ABSTRACT

DAVID RICARDO'S MACROECONOMICS

Doctor of Philosophy, 1998

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This thesis confronts the tendency in the literature of the history of economic thought to criticize Ricardo's macroeconomics, specifically his knowledge of contemporary events, his analysis of postwar crises, and his monetary and fiscal policies. To this end, the historical introduction in Chapters One and Two is critical, for it dispenses with the traditional view that the postwar decade was a period of chronic depression caused by underconsumption and, to a lesser extent, by monetary contraction associated with the 1819 Resumption Act. Chapter Three completes the foundation of our study by showing that Ricardo was well informed regarding Britain's economic and political situation. That he used this knowledge as a basis for his analysis of contemporary events is established in Chapters Four and Five, which chapters also refute the view that his treatment of postwar crises was merely a rationalization of the crude quantity theory and the strict law of markets in the face of overwhelmingly contradictory evidence. Chapter Six argues the merits of his monetary policies, particularly his insistence on the gold standard as a means to curb abuses by the Bank of England and the Government, which together were responsible for gross

mismanagement of the currency. The chapter further examines whether Ricardo accepted the "Treasury View" of fiscal policy, and whether his position implies adherence to a doctrinaire version of Say's Law.

My conclusions differ from those of authors critical of Ricardo largely because I have adopted a methodological approach to the history of economic thought that differs from theirs. My methodology has no merit of originality, but it does incorporate two tenets of sound scholarship: first, that primary texts should be interpreted in an accurate historical context; and second, that textual exegesis involves more than piecing together scattered quotes, but should entail the interpretation of an author's complete position.

ACKNOWLEDGEMENTS

I am grateful to Sam Hollander for his encouragement, for the time he spent reading nearly a dozen drafts of this work, and for his extraordinary ability to appreciate minute factual and theoretical points.

I extend thanks also to Ann Robson, Jack Carr, Alan Hynes and David Laidler for their helpful suggestions and for serving on my thesis committee. And finally, I appreciate Sue Howson's comments regarding the economic history chapters.

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List of Abbreviations Used in the Appendices

HCJ - Journal of the House of Commons

JHL - Journal of the House of Lords

PP - Great Britain, Parliamentary Papers

MF - Microfiche

Introduction

> Ricardo is a prime specimen of that dangerous intellectual type, the extreme abstractionist-deductivist possessed by a passionate eagerness to apply the results of his unrealistic abstractions (models) to the real world.
> --T.W. Hutchison (1992) p.104.

It is common for historians of economic thought to make sweeping condemnations of David Ricardo's macroeconomic theory and policy. His macroeconomic model, it is said, was vacuous, consisting of little more than the quantity theory of money and a doctrinaire version of Say's Law, and focusing on long-run comparative statics to the neglect of immediate, practical concerns. His analysis of postwar events, in particular, is cited as evidence that either he ignored the realities of contemporary Britain or, that mesmerised by the simplicity of his model, he remained convinced of its invulnerability to empirical verification even when confronted with the facts of the post-Napoleonic War depression. The capstone of Ricardo's system, according to the critical view, was a ruinous and irresponsible policy agenda founded, at best, on his indifference to current economic phenomena and his disregard for the practical consequences of his proposed policies. Schumpeter [(1954) p.1171] has labelled this methodological error--"piling a heavy load of practical conclusions upon a tenuous groundwork"--the "Ricardian Vice".

The present work argues against the criticisms of Hutchison, Schumpeter and others. I contend that Ricardo's macroeconomic theory was founded upon and shaped by a thorough knowledge of contemporary events, and that Ricardo was a sophisticated theorist, especially in his allowances for short-run phenomena such as the non-neutrality of money and the possibility of excess money demand. Concerning his treatment of the postwar depression,

Ricardo's analysis was not simplistic, but instead reflected his considerable knowledge of current events. My claim is substantiated by a detailed comparison between Ricardo's Works and the economic conditions of postwar Britain. With respect to Government policy, I maintain that Ricardo advanced a responsible policy agenda given current circumstances. Critics associate him with the "Treasury View" of fiscal policy, and thus infer that he accepted a doctrinaire version of Say's Law. But I show that he opposed public spending principally because of his concern with its effects on long-term growth--a defensible position given the current problems of high taxation, the national debt, and capital flight. Regarding key passages wherein Ricardo addresses the short-run effects of fiscal policy, I suggest readings of these excerpts that do not require the assumption of Say's Identity. I admit that the textual evidence for my position is not conclusive, but passages cited by critical authors are even less conclusive. And my interpretation has the additional merit of being consistent with Ricardo's general application of macroeconomic theory. With respect to monetary policy, I show that Ricardo's support for convertibility, at the expense of limiting the discretionary powers of the Bank of England, was reasonable given the Bank's mismanagement of the currency during the Restriction Period. And I conclude that he cannot justly be typecast as either an extreme bullionist or a doctrinal father of the Currency School and the 1844 Bank Charter Act.

I. Unfavourable View of Ricardo.

A. His Knowledge and Empiricism.

The idea that Ricardo entertained a simplistic notion of economic phenomena did not originate with Hutchison and Schumpeter. Walter Bagehot [(1879) p.205] remarked that "To the end of his days, he [Ricardo] never comprehended what he was doing. He dealt with

abstractions without knowing that they were such; he thoroughly believed that he was considering actual human nature in its actual circumstances." The same view was expressed by Keynes[1] [(1933) p.123]: "in the course of simplifying the many successive stages of his highly abstract argument, [Ricardo] departed necessarily and more than he himself was aware away from the actual facts", and later by Stigler [(1953) p.599]: "One leaves Ricardo with some envy...The basic truths of the science seemed almost within grasp...The frustratingly complex economy which generations of research have uncovered was still hidden in the future."

Schumpeter [(1954) p.472n] allows that Ricardo may have possessed information about events in Britain, but argues that he was incapable of applying it: "I do not think that Ricardo ever did much historical reading. But this is not what I mean. The trouble with him is akin to the trouble I have, in this respect, with my American students, who have plenty of historical material pushed down their throats. But it is to no purpose. They lack the historical sense that no amount of factual study can give. This is why it is so much easier to make theorists of them than economists." Hutchison [(1994) p.109] similarly recognizes Ricardo's business knowledge and political expertise, but contends that it "did not save him from the Ricardian Vice" because he failed to relate such knowledge to economics.

A more extreme criticism is made by authors who claim, not that Ricardo was unable to merge his knowledge with his economic analysis, but that he had little knowledge to work with. His "naive view of economic structure," according to Sayers [(1953) p.65], "could be held only by a man whose time was largely spent in the City and on his estate in Gloucestershire and who never went into the great industrial areas of the Midlands and the

[1]Ahiakpor [(1997) p.71] provides some detail on how Keynes' "misrepresentation" of classical economists was propagated by Hicks, Robinson, Kahn and others.

North," and again: "there seem to be two circumstances hindering Ricardo's path towards the whole truth: the attraction of Say's Law, and his lack of touch with the industry and trade of Britain outside London." Consistent with Sayers' position is Peach's [(1993) p.137] sarcastic assertion that, "lack of direct knowledge did not prevent Ricardo from knowing how the economic system should operate."

Some authors even contend that indifference to empirical evidence was a matter of principle for Ricardo. They maintain that Ricardo, qua classical economists, "had a deep conviction of the invulnerability of logical analysis to factual attacks" [Maital & Haswell (1977) pp.359,364]--a conviction which, according to Blaug [(1956) p.158; (1958) pp.187-8], was not based on the absence or unreliability of data, since ample data existed for verification at this period, but rather on "methodological predilections" that precluded the use of data so that "the divorce between abstract theory and empirical work was never more complete than in the heyday of Ricardian economics."

In part, Blaug [(1986) p.124; (1992) p.53; (1994) p.26] attributes Ricardo's alleged failure as an empirical economist to what he terms the "true Ricardian Vice"--a preoccupation with long-run comparative statics that precludes the relevance of short-run phenomena to either verify theory or guide public policy. Similarly--and almost repeating Fetter's [(1969) pp.72,73] assertion that Ricardo assumed "a stockbroker in every man"--Peach [1993) p.142] admits that Ricardo recognized "temporary maladjustments" but argues that he minimised short-run processes, thereby providing "a vision of free-market capitalism which functioned with almost clockwork precision." O'Brien [(1982) p.250] advances the same argument when describing Ricardo's monetary theory.

The critical view of Ricardo's empiricism is further manifest in an unfavourable contrast between Ricardo and Adam Smith. O'Brien [(1982) p.7] finds a glaring absence of an

empirical element in Ricardo's work, arguing that "Smith had continuous resort to factual materials while Ricardo's 1815 Essay and 1817 Principles contain no facts at all." More recently Coleman [(1996) pp.207,208] has extended the same criticism to classical economists in general: "If Smith's work had an important empirical dimension, Classical economics in its Ricardian formulation was staunchly theoretical...Complementing this confidence in theory was a relative unconcern amongst leading Classicals with the particular facts of economic life. Classical economics provides a high point (or low point?) of a naive overconfidence in theorising and a cool indifference for the results of empirical inquiry."

B. Characteristics of Ricardo's Macroeconomic Theory.

Whether because of his alleged ignorance about or his indifference to economic conditions in Britain, critics claim that Ricardo formulated a simplistic macroeconomic model, the pillars of which were a doctrinaire version of the law of markets (termed Say's Identity by modern authors) and the quantity theory of money. Appended to the model were two corollaries: the strict neutrality of money--or a dichotomy between the real and monetary sectors--and the impossibility of a general glut. It is commonly believed that Ricardo inherited his version of the law of markets from James Mill [Stigler (1953) p.595; O'Brien (1994) p.209]. According to Joan Robinson [(1978) p.14], "Ricardo overlooked the possibility of a deficiency of effective demand; he supposed that both workers and landlords would spend all their incomes currently as they were received, while capitalists would devote most of their profits to financing additions to stock. Thus he made saving govern investment. This became the orthodox dogma of J.S. Mill and of Marshall and it needed the whole force of the Keynesian revolution to overturn it".

Given the presumption that Ricardo accepted a strict version of the law of markets, critics

further claim that he failed to recognize the possibility of fluctuations in the demand for money. According to this interpretation, money was only a "medium of exchange" [Lange (1942) pp.53,61] or a "counting unit" [Patinkin (1948) p.135] so that in matters of theory and policy his model reduced to a barter economy [de Vivo (1987) p.188; Gillman (1956) pp.150,151] in which the failure of effective demand was impossible by definition [O'Brien (1994) p.209] and in which full employment equilibrium occurred automatically [Checkland (1948) p.7].

The second pillar of Ricardo's model--a strict version of the quantity theory--has been described by Schumpeter [(1954) p.703,724] as requiring at least four strong assumptions about the macroeconomy: an exogenous money supply, a constant velocity of circulation, a dichotomy between the real and monetary sectors and rigid proportionality between monetary fluctuations and the price level. The supposed dichotomy between the real and monetary sectors has the greatest implications for monetary policy, for on the basis of this assumption, Ricardo allegedly rejected any role for discretionary monetary policy and even went so far as to recommend the disastrous policy of resuming cash payments in the midst of a depression [Keynes (1933) p.138; Stigler (1953) p.593; Peake (1978) p.206]. It was this simplistic, but superficially appealing, statement of the neutrality of money that Ricardo promoted to "a new significance", the doctrine "becoming almost a truism of economic reasoning, until Keynes threw it over in the General Theory" [Henderson (1997) p.30]. The critical view of Ricardo is so widely disseminated that the only remaining question in the (hostile) canon seems to be whether Say's Identity is consistent with a determinate price level as implied by the quantity theory [Hickman (1950); Leontief (1950); Patinkin (1951); Brunner (1951)].

C. Ricardo's Analysis of Postwar Events.

Ricardo's methodological position regarding the verification of economic theory has been a further point on which he has not generally received good press. As a matter of historical record, the conditions of nineteenth-century Britain clashed with anything like Say's Identity or the strict quantity theory. But it is alleged that Ricardo failed to appreciate the discrepancies between his theory and current events and that no matter how extreme the apparent contradictions, he retained unflagging confidence in abstract macroeconomics. According to Peach [(1993) p.140], when economic phenomena contradicted Ricardo's model, he resorted to the principle of non-verification and "blamed reality for not conforming to the model, not vice versa". It is asserted that Ricardo was so enamoured of deductive reasoning that he denied the very existence of contrary events [Bonar (1885) pp.212-213; Mitchell (1949) p.135; St. Clair (1965) p.257; Maital and Haswell (1977) p.364], particularly in his attempts to account for the post-Napoleonic War depression [Gilbert (1996) p.308] and in spite of being confronted with discrepancies between his theory and economic realities by Malthus and William Blake. Faced with Malthus' "objections based on empirical evidence", Cremaschi and Dascal [(1997) p.502] argue, "he tends to protect his position by retreating from experience." The most severe critic is Peach [(1995) p.6] who writes:

> In Ricardo's case, the 'true' principles of political economy led him to the somewhat counterfactual position that the 'distress' ought not to be happening, certainly not on the scale, nor for the duration, that was actually being experienced. To the extent that he could make any sense of it at all, its severity was finally attributed by him to blind irrationality on the part of the capitalists class: for reasons that he could not fathom, capitalists were persisting in producing the 'wrong' commodities whereas, according to his version of the 'law of markets', they could be producing outputs that would yield them healthy profits.

Concerning the Ricardo-Malthus debate on the depression, Peach [(1993) pp.132,138,140] contends that Ricardo was so attached to Say's Law that he assumed away the problem of

deficient aggregate demand which was fundamental to Malthus' analysis. Hollander [(1979) p.524,527] is not so critical, arguing instead that Ricardo understood Malthus to be explaining the depression in terms of oversaving. Regarding Malthus' complete account, Hollander [(1979) p.530] states that Ricardo either rejected, or at least "did not recognize the consequential reduction in expenditure by the agricultural community upon manufactured produce". Sowell [(1963) pp.193,202] provides another perspective on the Ricardo-Malthus debate, explaining their differences in terms of the larger general-glut controversy in which "Malthus was concerned with dynamic studies of economic development [while] Ricardo set forth his purpose as the study of distributive shares."

Ricardo's empiricism has also been questioned on the basis of his notes on William Blake's Observations on the Effects Produced by the Expenditure of Government During the Restriction of Cash Payments (1823), which explains the postwar economic crises in terms of deficient aggregate demand. Milgate and Stimson [(1991) p.41] have understood Ricardo's responses to Blake to require the assumption of full employment--an awkward vantage from which to explain the existence of unemployed resources. Similarly, and in agreement with interpretations by Corry [(1958) p.43] and Stigler [(1953) p.598], Blaug [(1958) p.79] claims that Ricardo assumed "the full employment of capital" when answering Blake.

D. Ricardian Policy.

Another objection to Ricardo is that he did not hesitate to advise on public policy issues, though such advice derived from an abstract model and from facts of his own creation--"facts" unrelated to actual events but compatible with Say's Identity and the quantity theory [de Marchi (1970) p.265; Hutchison (1994) p.109]. Fetter [(1969) p.83] even alleges that Ricardo did this knowingly: "[Ricardo] sometimes recognized the artificiality or dubious

validity of his assumptions, but that rarely stopped him from going ahead with his analysis and presenting his conclusions as if there were no doubt about his assumptions. No economist who preceded Ricardo and no other economist of the English-speaking world from his time until Keynes so delighted in making sweeping policy recommendations from assumptions of his own choosing." His "assumptions" dictated a Government policy of "unambiguous...laissez faire", according to Peach [(1993) p.141], a view continuously reinforced by his "pathological feeling that the government did everything badly" [Fetter (1969) p.73].

1. Monetary Policy.

Three principal criticisms of Ricardo's monetary policy have developed in the literature. The first is his alleged proposal to resume cash payments in the midst of a depression [Gootzeit (1975) p.23; Robbins (1976) p.72] and at the ancient par. According to Fetter [(1964) pp.xiii-xiv], "Ricardo seemed oblivious to the influence of monetary policy and of price changes on economic conditions" and testified before the Commons Committee on Resumption that monetary deflation of 5% was "not very formidable". Peake [(1978) p.206] claims that his policies were "characterized by a consistent effort to adhere to a neutral money framework". O'Brien [(1975) p.164] similarly states that "Ricardo...denied the damage of deflation, and the stimulating effect of rising prices".

The second criticism of Ricardo's monetary policy relates to his alleged rejection of a discretionary role for the central monetary authority [Peake (1978) pp.203,210; O'Brien (1981) pp.20,21]. In this respect, he is considered a father of both the Currency School and the 1844 Bank Charter Act [Marcuzzo and Rosselli (1994) pp.1260,1261], and is compared unfavourably with Henry Thornton, who, it is presumed, held an enlightened view of the

possibilities of monetary policy [Sayers (1953) p.64; Hicks (1967) pp.165,166; Fetter (1980) p.100]. The supposed differences between the two are best described by Fetter [(1969) pp.74,75]: "What Ricardo did, in the heat of controversy over the credit policy of the Bank of England, was to strip from existing theory Thornton's refinements on Hume and come up with a simplistic proposition...Ricardo was the doctrinal father of the Currency Principle that wished to tie changes in the currency supply to changes in the specie holdings of the Bank of England; whereas Henry Thornton, and the Bullion Report of which he was a coauthor, anticipated much of the Banking Principle in their recognition of the need for discretionary action by the Bank of England."

The third criticism of Ricardo's monetary policy is that he "failed to recognize the vital role of the Bank of England as lender of last resort" [O'Brien (1975) p.152]. Sayers [(1953) p.63] articulates the point best: "It is significant both of Ricardo's general position and of his view of the Bank Directors that neither in published work nor in private letters did he make any reference whatever to the special responsibility of the Bank as a prop to the market in times of trouble--as, we should say, a lender of last resort."

2. Fiscal Policy.

Several secondary authors, reading Ricardo's statements on fiscal policy as indicating acceptance of the "Treasury View", have inferred that his position implies adherence to a strict version of the law of markets. Hutchison [(1952) pp.75,76], for instance, in reference to a speech made by Ricardo during the depression of 1819, writes: "Here again is Ricardo urging upon the House of Commons the obvious practical conclusion to be drawn from the Law of Markets, that public works could not possibly help to remedy the depression...the doctrine against public works was, of course, eventually to become by 1929 'the orthodox

Treasury dogma steadfastly held'". Paglin [(1961) p.101] similarly argues that for Ricardo "(who subscribed to Say's Law) debt reduction and taxation were merely transfer problems having no impact on demand and employment".

II. Favourable View of Ricardo.

A. His Knowledge and Empiricism.

Notwithstanding the weight of opposition to Ricardo, there are differences of opinion respecting his empiricism, the validity of his macroeconomic theory, and the prudence of his policy proposals. Dunbar [(1887) p.8] was an early defender of Ricardo, insisting that he possessed a wealth of knowledge which he applied for "illustration, verification or the premise of an argument". Cannan [(1894) p.302] likewise protested against the critics of Ricardo: "Among all the delusions which prevail as to the history of English political economy there is none greater than the belief that the economics of the Ricardian school and period were of an almost wholly abstract and unpractical character." More recently, Corry [(1962) pp.11,12] has refuted Blaug's critique of Ricardo's lack of empiricism on the grounds that Ricardo's monetary pamphlets make use of statistical data. Similar observations have been made by Viner [(1978) p.4] and by Jacob Hollander [(1911) p.51] with respect to Ricardo's pamphlets on both corn and currency. Joan Robinson [(1978) p.14] contends that "Ricardo was observing a historical process...going on through time and, like Keynes, he was applying what he believed to be realistic analysis of the actual situation to problems of policy." And finally, Hollander [(1979) pp.658-9] refers to both Dunbar and Marshall in his argument that "Ricardo was in fact preoccupied with 'short-run' matters relating both to

theory and policy".[2]

B. Ricardo's Macroeconomic Model.

Authors favourable to Ricardo note that he was both knowledgeable about events in Britain and that he developed a sophisticated model to explain economic phenomena. According to this view, his macroeconomic model did not incorporate Say's Identity, but rather used Say's Equality, the concept that equilibrium in the commodity market occurs via changes in the price level [Baumol and Becker (1952) p.369]. The "Equality" version of the Say's Law associates disequilibrium in the commodity market with a corresponding discrepancy between the supply and demand for money, and Ricardo's model certainly allows for this possibility.

For classical economists generally,[3] and Ricardo in particular, money demand was a function of uncertainty [Corry (1962) pp.43,44,98] given that money served as a store of value [Ahiakpor (1985) p.18] and might be hoarded at times of alarm [Sowell (1974) p.62]. Concerning the supply of money, Ricardo understood that shocks to the "circulating medium" proceeded from fluctuations in either bank notes or the state of commercial credit. Moreover, he appreciated that during periods of disequilibrium in the money market there would be corresponding maladjustments in the output market [Gootzeit (1975) pp.3,10], implying an understanding that monetary fluctuations were not always neutral [Beauregard

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[2]O'Brien [(1981) pp.1-35; (1982) pp.247-252] has contested Hollander's position with almost religious zeal, describing his work as a "total assault on previous work". Stigler [(1981) p.101] likewise characterizes Hollander as "a partisan defender of Ricardo".

[3]Skinner [(1969) pp.180,181] notes that classical economists made explicit assumptions about hoarding. Smith and Say in particular acknowledged the possibility of hoarding [Hollander [(1979) pp.68,80,84].

(1982) p.107].[4] (His arguments in the Principles regarding non-monetary topics often assume monetary equilibrium, but this simplification is only for convenience of exposition and does not reflect his actual view [Gootzeit (1975) pp.3,10].)

As for the strict quantity theory as defined by Schumpeter [above, p.6], Sowell [(1974) pp.59,60] has responded that neither the rigid quantity theory nor perfectly flexible prices can be found "in any classical proponent of the quantity theory". Hollander [(1979) p.479] further states that for classical economists, velocity was not a constant. Aggregate output was not an independent variable either and many authors recognize that Ricardo viewed short-run monetary disturbances as potentially devastating [Sowell (1972) pp.31,32; Sowell (1974) p.57; Hollander (1979) p.489; Niehans (1990) p.103].

It is also recognized by some that at the microeconomic level of analysis Ricardo appreciated short-run monetary non-neutrality, such that the full effects of monetary fluctuation were realized only after a time lag [Ahiakpor and Carr (1982) p.147; Ahiakpor (1985) p.19; Niehans (1990) p.103]. Among the effects he considered were the extent to which discounting activities by the Bank of England tended to redistribute trade capital and income [Ahiakpor (1985) p.19]. Taxation also entered his analysis insofar as monetary shocks altered relative prices in a world with differential property and excise taxes [Hollander (1979) p.480; Ahiakpor and Carr (1982) p.147; Ahiakpor (1985) p.20; Niehans (1990) p.103; Marcuzzo and Rosselli (1994) p.1256]. And not just taxation but any fixed component of cash flow--owing, for example, to long term contracts or fixed income streams--served to redistribute income during monetary fluctuations [Ahiakpor (1985) p.20; Niehans (1990)

[4]Even Blaug [(1995) p.32] concedes that Ricardo allowed for temporary monetary disequilibrium: "every classical economist regarded money as non-neutral in the short-run, and since the label 'classical economist' is frequently misused, we may as well say that we refer to such writers as Hume, Malthus, Ricardo, Thornton, Bentham, McCulloch, James Mill, John Stuart Mill and Torrens."

p.103; Marcuzzo and Rosselli (1994) p.1256]. Ricardo further understood that interest rates were temporarily altered by monetary changes [Hollander (1979) p.480; Ahiakpor (1985) p.21]. And finally, he knew that a redistribution of income, resulting from any of the above causes, altered the pattern of final demand [Hollander (1979) p.480; Ahiakpor (1985) p.19].

C. His Analysis of the post-Napoleonic War Period.

Ricardo's treatment of the post-Napoleonic period has also been viewed favourably by some, particularly his explanation of the economic hardships associated with the transition from wartime to peacetime production. The strengths of his analysis concerning the existence of gluts, commercial crises and involuntary unemployment, for example, are defended by Jonsson [(1997) p.203] on the grounds that secondary authors have "ineptly" misrepresented Ricardo by citing each other rather than primary sources. Sowell [(1972) pp.29,30] describes his analysis as the first systematic attempt to reconcile the facts of excess capacity and unemployment with Say's Law. Schumpeter [(1954) pp.693,740] also allows that postwar adjustments were of a magnitude "the kind which it always takes a depression to straighten out", though he adds that Ricardo's analysis was inadequate to fully account for the depression. Other authors admit the validity of Ricardo's position from 1815 to 1817 but question his continued use of the argument in 1820, five years after the war ended [Blaug (1958) p.77; Link (1959) p.63; Tucker (1960) pp.125-126; Hollander (1979) p.518].

Ricardo's explanation of the agricultural crises of 1813-16 and 1820-22--that high corn imports from the Continent in the first instance and Irish corn imports, coupled with abundant harvests, in the latter, saturated the domestic market--has also been commended by secondary authors. De Marchi [(1970) p.263] considers his analysis quite reasonable, as does De Vivo [(1987) p.186], since under the 1815 Law corn imports did, at times, inundate the British

market.[5] Without commenting on its empirical validity, Hollander [(1979) p.497] also discusses Ricardo's claim that surplus agricultural production contributed to the 1820-22 agricultural depression. And finally, concerning the extent to which monetary contraction aggravated postwar crises, both O'Brien [(1982) pp.25,29] and De Vivo [(1987) p.185] note that Ricardo attributed distress, in part, to the poor implementation of the Resumption Act by the Bank of England.

Even favourable authors, however, have not fully appreciated the richness of Ricardo's analysis, for none have provided a comprehensive statement of his interpretations of postwar events. And there is the additional fact that, to my knowledge, no author has recognized the distinction he made between temporary and permanent causes of distress. Hollander [(1979) p.518], for instance, writes: "By the end of 1819 Ricardo felt obliged to alter his diagnosis [of the depression]. In his speeches of December we find no reference to capital immobility, but rather the emphasis is placed upon an inadequacy of capital supply relative to population which is explained in terms of low profitability due in turn to agricultural protection...But by mid-1820 Ricardo had reverted to his original argument that the postwar problem in manufacturing was entirely due to capital misallocation." Winch [(1987) p.81] similarly fails to differentiate between Ricardo's explanations of "temporary" as opposed to "permanent" causes of the depression, leading to a muddled and generally unfavourable assessment of his analysis.

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[5]In spite of the disastrous effects of corn imports on British agriculturalists under the 1815 Law, Robbins [(1967) p.260] criticizes Ricardo's position, saying "How greatly superior in good sense is [Malthus'] attitude to that of Ricardo, bombinating away in a stratosphere of abstract logic which led him to attribute the post-war depression in part at least to agricultural protection."

D. His Policy Proposals.

1. Monetary Policy.

Ricardo's monetary policy further demonstrates that he rejected, at least implicitly, the short-run neutrality of money [Hicks (1967) p.161]. For had he accepted money neutrality, there would have been no justification for his Ingot Plan, which reduced the degree of monetary contraction associated with Resumption by minimising the gold purchases required by the Bank of England [Sayers (1953) p.59; Hollander (1979) p.494; Laidler (1989) p.69]; similarly, his allowance for permanent devaluation[6] given a depreciation of more than 5% would have been meaningless [Viner (1965) p.204; Robbins (1970) p.237]. His proposal to issue warrants for the quarterly dividend payments on the national debt in order to reduce the short-run monetary contraction experienced several days before dividend payments were made to public creditors further demonstrates adherence to a non-neutral money framework [Viner (1965) p.204; Robbins (1968) p.129; Hollander (1997) p.658].

Ricardo also allowed for discretionary control of the money supply. Niehans [(1987) pp.420,421] and Robbins [(1968) p.128] acknowledge the case for discretion in Secure Currency. Hollander [(1979) pp.492,493] notes the same passages but believes the point should not be emphasized. Arnon [(1987) p.268; (1989) p.12; (1991) p.177] has discovered Ricardo's case for discretion in the Plan for a National Bank but claims that it constitutes a major break with his former policy position. Viner [(1965) p.206] also found discretionary policy in the National Bank (and elsewhere) noting that Ricardo "recommended that the managers of the currency should engage in open-market operations when expansion or contraction of the currency was desirable."

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[6]His recommendation of temporary devaluation was actually incorporated in the Resumption Act [Robbins (1976) p.72; Hollander (1979) pp.425,488].

2. Fiscal Policy.

In one of the few favourable readings of Ricardo's statements on fiscal policy, Tucker [(1960) p.177] explains that "Whatever the policies that were explicitly recommended by 'underconsumptionist' writers, the Ricardian group deprecated any theory which might have the effect of weakening the pressure of public opinion against taxation and government borrowing. Governments were only too ready to spend and they required no exhortations from economists". Churchman [(1996) p.108] also concludes that Ricardo's position "arose out of fear that any concession might be construed as supporting increased government spending", something anathema to him since he was concerned with the burden of taxation and the waste of resources rather than the immediate effects of Government expenditure on aggregate demand. This reading has more recently been supported by Baumol [(1997) p.219] and Kates [(1997) p.197] on the grounds that Ricardo would have found it "beyond comprehension that someone should recommend wasteful expenditure as a way of generating wealth", particularly given the classical distinction between productive and unproductive expenditure.

Even Blaug [(1997) p.235] seems to concede something to Ricardo's view of government spending, by arguing that early nineteenth-century Britain was experiencing "Marxian" (as opposed to "Keynesian") unemployment. The latter refers to unemployment resulting from a deficiency in aggregate demand. The former suggests that due to limited technical possibilities in the substitution of labour for capital, a shortage of capital relative to the labour supply might necessarily leave some labourers unemployed. In the instance of Marxian unemployment, a government expenditure program that impeded the accumulation of capital would only aggravate the problem of unemployment. Had Britain been

experiencing Marxian unemployment, Ricardo's objection to "unproductive" Government expenditure would seem to have even greater merit.

III. Explanation for the Divergent Opinions in the Literature.

Some explanation is required for the divergent opinions in the secondary literature relating to Ricardo's knowledge, theory and policy. In large measure the negative view stems from methodological errors associated with interpreting the Principles or the High Price of Bullion in isolation, without reference to Ricardo's complete works or to contemporary economic and political events. Authors favourable to Ricardo, by contrast, generally approach his works from a broader perspective, attaching greater weight to his correspondence and speeches, and to some extent taking into account his historical milieu.

A. Piecemeal Reading of Ricardo.

1. Nature of the Debate.

Cannan [(1894) p.306] noted the importance of reading Ricardo in context, especially his Principles: "Read with the pamphlets which preceded it, Ricardo's Principles of Political Economy and Taxation is intelligible enough. Read without them it is the happy hunting-ground of the false interpreter." Dunbar [(1887) pp.8,9] described Ricardo's pamphlets as providing "side-lights" upon his "mental processes and his equipment for discussion"--insights not available in the Principles which was written as a text "with a singular exclusion of all reference to the actual world around him." Ahiakpor [(1985) p.27] noted a similar problem respecting Ricardo's monetary analysis: "unless one keeps in mind the purpose for which Ricardo constructed the analytical device employed in the early sections of the

Principles, one is liable to derive the wrong conclusions".[7]

A related matter--and subject of controversy in the wake of Hollander's The Economics of David Ricardo (1979)--concerns the weight to be accorded Ricardo's correspondence and his Parliamentary speeches. Hollander's book, which O'Brien [(1981) p.1] describes as a "baffling...full scale frontal attack on the existing body of Ricardo scholarship", draws heavily from unpublished sources to develop the case that Ricardo was an informed, subtle theorist, who modified his basic model as appropriate when addressing practical or policy related concerns. Its method of exegesis Stigler [(1981) pp.101,102] questions in his highly critical review:

> Hollander culls a considerable number of passages, often from Ricardo's correspondence...Hollander gives these departures from the subsistence wage much weight.
>
> By exaggerating the slack and inconsistency in Ricardo, Hollander makes him an unimportant, fuzzy theorist.
>
> An interesting question is raised by Hollander's practice of treating as equal in evidential value the views that Ricardo expressed in publications and in private correspondence. The unpublished work differs at many points in explicitness, or reveals a transitional view, or addresses a situation not faced in the publications.

Stigler's remarks are curious considering that his AER review of the Sraffa edition [(1953) pp.586-599], cites extensively from the correspondence of Ricardo, Malthus, Mill, Say, Trower and McCulloch to illustrate their views on theory and policy. And at no point does he differentiate between the relative importance of published, as opposed to unpublished,

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[7]These statements assume that primary texts are being used. It should be noted that textual evidence is not always incorporated in works pertaining to the history of economic thought. In the protracted debate concerning the alleged inconsistency between Say's Law and the quantity theory of money, Brunner (1951), Hickman (1950), Leontief (1950) and Patinkin (1948, 1949, 1951) cite no primary texts. Their arguments instead rely on a stylized account of classical macroeconomic theory that includes a rigid quantity theory of money and Say's Identity.

sources.[8]

O'Brien [(1981) pp.4,6] adopts Stigler's criticisms in his OEP review: "Hollander rejects the Stigler position on textual exegesis...Hollander also attaches great weight, in arriving at his 'Ricardo', to the qualifications conceded by Ricardo to his basic view of economic relationships. In fact, because he ostensibly rejects Stigler's position, he is free to attach whatever weight he desires, to particular statements by Ricardo. This freedom Hollander uses. In particular, a good deal of weight is attached by Hollander to his interpretation of correspondence" and again: "Hollander attaches great weight to the Parliamentary material". O'Brien so frequently (on pages 4,6,22,23,27,30) objects to evaluating Ricardo's theory and policy on the basis of his unpublished works, that Hollander [(1982) pp.227-228] describes this concern as "the central complaint in the review". The two examples below support Hollander's textual method by illustrating the sorts of errors that can occur when primary texts are analyzed piecemeal, without reference to an author's complete works.

2. Examples of Misinterpretations.

Two examples of conflicting interpretations--due in both cases to whether excerpts were drawn piecemeal from Ricardo's writings or whether his complete works were considered--

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[8]A similar review of the Sraffa edition by Hutchison in Economica [(1953) pp.263,264] treats Ricardo's unpublished works with equal, if not more importance, than his published works, going beyond Hollander in this respect: "Because of the unique character of this Correspondence as a whole, there is now a good case for approaching Ricardo's works not as primarily the Principles, plus some important Essays...but rather as primarily the Correspondence, for the fuller appreciation of which it is necessary to equip oneself by an acquaintance with the Principles and Essays", and again: "The new letters do make much less easily tenable certain influentially-held interpretations, or overinterpretations, of Ricardo's thought".

Notwithstanding his acceptance of what I consider the correct method for analyzing Ricardo's works, Hutchison is still highly critical. His position is explained below [pp.25-27] when we consider the historical context in which Ricardo is interpreted.

are given below. These pertain, first of all, to the interpretation of the Principles chapter on the "Effects of Accumulation"; and second, to the alleged contrast between Ricardo and Thornton on discretionary monetary policy as based on the High Price of Bullion.[9]

The Principles chapter "On the Effects of Accumulation" has been a popular "happy hunting ground" for critics who attribute to Ricardo a strict version of the law of markets. In the chapter Ricardo addresses the subject of economic growth as it pertains to Adam Smith's theory of the "increasing competition of capitals". He attempts to resolve the question of whether a secular increase in the capital stock necessarily entails a decline in profits. His reasoning proceeds in the context of the Ricardian growth model where profits do not fall secularly unless "there be some permanent cause for the rise of wages...owing to the increasing difficulty of making constant additions to the food of the country" [DR, 1:289]. This is simply a restatement of his familiar idea that, assuming no expansion at the extensive or intensive margins of cultivation, real labour costs do not rise secularly nor do profits decline secularly. Ricardo attacks the concept implicit in Smith's "increasing competition of capitals" thesis that effectual demand does not increase secularly in proportion to increases in aggregate output, leading to a decline in commodity prices and profits. (In this regard, his argument parallels that in his debate with Malthus on the possibility of oversaving.)

But instead of reading Ricardo's response to Smith in terms of the secular "competition of capitals" question, critics interpret the chapter--especially pages 290 to 293--as a blanket statement by Ricardo on short-run aggregate demand.[10] Stigler [(1953) p.595], quoting from

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[9]Throughout our study we use the recent compilation of Ricardo's writings: David Ricardo (1951-73) The Works and Correspondence of David Ricardo, 11 Volumes, edited by Piero Sraffa. When needed for clarification, subsequent references to this edition are abbreviated as DR; volume and page numbers are included in each citation.

[10]Reading the literature on Ricardo I gained a great appreciation for Jonsson's [(1997) p.203] observation that "It is all too easy to cut and paste, to combine a simplifying assumption from one

all four pages, argues that "Ricardo developed the law of markets along [James] Mill's line" and "even went considerably beyond the [Mill's] law in his denial that the quantity of money could have any influence on real output." Blaug [(1958) p.78] takes a similar view, citing page 290 as evidence that "at no time did he permit himself to conceive of a break in the income stream through the influence of hoarding".[11] Tucker [(1960) p.125] alludes to the same pages as Blaug and so does Peach [(1993) pp.134-145], who provides the most thorough statement of this position:

> The 'law of markets' received its formal blessing from Ricardo in the chapter 'Effects of Accumulation on Profits and Interest' in the Principles which opened with the claim that 'no accumulation of capital will permanently lower profits, unless there be some permanent cause of the rise of wages' [1:298]. Ricardo devoted most of the chapter to an elaboration of the 'law of markets' argument that 'there is no amount of capital which may not be employed in a country, because demand is only limited by production'. The steps in his reasoning should be familiar: commodities are supplied only with a view to demanding other commodities [1:290]; the desire to consume something is 'implanted in every man's breast; nothing is required by the means and nothing can afford the means, but an increase of production' [1:292]; and all money income is spent either by the direct recipients, or by those to whom they lend their unspent money balances, thus implying that aggregate net savings are zero [1:291].

In contrast with Ricardo's critics, Hollander [(1979) pp.510-513] recognizes that the chapter on "Accumulation" pertains to the question of whether there can be a "long-run deficiency of aggregate demand." To support his analysis, he draws on Ricardo's correspondence and his Notes on Blake, in violation of the rules of exegesis proposed by Stigler and O'Brien.

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context with something from an entirely different one, and thus to concoct notions [in classical economics] that never really existed."

[11]Blaug's position may have matured since 1958. His 1995 article [p.32] on the quantity theory of money concedes that Ricardo regarded money as non-neutral in the short run.

Further examples of the problems of analyzing primary texts without reference to an author's complete works appear in criticisms of Ricardo's monetary policy that rely solely on the High Price of Bullion (1811). In the pamphlet Ricardo discussed "two unerring tests"--meaning, the "rate of exchange and the price of bullion" [DR, 3:75]--by which it was possible to determine whether a currency was depreciated. Concerning the "tests", he differentiated his position from Henry Thornton's on the grounds that in Paper Credit, "Mr. Thornton has told us that an unfavourable trade will account for an unfavourable exchange" [4:83], whereas Ricardo thought that the unfavourable foreign exchange in 1811 was "to be accounted for only by the depreciation of the circulating medium" [4:83]. In Ricardo's fifteen references to Thornton, he contrasted his position with Paper Credit only on the subject of the "two unerring tests"; the other references to Thornton are all favourable. None-the-less, Ricardo's critics have seized upon these passages[12] and inferred that Ricardo differed with Thornton on the whole gamut of economic theory and policy [Horsefield (1944) pp.112-115; Hicks (1967) pp.165-166; Fetter (1969) p.75; Peake (1978) pp.193-210; Fetter (1980) p.100; O'Brien (1981) p.22; Marcuzzo and Rosselli (1994) pp.1260-1261]. In so doing they have constructed a mythology, depicting Ricardo as an extreme Bullionist, precursor of the Currency School and father of the 1844 Bank Charter Act. By contrast, Thornton is cast as a sophisticated monetary theorist who appreciated the possibilities of discretionary policy. The essential character of this view is summarized by Sayers [(1953) pp.64-65]: "Ricardo was the father of the system adopted by the Bank of England after its internal revolution at the beginning of the 'forties and, after Peel's conversion, embodied in the famous Bank Charter

[12]I do not suggest that Ricardo and Thornton agreed on every point of theory and policy apart from the "two unerring tests", but, as will be shown in Chapter 6, their differences were fewer than commonly believed, and, at any rate, the claim that Ricardo's references to Thornton reflect a radical position on monetary policy is not sustained by any reasonable reading of the High Price of Bullion.

Act of 1844...This emphasis [on long-run forces] prevented him from realizing the potentialities of banking policy...he must share responsibility for the Bank Charter Act of 1844 which gave the English currency system its peculiar form and also retarded the development of central banking."

Sayers' view continues to be prominent in the literature, notwithstanding the weight of evidence that it is not a valid inference from the texts. Concerning this evidence, there is, in the first place, the fact that by 1811 Thornton had concluded--in agreement with Ricardo--that Britain's ongoing unfavourable foreign exchange had been caused by a depreciated currency. In Paper Credit, he observed that exchange rates can temporarily be affected by causes other than monetary fluctuations, but by 1811 he had rejected the possibility that the foreign exchange could be depressed for a long period of time apart from monetary forces, referring in a Parliamentary speech to "that dangerous doctrine" according to which an unfavourable foreign exchange "was no indication of an excess of paper or of a depreciation of it, but was simply an evidence of an unfavourable balance of trade...It was an error to which he himself had once inclined, but he had stood corrected after a fuller consideration of the subject" [(13 May 1811) Hansard 1s, 20:84].

Concerning the supposed differences between Ricardo and Thornton, there is the additional fact that, even in 1811, Ricardo allowed that a deficient harvest [DR, 6:36; 6:74], foreign subsidies, the foreign expenditures of the British Government [6:39; 6:73-74; 6:89], and even "a change of taste in one country for the commodities of the other" [6:89] could, for a time, cause an unfavourable exchange. The clearest statement of his understanding is contained in a letter of 1816 [7:43]: "by exchange we always mean the price of the currency of one country estimated in the currency of another...What may be the cause of a high or low exchange is another question. Subsidies, bad crops, unprosperous commerce may disturb the

equilibrium of exports and imports, and produce powerful effects on the exchange, within its natural limits, but they do so only by affecting the relative value, or price of currency." What Ricardo rejected in High Price in 1811 was the notion that Britain's unfavourable exchange, which had progressively become worse since 1803, was due to one of these temporary causes, rather than a depreciation of the currency.

B. The Historical Context.

The most extreme critics claim that Ricardo undermined the historical element in economics in much the same way that he allegedly "shunted the car of Economic science on to a wrong line" [Jevons (1924) p.li]. The view is stated by Coleman [(1987) pp.23,24] in his recent book on economic history:

> Ricardo hardly ever appealed to history to make a point, to support an analytical proposition, even to illustrate an argument. As Schumpeter observed, he had no historical sense nor, indeed, 'insight into the motive powers of the social process'. His ingenious mind, essentially that of a brilliant theoretician, never displayed any significant interest in the past...So, by the mid-nineteenth century, the combined efforts of Mill, Ricardo and McCulloch had gone far to remove the historical elements from the formulation of economic theory. History had been relegated to the subsidiary role of providing illustrations of what were confidently regarded as the ignorance and foolishness of past attempts by governments to influence the economy.

Hutchison triumphantly alludes to Coleman's work in his Times Literary Supplement (11-17 December 1987) review of Hollander's Classical Economics (1987), contrasting the historical element in the Wealth of Nations with the "non-historical dogmatism of Ricardo and his associates". Hollander [(1989b) p.396] responds by noting that Coleman's conclusions derive from Hutchison's earlier Revolutions and Progress in Economic Knowledge (1978) and by emphasizing the "powerful component of abstract theory in the Wealth of Nations". He does

not, however, respond to the criticisms of Ricardo--an omission, in part, perhaps due to the fact that Hollander interprets Ricardo's work in the same stylized historical context as Hutchison, Coleman and others, so that any defense of Ricardo's historicism he might offer is necessarily muted. The reasons for this are best illustrated by the conflicting views concerning Ricardo's analysis of postwar economic events.

1. Ricardo's Analysis of Postwar Economic Events.

Critics have attacked Ricardo on the basis of a stylized history, claiming that his failure to admit the existence of a general glut of commodities during the post Napoleonic War depression shows that he had been blinded by the Law of Markets to the point that he could not recognize even extreme inconsistencies between his theory and reality. This criticism has not been answered, even by authors favourable to Ricardo. Hollander [(1979) pp.512,513], for instance--in the same passage where he argues that (interpreted in the context of his complete works) Ricardo can be shown not to adhere to a strict version of the law of markets--fails to defend Ricardo on the postwar depression:

> Let us now try to reach a conclusion regarding the central matter, namely whether by his formulations of the law of markets Ricardo rejected the possibility of excess commodity supply even in the short run or whether he intended only to define full equilibrium...On a balance of the foregoing considerations the valid deduction would appear to be that Ricardo, despite his occasional strong statements (and despite his criticism of Say on the need for 'counter-commodities') adhered to that version of the law of markets labelled 'Say's Equality,' which allows for temporary deviations between the money values of commodities supplied and demanded, that is, for temporary excess demand for money. We are not, however, yet out of the woods. For as we shall now see, in his analysis of the post-war depression Ricardo failed to recognize the relevance of temporary excess money demand.

Citing this passage, O'Brien [(1982) p.21] writes:

> It seems to me that Hollander, in his charitable zeal to do the best by Ricardo, is determined to drag Ricardo right out of the woods, even if this means demolishing a lot of timber in the process. This impression is further accentuated by something which is very apparent throughout the discussion but particularly in the section on the post-war depression. For by confining himself to the Ricardo-Malthus correspondence, the notes on Malthus, and the published volumes generally, the wider debate is almost totally omitted.

O'Brien's criticisms--and others discussed below--are based, in part, on an assumed economic history, according to which Britain entered a decade-long depression at the close of the War such that all branches of trade were stagnant, unsold commodities glutted markets, and labourers suffered chronic unemployment. The account attributes the postwar depression to a deficiency of aggregate demand, coupled with an ill-advised contraction of the money supply after Parliament approved the 1819 Resumption Act. Ricardo and classical economists generally are blamed for having aggravated the depression since, blinded by an attachment to Say's Law, they recommended the ruinous policy of Resumption.

It will be my purpose to show that, contrary to this stylized account, the postwar period was not one of uniform hardship. All sectors experienced some periods of prosperity and the distress which occurred resulted not from chronic excess money demand but from a sequence of shocks affecting at times specific sectors and at times the whole system. As for the alleged monetary contraction in the wake of the Resumption Act, historical documents reveal that the combined circulation of Bank of England notes and coin actually remained stable from 1819 through 1824.

Because of inconsistencies between Ricardo's explanations of postwar crises and the historical facts assumed by modern authors, the empirical validity of his analysis has largely gone unappreciated. Blaug [(1958) p.98], for instance, criticizes Ricardo--without recourse to historical evidence--for attributing the various depressions to exogenous shocks: "It is not

surprising then that the periodic alternation of booms and slumps was not appreciated by economists until the third or fourth decade of the nineteenth century. Earlier it was possible to argue, as Ricardo did, that every crisis arose out of adventitious and nonrecurring circumstances. The depressions of 1811, 1816-17, and 1818-19 could be explained by pointing to obvious exogenous factors such as the Bank Restriction Act, the strains of waging war, the difficulties of postwar conversion, or the influence of the weather in producing poor or abundant harvests. It took some time before old habits were shed." Peach [(1993) pp.133,134] likewise attacks Ricardo for claiming that adjustment to peace-time production was (partly) responsible for the distress: "The fact"--Peach cites no facts--that funds were being hoarded and not invested in new ventures "seems to have been regarded as almost immaterial." Adopting Peach's methodology, Gilbert [(1996) p.308] also cites no evidence in his argument that Ricardo became more and more convinced of the validity of James Mill's version of the law of markets "even in the face of overwhelming empirical evidence to the contrary", and again: "His refusal to recognize the depth of the economic crisis following the Napoleonic war, his repeated assurances to Malthus that prosperity would soon arrive...all prove how justly Ricardo has been convicted of the 'Ricardian Vice'." Concerning the effects of the Resumption Act, Maital and Haswell [(1977) p.364] criticize Ricardo for not assigning general distress in 1822 to monetary contraction and Robbins [(1976) pp.72,73] argues that, from 1815 onwards, Ricardo failed to recognize "the cause of the contemporary troubles, alleging all sorts of explanations other than the obvious one of contraction of the circulation."

In contrast to the authors just mentioned, the few interpreters who view Ricardo's analysis of the postwar crises favourably do so on the basis of accurate historical information. Both Sowell and Schumpeter [quoted above, p.14], for instance, approve of Ricardo's treatment of the postwar re-alignment of capital because they appreciate the magnitude of the transition

involved. Similarly, De Marchi [quoted above, p.14] commends him for recognizing that the two postwar agricultural depressions were caused by high corn imports coupled with abundant harvests.

. . .

The principal error of the stylized history is that it depicts the "postwar depression" as a single occurrence, rather than two separate depressions. The error seems to have resulted from a widespread lapse in scholarship, since accurate accounts of the period are available--notably by Gayer et. al. [(1953) p.110], who correctly date the first business cycle from the cyclical peak of March 1815 to the peak of September 1818 and the second cycle from September 1818 to the peak of May 1825.[13]

That crucial facts concerning the postwar period have been forgotten by historians of thought is evident in both the favourable and unfavourable views of Ricardo's analysis. Thus Stigler's [(1953) p.596] critique of Ricardo centers on the claim that "Beginning in 1815, he [Ricardo] made a series of predictions that prosperity would soon come to England. The prediction was continuously wrong and it was no compliment to his intelligence that after 1820 he blamed the distress on the abundance of harvests." But in fact, of the four "predictions" Stigler cites, the first was made on 27 June 1815--at a time where tax reports indicate the economy was expanding--and the fourth occurred on 7 August 1817, during a period of general prosperity--agricultural prices were high, foreign trade had recovered and manufactures were approaching full employment. The second and third "predictions" were

[13]Blaug [(1958) p.98] is one of the few historians of thought who has recognized that Britain's economy was not continuously depressed from 1815 through 1823.

made on 25 December 1815 and 15 July 1816 respectively. The economic recovery to which these predictions referred became evident in agricultural districts by April 1816; prosperity in trade and manufacturing resumed by the Spring of 1817. The length of time between Ricardo's statements and economic recovery was certainly not so long as to render his predictions "continuously wrong", and by no stretch of the imagination would it be justified to question Ricardo's "intelligence" on the basis of these results.

As for Stigler's comment that Ricardo blamed "distress after 1820...on the abundance of harvests", it should be noted that the nature of the distress in question is unclear since by the third quarter of 1820, the economy was not suffering from a general depression. Agriculture prices began to decline after the harvest of 1820 and did not increase again till 1823, but low prices were caused in part by a series of abundant harvests, which is what Stigler criticizes Ricardo for saying.

Similar errors appear in Hollander's (1979) argument that Ricardo's misallocated capital explanation of postwar crises "becomes more convincing only after the return of industrial prosperity; it scarcely accounts for events prior to 1821, when the entire economy was depressed" [p.519]. Hollander thus mistakenly assumes that general economic conditions were depressed from the end of the War through 1820. He also finds fault with Ricardo's answers to Malthus concerning the effects of declining agricultural incomes on aggregate demand: "The vital difference between Ricardo and Malthus is precisely that the former did not recognize the consequential reduction in expenditure by the agricultural community upon manufactured produce" [p.530]. (Regarding this view, I shall demonstrate that Ricardo understood Malthus' explanation, but rejected it on the basis of government financial reports indicating that general economic conditions improved during the years 1813-15 and 1820-24, both of which were periods of low agricultural prices.) Finally, Hollander quotes Malthus'

letter to Ricardo of 25 September 1820 where he questions Ricardo about "the fall in the interest of money and the difficulty in finding employment for capital." Hollander claims that Ricardo "failed to account for the contemporary fall in the interest rate, general unemployment and excess capacity" [p.522]. (Again, I shall argue that it was Malthus whose account was wanting since by the Autumn of 1820, British trade and manufacturing had recovered from the 1819-20 depression.) In each instance above, Hollander's defense of Ricardo can be strengthened by making use of a thorough and accurate economic history.

2. Interpretations of Ricardo's Monetary Policy.

Differing opinions of Ricardo's monetary policies also result, in part, from the historical events assumed by his interpreters. In this respect, his support of Resumption in the midst of a depression has earned the most criticism. Robbins [(1976) p.72] and Fetter [(1964) pp.xiii,xiv] condemn the proposal as irresponsible. Gootzeit [(1975) p.23] makes the same case, stating: "There was little recognition, however, that such a course of action [Resumption] might lead to disastrous consequences for a nation beset with a drastic shortage of funds which were stringently required to carry out emergency spending projets in foreign nations...A reduction in paper credit at such a time could not be tolerated. Even after the war was over, the Bank of England provided an important prop to the commercial loan market--one that could not be removed very quickly without creating serious consequences for both private and public borrowers."

Implicit in Gootzeit's statement are the assumptions, first of all, that Britain was in the throes of a long-term depression and, second, that the Act required an immediate monetary contraction. Neither assumption is correct. The depression of 1819-20 was not part of an

ongoing economic crisis, for Britain's economy had returned to full employment in 1818. Instead, the 1819-20 crisis occurred as the result of a collapse in the boom of exportable commodities in February 1819 which, in turn, caused a temporary reversal in foreign trade and domestic manufacturing. Gootzeit also describes a severe shortage of funds in Britain. Whether his account is accurate is debatable, for notwithstanding the temporary financial crisis during the first half of 1819, "by Autumn, every vestige of discredit had disappeared", according to Tooke [(1838) 2:78]. Moreover, Gootzeit's assertion that there was a "reduction of paper credit" is certainly not valid since the Bank made no attempt to contract its notes after the Resumption Act passed, but continued to provide its accustomed discounts to merchants.

A final criticism of Ricardo's monetary economics is that he "failed to recognize the vital role of the Bank of England as lender of last resort" [O'Brien (1975) p.152]. The criticism is based on the omission from Ricardo's posthumously published Plan for a National Bank (1824) of any reference to that function. Certain authors consider the oversight a severe deficiency in his monetary thought since it is assumed that the Bank of England actually fulfilled this role and that this was widely recognized. But while the concept of the dernier resort was understood at the time--Thornton discussed the duty at length in Paper Credit--the Bank of England was inclined to operate as any other commercial institution and had historically restricted credit during severe financial crises. The neglect of this fact is evident in Sayers [(1953) p.63], who attacks Ricardo on the basis of an imagined policy of the Bank of England, saying: "It is significant both of Ricardo's general position and of his view of the Bank Directors that neither in published works nor in private letters did he make any reference whatever to the special responsibility of the Bank as a prop to the market in times of trouble--as, we should say, a lender of last resort."

Pace Sayers and O'Brien, the Bank did not function as a lender of last resort from 1793 till 1826; rather, they abandoned the duty to the Exchequer, which was forced to provide credit during several financial crises. This is a fact confirmed by Hawtrey [(1934) p.21], Hawtrey [(1970) pp.119-122], Fetter [(1965) pp.118-120] and Morgan [(1943) p.8]. To cite Morgan, "The realization of its [the Bank's] responsibilities to provide cash in times of emergency was delayed by the action of the government in issuing Exchequer bills to merchants in distress during the crises of 1793 and 1811. The demand for such aid was renewed in 1825, and it was only after Liverpool had very firmly refused that we hear the last of it. The evil consequences were twofold for the Bank was blinded to its natural responsibility, and the public was encouraged to look to the government for aid."

IV. The Contribution of the Following Chapters.

Though classical economics originated in the real world, it seems that the role of historical events in the formation of economic theory has been too little appreciated by the majority of historians of economic thought. Ricardo's works, particularly, have been interpreted without adequate consideration of his political and economic milieu. My purpose is, in part, to remedy this deficiency in the literature, and to this end, I have devoted Chapters One and Two to a detailed account of the relevant economic and political events in Britain from 1813 through 1824, establishing the historical background for Ricardo's works, which to my knowledge is not available from any of the hundreds of other books and articles relating to this period. The standard texts by Mathias (1969), Ashton (1948) and recently Hudson (1992) on the industrial revolution lack sufficient detail to be of much use to historians of thought. The statistical works by Gayer (1953), and later Dean and Cole (1967), provide

much needed data, but still no detailed account of actual economic events nor a discussion of the information available at the time. Similarly, the books and journal articles on specific industries--such as coal, cotton, iron, railways, wool--on the banking system, the Poor Laws and agricultural protection, are each too narrowly focused for our purpose which requires precise information about every aspect of the economy, from particular industries to the working of the banking system, to the legal environment, to public finance. For the historian of thought, it is also important to know what information was available to the classical economists since their perceptions of current events certainly differed from modern economic histories, produced with the advantage of hindsight.

Chapters One and Two provide an historical background for Ricardo's works, describing, in a month by month narrative, the political and economic developments relevant to his macroeconomic theory, his interpretation of the depression, and his suggestions concerning public policy. Included are explanations of the Corn Laws, the Poor Laws and the Acts pertaining to the Bank Restriction. The chapters also reconstruct the Parliamentary debates surrounding Resumption and agricultural protection--debates that are important because they relate directly to Ricardo's analysis of the 1818-25 business cycle.[13]

The historical account is almost entirely based on primary sources in order to provide a sense of how Ricardo and his contemporaries would have perceived the postwar period. Descriptions of primary sources--specifically Government reports and business publications--and the information contained in these sources are included, offering a unique view of the conventional wisdom of educated Englishmen in the last century.[14] The chapters are

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[13]William Smart (1910-1917) makes scattered references to Parliamentary debates where Resumption and agricultural protection were discussed, but he does not provide a unified treatment of the subject.

[14]To my knowledge, no account similar to mine has been published. There are, of course, lists of Parliamentary papers--notably the Cockton Index--but none approach, in detail, the information

supported by an Appendix, which, though unusually lengthy for a work in the history of economic thought, is an essential part of the account.

The materials from Chapters One and Two underlie the ensuing chapters, which question the critical view of Ricardo--particularly, the presumption that he was ignorant of contemporary events, that he adhered to a simplistic model, and that, on the basis of this model, he advanced ruinous policies. Chapter Three begins the history of economic thought section of the thesis by describing what Ricardo knew about current economic events and how he acquired this knowledge. I show that because of his business pursuits and because of his interest in political affairs, Ricardo was far better informed about events than is commonly acknowledged.

Chapters Four and Five address Ricardo's analysis of the first and second postwar depressions, respectively. Emphasis is placed on his assessments of the effects of a number of severe shocks, including: the sudden reductions in export demand in 1815 and 1819, the country banking crisis from 1814 to 1816, the monetary fluctuations attending the Resumption Act, the effects of ongoing technological change, the hardships attending the transition from wartime to peacetime production and two separate instances when the British market was deluged with corn imports--from Russia and Germany in 1814 and from Ireland in 1820. The chapters also examine what Ricardo considered institutional barriers to prosperity: trade restrictions, the national debt, high taxation and the Poor Laws. To show that he did not vacillate from one account of distress to another, Chapter Five emphasizes the distinction Ricardo made between temporary reversals in economic activity and the more permanent problem of a "disproportion" between capital and labour. He associated short-term crises--reversals in trade in 1819, for example--with the misallocation of capital; the

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contained in the economic history chapters and the data appendices.

long-term problem of a deficiency of capital, on the other hand, he attributed to agricultural protection, the Poor Laws and the national debt.

These two chapters also address the issue of Ricardo's alleged denial of general gluts. I show that Ricardo allowed for the possibility of temporary excess money demand and explicitly recognized the practice of hoarding, but rejected what he understood Malthus and Blake to mean by the designation "general glut" as an explanation of postwar distress, on the grounds that their positions were incompatible with current economic conditions.

Chapter Six defends Ricardo's position on monetary policy. First, I demonstrate by reference to economic and political events that Ricardo's proposal to resume cash payments in 1819 was not irresponsible; it was rather a reasonable solution to the ongoing monetary instability. Second, it is shown that the caricature of Ricardo as an extreme bullionist bears no resemblance to the man in Parliament and to the author of An Economical and Secure Currency. From at least 1816, and perhaps earlier, Ricardo advocated the discretionary management of a convertible paper currency by the central monetary authority. It is thus necessary to re-evaluate his position in the Bullionist camp and whether he actually was the doctrinal father of the Currency School and the 1844 Bank Charter Act. Finally, I demonstrate that the criticism of Ricardo, for failing to recognize the alleged role of the Bank of England as lender of last resort, is not valid. For not only was the Bank not functioning in this capacity, but more importantly, Ricardo did recognize, and expressly stated, that the Bank could preempt the Exchequer in providing credit during severe crises, noting the panic of 1793 as an example.

Chapter Six concludes with a clarification of Ricardo's "Treasury View" of fiscal policy, and, in particular, whether his position implies adherence to a strict version of Say's Law. When Ricardo considered the merits of public spending, he was not primarily concerned with

the immediate effects of this expenditure on aggregate demand. Rather, he focused on the question of whether high Government spending, financed ultimately by high taxation, was likely to impede or encourage capital accumulation. There are, however, passages in his writings that refer to the short-run effects of expenditure on output and employment, and a number of these have been cited in the literature as evidence that Ricardo accepted Say's Identity in the course of developing his highly abstract and irresponsible position on fiscal policy. I provide alternative interpretations of the passages in question, interpretations consistent with Ricardo's allowances in other contexts for hoarding, the non-neutrality of money, and unemployment. I recognize that the textual evidence is not conclusive in this matter, but there is at least as much support for my interpretation as for that of critical authors.

Chapter One: The Business Cycle of 1815-1818

I. Introductory Remarks.

A detailed knowledge of historical events is an essential part of the study of classical economics. In the case of Ricardo, the most important events occurred from 1813 to 1823. In Chapter One we focus on the first half of this period, and particularly on the depression phase of the 1815-18 business cycle. (Both Chapters One and Two date business cycles from peak to peak.)

The upper turning point of a speculative expansion occurred in mid-1815. I say "mid-1815" because there is some uncertainty as to the exact timing of the change. Gayer [(1953) p.110] assigns the peak to March 1815. Based on contemporary tax reports, however, I set the date later, in July or August 1815. What is certain is that a general depression was underway by the Fall of 1815 and that the crisis continued into early 1817.

Section II examines a possible initiating factor of the general depression: the agricultural crisis of December 1813 to April 1816. We show that while the agricultural depression reduced the expenditures of landlords and farmers, and while it contributed to widespread failures among country banks in rural districts, the crisis did not, in itself, cause the general depression. Rather, the decline in agricultural expenditure was counteracted by an increase in foreign export demand and in domestic manufacturing until a collapse of foreign markets occurred in mid-1815.

Consistent with contemporary views in Parliament and the commercial press, Section III argues that the reversals in foreign trade in 1815 and 1816 largely caused the 1815-17 depression. The account is supported by the fact that general economic activity, as measured by tax data, corresponds exactly with fluctuations in foreign trade. Section III further

examines the effects of the cessation of the Government's wartime expenditures--a sudden drop of £53.5 millions or about 18% of aggregate demand--on the labour market. Military campaigns are labour-intensive. So when demobilisation began in 1814, and 400,000 soldiers returned to the civilian workforce, this greatly added to the current problem of unemployment. The hardships endured by labourers after the War, and especially after the harvest of 1816 failed, are reflected in many petitions to Parliament. A selection of these petitions, with a description of the attending civil unrest, is included below. The subsequent economic recovery, which began in April 1817, is described at the close of Section III. With high corn prices and a rejuvenated export demand, all sectors were prospering by the end of 1817, and favourable economic conditions continued through 1818.

Section IV critically examines the Bank's monetary policy from 1815 through 1818. Despite its unofficial position as England's central bank, we show that the Bank behaved in every way like an ordinary commercial bank, contracting its discounts at the depth of the depression in 1816, then increasing its note circulation during the subsequent boom. Though the Bank initiated a partial resumption of cash payments in 1816 and 1817, it continued to increase its note issue in 1817, even after the foreign exchange became unfavourable. The consequent loss of its bullion hoard forced the Bank to suspend cash payments in April 1819, and had it not been for the 1819 Resumption Act, it is not clear that the Bank would have ever restored the gold standard. In any event, the return to cash payments was delayed till 1821. The Bank's mismanagement of the money supply incited much hostility in the City and in Parliament. Section V examines the political consequences of this opposition, showing that it was an important element in the movement to limit the discretionary powers of the Bank.

By providing the essential historical background, our account corrects common misconceptions in the literature concerning postwar events. As noted in the Introduction, secondary authors seldom recognize that two separate business cycles occurred in the years 1815 to 1825, supposing instead that chronic underconsumption depressed the British economy for nearly a decade. In point of fact, the depression of 1815-17 lasted less than 24 months, and was not initiated by a collapse of domestic demand. By painstakingly basing our account on primary documents, we also show that the educated public would have been well informed about both the duration and the probable causes of the depression.

II. The 1813-16 Agricultural Depression.

"But, above all things, wine upon table after dinner," thundered Cobbett in his Weekly Political Register, "that is an unnatural and bad state of society in which farmers in general can even think of doing these things." With little foreign competition and a growing populace to supply, British agriculturalists flourished during the War. Two decades of high corn prices permitted a country lifestyle that was profligate by some accounts, and at least comfortable by any measure. High prices also produced a "rage for farming," as Brougham described it [Edinburgh Review (June 1816) p.261], that was attended by unprecedented investments in land and agricultural machinery, causing "a vast portion of land to be thrown into cultivation which had before been untilled," [Edinburgh Review (June 1816) p.259], and extending the intensive margin of cultivation. There were 1700 Enclosure Acts in the years 1800 to 1819, as compared with 2200 in all other decades from 1720 to 1829 combined [Porter (1836) pp.155-6]. In terms of acreage, from 1793 to 1801 land holders enclosed 273,891 acres of common pasture and wastes (30,432 acres annually), while from 1802 to 1815 793,743 acres (or 52,838 acres annually) were enclosed [Barnes (1965) p. 106].

The continued extensions of the margins of cultivation created an ever widening disparity between corn production costs in Britain and on the Continent. Based on studies by the Board of Agriculture, Arthur Young testified before the 1814 Commons Committee on the Corn Laws [Minutes of Evidence, pp.80-3] that the expense of cultivating 100 acres of arable land had increased from £411 in 1790 to £547 in 1803, and again to £771 in 1813--a rise of almost 90% in total.[1] Accordingly, he stated that the remunerative price of wheat could not be less than 87s. per quarter; 34s. was his estimate for oats.[2] In contrast, Prussians purchased wheat for less than 30s. per quarter in 1814 and sold oats for 10s. [see Appendix C.3]; even at Hamburg and Rotterdam the average price of wheat was below 50s. Based on this disparity, the 1814 Commons Committee [Report, p.6] concluded that "there is scarcely any price in our own market, which, under circumstances of a general abundance in the other parts of Europe, would be sufficiently low to prevent an importation of corn from those foreign parts".[3]

Notwithstanding the potential threat of foreign competition, British agriculturalists remained optimistic as the War ended. For though the ports had been open to foreign corn during the entire conflict,[4] Britain was in famine by 1813, following four successive bad

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[1]In real terms the rise in production costs was less than 90% since an inflation of about 40%--as measured by the price of gold--occurred from 1790 to 1813. Gold increased from £3 17s. 10 1/2d. to £5 10s. per ounce.

[2]Arthur Young was the Secretary of the Board of Agriculture. The estimates of production costs provided by the Board tended to bolster the position of the extreme protectionists [Mitchison (1959) p.62].

[3]Similar findings were made by the 1814 Lords Committee on Grain and the Corn Laws.

[4]The Corn Law of 1804 permitted importation at any domestic price. Wheat was subject to a high tariff (24s. 3d.) at prices below 63s., but above 63s. the tariff became insignificant. Because wheat prices remained high during the War, the 1804 Law never came into effect. This fact is discussed at length in Barnes [(1965) pp.89,121]. Hollander [(1997) pp.868-870] provides a valuable summary of the various Corn Laws.

harvests.[5] Moreover, the Corn Laws of 1791 and 1804 had demonstrated the landlords' collective strength in Parliament[6] and there was every reason to be confident that additional protective measures could be adopted if necessary.

The climate of optimism prevailed until the Fall of 1813, when the first in a series of agricultural shocks occurred. Wheat prices, which had long been above 100s. per Winchester quarter, began falling in August in anticipation of an abundant harvest. The harvest was better than expected, sending wheat prices below 100s. in September and below 80s. by November. Prices failed to rebound in 1814, for though the 1814 harvest was poor, the combined weight of foreign imports and the stock remaining from 1813 kept prices under 80s. throughout 1814 and below 60s. for most of 1815 [see Appendix C.1]. The immediate effects of this fall were severe[7] since a third of the populace were directly employed in agriculture.[8]

The resultant political agitation persuaded Parliament to adopt a protectionist[9] Corn Law

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[5]The price of wheat had been as high as 155s. per Winchester quarter in August 1812. Wheat did not fall below 100s. until September 1813. [see Appendix C.1]

[6]Spencer Walpole estimated the voting power of the landed gentry at about 150 [Smart (1917) 2:37].

[7]In his Objections Against the Corn Bill Refuted [(1815) p.2], William Spence wrote that the best grain sold at a loss, even ignoring rent charges. Malthus described the situation as far worse and more extensive than any mercantile distress that ever took place in the country [Grounds of an Opinion (1815a) p.7].

[8]See Census Reports for either 1811 or 1821.

[9]The 1815 bill prohibited the importation of wheat at prices below 80s. per quarter, but allowed duty free importation once domestic wheat prices exceeded this threshold for a period of three consecutive weeks. By contrast, the 1804 Corn Law effectively prohibited imports only when the domestic price of wheat exceeded 63s. per quarter. With respect to other types of corn, the 1815 Law permitted the importation of Barley at 40s., of oats at 26s., and of rye, pease and beans at 53s. The Law allowed importations from Quebec and the North American colonies at rates 25% below those for foreign corn [Lowe (1822) Appendix, pp.128,129].

in 1815, after a protracted investigation,[10] and notwithstanding the intense opposition from non-agricultural interests.[11] Unfortunately for the landlords and farmers, the introduction of the new Law coincided with the abundant harvest of 1815 and wheat prices declined to 53s. 1d. by the fourth week of January 1816 [see Appendix C.1]. Agricultural hardships were further aggravated by a late drought that forced the sale of large numbers of cattle at depressed prices [Smart (1910) 1:435]. The low prices of corn and stock caused a reduction in the demand for agricultural land to such an extent that in some districts marginally productive farms were abandoned en masse: "The tenants are throwing up their farms in bodies; selling their little stock, and quitting the country. Large tracts of country are literally laid waste, as if the ravages of pestilence, or famine, or war, had swept every thing away before them; and proprietors, who used to receive thousands a year of rent,[12] have now not nearly so many hundreds, and, in some cases, scarcely any thing at all" [Edinburgh Review (June 1816) p.257].

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[10]On 22 March 1813--before the collapse of prices--a select committee was appointed to inquire into the corn trade of the United Kingdom. The committee proposed the free export of corn from Great Britain and Ireland, but nothing came of these proposals [Barnes (1965) pp.117,118].

Debate in Parliament on the Corn Laws resumed 5 May 1814 under conditions opposite those in 1813. The Lords Committee on the Growth, Commerce and Consumption of Grain (1814) provided two reports on the agricultural crisis, but made no policy proposals [Barnes, pp.129,130]. The Commons Committee on the Corn Laws (1814), however, supported an increase in agricultural protection and its recommendations formed the basis of the 1815 Corn Law. The new Corn Law passed the Commons on 10 March 1815. Third reading in the Lords occurred on March 20th. And the Bill received Royal Assent on March 23rd [Smart (1910) 1:451-3].

[11]The total number of signatories to Parliamentary petitions against the 1815 Corn Law amounted to 1,817,000; 10,000 petitioners lobbied for the legislation. On 6 March 1815 riots against the Bill began in London and continued for several days; some lives were lost. Robinson, the Vice-President of the Board of Trade and the man who introduced the nine resolutions on which the 1815 Law was based, had his home sacked. ["Chronological Arrangement of Remarkable Occurrences for the year 1815," The Scots Magazine (January 1816) p.19]

[12]Fussell and Compton [(1939) p.194] report that by 1816, rents, generally, had fallen by a third to a half.

The spillover from the agricultural crisis began affecting country banks[13] in rural districts by July 1814.[14] As landlords, farmers and land speculators proved unable to repay their debts, there followed a twenty-four month financial debacle[15] that the Edinburgh Review [(July 1821) pp.477-8] attributed directly to the fall in agricultural prices: "The importations of foreign corn, subsequent to the opening of the Dutch ports in 1814, by occasioning a great decline of the price of the principal article of agricultural produce, produced an unprecedented degree of distress, first among the farmers and latterly among the country bankers. It is estimated that, in 1815 and 1816, no fewer than 240 private banking companies either became altogether bankrupt, or, at least, stopped payment".[16] 25 banks failed during the latter half of 1814; 25 more banks collapsed in 1815; a further 26 became bankrupt during the first half of 1816.[17]

In spite of the severity of the agricultural depression, the crisis was short lived. Corn prices began to rise in January 1816, increasing rapidly so that by April renters were returning to the once abandoned farms [Annual Register (1816) Chronicle 55]. By August 1816 wheat sold above 80s. per quarter. After the harvest of 1816 failed, British agriculturalists enjoyed two and a half years of extreme prices, and for eight months wheat

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[13]The country banks had overextended credit for speculative land purchases and agricultural improvements because it was assumed that land was a safe investment [Buer (1921) p.161].

[14]Prior to 1814 the banks had been flourishing. In 1813, for example, only eight of the nearly six hundred country banks in England and Wales became bankrupt.

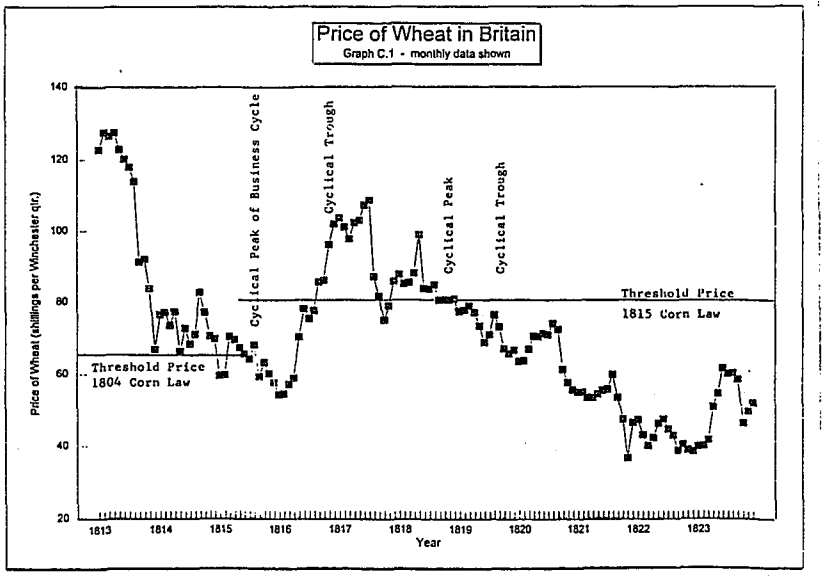
[15]The country-banking crisis began in July 1814 as a consequence of the fall in corn prices. Reversals in foreign trade in the Autumn of 1814 created additional troubles, but exports increased again the Spring of 1815, and it was not until the collapse of foreign demand for home goods in 1815 that there were widespread failures as a result of speculative investments in foreign trade.

[16]A similar description of the crisis can be found in an Edinburgh Review article of July 1819, p.54.

[17]Report from the Committee of Secrecy on the Bank of England Charter, Appendix No.101, reprinted in Parliamentary Papers (1831-32) vol.6, p.599.

even surpassed 100s. per quarter [see Appendix C.1]. Though the ports were open, competition from foreign sources failed to reduce British corn prices because the 1816 harvest on the Continent also failed [Tooke (1838) 2:14-18], resulting in famine and a similar rise in corn. In Rotterdam, for example, the average wheat price in 1817 was 104s. sterling per quarter [Appendix C.3].

Though rural Britain was directly affected by the agricultural depression, it is difficult to determine the extent to which the reduction in agricultural demand affected aggregate business conditions. As shown in the graph below, the peak of a long boom in aggregate activity occurred in the Summer of 1815--two years into the agricultural depression and only months before its lowest depths. The ensuing cyclical trough of aggregate activity occurred in September 1816--a time when agriculture was again prospering and wheat prices were above 80s. The next cyclical peak (September 1818) occurred when wheat was at 80s.; in the subsequent trough (September 1819) wheat sold for 73s.



Given the timing of these events, aggregate business conditions seem to correlate more closely with fluctuations in foreign trade than with the state of British agriculture. This is not to suggest that agricultural demand was unimportant, but it seems that the effects of agricultural demand were frequently offset by the strength (or weakness) of foreign demand for British manufactures.

III. The First Postwar Business Cycle

A. Initiation of the General Depression, Fall 1815 to Spring 1817.

As Allied victory seemed imminent, merchants anticipated a renewed demand for British manufactured goods on the Continent. The attending production boom in exportable commodities--which lasted from late 1814 through the Spring of 1815--degenerated into a speculative furor, causing an inflation of both wages and commodity prices. The Scots Magazine [(November 1813) p.854] noted that with the tremendous demand for goods, workmen in some manufacturing districts were "able to raise their wages twice in a week" . The Scots February 1814 [p.83] edition further stated that "Commercial speculations in all branches has been uncommonly active since the battle of Leipsic, and especially since the passage of the Rhine by the allied powers".

Initially, the speculations seemed justified. The quantities of goods exported in 1814 exceeded those of any previous year[18] and aggregate exports increased by another 20% in 1815 [see Appendix D.1]. In addition, British military demands for manufactured goods remained high till late 1815, as Parliament voted a vigorous campaign and, even after the

[18]This is apparent in the report on customs and excise revenues in the Scots Magazine of September 1815, p.657.

Hundred Days, large expenditures were required to support the Allied occupation. The state of prosperity was heralded in a Parliamentary address on 20 February 1815 by the Chancellor of the Exchequer as "the most flourishing period which the history of this country presented" [Hansard 1s, 29:860]. His assessment seems to have been confirmed by the continued rise in money wages at a time--1814 and early 1815--when the price of subsistence was declining [Tooke (1838) 2:5,6].

Under normal circumstances, the speculative boom would have been checked by a lack of credit facilities. However, the Bank of England had extended its note circulation farther than usual, allowing the increase[19] in both commercial credit and Country Bank issues.[20] The Bank did not deliberately increase private credit--in fact, its commercial discounts were modest during the final years of the War [see Appendix A.2]--but as the conflict intensified in violence and expense, fiscal pressures forced the Government to demand liberal advances from the Bank [Acworth (1925) p.71], leading to the increase in the circulation of Bank paper,[21] and abetting the subsequent speculative investments in foreign trade.

Price inflation accompanied this monetary expansion. According to contemporary measures of inflation--namely, the prices of gold and silver and the foreign exchange--the currency was most depreciated in August 1813, when the market prices of gold and silver peaked at 110s. per ounce and 7s. per ounce, respectively, and when the foreign exchange

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[19]The increase of country notes is evident in Parliamentary reports of 1814 and 1815 [see Appendices B.1 and B.2].

[20]Country Bank notes were convertible upon demand into Bank of England notes. They could not be issued without limit since they would be returned to the issuing banks if they became depreciated relative to Bank of England paper.

[21]Bank of England issues increased steadily from the beginning of 1811 (£23,333,430) to August 1814 (£29,483,480), at which time the Bank's circulation began to decline, falling to £25,750,550 by the end of 1815 [see Appendix A.1].

with Hamburg reached its lowest point [see Appendix C.4]. The fact that inflation peaked in mid-1813 is supported by the Gayer domestic price index [(1953) pp.469-470], which records the highest commodity prices in May.

. . .

The prosperity of trade and manufacturing began to ebb in the Summer, or perhaps early Fall, of 1815 as foreign demand proved less than anticipated.[22] To the chagrin of British merchants, Continental powers emerged from the War "in a state of comparative poverty and distress" [Edinburgh Review (February 1816) p.136]. Moreover, the Continent was not as dependent on British manufactures as before the War since competitive industries had developed during the years of the Continental System [Gayer (1953) p.121]. Foreign trade barriers[23] further hampered British exports, as did renewed competition for Mediterranean markets.[24] Competition from Continental merchant marines in the Mediterranean alone

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[22]Gayer [(1953) p.110] assigns the peak of the business cycles to March 1815. Tax data, however, shows that general economic activity continued to increase through the third quarter of 1815 [see Appendix E.2]. To my knowledge, the first commercial report of a widespread crisis appeared in the October 1815 edition of the Scots Magazine in an article dated 4 September 1815. (The Scots was a principal source of business news and reported nothing about a general depression till this point.)

Trade with the Continent was depressed by June 1815 [New Monthly Magazine (July 1815) p.579], but a strong demand for commodities to export to the United States prevented a further decline in prices [New Monthly Magazine (August 1815) p.90], and by September, even "the continental markets generally indicate an improvement in the price of most of our export articles of merchandize, both colonial and manufactured, [causing] the prices here to be fully supported" [New Monthly Magazine (September 1815) p.184].

[23]In 1816 the United States levied duties of 25% on commodities which could be amply produced domestically and 20% on those which could not [Smart (1910) 1:495].

[24]During the War the Dey of Algiers had been allied with Britain, providing the British merchant marine with a monopoly of the Mediterranean trade since the Barbary pirates preyed upon all but English ships. But this privileged position ended when, in a "fit of magnanimity", British forces under Lord Exmouth attacked Algiers, destroyed the pirates and opened the Mediterranean [Smart (1910) 1:461].

forced more than 800 British ships and 10,000 British sailors out of employment [Smart (1910) 1:461,462]. Because of the reversals in foreign trade in 1815, British exportable commodities glutted markets in Europe and the United States, reducing prices "far below the original cost" [Annual Register (1815) Chronicle 176]. In a Parliamentary speech of 9 April 1816, Brougham commented on the "rage for exporting goods of every kind" in 1814 and 1815 that had caused English goods to be "a dead weight without any sale at all; and either no returns whatever were received or pounds came back for thousands that had gone forth... [leading to] a prodigious diminution in the demand for manufactures and indirectly, a serious defalcation in the demand for the produce of land" [Edinburgh Review (June 1816) p.263].

The extent to which the reduction in trade initiated the postwar depression should not be underestimated. Gayer [(1953) p.117] remarks that "we have here a crisis the basis of which was prior investment in consumption goods for export and re-export." The official value of goods exported--a measure that reflects quantities traded, not market prices--declined by 17% from 1815 to 1816. The market value of exports declined by £10 millions--about 20%--over the same period [see Appendix D.1]. These reductions in trade were widely recognized, being publicized both in Government reports[25] and in the commercial press.

A further cause of the economic crisis of 1815-17 was the cessation of Government war expenditures, "suddenly diminished by about fifty millions[26] a year" according to the Edinburgh Review [(June 1816) p.262], that created havoc in war-related industries. The reduction in Government spending accounted for nearly 18% of aggregate demand as compared with estimates of nominal British national product during census years: £232

[25]A list of these reports, which came to 60 pages in 1816, can be found in the Appendix to the Journal of the House of Commons.

[26]The actual reduction in annual Government expenditures in the years 1814 to 1817 was £53.3 millions.

millions in 1801; £301 millions in 1811; and £291 millions in 1821 [Deane and Cole (1967) p.166].

The effects of this reduction on the working class were particularly serious given the labour intensity of military spending. Concerning demobilisation, the Scots Magazine [(July 1817) p.493] stated that "The reduction of the army and navy at this particular period, and the return of many soldiers and sailors to their friends just when there was a difficulty of finding employment was a considerable aggravation of the distress, rendering the employment of ordinary labourers more difficult, besides throwing these also on the public market of labour." By comparing the numbers of soldiers employed by the British military (shown below) with the male population of Great Britain--which the 1821 Census estimated at 6 millions and of whom 2.5 millions were below the age of 15[27]--it is not unreasonable to suppose that the 413,000 demobilised soldiers accounted for more than 10% of the male labour force.

Year	Soldiers, Sailors, Marines in Service
1814	534,351
1815	365,392
1816	178,724
1817	121,168

The reduction of military expenditure also affected labourers in war-related industries, of whom Lowe [(1822) p.62] estimated there were about 100,000. The ironworks, particularly, suffered "extensive ruin" as the annual average price for pig iron at the forge fell from £6 0s.

[27]Population figures are taken from 1811 and 1821 census returns: Abstract of Population Returns for 1821 (1812) vol.11, p.509 and Enumeration and Parish Registers of Great Britain according to the Census of 1821 (1822) vol.15, pp.542,543.

0d. in 1814 to £3 16s. 0d. by 1816 [Gayer (1953) p.128]. Even in April 1817, when most manufactures were reviving, Brougham presented a petition from Birmingham, signed by almost the whole labouring population of the city (11,000 signatures had been obtained in 48 hours), pleading for relief [Hansard 1s, 36:21].[28]

B. Exact Dates of the Depression.

Reflecting the state of general prosperity at the close of the War, Treasury accounts indicate that from the quarter ended July 1813 through the quarter ended October 1815,[29] total customs, excise and property tax revenues steadily increased.[30] The postwar reversals in foreign trade and domestic manufacturing are reflected in falling tax revenues beginning the fourth quarter of 1815. The depth of the crisis seems to have occurred in mid-1816.[31] An increase in excise revenues in the first quarter of 1817[32] signalled an end to general distress.

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[28]In March 1817 Brougham cited statistics to demonstrate the situation of Birmingham: "of a population of 84,000, about 27,500 were receiving parish relief. Of the work people, one third were wholly out of employ and the rest were at half work. The poor rates had risen to between £50,000 and £60,000 a year, a sum exceeding what the inhabitants paid in income tax" [Smart (1910) 1:595].

[29]As noted above, Gayer [(1953) p.110] assigns the cyclical peak to March 1815. Tax reports were, however, the contemporary measure of aggregate economic activity.

[30]This occurred notwithstanding the fact that £1.1 million in customs duties were repealed over the 24 month period. ["A Return of the Gross and Net Amount of all Taxes Repealed, Expired or Reduced..." Parliamentary Papers (1833) vol.32, pp.637-653]

[31]Customs returns for the third quarter of 1816 were down by about 30% as compared with 1815; excise returns had declined nearly 17%. Gayer [(1953) p.110] assigns the depth of the depression to September 1816.

[32]From the second quarter of 1816, I consider customs and excise revenues rather than total revenues because with the repeal of the Property Tax in March 1816, total revenues declined far below wartime levels. The amount of excise duties collected in 1817 was less than in 1816, but this does not indicate that aggregate economic activity was reduced. It instead reflects the fact that £2.9 millions in excise taxes were repealed in 1816. [Parliamentary Papers (1833) vol.32, pp.637-653]

The subsequent economic expansion peaked in either the third or fourth quarter of 1818--depending on whether one attaches more weight to customs or excise figures [see Appendix E.2]--but, as we shall see in Chapter Two, general prosperity continued through January 1819.

Apart from helping modern authors understand movements in the business cycle, tax reports are important because they indicate how economic fluctuations would have been perceived at the time. Since there were no proper national income statistics in early nineteenth-century Britain, tax reports were the best available measures of economic activity, and they were used for this purpose. There are, for example, frequent references in Hansard to the "tax abstracts" that appeared quarterly when Parliament was in session. (Appendix E.1 lists the dates on which tax reports were presented to Parliament. Appendix E.2 summarizes the contents of these reports.) Additional data on Government tax revenues and expenditures were used by the House of Commons Finance Committees, which reported each Parliamentary session on the Government's income and expenditures during the previous fiscal year,[33] and also estimated tax revenues and expenditures for the current and upcoming fiscal years. Tax accounts were used to estimate changes in aggregate economic activity, enabling the 1817 Finance Committee, for instance, to approximate the severity of the depression by comparing tax revenues in 1816 with revenues of the four preceding years [Report of the Finance Committee (1817) pp.121-124]:

[33]The reports of the Finance Committees were an important, but not the only source of information on public finance. Future Government spending could be approximated simply by looking to Parliament's votes on expenditure estimates. If the estimate for a particular project was approved, then funding for that project was assured. The Budget report, presented annually by the Chancellor of the Exchequer, summarized these estimates of future expenditures and also indicated the level of the sinking fund that the Chancellor intended to maintain in the upcoming fiscal year. Exact data on Government expenditures and the sinking fund were published with a lag of one fiscal year.

> The nature and extent of the distress which has prevailed throughout those classes of the community which constitute the bulk of the population, were too strongly impressed upon the minds of Your Committee, to admit of the supposition that under such circumstances the Revenue could have been productive in an ordinary degree....the revenue derived from articles of most general consumption must be injured by the calamity of a deficient harvest [in 1816]; and the distress proceeding from this cause had followed immediately that rapid fall of prices by which the agriculture of the kingdom had been so greatly depressed and had in conjunction with the effect produced upon the commerce and manufacturing industry of the country by the sudden changes which had occurred in the political state of Europe.
>
> Your Committee are enabled to present at one view a statement of the comparative productiveness of each branch of the Revenue in the year 1816 and for the four several years which preceded it. The result of this comparison will shew that the Revenue in the year 1816 was considerably less productive than in the year 1815...It will further be observed that the receipt of the year 1815 was an extraordinarily large one...Your Committee [are] fully impressed with the belief that the unfavourable returns of the Revenue in the year 1816 are essentially referable to the general distresses of the Country.

In estimating revenues for 1817, the Finance Committee was more optimistic since an economic recovery seemed to be underway [Report, p.125]:

> Of the degree in which some melioration may already have taken place, it would be premature to state any distinct opinion. [The Committee] have, however, thought it right to call for such information as could be acquired upon this very important point from some of the persons most conversant, practically, with the Manufacturing and Commercial Industry of the Country; and the opinions of these persons as to the actual commencement or the early prospect of returning activity are upon the whole encouraging. Your Committee feel warranted...in expressing as belief that a favourable alteration is already manifesting itself throughout the Country.

The assessments of the Finance Committee concerning both the severity of the depression in 1816 and the recovery of 1817 were confirmed by the commercial press. To my knowledge, the first published article regarding the onset of a general depression appeared in the Scots Magazine of October 1815 under the heading: "The Causes of our Domestic

Embarrassments, and of the Depreciation of Property".[34] The Edinburgh Review first mentioned the depression in February 1816, describing an "unprecedented stagnation in almost every branch of our industry" [p.136] that had occurred in the aftermath of the Napoleonic War. A subsequent article stated that "At no former period of the history of this country was so great and so general a distress ever known to prevail...During the last twelve or eighteen months the country has been suffering severely in every direction; in its agriculture and its manufactures; its home trade and foreign commerce" [Edinburgh Review (June 1816) pp.255-256]. The author attributed the trade crisis to the failed speculations of 1814 and early 1815. He was careful to observe, however, that the reversals in foreign trade were unrelated to the agricultural depression, which resulted from "over cultivation, enclosures and improvements" combined with "some of the best harvests that had ever been known" in 1812, 1813 and 1814 [p.262]. The third Edinburgh Review [(December 1816) p.374] article was similar to the first two, except for an important note that "the labourer now has to struggle against low wages and dear provisions".

C. The Condition of Labourers During the Crisis.

The Edinburgh Review's reference, in December 1816, to labourers reflects the current unemployment, starvation and civil unrest prevalent in manufacturing districts.[35] According to the Scots Magazine [(June 1816) p.469], violence erupted in May 1816, as rioters

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[34]The Scots' Commercial Reports for August and September 1815 were, respectively, "The Newfoundland Trade" and the first opium sale of the year for the East India Company in Calcutta.

[35]The Chronicle of the Annual Register (1817) gives a detailed account of the unrest. For a summary of the Government's response, including the suspension of the Habeas Corpus Act and the renewal of the "Gagging Bill", see Smart [(1910) 1:548-550].

protested the rising prices of corn and butcher meat by "the breaking of threshing machines, the destruction of barns and corn stocks and by malicious fire-raising". The response of the rioters was understandable because a sudden rise in corn prices--from 53s. in January 1816 to more than 100s. per quarter by December 1816--coincided with high unemployment and declining wages: "In the course of this disastrous period...all the evils to which the labourer was formerly exposed were necessarily aggravated by the scarcity of subsistence" [Edinburgh Magazine (August 1817) p.39].

One expression of the frustration attending economic hardships was the outpouring of opposition to machinery. Legally, workers were limited to sending petitions, as shown below, to Parliament.[36]

> In consequence of the extensive introduction of Spring Looms into the department of the Woollen Manufactory...they can no longer provide for themselves and their families, a great number of them having been thereby thrown out of employ and are reduced to the humiliating necessity of seeking parochial aid... [Petition of Cloth Weavers of Somerset, Wilts and Gloucester read 6 February 1817. Journal of the House of Commons (1817) vol.72, p.32]

> [Petitioners] heretofore maintained themselves and their families, but in consequence of the extensive introduction of Machinery into that department of the Woollen Trade, they are no longer able to. [Petition of Inhabitants of Leeds relating to the use of Machinery read 11 February 1817. Journal of the House of Commons (1817) vol.72, p.49]

> A petition of several Clothworkers of the County of Gloucester, complaining of the use of Machinery in the manufacture of Cloth was presented and read... [Petition of Clothworkers of Gloucester read 5 March 1817. Journal of the House of Commons (1817) vol.72, p.138]

The petitioners hoped for a Parliamentary committee to inquire into their complaints and to introduce legislation prohibiting the use of machinery in their particular trade. The

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[36]General Indices to the Journals of the House of Commons for the years 1801 to 1820 and 1820 to 1837 provide partial lists of petitions. The greatest number of petitions relating to machinery appeared in 1817.

petitioners were sometimes successful,[37] but notwithstanding Parliament's occasional interest in the subject of machinery, the political process held little promise for desperate labourers. The outright destruction of machinery was a more certain means of opposition,[38] and frequent violence forced Parliament to adopt several measures[39] prohibiting machine breaking.

Apart from the issue of machinery, the civil unrest in 1816 and early 1817 became mixed with radical notions of political reform and degenerated into open insurrection in some districts. In response, the Commons appointed the Committee of Secrecy on Papers Presented to the House Sealed Up (1817) and the Lords formed the Secret Committee to Consider Several Papers Sealed up in a Bag (1817) to examine the alleged revolutionary schemes and the operations of secret societies, which, it was supposed, intended "a total overthrow of all existing Establishments, and a division of the Landed, and extinction of the Funded property of the Country" [First Commons Report, p.3]. Parliament's concerns may have been justified, judging by the machinations uncovered, which included: the hoarding of

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[37]Below is a partial list of Committees that were appointed in the early Nineteenth Century to inquire into issues related to the use of machinery:

(1803-04) Committee on the Petitions of Calico Printers
(1806) Second Committee...Calico Printers
(1810-11) Committee on Petitions of Cotton Weavers
(1812) Committee on Framework Knitters Petitions
(1812-13) Committee on Machinery for Manufacturing Flax
(1817) Second Committee...Manufacturing Flax
(1819) Second Committee...Framework Knitters

[38]For a chronology of popular disturbances, see Cook and Stevenson (1996) pp.192-193, 208-211. Another source is Thomas (1970) The Luddites. The Chronology of the Annual Register provides accounts of specific acts of machine breaking.

[39]In the 1816 session, Parliament passed a "Bill for more effectual Punishment of Persons riotously destroying or damaging Buildings, Engines and Machinery in Collieries and Mines". Similar legislation was adopted in the 1812 "Bill for more exemplary Punishment of Persons destroying Stocking or Lace Frames or other Machines" and in the (1813-14) "Act for Punishment of Persons destroying Stocking or Lace frames".

pikes, raids on gunsmiths shops, and even detailed plans to raid the Tower of London and the Bank of England [First Commons Report, pp.4,5]. In Manchester the conspirators actually designed "to set fire to the factories in the town [and] it was declared by one of the conspirators, that this atrocity was intended for the purpose of increasing the prevalent distress, in the hope of thereby adding to the numbers of the discontented, by throwing the workmen out of employment" [Second Commons Report, p.10]. The Government responded to these incidents of defiance in February 1817 by suspending the Habeas Corpus Act and reimposing the Act of 1795 for preventing seditious meetings.

D. Economic Recovery and the Prosperity of 1818.

The Government acted in gentler ways too, approving the Employment of the Poor Bill in May 1817 whereby exchequer bills were loaned through a board of twenty-one commissioners[40]--a body later to become the Public Works Loan Board--to fund "the employment of the present unemployed population" [Flinn (1961) p.88].[41] Financially, the project was a success; when presenting the Budget the following year, Vansittart noted that "There was a sum of £21,448 arising from the profits resulting from the loan of £1,000,000 of exchequer bills granted last year to promote public works and for the general employment of the poor; which profits the commissioners for managing that loan had already paid into the exchequer; and much more was expected to be returned in the course of the current year" [(20 April 1818) Hansard 1s, 38:211]. In terms of ameliorating economic distress, however, the project was less impressive. Not only were funds not directed to the most affected areas of

[40]There were 23 commissioners, several of whom were friends of Ricardo: Samuel Thornton, Baring, Tierney and Bosanquet [Hansard 1s, 36:574].

[41]Vansittart proposed the measure on 28 April 1817. It was approved in May 1817 [Hansard 1s, 36:569,818].

the North and Midlands, but by the time the commissioners actually began to consider providing loans--they received their first applications on June 24th [Flinn (1961) p.89]--economic recovery was already underway.[42]

By comparison, preparations to close private relief works began in Edinburgh in April 1817 for want of applicants. The first indications of improved foreign trade also appeared in the commercial press in April,[43] signalling the beginning of economic recovery.

> In the demand for the Manufactures of this country, we are happy to announce some improvement, thought not yet such as to be very generally felt; still we think the worst is past, and that the late universal depression will in a short time be considerably removed; not however, that we hope the sanguine expectations of speculators at the conclusion of the war can ever be realized. From the most important Continental markets, France and Austria, our manufactures are completely shut out; and other states into which they are admitted, have been for a long time inundated, what with our excessive exports and the produce of native manufactures. The same applies to the North American market. [Blackwood's Edinburgh Magazine (April 1817) p.113]

> On the 7th April, a meeting was called to take into consideration the propriety of continuing or discontinuing the further employment of labourers...it was essentially necessary to adopt some mode of terminating this artificial aid during the summer, now that the pressure of the winter was over, and when a renewal of employment, to a certain extent, had taken place...if circumstances did not authorize our stopping now, it seemed impossible to say we could cease at any later period; for every thing indicated that a return of employment was already commenced. ["Report of the Committee for affording Relief to the Labouring Classes in Edinburgh," Scots Magazine (July 1817) p.493]

By mid-July business periodicals pronounced a bona fide recovery:

> We state again, with much pleasure, that our intelligence from the different Manufacturing districts continues favourable. Trade is reviving slowly; and

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[42]The Employment of the Poor Bill did not receive royal assent till June 16th [Flinn (1961) p.82].

[43]Trade figures for 1817 are not much higher than those in 1816. This does not indicate that trade failed to improve, however, since goods ordered in 1817 were often not exported till 1818. [see Appendix D.1]

> the best proof of it is that all the workmen are now in employment. Wages have also risen, though, we doubt, not yet in proportion to the prices of provisions. In Glasgow and some other places, those charitable establishments which had been formed for distribution soups, &c. have been given up as no longer necessary. [Blackwood's Edinburgh Magazine (July 1817) p.444]

With an increase in British exports, the revival of domestic manufacturing continued through 1818:

> Lead and Iron Mines, almost abandoned, are resuming their former activity. The value of land is increased, and general confidence seems fast approaching, and settling upon a sure and solid foundation...The Cotton manufactures of the United States and Continental Europe have sunk before our own, and left us undisputed masters of this lucrative branch of trade. The general exports of this kingdom during last year will be found greatly to exceed in quantity most, if not all, those of every preceding year. Manufactures flourish and increase: work is abundant, and all hands employed. The wages in some branches are in comparison to the still high price of some necessaries of life, as yet but low, though much increased; while in most others these are not only good, but liberal. [Blackwood's Edinburgh Magazine (January 1818) p.464]

The business sections of the Edinburgh Magazine were filled with similar accounts of full employment [(January 1818) p.92] and the "improvement in the condition of the labouring classes" [(April 1818) p.391]. By September 1818, even the iron works were operating at capacity, with "foreign orders being so great that they cannot be completed with sufficient celerity" [p.291].

Government trade statistics confirm the accounts in the commercial press. In 1818 real exports were up £4.7 millions (or 11%) as compared with exports in 1817 [see Appendix D.1]; imports increased by £6.1 millions (or 20%) in 1818.

IV. Monetary Policy of the Bank of England.

The Bank of England received much abuse for its conduct of monetary policy during the 1815-18 business cycle. An early point of criticism was the Bank's non-response to contractions of private credit during the depth of the depression in 1816. The criticism was certainly justified because at this critical period the policies pursued by Bank Directors actually aggravated the crisis. A second controversy surrounded the Bank's decision in 1817 to advance £12 millions in notes to the Government on the security of Exchequer Bills. The advance occurred just as the economy was returning to full employment and it initiated a further--and unnecessary--round of inflation. Both points of criticism are addressed below.

Because of the decline in agricultural earnings in 1813, landlords and farmers were unable to repay many loans contracted during the years of high corn prices. A consequent crisis among country banks in agricultural districts ensued in July 1814, spreading to manufacturing centres after the boom in exportable commodities collapsed in late 1815. The combined effects of the two shocks produced what McCulloch [Edinburgh Review (December 1818) p.65] described as "the prodigious diminution of bank paper...In that period, above 240 country banks became altogether bankrupt, or at least stopped payment. The Board of Agriculture estimated, that in the county of Lincoln alone, above three millions of bank paper had been withdrawn from circulation; and the total diminution of the currency during 1814, 1815 and 1816, has never been estimated at less than twenty millions, though it probably amounted to much more." McCulloch's account agreed with evidence presented to Parliament by Francis Horner [Morning Chronicle (2 May 1816)] showing that "from the accounts on the table,[44] he was convinced that a greater and more sudden reduction of the

[44]Horner referred to an account of stamps on country bank notes presented to the House of Commons on 1 May 1816. The report covered the period October 1813 to October 1815. By law the banks were required to purchase stamps--that is, pay a special tax--on their promissory notes.

circulating medium had never taken place in any country...The reduction of the currency had originated in the previous fall of the prices of agricultural produce. The fall had produced a destruction of country bank paper, to an extent which would not have been thought possible without more ruin than had actually ensued."

The statements by McCulloch and Horner reflect a problem in any study of the monetary history of the period: the absence of accurate data concerning the country-note circulation. Changes in the country circulation were estimated by changes in the number of "stamps" purchased by the banks for their promissory notes.[45] One problem with the estimates, however, was that the Stamp Reports only indicated the number of country notes that might circulate; the reports revealed nothing about the actual circulation since nothing was known about the number of notes that had been worn out, or that were being held as reserves by the banks.[46] Because data concerning the actual country circulation was not available, translating the stamp reports into estimates of the country circulation required several dubious assumptions, as summarized by Mr. Sedgwick, Chairman of the Stamp Board, before the Lords Committee on Resumption in 1819 [Report, Appendix F.7]: "It is supposed that a Country Banker may usually have about One Tenth of the whole Amount of his Notes in his Coffers as a Reserve, and Nine Tenths in Circulation. The Notes of a Country Banker are

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[45]Stamps were a per unit tax levied mostly on items made of paper: newspapers, bank notes, bills of exchange, medical licences, etc... The Stamp Office would, at irregular intervals, provide data concerning the amount of money that had been paid in stamp taxes on country-bank notes; a higher tax was paid on notes of greater value. Stamp reports usually distinguished between notes of different denominations, the categories being: notes less than £1 1s., notes valued £1 1s. up to £2 2s., notes £2 2s. up to £5 5s., and, by increasing increments, notes of up to £100. (Stamps were also paid on cards, dice and race horses.)

[46]Stamps were also required for non-bank instruments of private credit: bills of exchange and non-reissuable promissory notes. But as with country bank notes, stamp reports indicated nothing about the actual state of private credit. Furthermore, no report on bills of exchange and non-reissuable promissory notes appeared until February 1819. [see Appendix B.7]

supposed to last, on the average Three Years[47]...the Reserves of the Current Year will, of course, be thrown into Circulation in the next Year".

Notwithstanding the lack of accurate information, it was well known, as Horner stated, that during the banking crisis, the Bank of England did nothing to support private credit. Rather, at the height of distress in 1816, the Bank reduced trade bills and notes under discount from £19.1 millions (10 January 1816) to £6.5 millions (24 December 1816) [Gayer (1953) p.132]. Further reductions occurred in 1817 as the Bank's average volume of commercial paper under discount fell to £3.9 millions [see Appendix A.2]. Tight credit contributed to increase of bankruptcies in the years 1814-18, as shown below [Journal of the House of Commons (1822) vol.77, p.1305]:

1814 - 1612	1816 - 2731	1818 - 1245
1815 - 2284	1817 - 1927	

The Bank's non-intervention in 1816 had implications for the future tenor of the debate surrounding monetary policy insofar as the Bank aroused opposition to itself both in the business community and in Parliament.

That Bank Directors readily acceded to Government demands for financing in 1817 and that this action sparked another round of inflation constituted a second point of criticism, and again one that affected future debate on monetary policy. By observing how easily Government ministers altered the money supply to suit their purposes, the Bank's critics concluded that the Government and the Bank together could not be trusted with the administration of an inconvertible paper currency. Because of the bearing of this event upon

[47]It was known that £1 and £2 notes tended to be so worn by the end of three years that they were no longer negotiable [Report of the Lords Resumption Committee (1819) Appendix F.6]. Notes of larger denominations, however, were known to remain in circulation much longer [see the testimony of Henry Burgess, below, pp.121-122].

later developments in monetary policy it merits further attention.

As the business cycle reached its depths in mid-1816, declining domestic prices created a trade surplus which caused the foreign exchange to turn favourably. At the same time, the market price of gold declined--selling for £3 18s. 6d. by October 1816 [see Appendix C.4]--and might have declined further had the Bank of England not purchased gold above the Mint price. By the Spring of 1817 the Bank's decision to purchase gold at £3 18s. 6d. had caused it to accumulate a hoard of more than £10 millions [see Appendix A.3], a treasure so immense that in November 1816 the Directors initiated a resumption of cash payments at the ancient Mint price for all £1 and £2 notes issued before 1812. No demand for specie occurred in response to this offer. The Bank made similar commitments in April 1817 and September 1817[48] and, according to Tooke [(1838) 2:50], the prospects for a complete and permanent resumption of cash payments appeared good: "It is quite clear that the value of paper had been virtually restored, and that the Bank was in 1817 in a position looking only to the amount of its treasure relatively to its circulation, extended as this was, to resume cash payments."

Notwithstanding the favourable circumstances, the Bank did not effect a complete resumption of cash payments at par in 1817 and, in fact, failed to accomplish the task till 1821. Opponents of the Bank questioned how there could have been a four-year delay in implementing a policy that was practically in place in 1817. The answer, as outlined below, involves a complicated sequence of disruptions in foreign exchange markets coupled with an ill-timed expansion of the money supply caused by a £12 million advance from the Bank to the Government to finance the Exchequer's fictitious sinking fund.

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[48]In April the Bank promised to pay in cash £1 and £2 notes dated prior to 1816. In September the Bank promised to pay in cash all notes of any denomination dated prior to 1817.

The pound sterling began declining against Continental currencies in March 1817 and by July it became profitable to export gold [see Appendix C.4]. By September 1817 most Bank of England notes--in fact, all notes dated prior to 1 January 1817--had been declared convertible and there began a rapid depletion of the Bank's gold hoard [see Appendices A.3 & A.4]. Under normal circumstances the Bank would have contracted its notes to raise their relative value and thereby stop the loss of bullion. But this policy was not followed for in the Summer of 1817 the Government forced the Bank to actually increase its circulation via a £12 million cash advance on Exchequer bills. Country Bank issues and private credit expanded in tandem with Bank of England notes [see Appendix B.1]. The metallic component of the money supply may have also increased in 1817 since the Bank issued more than £1 million in gold coin [see Appendix A.4] and since the Mint issued £4.2 millions in new silver coin [see Appendix B.4]. No accurate measure of the coin in circulation is available, though, because the foreign exchange became unfavourable in July 1817, causing some, and perhaps all, of this coin to be exported. A further complication is that about £5 millions of the new silver coin replaced old silver coin and silver tokens.

The temporary fall of the British pound on foreign exchange markets during 1817 occurred partly in response to an exodus of foreign and domestic capital and partly because of the need to make sizeable remittances abroad for the corn and commodity imports of 1817 and 1818. The exodus of capital was caused by investors on the Continent, who had purchased millions in British funds during the War, but then withdrew their wealth as peace returned. Appendix 43 to the Second Report from the Commons Secret Committee on Resumption (1819) records the magnitude of these capital transfers in a section titled: "Account of the Total Amount of Foreign Property in the British Funds." Shown below, the account pertains only to foreign holdings of British Government debt, other types of foreign

investment are not included.

Report Date	Foreign Ownership of British Funds
29 February 1816	£17,334,458
31 August 1816	17,235,150
1 March 1817	15,892,711
30 August 1817	13,305,397
28 February 1818	12,729,618
31 August 1818	12,486,913

The loans raised in Britain by Continental powers further contributed to the capital outflow. France, for instance, negotiated loans annually to pay the instalments of its war indemnity. Funds were also needed to finance postwar reconstruction, including the recovery of the monetary systems of Russia, Prussia and Austria--all of which returned to a metallic standard [Gayer (1953) p.162]. During 1819 both the Lords and Commons Resumption Committees noted the effects of the enormous capital withdrawals which occurred from 1816 through 1819. The Report below pertains to the total amount of funds raised annually by Continental powers; the breakdown is by country and year.[49]

	1817	1818
France[50]	£12,041,364	£15,014,166
Russia	1,106,875	2,966,145
Prussia		2,790,000
Austria[51]		4,100,000
Holland		1,818,181
Private European Loans		16,000,000

[49]"Statement of British and Foreign Loans, contracted in 1817 and 1818," Journal of the House of Lords (1819) vol.52, p.374. The Statement is dated 7 May 1819.

[50]Baring Brothers served as loan contractors for the Austrian loan of 1818 and for the French loans in 1817, 1818 and 1819. The loan of 1819 was particularly important because it coincided with the appointment of the Resumption Committees and inspired Alexander Baring's opposition to the Resumption Act.

[51]The financial demands by Austria-Hungary and Russia were particularly high because these nations were returning their currencies to silver standards [Hawtrey (1934) p.341].

British subjects invested at least £7,227,600 in these loans, according to the Committees' reports.[52] Their willingness to supply foreign governments with capital was due, in part, to low domestic interest rates, which both Tooke and Nathan Rothschild, in testimony before the 1819 Commons Resumption Committee, cited as a causal factor in the flight of capital.[53] Alexander Baring made a similar observation before the Lords' Committee on Resumption [Report (1819) p.103]: "The difference in the rate of interest in this country and in foreign countries, has undoubtedly occasioned considerable transfers of capital abroad. Nor do I think that it is likely to discontinue, whether new loans are made there or not, as long as the same disproportion continues to exist between the value of capital in this and other countries". In total, no less than £12 millions in capital was transferred to the Continent during 1817 and 1818.[54]

Apart from an exodus of capital in 1817 and 1818, the extensive imports of corn and other commodities, which began in 1817 and continued through 1818, also helped turn the foreign exchange against Britain. Tooke [(1838) 2:61] reported that a "scarcity of corn and of nearly all the leading articles of consumption" was evident in Britain by early 1817. The scarcity stemmed from the poor harvest of 1816 and the fact that during the depression of 1816 there was little foreign trade or domestic production. Because of the shortages, domestic prices began to rise in early 1817, being accompanied by "the usually exaggerated speculations

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[52]Tens of millions in foreign loans were contracted in England from 1821 through 1824 as well.

[53]See Tooke's testimony on pages 125-32 of the Committee's Report; Rothschild's testimony appears on pages 157-163.

[54]Our detailed examination of capital flows is warranted, not only because capital flight interrupted the return to cash payments, but because the enormous transfers of wealth to the Continent strengthened the prevalent view that Britain's postwar economic troubles, particularly in 1819 and 1820, were, in part, the result of a deficiency of national capital. As will be shown in Chapters Two and Five, the exodus of investment funds from 1817 through 1824 suggested that the Corn Laws and high domestic taxes were slowing the accumulation of domestic capital.

connected with them, which continued through the greater part of 1818" and resulted in "importations of enormous magnitude" [Tooke (1838) 2:61]. The official value of imports rose by £6.1 millions (about 20%) from 1817 to 1818 [see Appendix D.1]. Imports of principal commodities increased by an even greater percentage [see Appendices D.2 & D.5]:

	1817	1818
Barley (qtrs.)	161,811	722,843
Beans (qtrs.)	5,850	120,779
Oats (qtrs.)	1,090,111	2,059,134
Wheat (qtrs.)	1,086,310	1,691,209
Raw Wool (lbs.)	14,100,000	24,700,000
Raw Cotton (lbs.)	124,900,000	177,300,000

In response to the exodus of capital and the imports of 1817 and 1818, the foreign exchange turned against Britain in July 1817. Exporting gold became profitable and the Bank, given that most of its notes were by then convertible, gradually lost its reserves--about £400,000 per month on average from October 1817 through March 1819 [see Appendix A.4]. Under normal conditions the Bank would have contracted its notes, but this was not possible because in mid-1817 the Bank--under protest--extended a £12 million cash advance to the Government.

Why the Government required so large an advance is not immediately obvious since the fiscal demands of 1817 were not unusual, the national deficit for the year ended 5 January 1818 being only £1.1 millions as compared with total Government expenditures of £58.7 millions [see Appendix E.3]. The explanation for the Government's action centers on Vansittart's fictitious Sinking Fund. A true Sinking Fund requires a budget surplus. Britain enjoyed nothing like a budget surplus during the latter years of the war, yet millions were applied to the official Sinking Fund to redeem public debt during Vansittart's tenure at the

Exchequer.[55] To maintain the appearance of such a fund, the Government regularly sold Exchequer bills in the open market, or to the Bank of England, then used revenues from the sales to purchase funded debt. The Government would later issue new long term debt and apply the proceeds to repurchase Exchequer bills. William Huskisson captured the absurdity of this system in a letter of protest to Lord Liverpool in February 1819:

> The mystery of our financial system no longer deceives anyone in the money market; selling Exchequer Bills daily to redeem funded debt daily, then funding those Exchequer Bills once a year, or once in two years, in order to go over the same ground again; whilst the very air of mystery and the anomaly of large annual or biennial loans in times of profound peace, create uneasiness out of the market, and in foreign countries an impression unfavourable to the solidity of our resources...Whatever surplus of revenue we possess must be our real sinking fund; be its amount great or small. [Acworth (1925) p.79]

Vansittart's Sinking Fund was not only expensive to maintain, it wrought gratuitous havoc in financial markets because the Government's annual loans were larger than necessary and because the money supply was liable to increase suddenly in situations such as occurred in 1817 when the Government sold £12 million in Exchequer Bills to the Bank to finance its purchases of funded debt.

The 1819-20 depression, for instance, would have been less severe had the Bank of England not advanced additional monies to the Government in 1817. A more restrictive monetary policy would have checked the increase of Country Bank notes and the speculative boom in foreign trade in 1818. The Bank also would have been able to arrest inflation, turn the unfavourable foreign exchange, and reverse the outflow of gold. But instead of contracting its notes, the Bank was forced to extend its issues, while the Government "in

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[55]The official value of the sinking fund was arbitrarily determined by the Chancellor of the Exchequer. Government estimates of the fund bore no relation to the actual budget surplus or deficit. Estimates did, however, indicate how many additional millions would be borrowed to redeem unfunded debt.

effect paid off some £12 millions (nominal) of Funded Debt by borrowing notes from the Bank of England to the required amount!" [Acworth (1925) pp.78,79].[56] Tooke [(1823) 1:155-156] was highly critical of these maneuvers: "But if the increase of about £700,000 Bank Notes in the first half of 1817 was excessive under the circumstances described, what is to be said for the prudence of the further increase which took place, to the extent of nearly two millions on the average of the following six months, when all the circumstances tending to make the former amount excessive were in full operation?" Because of the depreciation of the paper pound, the Bank's hoard continued to be depleted until April 1819 [see Appendices A.3 and A.4] when, at the request of the Resumption Committees, cash payments were ordered stopped:[57]

> The state in which the Bank found itself in the Years 1816 and 1817 appears to have induced the Directors, in the latter year, to signify by two successive notices their intention to pay in Cash all Notes of dates antecedent to the 1st of January 1817. The effect of this measure has been to produce a considerable drain of the Treasure previously collected by the Bank...the Committee are decidedly of opinion, that all practicable and advantageous operations for that purpose [Resumption] would be impeded instead of being promoted by a continuance under the present circumstances of the partial payments to which the Bank is at present liable; and they presume most strongly to recommend to the House that such payments should immediately be suspended...

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[56]The Bank did not actually increase the aggregate amount of its notes by £12 millions during 1817. The argument advanced by both Acworth and Tooke is that because of advances made to the Government, the circulation of Bank of England notes was higher than it otherwise would have been and this contributed to the unfavourable foreign exchange and loss of the Bank's gold reserve.

The "Account of the Average Amount of Bank Notes in Circulation in each Quarter of a Year, from 1792 to 1832" [Digest of Evidence on the Bank Charter (1832) Appendix No.12] shows that during the four quarters of 1817 the actual quantity of Bank of England notes remained steady:

31 March 1817 - £27,138,290
30 June 1817 - £27,541,200
30 Sept 1817 - £29,504,080
31 Dec 1817 - £28,915,940

[57]First Report of the Lords Committee on the Bank of England Resuming Cash Payments (1819), reprinted in Parliamentary Papers (1819) vol.3, p.363.

Because of its mishandling the money supply, the Bank found itself no better positioned to resume cash payments in April 1819 than it had been immediately following the War, and far worse positioned than it had been in 1817. From the Spring of 1817 to January 1819 the market price of gold rose from £3 18s. 6.d. per ounce to £4 3s., the highest price since November 1815 [see Appendix C.4]. Concurrently, the Bank lost its bullion hoard, which declined from £11.8 millions in October 1817 to £3.8 millions in April 1819 [see Appendix A.3]. Government ministers attributed the failed attempt at resumption to two of the causes already mentioned: loans to Continental powers and the corn imports that occurred from the harvest of 1816 to the end of 1818 [Acworth (1925) p.80]. Opposition members thought the trouble centered in the monetary expansion attending the Bank of England's £12 million loan to the Government in 1817 [Smart (1910) 1:614-624], an occurrence seen to illustrate the dangers of the Government and the Bank jointly managing an inconvertible currency. (The pound had not been convertible since the Bank Restriction began in 1797.)

V. Political Debate Preceding the 1819 Resumption Act.

Apart from the debacle in 1817 and the subsequent monetary inflation, opposition to the inconvertible pound steadily increased after the War because of the Government's failure to commit to a metallic standard. The postwar continuation of the Bank Restriction on the grounds of its expedience to the Government and the Bank contributed in no small measure to Parliament's support for Resumption in 1819, since it was understood that if cash payments were not restored, nothing would prevent the Government from forcing the Bank to extend its circulation again, thereby causing further monetary instability and inflation.

By law[58] cash payments were to resume six months after the signature of a definitive treaty of peace, which occurred on 30 May 1814. In July 1814, Vansittart accordingly proposed that cash payments resume on 25 March 1815 [Hansard 1s, 28:628,629], but he reversed this decision in February 1815[59] [Hansard 1s, 29:697,711,790,1203] on the grounds that "the Restriction Act must be continued at least until the account of our foreign expenditure could be wound up, and until the state of our exchange and of the bullion trade should be farther improved".[60]

Following Napoleon's roguery and the Hundred Days, treaties of peace were ratified on 29 November 1815. According to the original Bill 44 Geo. III, cash payments were to resume in May 1816, and indeed might have for the market price of gold was then at £4 per ounce and the foreign exchange became favourable to Britain in June 1816. But notwithstanding the opportune circumstances, "It was notorious that the bank had not taken steps for the resumption of cash payments" [(3 May 1816) Hansard 1s, 34:247]. The Government consequently extended the Bank Restriction, in this instance till 5 July 1818, so that the Bank would have "sufficient time for all necessary preparations" [Hansard 1s, 34:243,244,404].[61]

The Resumption date was delayed again--till 1 October 1818--during the 1817 session

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[58]The original Orders in Council appeared 26 February 1797. The orders were confirmed by Bill 37 Geo. 3. which was thereafter continued and/or amended nine times. Bill 44 Geo. 3. extended resumption till six months after ratification of a definitive treaty of peace. For a list of these various Acts, see the Index to the Journals of the House of Lords, 1780-1819.

[59]The Bill 54 Geo. III, c.99--passed in February 1815--renewed the Bank Restriction Act till 5 July 1816 [Hansard 1s, 29:1203].

[60]Horner and Tierney led the opposition to the Bank Restriction in the House. When the Bill to continue the Restriction was finally approved, Horner noted that "from the silence of the governor of the Bank of England...he looked to the event of the resumption of cash payments with any thing but hope and satisfaction" [Hansard 1s, 29:1203].

[61]Bill 56 Geo III, c.40 continued the Restriction. Parliament approved the Act in May 1816.

[Annual Register (1817) Chronicle 87]. But when the 1818 session of Parliament convened, the Government balked at this date as well, Vansittart announcing that though "the Bank had made ample preparation for resuming its payments in cash...and that he knew of nothing in the internal state of the country or in its political relations with foreign powers which would render it expedient to continue the restriction...there was reason to believe that pecuniary arrangements of foreign powers[62] were going on of such a nature and extent as might probably make it necessary for parliament to continue the restriction" [(29 January 1818) Hansard 1s, 37:115].[63]

In January 1819, for the fifth and final time, the Government again suggested that Resumption should be delayed. It reversed this position days later, however, when it became evident that there was a general consensus in Parliament in favour of legislation to end the Bank Restriction [Smart (1910) 1:674]. (Chapter One concludes at this point. The economic events from January 1819 through 1825 are addressed in Chapter Two.)

VI. Conclusion.

We have shown that through the entire business cycle, aggregate economic conditions accorded more closely with fluctuation in foreign trade than with changes in the state of British agriculture. For though an agricultural depression began in Britain in the Fall of 1813 and continued through the Spring of 1816, the fall in agricultural income and consequent

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[62]This is a reference to the loans raised by foreign powers in Britain (see above, pp.64-65).

[63]On 9 April 1818 the Government officially moved to continue suspension of cash payments [Hansard 1s, 37:1230]. On this occasion Grenfell made an able speech, describing the conditions favourable to resumption in 1816 and early 1817, and attributing the failed attempt at resumption to the increase of bank notes in the Autumn of 1817 [Hansard 1s, 37:1251-52].

reduction in agricultural demand was offset by high export demand from 1813 through mid-1815. A state of general depression did not began till the Fall of 1815 when foreign demand collapsed. Similarly, the return of high corn prices in 1816 did not produce a rise in agricultural demand sufficient to bring the economy out of the recession. The economy did not recover till foreign demand began to increase in early 1817.

We have also shown that the Bank of England ineptly managed the money supply and thereby contributed to the severity of the cyclical fluctuations. The Bank failed to support private credit during the country banking crisis from July 1814 to July 1816, even contracting its commercial discounts at the height of distress in 1816. Moreover, though the Bank was positioned to resume cash payments at the ancient par in 1816 and actually began a partial resumption, the attempt at resumption failed because the Bank increased the money supply by £12 millions in mid-1817 via an advance to the Government just as the foreign exchange became unfavourable. The consequent depreciation of the pound caused the Bank to lose two thirds of its hoard by 1819, leaving it no better prepared to resume cash payments than it had been immediately after the War. Because the Bank and Government had, in tandem, so mishandled the inconvertible currency, strong opposition to the Bank Restriction developed in Parliament, leading eventually to the 1819 Resumption Act.

Chapter Two: The Business Cycle of 1818-1825

I. Introductory Remarks.

This chapter concerns the business cycle of 1818-1825. Section II addresses the depression phase of the cycle, which lasted from February 1819 to May 1820. We show that the depression resulted from an unanticipated collapse of foreign export demand and, to a lesser extent, was also a natural correction of the speculative increase in imports that occurred in 1818; in no way was the depression initiated by the failure of effectual demand domestically, a common misconception in the secondary literature [see the Introduction, pp.26-30]. We further demonstrate that--contrary to the claims of the Inflationists in Parliament--the depression, and the attendant decline in commodity prices, could not have been caused by monetary contraction associated with the Resumption Act, for the depression began months before the Resumption Act was assured passage, and even before the Bank of England began making preparations for cash payments. Section III examines the agricultural depression of August 1820 through 1822 and the attendant price deflation that Gayer [(1953) p.110] has estimated at 37%. We demonstrate that the fall in prices was largely limited to agricultural products, and reflected a glut of corn. Section IV shows that monetary contraction could not have been a significant factor in the price deflation, for Britain's money supply actually increased over the period.

The claims of the chapter are important, for among Ricardo's political opponents were those--including Mathias Attwood, Henry Brougham, William Cobbett, Sir John Sinclair and Charles Western--who criticized him for supporting the Resumption Act, which, they claimed, aggravated the depression of 1819-20 and was the principal cause of the decline in

domestic prices that occurred from 1820 through 1822. Moreover, the chapter corrects the misconception in the secondary literature that Britain's economy was continually depressed during the decade following the war [Introduction, pp.26-30]. The 1819-20 general depression, in fact, lasted only 17 months, ending in May 1820 with an increase in export demand. Thereafter, Britain's economy expanded for five years, driven by a burgeoning foreign trade that counteracted any aggregate effects of the 1820-22 agricultural crisis.

Concerning matters of public policy, the chapter provides an overview of the political debates involving Resumption, the Corn Laws, and the Poor Laws. Particular emphasis is given to the Poor Law Committees of 1817, 1818 and 1819 because Ricardo largely based his analysis of the sufferings of the poor on the Committees' investigations. The chapter also addresses the implementation of the Resumption Act to determine whether the Bank of England mismanaged the Resumption process as critics, including Ricardo, repeatedly asserted.

II. The General Depression of 1819-20.

A. The Onset of the Depression.

The preceding chapter has demonstrated that Britain's economy began to recover from the immediate postwar depression in early 1817. General prosperity continued through 1818, and even in January 1819 there were only favourable reports in the commercial press.

> The accounts from the manufacturing districts are not less flattering...orders were never known to be greater than at present...and the weavers are in full employment. [Edinburgh Magazine (November 1818) p.483]

> The iron works in particular, which two years ago were in so lamentable a state of distress are now so well employed that they cannot execute their orders. [Edinburgh Magazine (January 1819) p.91]

> The agricultural interests of this country are recovered from their severe depression...All our manufactures are in full activity...The extension of our trade from the additional and increasing arrivals and departures from every port is truly great and cheering. [Blackwood's Edinburgh Magazine (January 1819) p.497]

As further evidence of the general prosperity, the Prince Regent's speech at the opening of Parliament on 21 January 1819 asserted that "the trade, commerce, and manufactures of the country are in a most flourishing condition [and] the favourable change which has so rapidly taken place in the internal circumstances of the United Kingdom affords the strongest proof of the solidity of its resources" [Bulletins of State Intelligence (1819) p.15]. His statements were confirmed by members of the House in the subsequent debate on the address [Hansard 1s, 39:17-65].

Foreign demand might have been adequate to sustain the export boom, and the 1819-20 depression in Britain might never have occurred, except that in October 1818, "a sudden and great fall of the French funds occurred[1] [so that] combined with the great and sudden fall of the prices of grain on the Continent, extensive failures occurred in Paris, Marseilles and other parts of France as also in Holland and in Hamburg in 1818 before any indication had appeared of discredit or of any material pressure on the money market in this country" [Tooke (1838) 2:94,95]. A concurrent shock sent the United States' economy into a severe depression, while political upheaval closed Spanish South America to British exports. These

[1]Because of high demand for bullion in Russia, Prussia and Austria coupled with an overextension of its notes, the Bank of France found its bullion reserves being quickly depleted in the summer of 1818, falling as low as 37,000,000 francs [Jenks (1963) p.38]. To stem the loss of its hoard, the Bank contracted its discounts, "refusing to discount any paper having more than forty-five days to run, as compared with the normal ninety days" [Hawtrey (1934) p.341]. This action resulted in a complete collapse of the money market, imperiled the loan of 179,000,000 francs that had just been contracted with Barings, and threatened to prevent France from meeting her indemnity obligations.

foreign crises were noted in contemporary business reports,[2] causing some concern, but there remained widespread confidence that the home market would not be affected.

Actual events proved more harsh. British real exports for 1819 declined by £11.3 millions (or 25%) relative to the exports of 1818 [see Appendix D.1]. The collapse of foreign demand, in turn, caused a depression in domestic trade and manufacturing so that "numerous and extensive failures, which began in the latter part of 1818, continued more or less through the earlier part of 1819. Importers, speculators and manufacturers were successively ruined" [Tooke (1838) 2:77]. Because of this turn in events, the once sanguine perceptions of Britain's economic state changed in February, and by March distress was confirmed in the business press, though it was only expected to be temporary:

> Since our last publication, we are happy to see, that our accounts of the extensive trade and flourishing revenues of our country are borne out by the highest authority...[But] a time of commercial pressure and difficulty is marching hard after many, and will soon overtake individuals. [Blackwood's Edinburgh Magazine (February 1819) p.630]

> The pressure upon some branches of our trade has been very great, [but] we are mistaken if it lasts long, and are also convinced that the greatest danger is over, as there is every prospect of permanent tranquility among the nations of Europe. [Blackwood's Edinburgh Magazine (March 1819) p.761]

Concurring with Blackwood's, the editors of the Edinburgh Review [(July 1819) p.53] attributed "the principal, as well as the immediate cause of the distress of the manufacturing and commercial classes, to [the] falling off in the Continental demand". The reviewers also considered the crisis to have been aggravated by the extensive speculations in exportable

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[2]Blackwood's commercial report for January 1819 [pp.496-498] noted conditions in the United States and South America: "Numerous and extensive failures are daily taking place--confidence is shaken--money is not to be had, and mercantile concerns wear a most unfavourable aspect throughout the Maritime States of America [and] our former great and lucrative trade with Spanish South America remains subjected to the greatest vexations, vicissitudes and uncertainty from the nature of the sanguinary and destructive warfare there carried on".

commodities in 1818, made possible by an increase in private credit that might have been checked if the currency had been convertible: "We have experienced, in the course of the last eight years, three periods of universal distress, viz. the years 1812, 1816 and 1819; and although many circumstances may have concurred to produce it, there can be no doubt that the general practice of overtrading[3] which was the natural consequence of the paper system, has been the main cause of that glut of goods and also of labour in the market which has occasioned the fall of prices and of wages, which is at the root of our present distress" [Edinburgh Review (January 1820) p.57].

The importance of reversals in foreign trade should not be underestimated. Blackwood's [(September 1819) p.748] blamed the crisis on "the situation of foreign nations, and the condition to which these were reduced", principally referring to Continental powers, the regions of Spanish South America, and the United States--all areas to where unprecedented levels of British exports had been shipped:

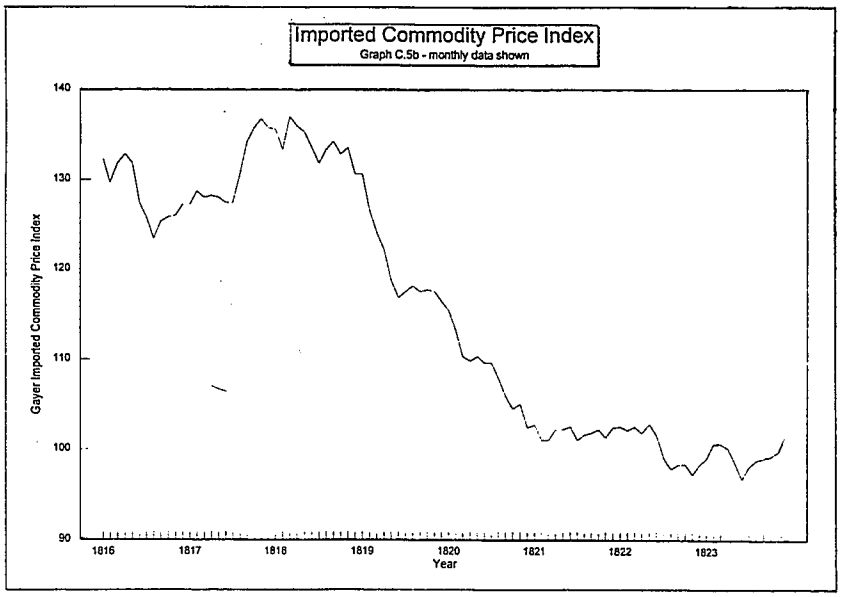
> The bubble is burst and brought ruin on thousands and the United States will find they are as yet too young and unsettled a state to carry on their trade and improvements by a banking system or a paper currency...The trade to Spanish South America is completely cut up. [Blackwood's (September 1819) p.747]

> The accounts from those foreign markets on which our commerce chiefly depends, is gloomy and distressing indeed. By the immense extension of our manufactures we have indeed overstocked almost every market, but this will be found to proceed more from the inability of these nations, owing to recent political events and convulsions, to find the means of trade, than that their wants have been over-supplied. [Blackwood's (October 1819) p.108]

High imports in 1818 were a second factor in the trade crisis. Because merchants miscalculated the level of domestic demand, foreign goods glutted the home market, causing a sharp decline in the prices of imports from January 1819 through December 1820 and

[3]"Overtrading" referred to the import, export or production of commodities in excess of the quantity saleable at a profit. In 1819 it was recognized that both imports and exports had been too great.

bringing widespread financial ruin. The fall in prices is illustrated by the Gayer Imported Commodity Price Index:[4]



Blackwood's [(February 1819) p.630] reported losses on cotton-wool imports alone at £3 millions and estimated total losses "on all exports and imports since last year, at fifteen millions" [(July 1819) p.498]. The connection between excessive imports and the collapse of prices was widely recognized, for in addition to commercial reports such as Blackwood's,

[4]For a return of the prices of specific commodities, see Appendices 92 and 93 to the Report of the Bank Charter Committee (1832).

dozens of Parliamentary reports on trade were available.[5] The table below is based on trade figures in the Journal of the House of Commons.

Imports into Great Britain[6]

Year	Sugar(cwts.)	Raw Wool(lbs.)	Raw Cotton(lbs.)	Tea(lbs.)	Silk(lbs.)
1816	3,760,548	8,100,000	93,900,000	36,234,380	1,137,922
1817	3,795,550	14,700,000	124,900,000	31,467,073	1,177,693
1818	3,965,947	26,400,000	177,300,000	20,065,728	2,101,618
1819	4,077,009	16,200,000	149,700,000	22,881,957	1,848,000
1820	4,063,541	10,000,000	149,300,000	30,147,994	2,642,000

Without considering any other commodities, the data concerning wool, cotton and silk imports explain much of the movement in the Gayer Import Price Index, which employs the following weights: sugar (16.6%), cotton (16.3%), wool (11.9%), tea (11.1%) and silk (6.1%). The increases in the importations of cotton, wool and silk from 1816 to 1818 were enormous, causing the losses described above. And though sugar imports remained stable, the stock on hand at the end of 1819 was still "very considerable," according to Blackwood's [(January 1820) p.473], leading to a fall in price of about 15% from January 1819 to January 1820. The price of Bengal cotton fell almost 11% during the same period,[7] and Georgia cotton declined by a fourth, owing largely to the continued importations from the United States and India:

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[5]The Journal of the House of Commons for 1819 alone contains 130 pages of trade accounts.

[6]For sources and annual accounts covering a broad range of commodities in the years 1810 to 1825, see Appendices D.2 and D.5.

[7]The prices of sugar, cotton and other commodities are quoted in Appendices 92 and 93 to the Report by the Bank Charter Committee (1832).

> Cotton. There have of late been very considerable arrivals from the United States and more are daily expected. [Blackwood's (February 1820) p.591]

> Cotton--The cotton market continues heavy, and the India Company having declared a further quantity for sale on the 17th instant, has added to the general stagnation of the trade. [Edinburgh Magazine (March 1820) p.287]

The increase in importations was not limited to wool, cotton and silk, however. According to official import values--that is, the Government's measure that reflected quantities of goods traded as opposed to the market value of those goods--the amount of all commodities imported for home consumption increased 57% from 1816 to 1817 and by another 30% from 1817 to 1818 [Tooke (1838) 2:62].

Trade statistics and anecdotal evidence concerning imports were important at the time because they strengthened the suspicion that excessive importations in 1817-19 contributed to the decline in the prices of foreign goods in 1819--a suspicion further supported by the fact that domestic consumption of the principal commodities of trade had not fallen during the 1819-20 depression. In disputing whether a decline in consumption had occurred, for instance, Lord Liverpool expressly referred to domestic trade statistics, saying: "It is material to consider whether the distressed state of the commerce has grown out of any diminution in our internal consumption...there is no ground for believing that any part of the distress which pervades our internal commerce has arisen from a reduction in the use of any of the great articles consumption" since taking the average of the last three years there had been practically no diminution in the consumption of tea, coffee, tobacco, malt or spirits and "It was the same with articles on which there had been no increase of taxation, consumed by all classes such as candles, paper, hides, skins, soap, salt, bricks, etc." [(26 May 1820) Hansard 2s, 1:568-570].[8]

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[8]Actual excise returns show that Liverpool's statements were correct [Digest (1833) 2:14-15].

Liverpool's statements, and the preceding trade statistics, further bring into question the view that the postwar depression in Britain resulted from chronic domestic underconsumption. The evidence seems to suggest, rather, that the 1819-20 depression was a correction of excessive investments in both imports and exportable commodities in 1818 and early 1819.

B. The State of Domestic Agriculture, 1819.

Though Blackwood's [(February 1820) p.591] described the initial months of 1819 as "the most disastrous in the commercial annals of Great Britain", not all industries were equally affected. The agriculturalists, in particular, passed the year in relative prosperity; British wheat prices declined from 76s. 2d. in August 1819 to 63s. 3d. in January 1820 after an "early and abundant harvest" [Blackwood's (September 1819) p.746], but domestic wheat prices still exceeded prices on the Continent [see Appendix C.3] and landed interests suffered only relative to their former extravagance. The annual average prices for British wheat were 94s. 9d. in 1817, 84s. in 1818 and 73s. per quarter in 1819.[9] By comparison, the Corn Law of 1804 established a threshold price of 64s. per quarter of wheat--a price at the time considered sufficiently high to ensure adequate profits.

The relative prosperity of British agriculture in 1819 was further attested to by the Report of the 1832 Bank Charter Committee [Digest of Evidence (1832) p.4], which characterized 1819 as a year of "Great Manufacturing and Commercial [but not agricultural] Distress". No less an authority than Lord Liverpool held the same opinion: "If Certain manufacturing

[9]"Account of the Average Price of all Sorts of Grain in each Year," Journal of the House of Commons (1821) vol.76, p.1032.

districts are excepted...I have never known the country in general since the conclusion of the war in a more prosperous situation...But I must now reverse the picture, and I must say that nothing can be worse or more alarming than the state of those parts of the country which I first excepted."[10]

C. The State of Domestic Manufacturing.

Manufacturing districts were indeed troubled. As British exports became unsaleable abroad, manufactures curtailed production and reduced their demands for labour, causing unemployment and inciting civil unrest. By March 1819 the financial press confirmed "general gloom" and "great stagnation in the manufacturing and commercial world." Signs of recovery appeared in June [Blackwood's (June 1819) p.365], but proved deceptive: "In this publication we had hoped to have been able to have given an account of the revival of trade, and more cheerful prospects for the commercial interests of the country. We are disappointed. The stagnation of all kinds of business continues, and is extreme, perhaps unprecedented. Numerous and severe failures cover the face of the manufacturing districts with distress and dismay, while the dreadful depreciation of all manufacturing property has swept away from thousands the labour and the profits of years" [Blackwood's (July 1819) p.498].

By April 1819, manufacturing labour was reported as suffering "dull and low wages" [Blackwood's (April 1819) p.110]. Conditions deteriorated over the next several months, so that in September 1819, the Edinburgh Magazine [p.284] stated that because "[manufacturing

[10]A letter from Lord Liverpool to Canning, dated 23 September 1819, and reprinted in English Historical Documents, 1783-1832 (1959) edited by A. Aspinall and E. Smith, London, p.333.

prices] are so low and the number of hands so great, we fear there is but a faint prospect of workmen speedily obtaining comfortable wages." The Edinburgh Review [(October 1819) p.452] provided a similar account: "When we examine into the condition of the labouring classes in this country, we immediately perceive that their distress arises from want of employment", the effects of which were confirmed in a subsequent article, describing how labourers in manufacturing districts had experienced reductions in wages [Edinburgh Review (May 1820) pp.332-4]:

> The wages of weavers in Glasgow, which, when highest, had averaged about 25s. or 27s. a week, had been reduced in 1816 to 10s.; and in 1819 to the wretched pittance of 5s. 6d. or 6s.
>
> [In Coventry] those in employment, such as had frames of their own, and who worked 16 hours a day, were only in the receipt of 10s. a week; the second class, whose frames were furnished by the master manufacturers, earned in all about 5s. 6d.; and the third, or inferior class of workmen, only from 2s. 9d. to 1s. 6d. a week.
>
> The frame-workers of Nottingham...after working from 14 to 16 hours a day, only earn from 4s. to 7s. a week.

The anecdotal evidence on wages[11] is important since it relates to the debate between Ricardo and Malthus concerning the extent to which wages fall in response to unemployment [see Chapters Four and Five]. Contemporary reports are also valuable because modern accounts of the period do not reflect the severe fall in wages. The wage indices of Mitchell and Deane [(1971) pp.348-349 and reprinted in Appendix F.1], for example, indicate a more gradual decline in money wages. The same is true of the indices compiled by Kondratieff, Bowley and Tucker [reprinted in Appendix F.2].

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[11]Further evidence on wages is contained in Smart [(1910) 1:724-725].

D. Civil Unrest.

Radical political figures capitalised on the economic distress of 1819 to further the cause of Parliamentary Reform--or Levelling, depending upon one's perspective. On 16 August 1819, the day of the Peterloo massacre, Sydney Smith wrote: "If trade does not increase, there will be a war of the rich against the poor" [Smart (1910) 1:690]. According to Blackwood's [(December 1819) p.351]: "The alarming situation of all the manufacturing districts has put a complete stop to business. In extensive districts of the country, it is completely suspended, and terror and alarm now occupy the minds of thousands...People at a distance from and unconnected with the manufacturing districts have no idea of the terrible dangers and principles which assail the peaceable part of the community in those places." The Annual Register [(1819) p.104] noted that radical political assemblies "proved so attractive to the manufacturing classes, under the irritation produced by low wages and a deficiency of employment, that the spirit rapidly diffused itself through the counties of York, Lancaster, Chester, Nottingham, and Leicester...gaining at length the important town of Birmingham".

By the time the Parliament re-assembled on 23 November 1819, the state of the country had further deteriorated, prompting the Prince Regent to cite in his opening speech "seditious practices...incompatible with the public tranquility" and leading to his request for "such measures as may be requisite for the counteraction and suppression of a system, which, if not effectually checked must bring confusion and ruin on the nation" [Annual Register (1819) p.116]. The crisis is fully documented in the Papers Relative to the Internal State of the Country [reprinted in the Journal of the House of Commons (1819-20) vol.75, pp.595-611], which were presented to Parliament and which provide accounts of: the economic conditions in manufacturing districts, the inflammatory activities of radical political reformers, and

particular incidents of defiance. To quell the current unrest Parliament passed the Six Acts, "forming a system of force, terror and coercion" [Annual Register (1819) p.129] according to Earl Grey, and instituting what Tierney decried as "an attack upon the very vital principles of the British constitution" [Annual Register (1819) pp.130,131].

(These facts relate to subsequent chapters insofar as they provide a sense of how Ricardo probably viewed the crisis. Because the Papers on the Internal State of the Country were made available to him and because he participated in the debates surrounding the Six Acts, it is evident that the civil unrest of 1819 did not escape his attention.)

E. The Status of the Poor.

Closely related to debates on the unrest of the labouring classes were the Parliamentary investigations of the Poor Laws, for it was widely understood that low wages resulted from a low demand for labour relative to an abundant supply, and it was suspected that subsidizing the poor tended to increase the supply. This was, at least, the perspective adopted by the House of Commons Committees on the State of Mendicity in the Metropolis in 1815 and 1816, and later evident in investigations by the Commons Committees on the Poor Laws in 1817, 1818 and 1819 and the Lords Committee on the Poor Laws in 1817. (These Committees, their reports and their proposed policies are relevant to later chapters because they shaped much of Ricardo's analysis of the sufferings of the poor.)

The Committees' investigations were widely publicized given that the "lower orders" and the question of what should be done about them were popular topics in the press [see Appendix G]. From 1814 to 1818, for example, the Scots Magazine published fourteen articles on the management of the poor. The Edinburgh Review published seven long articles

in the years 1817 to 1821, that described in detail the Poor Law statutes, the legal interpretations of these statutes and the practical operations of the Poor Laws. Articles pertaining to the First and Second Reports by "The Society for the Suppression of Begging" appeared in the Scots Magazine (January 1814, February 1816, September 1816), which also reported on the "Education of the Lower Orders" (November 1816), as did the British Review (February 1817). Similar writings on mendicity, vagrancy and the abuse of charities helped foster a widespread opinion that the poor were victims of their own bad habits and that assistance from charitable organizations or the state both encouraged the practice of vice[12] and perpetuated the existing squalor:

> Every public and proclaimed provision, for the relief of general indigence, is not only utterly incompetent to the attainment of its object, but has the effect of perpetuating and extending the very distress which it proposes to alleviate. [Edinburgh Review (March 1817) p.2]

> [The Poor Laws] relax the natural excitements to industry and foresight, and thus multiply the instances of wretchedness beyond its power of relieving them. [Edinburgh Review (February 1818) p.262].

The shortcomings of the English Poor Laws were alleged to have originated with the Poor Law of 43rd Elizabeth I, which legislated the compulsory provision for "a convenient stock of flax, &c. to set the [able bodied] poor to work; and also competent sums for and towards the relief of the lame, impotent, &c.." [Report of Commons Committee on the Poor Laws (1817) pp.4,6]. The statute levied Poor Rates on "every inhabitant, parson, vicar and every occupier of land" according to the assessed value of real property, described as "lands, houses, tithes, coalmines or saleable underwoods". The wording of the Law meant that, in industrial Britain, resident landlords suffered a disproportionate tax burden from the Poor

[12]The Report of the Committee on the State of Mendicity in the Metropolis [(1816) pp.3,4] best illustrates the popular view concerning the "evils attending mendicity".

Rates since non-resident landlords were exempt from the rates, while manufacturers and those with monied capital paid almost nothing, and while tenants, though they could legally be compelled to pay Poor Rates, were often deemed too impoverished to contribute. Concerning the potential tax liability facing resident land owners, Brougham observed that "in one parish, every individual, with a single exception, was wholly ruined; this gentleman had to pay the whole poor-rates of the parish, and his income was accordingly entirely absorbed" [Edinburgh Review (June 1816) p.257].

The burdens of the Poor Rates were further aggravated by liberal judicial decisions. The phrase "a convenient stock of flax, &c. to set the poor on work", for instance, came to be interpreted as requiring that public works employing the able bodied poor be provided from the Poor Rates. According to the Rev. Phillip Hunt, testifying before the Select Committee on Labourers' Wages in 1824 [Report, VI, p.36], the Rates were also used to finance the system of roundsmen, whereby unemployed labourers were sent, in rotation, from farm to farm, "to work for such farmers [but] to have their wages paid, in whole or in part, out of the poor rates".[13] In some districts the Poor Rates were even used to subsidize the wages of manufacturing labour,[14] as is shown in testimony before the 1818 Committee on Silk Ribbon Weavers [Report, p.126]:

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[13]Similar observations were made by the 1817 Poor Law Committee [Report, p.9]: "The effect of the system of roundsmen has been to throw upon the general [poor] rates of parishes...a very considerable proportion of the wages of that labour, the charge of which ought to have been defrayed by the individuals for whom it was performed."

[14]It is important for economic historians not to ignore this fact, considering the risk of overestimating the extent of unemployment. Blaug [(1958) p.75], for instance, has stated that "In an era when the number of individuals on public relief hovered steadily around one million (about 10 per cent of the population of England and Wales), the existence of a hard core of surplus labour must have been taken for granted." While Blaug correctly notes the extent of poor relief, it would be a mistake to infer that all those receiving assistance lacked employment. To the contrary, many were partly employed, and others fully employed by masters who managed to shift part of their wage costs to the Poor Rates. (Blaug's 1963 and 1964 articles on the Poor Laws are discussed in Chapter 5.)

> Question: How is it possible that goods can be manufactured at so low a rate...that you can purchase goods so much cheaper than you can manufacture them?
> Answer: The masters that encourage the half-pay system, get their goods made at half-pay; some get them manufactured at full thirty per cent. lower than I do.
>
> Question: Then you conceive the poor's rates pay the difference of wages?
> Answer: Yes...for they have no other means of subsistence.

These abuses continued almost unchecked since the Law of 43rd Elizabeth I provided no guidelines by which to determine either the amount of the Poor Rates or the extent of relief. "All the various details of the system--the mode of making the assessment, the species of property to which it was to be extended--were either left entirely to their [churchwardens] discretion, or no precise rule was prescribed for their conduct; nor was any adequate security provided by the law for the upright administration of the funds which they were empowered to raise" [Edinburgh Magazine (August 1817) p.34].[15] In some instances the churchwardens so liberally provided from the Poor Rates that persons labouring at low wages were actually induced to abandon regular employment [Report of the Commons Committee on the Poor Laws (1819) pp.7,8].

The Committees further determined that the Poor Laws contributed to the disproportion between labour and circulating capital by subsidizing an increase in the population:

> Your Committee cannot but fear, from a reference to the increased numbers of the poor, and the increased and increasing amount of the sums raised for their relief that this system is perpetually encouraging and increasing the amount of misery it was designed to alleviate. [Report of the Commons Committee on the Poor Laws (1817) p.4]

and by reducing the private demand for labour since monies exacted through the Poor Rates

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[15]The ambiguity of the law frequently gave rise to legal challenges to the decisions of the churchwardens, so that, in 1815 alone, "the money expended on law-suits amounted to £285,000" [Edinburgh Magazine (August 1817) p.34].

depleted households' disposable income:

> The greater part, Your Committee believe, of the sums of money which are now forced into the poor's rate, and undergo a compulsory, and for the most part unprofitable distribution, would probably be restored to their natural channel, giving thereby an increased activity to labour, under the interested but beneficial superintendence of their owners; from which would necessarily result a rise of wages. [Report of the Commons Committee on the Poor Laws (1819) p.9]

> Contributions...would otherwise have been applied more beneficially to the supply of employment. And as the funds which each person can expend in labour are limited, in proportion as the poor rate diminishes those funds, in the same proportion will the wages of labour be reduced, to the immediate and direct prejudice of the labouring classes. [Report of the Commons Committee on the Poor Laws (1817) p.4]

The Poor Law system of England and Wales was contrasted with that in Scotland where, in most regions, contributions to the poor were only compulsory during periods of distress, and where it was found that the numbers of poor and demands for aid did not increase except in those districts where regular tax levies for support of the poor were in place:

> The Committee have thought it right to examine evidence respecting the management of the Poor in Scotland; where, though a power exists by law to impose a compulsory assessment for the relief of the Poor, recourse has seldom been had to it [because] considerable sums are raised by regular collections at the churches, which are applied to the purpose of relieving the Poor at the discretion of the minister and elders. [Lords Report on the Poor Laws (1817) P.10]

> The Committee of the General Assembly of the Church of Scotland state, 'That it is clear to them, that in almost all the country parishes which have hitherto come under their notice, where a regular assessment has been established, the wants of the poor and the extent of the assessment have gradually and progressively increased'. [Report of the Commons Committee on the Poor Laws (1817) pp.5,6]

The popular press agreed that the Scottish relief system, which was not institutionalized but relied on private donations except in time of emergencies, produced "the comparative exemption of Scotland from the burdens and the miseries of Pauperism" which occurred

under the largesse of the English Poor Law system [Edinburgh Review (March 1817) p.9].

On the basis of much testimony, Poor Rate returns and a comparison between the English and Scottish systems, the Poor Law Committee of 1819 recommended stringent eligibility requirements for receiving relief in an attempt to curtail the abuses of the system. They suggested that reforms not be implemented in 1819, however, because of the current reversals in foreign trade and manufacturing: "It is not at a moment like the present, when from a concurrence of circumstances, the Country is unusually embarrassed by the number of persons without employment, that it should be attempted to bring this better system at once into operation...That the market for labour is in many parts of the kingdom at present much overstocked, does not admit of dispute; nor does Your Committee believe that in other parts the demand is greater than the supply" [Report of the Commons Committee on the Poor Laws (1819) p.8].[16]

The 1819 Committee apprehended no short term solution to the alleged disproportion between labour and capital apart from emigration. And to this end Parliament voted £50,000 to help establish settlers on the Cape of Good Hope in 1819. (There was also much public discussion concerning the possibility of settlement on the Austrasian continent and in New South Wales. [Annual Register (1819) p.iv]) The Committee looked for long term solutions in education--which it was hoped would cause a decline in the birth rate--and in an increase of capital so that "the demand and supply of labour should be nearly balanced, and the wages of labour become a more adequate remuneration of industry" [Report of Commons Committee on the Poor Laws (1819) p.9]. The findings and policy recommendations by the

[16]The amendments to the Poor Law [59 Geo. III c.12] that Parliament approved in March 1819 provided for the appointment of salaried public officials to administer the Poor Rates, since this task was becoming too great for the unpaid churchwardens and overseers. The Act also charged overseers of poor relief to "take into consideration the character and conduct of the person to be relieved, distinguishing... between the deserving, and the idle, extravagant, or profligate poor" [Rose (1971) pp.67-8].

Committee are important because they correspond exactly with Ricardo's statements and policy proposals concerning the sufferings of the poor, as outlined in Chapter Five.

F. Timing of the End of the 1819-20 Depression.

Foreign orders for British textiles began returning to normal levels in May 1820,[17] leading to a corresponding increase in the demand for manufacturing labour. From June onwards, the commercial press voiced no doubts concerning the recovery:

> Several manufacturing houses could employ many more weavers than they can find at the present prices. [Glasgow Journal (June 1820)]

> We are happy to learn from Sheffield that the trade of that place has materially revived and there is every prospect of a further amendment. Many able hands, who have been for the nine or twelve months past supported by parochial support, are now in full work. [Edinburgh Magazine (August 1820)]

> You will be sorry to hear the trade and manufactures of these counties (round Manchester) are materially mended and are mending. I would not mention this to you if you were not a good Whig; but I know you will not mention it to anybody. [Letter by Sydney Smith dated October 1820, quoted in Smart (1910) 1:740]

For the year 1820, total exports increased by £5.5 millions [Appendix D.1] and imports were also higher. Britain's foreign trade continued to expand in 1821--the official value of exports increased by £2.5 millions [Appendix D.1]--and this contributed to the ongoing improvement of the textile manufacturers, as described by the Annual Register [(1821) p.69]: "The improvement which had begun in the course of the preceding year, to show itself in the state of our manufactures, still continued. In Yorkshire and Lancashire, the seats of the

[17]Though in April 1820, Blackwood's reported that "the same languor continues to operate upon every other article of commerce", by May its editors noted that "In the manufacturing districts trade in general may be stated as better [and] work is more abundant".

woollen and cotton manufactures, the working classes found regular employment, and received a liberal remuneration for their services. Other branches of industry were not equally prosperous. The iron trade was still in a very depressed state; and petitions setting forth the decay of the principal branches of industry in Birmingham were at an early period introduced."

The foregoing assessment has been substantiated by modern authors. Iron prices declined from 1818 through 1821, though iron production continued to increase [Gayer (1953) pp.151,152,177].[18] Cotton and wool prices were also lower after 1818, but an increase in output sustained profits and created new employment [Gayer (1953) pp.154-156]. Smart [(1917) 2:21] reports that labourers enjoyed high employment at adequate wages in 1821, being particularly benefitted by low agricultural prices. Even in agricultural districts there were signs of improvement: "in spite of low agricultural prices, the retail business of country towns was not materially affected. Total consumption of dutiable articles, of cotton, of wool for home consumption, had increased in comparison with the average of the three years preceding" [Smart (1917) 2:7].

Tax reports[19] provide further evidence for the economic recovery, showing an increase in aggregate consumption beginning the third quarter of 1820. Tax revenues had fallen in 1819, notwithstanding new excise duties amounting to £3 million, but by July 1821, customs and excise revenues had surpassed the levels at which they had been during the cyclical peak of 1815 [see Appendix E.2]. Revenues then remained steady for the next four years in spite of

[18]Mitchell's [(1990) p.280] figures on the output of Pig Iron, for example, show that British production increased from 280,000 tons in 1819 to 390,000 tons in 1821 and to 450,000 tons in 1823.

[19]Tax data were well known and were published quarterly when Parliament was in session [see Appendix E.1 for a list of reports].

the fact that £12 millions in taxes expired or were rescinded from 1821 through 1825.[20] The ongoing increase of tax revenues contributed to the progressive improvement of the British Government's fiscal situation, which saw a budget surplus of £1.5 millions in 1820, £3.2 millions in 1821, £3.4 millions in 1822 and £4.3 millions in 1823 [see Appendix E.3].

G. Monetary Contraction and the 1819-20 Depression?

Given that the Resumption Act passed in 1819, there were naturally questions about the extent to which monetary contraction contributed to the 1819-20 depression. In the Parliamentary debate on 24 December 1819 concerning commercial distress, for example, Alderman Heygate "imputed the distresses to the great diminution of the currency, which had been for a long time gradually going on. When nine millions had been withdrawn from the circulation, great mischief and distress must have been the result" [Hansard 1s, 41:1570,1582]. Again in May 1820, and as became characteristic of the Crude Inflationists, Ellice claimed that monetary deflation had been from 30 to 50 per cent [Hansard 2s, 1:193], and had thus contributed to the depression. He was supported by Alexander Baring, who called for bi-metallic standard [Hansard 2s, 1:196][21] that effectively would have devalued the currency since the market price of silver was then lower relative to its Mint price than the market price of gold as compared with its Mint price.[22]

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[20]"Return of the Gross and Net Amount of all Taxes Repealed, Expired or Reduced..." Parliamentary Papers (1833) vol.32, pp.637-653, microfiche #36.239.

[21]He repeated his proposal for bi-metallism in February and March 1821 [Hansard 2s, 4:535,1327], but seems to have abandoned it later [Hansard 2s, 5:132].

[22]Baring proposed allowing the Bank to pay "either in gold or in silver" at the Mint price. Presumably he intended the ancient parity, 1 to $15^{2096/10,000}$, though he may have considered the parity of the new coinage, 1 to $14^{2878/10,000}$ [Report of the Lords Committee on the Resumption of Cash Payments (1819)

It is clear that the fall of prices in 1819 could not have resulted from monetary contraction associated with the Resumption Act. For not until the Resolutions on Resumption passed the House of Lords without division on May 24th, and Peel's nine resolutions on Resumption were accepted by the House of Commons on May 26th, was the Resumption Act assured passage,[23] whereas domestic commodity prices declined by 13% between February and June 1819, and then stabilized.[24] (See the graph below, p.97.)

The Inflationists, however, argued that the Bank of England anticipated[25] the outcome of the Resumption debate and began to contract its notes months before the Resumption Act passed: "It had been said that the act of 1819 had not occasioned distress, because the distress had begun before it passed; but, the preparation for carrying it into effect had begun long before the bill had received the sanction of parliament. That bill merely prevented prices

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Appendix C.10]. The important point is that the market ratio of gold to silver on 8 May 1820 was 1 to $15^{8/10}$ [see Appendix C.4], thus it would have been cheaper for the Bank to pay in silver regardless of whether the old or new Mint regulations applied.

[23]Though Parliament began to debate Resumption in 1814, the Liverpool administration blocked any move to end the Bank Restriction till 1819 when a broad consensus among members of Parliament emerged concerning the need for restoring some standard for the currency. Based on this consensus, the Lords and Commons Committees on Resumption were appointed in February 1819. The appointments, however, did not guarantee that the gold standard would be restored, for when the first report from the Commons Committee appeared on 5 April 1819, it recommended only that the Bank stop the partial resumption of cash payments begun in 1816.

Third reading of the Resumption Act passed the Commons on June 14th. The Act passed in the House of Lords with slight amendment on June 23rd, the amendment was accepted by the Commons on June 25th.

[24]The Gayer domestic price index is 123.8 for June 1819 and 121.2 for June 1820 [see Appendix C.5].

[25]It could perhaps be argued that rational agents, anticipating the decline in prices upon the return to gold, attempted to increase their cash holdings and, in so doing, initiated the deflation that occurred, even though the Bank of England did not contract its notes. While superficially plausible, this suggestion is inconsistent with the fact that prices began to fall at least three months before the Resumption Act was assured passage. The Government began promising to restore the gold standard in 1814; nothing had come of these promises and there was no guarantee, in early 1819, that the investigations of the Resumption Committees would lead anywhere. We do not hear of any panic until after the resolutions supporting the Act were accepted by the House of Lords in May 1819.

from taking a backward course. The evils which the measure had caused in its contemplation and subsequent execution were incalculable" [Sir Francis Burdett quoted in Hansard 2s, 7:408]. But contrary to Burdett's claim, the Bank made no attempt to contract its notes in response to an imminent Resumption[26] and actually increased its notes outstanding, from £25,126,704 in February 1819 to £25,252,680 in August. According to Tooke [(1838) 2:97], "It was in this very interval, ending in August, 1819, in which there is not the vestige of preparation for cash payments, by a contraction of the circulation, that the principal part of the fall of prices, resulting from the large importations had taken place."

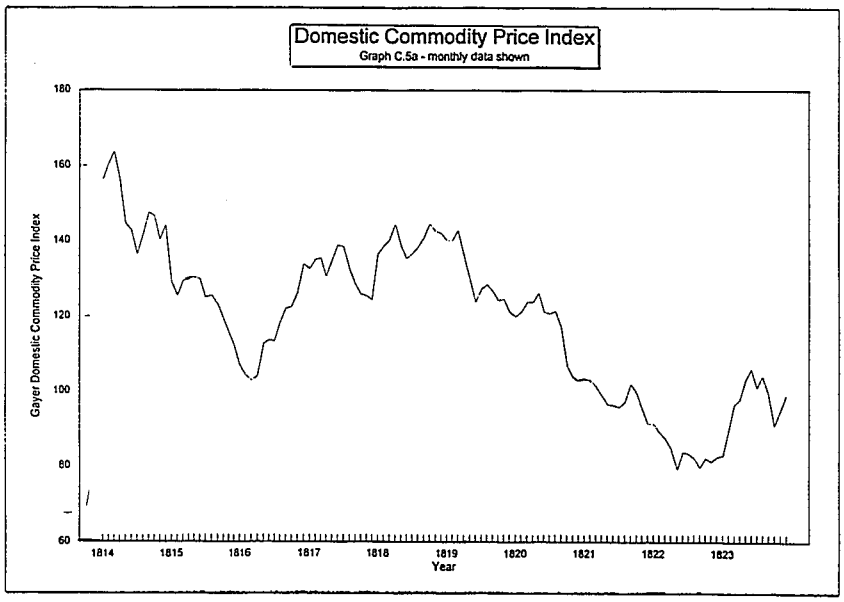
During the Fall of 1819 the Bank permitted some reduction of its note issue [see Appendix A.1], but by this point domestic prices had stabilized and remained unchanged for a period of twelve months. Moreover, it is difficult to determine whether the total value of Bank notes and coin actually declined in 1819 since, during the year, the Mint issued £1.2 millions in new silver coin [see Appendix B.4] and the Bank of England issued £694,380 in gold coin [see Appendix A.4]. Based on fourth quarter data, we estimate that the total circulation of Bank of England notes, silver coins and gold sovereigns declined from £30,824,512 in 1818 to £29,949,633 in 1819 [Appendix B.6], hardly a change to cause widespread depression.

[26]There was no need for the Bank to contract its notes in 1819. The Act stipulated that cash payments were not to begin until February 1820 and then only at the current gold market price of £4 1s. per ounce. Resumption at the ancient par was not scheduled to begin until May 1822.

III. The Price Deflation of 1820-22.

A. Overview.

In the Summer of 1820, according to Gayer (1953),[27] British prices began a two-year decline amounting to 37%. The Gayer domestic price index for the years 1814-1823 is shown in the graph below:



[27]The fact is confirmed by other price indices, but I cite the Gayer study since it is the best available source. Silberling (1923) provides quarterly data, instead of monthly. Further, his index is based on 35 commodities, as opposed to 78 commodities in Gayer. The Schumpeter index (1938) is based on fewer commodities and uses contract prices paid by institutions. The Gayer index employs market prices, which consistently measure price fluctuations because of their being drawn entirely from the Price Current Lists. The Rousseau index (1938) presents only annual data and the overall index is an unweighted average of the indices he developed for agricultural and industrial products. Gayer (1953) provides a monthly index, based on a wide range of commodities, spanning a long period of time and weighted according to actual consumption patterns.

The current deflation was widely recognized because the prices of the principal commodities were reported monthly in popular magazines and daily in the major newspapers,[28] and because contract prices for supplies at the Royal Hospitals at Chelsea and Greenwich were used by Parliament as rudimentary price indices.[29] (See Appendix C.6 for prices as reported in Blackwood's. Appendix C.8 shows prices as reported by the Board of Trade.)

The fact that agricultural commodities suffered the greatest fall largely explains the decline in the Gayer index, which employs the following weights: wheat (26%), oats (17%), mutton (16%) and beef (8%). Wheat, which had been selling for 74s. per quarter in August 1820, declined to 55s. by December. The slide continued for another two years, with wheat falling to 46s. in December 1821 and finally to 38s. in December 1822. Oats experienced a similar fall. Mutton declined by more than 60% from January 1819 to July 1822; beef prices fell by 50% over the same period.[30] Low prices were ruinous to the agriculturalists, for though English corn and livestock prices remained higher than those on the Continent [see Appendices C.2 & C.3], marginal production costs in Britain were yet higher, leading to an agricultural depression that was "appalling" by some accounts, and that the Annual Register [(1820) p.65] characterized as causing "ruin of an irretrievable character".

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[28]These price data are summarised by the Lords Committee on Resumption [(1819) Appendices E.4 and E.5] and by the Bank Charter Committee [(1832) Appendices 92 and 93].

[29]The Resumption Committees of 1819 and the Agricultural Committee of 1821 requested these "indices" in their attempts to measure whether--and to what extent--general deflation had occurred [see Appendix C.7].

[30]Mutton and beef prices are drawn from the Report of the Bank Charter Committee (1832) Appendix 92.

B. Claims of the Landlords and Crude Inflationists.

With the fall in corn, pressure mounted for Parliament to remedy the agricultural crisis[31] either by increasing agricultural protection--the policy landlords favoured--or by revoking the Resumption Act--the avowed goal of the Inflationists. The Inflationists claimed that monetary contraction, resulting from the Resumption Act, caused a general deflation that by some estimates was as great as 50%. Mathias Attwood, armed with a wealth of empirical evidence, was their foremost spokesman, arguing for the repeal of the Resumption Act and for greater protection of Britain's agricultural interests, whom, it was alleged, had particularly suffered from monetary deflation because of the fixed nominal burdens of taxes and mortgages on land:

> The fall of prices on some of the principal articles of manufactures and commerce since 1818, may be taken to have been: Iron, from £13 to £9 10s.; copper, from £140 to £98; cotton, from 1s. 7d. to 10d.; sugar, from 90s. to 60s.; hemp, flax, tallow, wines, oil have fallen in similar proportions. [(9 April 1821) Hansard 2s, 5:105]

> There is no truth, therefore, in the opinion that any fall in prices peculiar to agricultural produce has taken place. The fall in prices has been universal and not particular. The leases of the tenants, the mortgages of the landowner, [and] taxation pressing heavily on agricultural labour...will render the difficulties of the agricultural community more permanent. [(12 June 1822) Hansard 2s, 7:976-977]

The Inflationists also tried to undermine the perception that low corn prices, and the consequent agricultural depression, resulted from abundant harvests and Irish imports--the conclusion of the 1821 Agricultural Committee. Their intent was to establish that monetary contraction had caused a general depression, and that the only policy solution to the crisis was monetary expansion and inflation.

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[31]During the years 1819 and 1820 no less than 1200 petitions complaining of the operation of the Corn Law were presented to Parliament [Barnes (1930) p.167].

> The contraction of the circulating medium was the cause of the present distress...The diminution of the value of produce was not confined to agriculture: a similar diminution was to be found in the value of all other commodities...Nothing but the repeal of the act of 1819 would give relief to the agriculturalists. [Speech by Charles Western on 29 April 1822 quoted in Hansard 2s, 7:199]

> He was not prepared to admit that the condition of any one class of the people was good. If the agriculturalists were suffering more severely than the manufacturers and commercialists, still their distress was comparative. The others were not to be reckoned prosperous. [Speech by Henry Brougham on 29 April 1822 quoted in Hansard 2s, 7:202]

The landed gentry joined the debate in 1821 after corn prices began to decline in late 1820. Monetary deflation, they asserted, had caused the fall in corn prices--a fall not matched by a corresponding decline in tithes, poor rates and other taxes upon land--so that agriculture was languishing under a real tax burden that had increased, by some estimates, as much as 50%.[32] According to Charles Western, "during the depreciation of money, the rents of estates had doubled, but incumbrances had doubled and taxes had quadrupled...But what was the state of the landlord now? His income was again reduced to one half, and all their fixed payments remained" [Hansard 2s, 6:1444]. The claim was also made that monetary deflation had caused an unjust redistribution of property insofar as the real value of the national debt had increased, to the benefit of the fundholders--"monied men"--and loss of the landholders. In some instances the argument was applied to contracts generally, with a view to having mortgages renegotiated.

The ultimate purpose of the landlords and Inflationists was not, of course, to convince anyone as to the causes of the agricultural depression, but rather to advance their agenda. In

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[32]Baring, in a speech directed at Ricardo [Hansard 2s, 5:92], intimated that deflation had been "not less than from 25 to 33 per cent. In some instances he should say that it had risen to a third and even 50 per cent."

1820 the landlords in Parliament attempted to increase the extent of agricultural protection by altering the method of calculating average corn prices--a change which effectively increased the price at which corn could be imported, though without raising the 80s. nominal threshold.[33] In 1821 measures were brought forward repeatedly to revise the 1815 Corn Law, repeal the Resumption Act,[34] and even (partially) repudiate the national debt.[35] Mathias Attwood explicitly sanctioned devaluation [Hansard 2s, 5:101,124]. Charles Western urged Parliament to "rip up the law of 1819" [Hansard 2s, 6:1444]. And Brougham argued for repudiation of the debt with what the Annual Register [(1822) p.98] described as "parasitical zeal". Proposed policy solutions to the agricultural depression became more outlandish as corn prices continued to fall. Burdett, in 1822, recommended that all contracts signed prior to the alleged monetary deflation be forcibly renegotiated,[36] and in spite of the impractical nature of the proposal, the idea received considerable support in Parliament [Smart (1917) 2:135-9]. Though the schemes to repudiate the national debt and devalue the currency met with little success,[37] pressure for a new corn bill continued to build, being investigated by the

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[33]This proposal was made by the 1820 Agricultural Committee. The Committee's report was largely ignored, however, because Parliament was preoccupied with the trial of Queen Caroline which continued from June through November 1820.

[34]The Petition of the Merchants of Birmingham, which received wide support, effectively called for this measure [Hansard 2s, 4:530].

[35]The proposal was made in a Parliamentary address by Curwen supporting the Petition of the Merchants of Birmingham on 8 February 1821 [Hansard 2s, 4:528].

[36]Sir Francis Burdett called for a reduction in taxation, a reduction in the money terms of all contracts--especially mortgages--and a repudiation of the national debt proportionate to the degree of monetary deflation, which he estimated at not less than 20% [Hansard 2s, 7:956-957].

[37]In the debate on the Bank Cash Payments Bill, for instance, Baring motioned that "a select committee be appointed to consider the provisions of the 59th of George 3rd, chap.49, [the Resumption Act] and to report their opinion to the House, whether it would be expedient to make any alteration in the said act" [Hansard 2s, 5:92]. His proposal was negatived 141 to 27. Similarly, the repudiation of the debt was condemned as "objectionable both in justice and policy" [Hansard 2s, 4:539].

Agricultural Committee of 1821 and then approved by Parliament at the recommendation of the 1822 Agricultural Committee.[38]

It is noteworthy that in defense of their policy proposals, the Inflationists consistently misrepresented, or ignored, facts relating to the money supply. Mathias Attwood, for instance, refused to account for the silver coin in circulation [(9 April 1821) Hansard 2s, 5:112,113], and only noted that "the amount of bank of England notes reduced in this recent operation has been six millions." In an address of 12 June 1822 [Hansard 2s, 7:979,980] he made some allowance for the introduction of gold sovereigns, but still concluded that "the reduction of Bank notes is one-fourth, or one-fifth; and the fall in prices has approached nearly to one-half: and the hon. member for Portarlington [Ricardo] denies that prices will fall except in proportion to the reduction of money."

Whatever Attwood's reasons for neglecting the metallic circulation, it cannot have been that he lacked the necessary information. Concerning the silver coin issued in 1819, there were two reports [see Appendix B.5], indicating the value of silver coin produced by the Mint from the year 1760 through the month of April 1819. Additional reports on the quantities of new silver coin[39] issued by the Mint were reported to Parliament in the years 1817, 1818, 1819, 1821 and 1822 [see Appendix B.5]. Given this information, Attwood could have accurately estimated the quantity of silver in circulation, since it was known that

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[38]Though passed in 1822, the new corn bill was never of practical importance because it contained a provision that it would not take effect until the domestic price of wheat reached 80s. per quarter. The price of wheat never attained this level and the bill was superseded by another Corn Law in 1828 [Smart (1917) 2:117].

[39]Old silver coins and silver tokens were of no consequence since they had been withdrawn from circulation by 1819 [see the notes on Appendix B.4].

none of it had been melted and exported.[40] He could have also determined the approximate quantity of copper in circulation on the basis of two reports showing the amount of copper coin produced since the year 1790 by the Mint, and by a certain Mr. Bolton, who contracted to manufacture coins.[41] Concerning the gold coinage, the amounts of British gold coin, foreign gold coin and bar gold issued by the Bank of England up to the month of April 1819--when cash payments were ordered stopped--were published in four accounts that appeared in the House of Commons Journal and in the reports of both the Lords and Commons Committees on Resumption [see Appendix A.4]. Data on the amount of gold coin entering circulation was not available after 1819.[42] There were reports in the years 1818, 1819, 1822 and 1823 concerning the value of gold coin produced by the Mint [see Appendix B.5], but these coins belonged to the Bank and were not necessarily issued to the public.

Notwithstanding the lack of information about gold coin, Attwood should have recognized that his estimate of 50% monetary deflation was unreasonable. Ignoring gold altogether, the combined circulation of Bank or England notes and silver coin only declined from approximately £29 millions in the fourth quarter of 1819 to £25.8 millions in the fourth quarter of 1821. And though Attwood did not know the exact amount of gold entering circulation, he would at least have been aware that large numbers of sovereigns were

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[40]The coin remained in circulation because a 6% seigniorage was extracted from the silver coinage, beginning in 1817. Because of the seigniorage, new coins could not profitably be melted until the market price of silver exceeded 5s. 6d. per ounce and this only occurred once--in February 1819--during the years 1816 to 1823 [see Appendix C.4].

[41]The report on the Mint appeared on 24 May 1819 [Journal of the House of Commons (1819) p.1123]. The report on Mr. Bolton appeared on 3 June 1819 [Journal of the House of Commons (1819) p.1124].

[42]Even though the values of gold coin being produced at the Mint were known, the actual amount of gold coin entering circulation was not known because the Mint coined almost exclusively for the Bank of England and, for their part, the Directors of the Bank said little about the level of the Bank's bullion hoard or about the value of coin sold at the bullion office.

appearing in 1821. It is difficult to determine how he could have estimated a monetary contraction of "one-fourth or one-fifth" when the available evidence indicated that the circulation of Bank notes and coin could hardly have fallen by more than 10%.

C. The Response to the Inflationists.

1. Agricultural Distress was not General.

Given the larger policy debate, the Inflationists obtained no quarter from the defenders of the Resumption Act, who contended that from mid-1820, manufacturers and foreign merchants were prospering, and that agricultural distress was an exception to the general condition of the country. Huskisson made exactly such a statement in response to Brougham: "That the manufacturers, and the working classes generally, were in a state of comparative ease and comfort was undeniable. He defied any man upon any other principle to account for the known fact, that the produce of the taxes upon consumption was gradually and steadily rising" [(29 April 1822) Hansard 2s, 7:207]. Peel advanced the same argument, answering a petition from the agriculturalists of Wiltshire [(3 April 1822) Hansard 2s, 6:1455]: "Distress was only partial...the bill [Resumption Act] should be fairly tried, not by its effect upon a particular interest, but by its effect upon the state of the whole interests of the country. He [cited] the state of the manufacturing interest, the state of the poor-rates, the comforts enjoyed by the manufacturing population, and the tranquility prevailing in the manufacturing districts...He could not admit partial distress to be a fair criterion; and, next, he would not admit even that partial distress to be occasioned by the bill."

The general prosperity alluded to by Huskisson and Peel became increasingly evident after 1820. "The contented state of the working classes in 1821 and 1822, and not to mention the great increase of the revenue in those years," according to Tooke [(1838) 2:74], "attest the

comparative well-being of the bulk of the community in periods of what those who are interested in high prices and high rents are pleased to characterize as agricultural distress." On 15 February 1822 Castlereagh said that "at no period in the history of the country had they [manufacturing and commercial interests] been in a condition of more healthful, though temperate prosperity [(15 February 1822) Hansard 2s, 6:354]. In a speech of 12 June 1822 by Peel, who was then at the Home Office, a thorough description was provided of the continued rise of exports, leading to an increase in manufacturing production--even at the ironworks--and consequently to full employment at good wages [Hansard 2s, 7:1014-5].

The King's Speech to Parliament in February 1823 further described the "increasing activity which pervaded the manufacturing districts and the flourishing condition of commerce in most of its principal branches." Peel, still at the Home Office, provided another account of the state of national industry, observing that the working classes were well employed, poor rates were down, the cotton trade was booming, iron tradesmen seemed well employed, and investment had increased [Hansard 2s, 9:925]. Agricultural prices remained low, but complaints about agricultural distress became less frequent--a fact Smart [(1917) 2:144] attributes to lower agricultural wages and rents. Conditions were even better the following year, which Smart [(1917) 2:183] describes as one of "great prosperity everywhere".[43]

2. Excess Supply as Cause of the Fall in Corn Prices, 1820-22.

Apart from the suspicions that foreign imports of corn had glutted the British market, or that there had been a severe monetary deflation, the decline in agricultural prices was at first

[43]Since Ricardo died in September 1823, there is no need to give a full account of the economic events of 1824 and 1825.

something of a mystery. For though British ports were closed against foreign wheat in February 1819 and against all other grains by August 1819,[44] corn prices failed to rise. Prices instead remained steady till August 1820, then fell rapidly, initiating the 1820-22 agricultural depression.

Not until the 1821 Agricultural Committee began its investigation did the causes of the agricultural crisis become publicly known. The Committee concluded that the enormous harvest of 1820, coupled with unprecedented corn shipments from Ireland, occasioned the fall in corn in August 1820. Corn prices declined further in 1821 as the inventories remaining from 1820,[45] combined with another abundant harvest and yet more imports from Ireland [see Appendix D.3], depressed wheat prices to 55s. per quarter by December 1821. By October 1822, the third abundant harvest in succession caused wheat prices to fall to 38s. per quarter [Appendix C.1]. The extent of the 1820 harvest was not reported until April 1821 when leading corn factors,[46] among them David Hodgson[47] of Cropper, Benson and Company at Liverpool, testified before the 1821 Agricultural Committee. By Hodgson's estimate, the 1820 harvest exceeded the average crop by about 5 bushels per acre (or 15%) [Report of the Agricultural Committee (1821) pp.263-4]:

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[44]There is one exception to the prohibition on imports. The ports opened to foreign oats from August to November 1820. During that short interval 700,000 quarters of oats were brought from the warehouses to the domestic market. [Report of Agricultural Committee (1822) p.5]

[45]Tooke [(1838) 2:82] reports that because of the magnitude of the 1820 harvest, by April 1821, "there was as much corn left in the country as generally in common years there is after the harvest". Wheat from the 1820 crop continued to appear in the market for the next three years.

[46]Corn factors were individuals, or partnerships, who speculated in corn. To gauge prices months in advance, teams of statisticians were sent to farms throughout the kingdom to assess the state of the crop, measure the weight of the grain, etc. Corn factors were better informed about affairs in agriculture than anyone else since their livelihood depended on such expertise.

[47]Along with Thomas Tooke, Ricardo described Hodgson as "our best informed witness" [(21 April 1821) DR, 8:370].

> Question: Have you any objection to state to the Committee, upon any scale you may have formed, what has been the comparative productiveness of the crops of the last six years?
> Hodgson's Answer: None whatever; the crop of 1815, according to the method explained, gave a result of 37 Winchester bushels per acre; 1816 gave 25 1/16; 1817 gave 33 4/10; 1818 gave 32 and 4/16; 1819 27 7/16; 1820 37 1/16.

Hodgson also testified that the amount of land under cultivation had increased[48] in 1819 and 1820 as farmers switched from livestock to grain [Report, pp.265,276]:

> Question: What are your reasons for supposing an extension of growth to have taken place within the two or three last years in the United Kingdom?
> Answer: I apply it to the crops of 1819 and 1820; it appears from documents which I will submit to the Committee, that there has been a very great falling off in the slaughter of cattle in the towns of Liverpool, Manchester, Birmingham, Leeds and Sheffield, in the last two years...of $15^{1/4}$ %.

A report presented to Parliament in 1833, showing annual British wheat production, estimated the crop of 1820 at 16 million quarters. By comparison, a deficient crop, as in 1816, was 9 million quarters, and an average harvest was about 12 million [Digest (1833) 2:90].

In addition to the abundant harvest, Irish corn began to enter Britain at unprecedented levels in 1820.[49] But as with the magnitude of the harvest, the quantity of Irish corn imported in 1820 was unknown till trade reports appeared in March 1821.[50]

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[48]Even Thomas Attwood, an Inflationist and brother to Mathias Attwood, in his testimony of 10 April before the Committee [Report, p.245] admitted that there had been an increase in tillage since 1816. Ricardo was quite pleased by the apparent inconsistencies between Attwood's testimony and his Inflationist policies, writing to Trower that Attwood's "claims to infallibility have been sifted by Huskisson and myself" [(21 April 1821) 8:370].

[49]The table is taken from Appendix D.3. The same information, up to April 1821, appears in the Report of the Agricultural Committee (1821) Appendices Nos. 8 & 19, reprinted in Parliamentary Papers (1821) vol.9.

[50]The reports were presented to Parliament on March 2nd, March 12th and March 28th. See the Appendix to the 1821 Journal of the House of Commons.

Year	Irish Wheat: Grain & Flour Imports	Irish Oats: Grain & Flour Imports
1815	584,156 qtrs.	708,496 qtrs.
1816	426,172 qtrs.	795,585 qtrs.
1817	115,794 qtrs.	699,281 qtrs.
1818	228,709 qtrs.	1,429,535 qtrs.
1819	498,880 qtrs.	948,208 qtrs.
1820	1,073,371 qtrs.	1,040,917 qtrs.
1821	1,664,575 qtrs.	1,379,038 qtrs.
1822	1,598,167 qtrs.	673,755 qtrs.

The relevance of Irish corn cannot be overestimated. Huskisson, for instance, who wrote the Report of the 1821 Agricultural Committee, stated that if no alteration had been made in the corn trade with Ireland, the pressure of the glut might never have been felt by the English grower [Smart (1917) 2:62].

Because the findings of the Agricultural Committee threatened to undermine the Inflationists, Mathias Attwood began a protracted campaign, disputing whether a national economic crisis could be caused by "importations from Ireland...an abundant harvest [or] the importation of a few millions of foreign grain". He argued instead that the "real obstacles...dangers and evils" were in some way connected with "the alterations in our currency" [(9 April 1821) Hansard 2s, 5:110,111]. By comparison with what Attwood described as "trifling and insignificant operations", however, Colquhoun estimated the quantities of grain (including seed) consumed annually in Britain at the following levels [Edinburgh Review (January 1820) p.175]: Wheat, 9,170,000 qtrs.; Barley, 6,335,000 qtrs.; Oats, 16,950,000 qtrs.; Rye, 685,000 qtrs. and Beans & Peas, 1,860,000 qtrs. It is apparent that foreign[51] and Irish imports must have had a significant effect on corn prices in Britain, for the Irish wheat imports of 1821 and 1822 alone would have accounted for almost 20% of

[51]For a list of both foreign and Irish imports of a broad range of agricultural commodities, see Appendix D.2.

the home consumption (not counting seed). Similarly, the Irish oats imported in 1820 and 1821 would have filled about 10% of Britain's consumption. The effects of Irish corn were compounded by the fact that the harvest of 1820, which was approximated at 16% greater than average,[52] had already glutted the British market.

Prices were further affected because the surplus of corn was being sold against an inelastic domestic demand, a point Tooke repeatedly emphasized in his testimony before the Agricultural Committee [Minutes of Evidence (1821) p.228]:

> Question: Has your attention been particularly turned toward the effect produced on the price of corn by abundance?
> Answer: I have reason to think...that a deficiency or excess in the [corn] supply, compared with the average consumption, is attended with a still greater difference of price than that of most other articles.
>
> Question: Can you state to the Committee, any facts on which that opinion is grounded?
> Answer: I have made the following extracts relative to the prices of wheat and the quantities exported and imported:

Tooke produced ample empirical evidence, extending from 1671 through 1817, pointing to the historical relation between the supply of corn and its price in Britain, and with particular emphasis on periods of agricultural distress [Report, pp.229-232]. He summarized the evidence regarding the inelasticity of demand, stating that "the effect on price is in a ratio very much beyond the excess or defect of quantity" [Report, p.229].

The increase in the domestic supply of corn might not have caused such a severe fall in prices had domestic producers been able to export. But the margin of cultivation in Britain had been overextended--and consequently real production costs increased--so that when corn

[52]This figure is based on the testimony of David Hodgson, who stated before the 1821 Agricultural Committee that "The average acreable produce will be about thirty-two" quarters of wheat [Report from the Agricultural Committee (1821) p.264]. A subsequent estimate [Digest (1833) 2:90] placed the crop at 33% above average.

prices were ruinous to British farmers, they still could not compete on the Continent. The disparities in production costs between Britain and the Continent had been documented by the 1814 Commons Committee on the Corn Laws [see Chapter One, p.41], but were further substantiated in March 1820, by Castlereagh, the Foreign Secretary, who presented to Parliament detailed accounts of corn prices at major European ports.[53] (The evidence Castlereagh obtained from British consuls is recorded in Appendix C.3. It shows that the average wheat prices were at or below 20s. per quarter from 1820 onwards in Russia and Prussia, Britain's principal sources for imported wheat. In Holland and Prussia, oats traded for as little as 5s. per quarter after 1820.) Additional evidence was presented to the 1821 Agricultural Committee by Hodgson and Tooke concerning the corn prices at Continental ports and the shipping costs to Britain from these ports [Report, pp.224-227, 270-271, 284-286].

Because of the disparity in production costs, British farmers were unable to export surplus corn, but were forced to sell entirely to the domestic market. This fact, coupled with inelastic domestic demand, contributed to extreme fluctuations in corn prices.[54] In the event of an

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[53]Castlereagh requisitioned a second report in April 1821, a fact that Ricardo was pleased to report to McCulloch [(21 April 1821) DR, 8:374]: "Mr. Huskisson tells me that Lord Castlereagh has written to all our consuls and ambassadors abroad for an account of the prices of corn in foreign countries for a series of years which will be laid before parliament as soon as it arrives."

[54]Annual high and low wheat prices:

Year	Highest Price	Lowest Price
1813	129s. per qtr.	73s. per qtr.
1814	82s.	62s.
1815	70s.	54s.
1816	103s.	53s.
1817	112s.	74s.
1819	78s.	64s.
1820	73s.	53s.
1821	70s.	46s.
1822	50s.	38s.

abundant harvest, domestic production glutted the home market, causing a ruinous fall in prices. In the event of a deficient domestic harvest, prices commonly exceeded 100s. per quarter, as occurred during the War, when foreign supplies were limited, and during the famine of 1816-17.

The potential volatility of corn prices worsened after 1815, for, as the 1821 Agricultural Committee recognized, the unusual terms of the 1815 Corn Law--particularly the provision that foreign corn could be imported duty free when domestic wheat prices surpassed 80s. for three consecutive weeks--almost ensured a deluge of foreign corn following a deficient domestic harvest.[55] The threat of foreign imports was further increased by the fact that foreign corn could legally be warehoused at British ports without being officially "imported". Enormous quantities of corn could then suddenly be removed from the warehouses when corn prices exceeded the legal thresholds. From 15 August to 16 November 1820, for example, 726,873 quarters of foreign oats (5.8 million bushels) were admitted for home consumption [Report of the Agricultural Committee (1821) Appendix 22].

Because of the potential profits to be made by selling in the British market (corn prices on the Continent tended to be 1/2 to 2/3 the level of corn prices in Britain), foreign merchants had an incentive to lodge vast corn stocks at the British ports and even greater stocks at Continental ports. Because of the threat posed to domestic agriculture by foreign corn, the Government closely monitored the quantities of foreign wheat stored in Britain, which

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These data are taken from two sources:
"Account of the Weekly Average Prices of Barley, Oats, Rye and Wheat from 4th January 1813, to 24th February 1816," Parliamentary Papers (1816) vol.14, page 271.
"Account showing...Average Price of Wheat...Highest and Lowest in each of the Years from 1815 to 1826," Parliamentary Papers (1826-27) vol.16, page 13.

[55]In his testimony of 6 April 1821, Tooke stated that "in the event of a short crop, I should take for granted that prices will rise to the importation price of 80s." [Report of the Agricultural Committee (1821) p.232]

remained consistently high according to the accounts for 1820, 1821, 1822 and 1823 [see Appendix D.4]. In January 1821, for instance, 1,448,000 quarters of foreign wheat and wheat flour were warehoused in British [see Appendix D.4]--a quantity exceeding 15% of Britain's annual wheat consumption.

3. Further Evidence for Excess Agricultural Supply.

Castlereagh's reports on foreign corn prices [see above, p.110] posed another problem for the Inflationists, since, if it could be shown that corn prices had declined on the Continent, where no monetary deflation had occurred, then their claims that monetary contraction had caused a similar fall in corn prices in Britain would naturally be brought into question. Because of this fact, Attwood was loath to concede that corn prices had declined on the Continent. Supporting Western's motion on the currency, he stated in the House that "The hon. member[56] had asserted that prices on the continent had fallen to as great an extent as in this country; that of course this could only have been occasioned by abundant production; and he had asked whether we should find in France so great an absurdity as a demand for a reduction of taxes on the ground of an abundant harvest and a glut of corn? [But] the question as to foreign prices, was one on which much misstatement had taken place, and on which it was of importance to have the real facts before them" [(10 July 1822) Hansard 2s, 7:1613]. But even assuming, Attwood continued, that there had been a fall of prices on the Continent, he was certain that it had been caused by the Bank of England's purchases of bullion which "materially deranged the monied system of Europe", leading to monetary deflation [Hansard 2s, 7:1614].

[56]Attwood's reference is to David Ricardo.

In spite of Attwood's objections, there was little real doubt that corn prices had fallen on the Continent. The reports Castlereagh obtained from the British consuls concerning foreign corn indicate that wheat and rye began to decline in 1818, barley and oats in 1819. The reports also show that reductions in corn prices were at least as severe on the Continent as in Britain.[57] The table below is drawn from Appendix C.3 and gives average annual foreign wheat prices in British shillings:

	1817	1822
Archangel	57.2 s. sterling	14.2 s. sterling
St. Petersburg	56.6 s.	29.9 s.
Konigsberg	57.7 s.	22.8 s.
Hamburg	80.0 s.	27.5 s.
Rotterdam	104.4 s.	35.0 s.

Concerning Attwood's claim that monetary operations in Britain had "deranged the monied system of Europe", there is again no supporting evidence. Attwood suggested that gold purchases by the Bank of England in preparation for Resumption bid up the world relative price of gold which, in turn, caused monetary contraction to occur on the Continent and ultimately the fall of corn prices as shown above. This argument, however is not supported by the timing of price fluctuations on the Continent as compared with the timing of gold flows to and from Britain.

[57]Macleod [(1906) 2:103] has presented a similar argument, stating: "The low prices of that year [1822] had nothing to do with the act of 1819 [because] the prices of all sorts of agricultural produce were equally depressed all over the continent of Europe...At Vienna wheat which was 114s. in March 1817, fell in September, 1819, to 19s. 6d.; at Munich wheat fell from 151s. in September, 1817, to 24s. 5d. in September, 1820. The same phenomena were observed in Italy."

A sharp decline in corn prices on the Continent began in 1818 and continued through 1820, after which time prices were fairly stable [see Appendix C.3]. In comparison, Britain's foreign exchange was unfavourable [see Appendix C.4] from mid-1817 to mid-1819 so that vast quantities of gold were exported,[58] an operation that should have increased prices on the Continent, not reduced them. Moreover, even after the foreign exchange became favourable to Britain, the Bank did not begin to acquire significant amounts of bullion until April 1820, at which point the fall of corn prices on the Continent had almost ended. Tooke [(1838) 2:92,93] summarized the rebuttal to the Inflationists in the following terms:

> It was reserved for the opponents of Peel's bill to discover 'that the operations on English currency must have materially deranged the monied system of Europe'.[59] And these operations on English currency are said to have been 'such a reduction, forcibly made in the amount of money in circulation as was fully adequate to occasion that fall in prices'. But if the influence of such a cause could have the effects ascribed to it, its operation would, in the cases cited, of the fluctuation of prices between 1815 and 1820, have been in an exactly opposite direction to that which is inferred. For it has been seen, that bullion was flowing largely into this country, coincidentally with the great rise of prices on the Continent in 1816 and 1817; and that if flowed out of this country in 1818 and 1819, coincidentally with the great and rapid fall of prices on the Continent.

There was also little correlation between gold purchases by the Bank and fluctuations in British domestic prices. In February 1819 the quantity of gold coin and bullion in the Bank amounted to £4,354,000; by September 1819 the hoard had been reduced to £3,570,000 [see Appendix A.3]. This is the very interval when the greatest fall in prices occurred in Britain. The decline in the Bank's gold hoard was opposite what would have been expected if purchases by the Bank had increased the world relative price of gold, leading to a severe monetary contraction and consequent deflation. It should also be noted that the Mint coined

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[58]The Bank of England alone lost £8 millions of its hoard [see Appendix A.3].

[59]Tooke cites Mathias Attwood's Parliamentary speech of 10 July 1822.

only £3,574 in sovereigns and half-sovereigns in 1819, a quantity too small to affect the market price of gold [see Appendix B.4].

IV. Monetary Contraction and the 1820-22 Price Deflation.

Though no one except the ardent Inflationists claimed that the agricultural crisis was a strictly monetary phenomenon, contemporary reports suggested that there had been some monetary deflation and that, to this extent, the burden of taxes and mortgages on land had increased. According to reports from the Stamp Office, a reduction in country bank notes occurred from £20.5 millions in 1818 to £8 millions in 1822. Similarly, reports from the Bank of England showed that its circulation declined from £26 millions in 1818 to £17 millions in 1822. The reduction in Bank notes was partially offset by an increase in the circulation of silver coin by some £2.5 millions in the intervening years, but this was insignificant in comparison with the apparent, overall monetary contraction.

Some years later, however, information became available concerning both the amount of gold coin issued by the Bank of England and the actual circulation of the country banks. Based on this information, and in contrast to what was thought at the time, it is apparent that Britain's money supply was fairly stable from 1819 through 1823. These facts pertain directly to Ricardo's monetary policy and his analysis of the postwar period, as we shall see in Chapters Four, Five and Six.

A. Bank of England Notes and Coin.

Though the Bank of England contracted its notes after the Resumption Act passed,[60] it is not correct to assume that the monetary base was consequently reduced. For Bank notes were often exchanged for coin[61] and from 1819 to 1823, £16.6 millions in gold and silver coin were issued to the public [see Appendix B.6]. The silver coin issued by the Mint was not melted or exported since, owing to a 6% seigniorage, the face value of silver coin exceeded its intrinsic value, making the coin unprofitable to melt at prices below 5s. 6d. per ounce. Silver prices remained below this level from June 1819 onwards [see Appendix C.4]. Similarly, gold remained in circulation because the foreign exchange became favourable to Britain in July 1819 and precluded its export. In fact, Tooke [(1838) 2:101] noted that because of the favourable exchange, British sovereigns were imported "directly into circulation, so as not only to displace some of the small notes, but to form an addition to the whole circulation. According to this view, the amount of the circulation in 1820 would not vary materially from what it had been in 1819...[And] there is no doubt, that in 1821 and still more in 1822, the basis of the currency, as consisting of Bank of England notes and gold coin, exceeded in amount what it had been in 1819." When gold and silver issues are added to Bank note figures, it is evident that the monetary base remained stable from 1819 to 1820 and actually increased thereafter [see Appendix B.6].

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[60]Fourth quarter averages for notes in circulation fell from £26 millions in 1818 to £17 millions by 1822 [see Appendix A.3]

[61]Private persons could carry gold to the Mint to be coined or they could purchase gold coin at the Bank of England. For an ounce of gold, the Mint would produce coin worth £3 17s. 10 1/2 d. and return it to the owner after several weeks. But because of the time lag, it was more convenient to obtain gold at the Bank. In this way, the Bank sold £13,749,898 in gold coin from May 1821 through the end of 1823. During the same period the Mint issued only £10,930 to private persons. [see Appendix A.4]

Minimum Circulation of Coin and Bank of England Notes

1819 - £29,949,633	1821 - £33,063,069	1823 - £40,556,157
1820 - 30,213,933	1822 - 36,092,157	

If the Bank can be faulted for its policies, it is in the fact that it could have increased the money supply to a greater extent after 1819 and thereby precluded the import of gold. But as Rostow [(1926) p.19] observed, "that would have involved a conception of Bank policy and a subtlety of action which the Old Lady of Threadneedle Street had not yet attained even a hundred years later, under not dissimilar circumstances. Neither the tools nor the attitude necessary for a successful compensatory banking policy existed."

We mentioned earlier that little was known about the value of sovereigns and half-sovereigns entering circulation. Despite annual Parliamentary reports on the amounts of British gold coin produced at the Mint,[62] information concerning the amount of gold entering circulation was scare because the Mint coined almost exclusively for the Bank of England [Parliamentary Papers (1830) vol.17, p.371], which was strictly secretive about its internal operations. (Though in the years 1797, 1810 and 1819 the Bank's Directors provided something like an index number, showing fluctuations in its bullion reserve, the Bank published no reports on either its hoard or its issues of coin during Ricardo's tenure in Parliament [see Appendix B.5].)

After the Bank suspended cash payments in April 1819, its gold reserve stabilized. No longer was gold being sold at the Bullion Office, and neither was it being purchased, since the foreign exchange was only slightly above par and there was little incentive to import

[62]Parliamentary reports on the gold coinage appeared annually from 1818 onwards, except in 1820 and 1821.

gold. By mid-1820, however, as the pound continued to rise against Continental currencies, large amounts of bullion were brought to the Bank. Some suggestion as to the amount of treasure accumulating at the Bank came in March 1821 when its Directors petitioned the Government to permit cash payments to resume two years ahead of schedule.[63] The Bank's action caused suspicion that it had amassed an enormous hoard,[64] but nonetheless, the Bank released no information concerning the bullion it had accumulated. In fact, actual values of the Bank's hoard were not reported until 1832[65] in evidence before the Bank Charter Committee. As a consequence of the Cash Payments Bill, the Bank resumed payments in coin in May 1821, but as with its hoard, no information was divulged concerning the value of gold coin being sold by the Bullion Office.

. . .

A further observation should be made concerning the Government's proposal in 1822 to force an increase of the paper currency, a move that would have undermined the Resumption Act, and one that confirmed Ricardo's belief that the central monetary authority had to be independent of Government ministers. Historically the Bank of England refused to discount

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[63]The Resumption Act forbade the Bank to pay in coin until 1 May 1823. In response to the Bank's request the Government brought forward the Bank Cash Payments Bill which permitted the Bank to pay in coin after 1 May 1821. The Directors hoped that by offering coin they could encourage the public to relieve the Bank of its excessive hoard.

[64]The Bank's gold reserve began to increase rapidly in March 1820 (at which time it held £4,964,000 in bullion) so that by May 1821 its hoard amounted to £13,329,000 [see Appendix A.3].

[65]See the Report from the Committee of Secrecy on the Bank of England Charter (1832) Appendix No. 5, reprinted in Parliamentary Papers (1831-32) vol.6. Professor Judy Klein of Mary Baldwin College suggested this source to me. A fuller discussion of the matter can be found in her book, Statistical Visions in Time (1997) p.86.

commercial notes at less than a 5% nominal rate of interest. Beginning in mid-1819, this policy led to a reduction in the Bank's commercial discounts [see Appendix A.2], with a corresponding decline in the Bank's total circulation [see Appendix A.1], because the market rate of profit had fallen below 5%. At first unable to persuade the Bank Directors to reduce the discount rate, the Government, in the Spring of 1822,[66] planned to increase the money supply by borrowing £4 millions from the Bank on an advance of Exchequer bills, and then loaning the £4 millions to finance agricultural investments [Smart (1917) 2:66]. Liverpool justified the measure, stating:

> It was allowed on all hands that if it should turn out that the circulating medium was inadequate to the wants of the country, it would be better to increase it through the medium of discounts than by a further issue of Exchequer Bills...It does appear very extraordinary to His Majesty's Government...that at this moment when the market rate of interest is not more than 4 per cent., the Bank refuse to discount at a lower rate than 5...An immense quantity of treasure must have been flowing into the coffers of the Bank of England. The quantity of gold thus locked up by the Bank and their refusal to discount at less than 5 per cent. must certainly be very injurious to them, and if to them, to the public at large, more specifically to that distressed part of the public, the agricultural interest. Finding it impossible, however, to induce the Bank to lower the rate of interest on their discounts, conformably with the expectations held out in 1819, His Majesty's Government resolved on borrowing £4 millions on Exchequer Bills from the Bank with a view to applying that sum in some manner to the relief of the country.[67]

The Government intended "to get these 4 millions into general circulation" with the hope that this would "extend and quicken the general circulation" [Hansard 2s, 6:433]. The proposal, however, came close to compromising cash payments and was fiercely attacked by members of the House [Hansard 2s, 6:483,491-8] on the grounds that it would be "pro tanto a repeal of

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[66]Debate on the matter began 29 April 1822. Smart [(1917) 2:77-78,92-100] devotes an entire section to this and other attempts to undermine the Resumption Act.

[67]Parliamentary speech by Lord Liverpool in the Spring of 1822. The quote is taken from Acworth [(1925) pp. 105-106].

the bill of the right hon. gentleman opposite (Mr. Peel)" and that it would lead to another round of price inflation, accompanied by a fall in the foreign exchange and a loss of the Bank's gold reserve.

The matter was resolved on 21 June 1822 when the Bank reduced its discount rate to 4%, thereby reversing the reduction in its circulation. Following the change in the Bank's policy, the Government abandoned its efforts to "extend and quicken the circulation". The intended £4 million loan never materialised and the Bank's advances to the Government actually declined for the year [Acworth (1925) p.141].

B. The Country Banks.

On the foundation of the monetary base was constructed a credit pyramid involving country banks and various instruments of private credit. During the 1820s approximately 600 country banks operated in England and Wales.[68] Another 80 country banks were in Scotland along with the three Scottish chartered banks.[69] The banks reported to no central body and no attempt was made to gather data from individual banks about the volume of their issues. What little information existed concerning the country banks came in the form of crude estimates provided by the Stamp Office.[70] The official estimate of country notes

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[68]"Account of the Number of Country Banks in England and Wales for which Licences to issue Promissory Notes have been taken out," Lords Resumption Report (1819) Appendix F.9, reprinted in Parliamentary Papers (1819) vol.3.

[69]See the Report of Commons Committee on Resumption (1819) Appendix 31, as well as the Journal of the House of Commons (1818) page 760.

[70]For a complete explanation of the process by which Stamp Office reports were translated into estimates of the country circulation, see the report by Sedgwick, the Chairman of the Stamp Board, to the 1819 Lords Committee on the Resumption of Cash Payments.

shows a marked decline, from £20.5 millions in 1818 to £8 millions in 1822 [see Appendix B.1]. Based on these figures, which were the only data available to Parliament, the country circulation seems to have contracted in response to the Resumption Act, suggesting that a severe monetary deflation could have occurred.

The validity of the official estimates must be questioned, however, on the basis of testimony before the 1832 Committee of Secrecy on the Bank of England Charter by Henry Burgess, secretary of the Country Bankers' Committee. Burgess obtained data directly from 122 country banks,[71] which showed, in contrast to the Stamp Office estimates, that no considerable change in the country circulation occurred from 1818 through 1825 [see Appendix B.1].[72] The table below reports Burgess' data in the form of index numbers (1818=100), indicating that country issues never declined by more than 12%.

Index of Country Bank Issues

1818 - 100	1822 - 88.34
1819 - 98.29	1823 - 88.10
1820 - 94.16	1824 - 95.41
1821 - 93.05	1825 - 102.28

The discrepancies between the Stamp Office reports compiled by Sedgwick and the actual

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[71]Unlike reports from the Stamp Office, Burgess' data accurately reflected movements in the total country circulation of England and Wales [Minutes of Evidence (1832) p.413]:

> Question: Should you think that the account of these 122 Banks gives a fair view of the operations of the whole body of the Country Bankers of England and Wales?
> Answer: Perfectly fair.

> Question: And you think the general result drawn from this scale would correspond with the result of all the Bankers of England and Wales, if you had returns from them?
> Answer: I think it would with great accuracy.

[72]Macleod [(1906) 2:105] cites Burgess' figures as evidence that price fluctuations after 1819 were not due to changes in country-bank issues.

returns presented by Burgess resulted from the unrealistic nature of the assumptions of the Stamp Office, particularly the assumption that notes lasted on average only three years. Concerning this assumption, Burgess stated that it was not unusual for Bankers to continue reissuing notes for four, five or six years and that, because of the great number of notes stamped in 1818, country bankers "did not consequently get any large amount of new stamps for some years subsequent to the passing of the Act of 1819" [Minutes of Evidence (1832) pp.444,445].

Burgess' testimony is supported by the fact that from 1819 through 1822, the country banking system did not experience the sort of crisis--such as from 1814 to 1816 when more than two hundred banks failed or stopped payment--that would have caused a reduction of some 60% in the country circulation, as suggested by Stamp reports. The number of bank failures in 1819 was not unusual and from 1820 through 1824, the stability of country banks--as reflected in number of bankruptcies--seemed greater than at earlier periods.[73]

Taking into account, then, Bank of England notes, the metallic circulation, and the notes of the country banks, Appendix B.6 calculates fourth quarter averages for the money supply in the years 1818 to 1823. Given a number of reasonable assumptions, the total money supply is estimated to have decreased by 3.5% from 1818 to 1820, then increased by more than 18% from 1820 through 1823. It is thus not unreasonable to infer that monetary deflation was not a cause of the 1820-22 agricultural crisis nor of the decline in (mostly agricultural) commodity prices that occurred.

[73] 13 country banks failed in 1819; these failures were allocated evenly through the year, indicating no period of extreme pressure. 4 country banks failed in 1820; 10 failed in 1821. [see Appendix B.3]

C. Commercial Credit.

Commercial credit had been liberally extended during the speculative boom of 1818. But with the fall in commodity prices, and as foreign merchants and manufacturers struggled to maintain liquidity, their sudden demands for trade discounts, coupled with a reduced supply of credit, caused interest rates to double and there came everywhere "commercial discredit and distress" according to Tooke [(1838) 2:78,79]. A measure of recovery appeared in April 1819 when "The public funds, which were greatly depressed, recovered considerably" and when money seemed "more abundant on the Stock Exchange" [Blackwood's (April 1819) p.110], but financial distress resumed after resolutions supporting resumption unanimously passed the House of Lords. The panic was short lived, however, and by Autumn, "every vestige of discredit had disappeared" [Tooke (1838) 2:78,79].

Apart from the anecdotal evidence concerning the financial panic of early 1819, nothing indicates that private credit was withdrawn in response to the passing of the Resumption Act. In fact, the number of stamps on bills of exchange remained almost unchanged from 1818 through 1825, as shown in the table below [see Appendix B.7]:

Year	Amount of Stamps Issued on Bills of Exchange
1818	£ 589,331
1819	575,782
1820	544,978
1821	527,877
1822	519,203
1823	535,847
1824	556,919
1825	597,080

Information concerning the extent of private credit was publicly available since reports on "bills of exchange" and "promissory notes not re-issuable" were presented to Parliament in 1819, 1821 and 1823 [see Appendix B.7].

V. Conclusion.

We have shown that crises in the United States, Spanish South America and Continental Europe caused a reduction in the demand for British exports, leading to a general depression that began in February 1819. The consequent suffering experienced in manufacturing districts was acute and gave rise to radical political opposition of an alarming nature such that in November 1819 Parliament passed the Six Acts. The depression, fortunately, was short lived and with an increase in foreign demand manufacturing districts began returning to normal activity by May 1820.

Certain Inflationists blamed the general depression on an alleged monetary contraction that occurred as the Bank of England began preparing to comply with the terms of the Resumption Act. This criticism, however, was inconsistent with actual events, for the trade crisis, and the attending decline in commodity prices, began four months before the Resumption Act was assured approval by Parliament. Furthermore, there was no attempt by the Bank to prepare for Resumption in 1819 since the date for resuming bullion payments at the ancient par was still two years ahead and since the market price of gold was only 3% above its Mint price when the Act finally received Royal Assent. The Bank actually increased its circulation in the first half of 1819.

We have also shown that monetary contraction was not a cause of the decline in domestic commodity prices that occurred from August 1820 through the Spring of 1822. The fall in prices instead resulted from a glut of agricultural produce, in turn, produced by the abundant harvest of 1820, 1821 and 1822 coupled with unprecedented corn imports from Ireland. The causes of the consequent agricultural depression were not initially known, and certain Inflationists claimed that the country was suffering a general depression stemming from an alleged monetary contraction that occurred in response to the Resumption Act. This view

was overturned, however, when the investigation of the 1821 Agricultural Committee demonstrated the nature of the agricultural depression and confirmed the existence of general prosperity in the manufacturing districts and among foreign merchants. Some non-agricultural commodities also declined in price--notably, iron, cotton and wool--but it was well known that the quantities of these goods had greatly increased. Rostow [(1942) p.21] has explained the situation in terms of "Marshallian long-run cost curves being rapidly shifted downward; in quantity theory terms the increase in T outraced the increase in MV".

Notwithstanding the fact that the increases in agricultural and non-agricultural production were recognized, it was widely acceded that some monetary deflation--about 10% by conservative estimates--had occurred because Stamp Office reports suggested that the country bank circulation had contracted by as much as 60%. In contrast to what was accepted at the time, we have shown--based on Bank of England documents indicating that almost £14,000,000 in sovereigns and half-sovereigns were issued from 1821 through 1823, and on the evidence of Henry Burgess before the 1832 Bank Charter Committee--that the combined circulation of Bank Notes and specie remained stable following the passage of the Resumption Act. Moreover, the total circulation actually increased from 1820 through 1822, a fact incompatible with the claim that monetary contraction caused the 1820-22 agricultural depression and the attendant price deflation.

Chapter 3: Ricardo's Knowledge of Events

I. Introductory Remarks.

As we have shown, historians of thought often criticize Ricardo for lacking factual knowledge, for substituting instead the axioms of Say's Law and the Quantity Theory of Money, and for recommending public policies based on these axioms without serious heed to practical consequences. The present chapter establishes to the contrary that Ricardo was well informed about economic and political events in Britain because of his business pursuits and his interest in political controversies.

Even those critical of Ricardo as an economist admit of his expertise first as a stock jobber (1793-1818) and later as a loan contractor (1806-1819).[1] A matter not adequately recognized, however, is that his business expertise derived from a comprehensive knowledge of monetary fluctuations, tax revenues, Government expenditures, commercial credit, foreign trade and domestic commerce. To counteract the general neglect of the practical aspects of Ricardo's profession, I address his business-related knowledge in Section II, showing that he was obliged to remain well informed about both political and economic events to succeed as a loan contractor.

Section III addresses Ricardo's early interest in Government policy. From his August 1809 article on bullion in the Morning Chronicle to the posthumously published Plan for a National Bank, his writings--with the exception of the Principles--focused entirely on current political controversies. Accordingly, he came to study matters not directly related to loan contracting, in particular, the operation of the Poor Laws, the effects of the Corn Laws on

[1]An overview of Ricardo's business transactions is provided by Sraffa in the article "Ricardo in Business" contained in Vol.X of Ricardo (1951-73) pp.67-91.

economic growth and the distribution of resources, the treatment of Catholics, public education and child labour. In our discussion, we consider the information available to Ricardo in the commercial press and in Government reports. We show how this information contributed to his knowledge of the depressions of 1815-17 and 1819-20, and how it affected his understanding of the operation of the Poor Laws, and his awareness of the postwar changes in British agriculture.

Ricardo's election to Parliament and the importance of his roles in ending the Bank Restriction and opposing the Corn Laws are addressed in Section IV. As appropriate, we explain the implications for Ricardo's empiricism of his various observations concerning economic and political events. (The discussion of his analysis of these events is reserved for Chapters Four and Five.)

II. Information used by Loan Contractors.

A. Overview.

The business of contracting Government loans centred around bond auctions, which occurred annually, or at most at intervals of two years, and were held at Downing Street where the Chancellor of the Exchequer presided. When preparing their bids, prospective financiers monitored current market conditions, but looked also to future events since loan instalments were paid over a period of months during which time bond prices were likely to fluctuate to their loss or gain.[2] Because bond prices responded to shocks to the loanable

[2]Ricardo's success on the 1815 loan attests to this fact. The loan, which was the last of the War and also the largest at £36,000,000, was arranged just days before Waterloo. Upon news of the battle reaching London, the Omnium rose from a 2.5% premium to a 13% premium. Ricardo, as a contractor for the loan, had all his money invested in stock at this point, earning a profit the Sunday Times estimated at "upwards of a million sterling" [DR, 10:84].

funds market, Ricardo remained informed--or at least as informed as the available data permitted--about those factors affecting the supply and demand for funds.

The demand for funds in London was occasioned primarily by loans for foreign powers or for the British Government. British Government loans constituted the largest and most stable element of demand, though foreign loans amounted to millions of pounds annually--except in 1820--since London served as the financial capital of Europe after the War. Occasional sales of previously issued Government debt were a smaller, but still important, element in the demand for loanable funds and Sraffa [DR, 10:77-78] records that it was a common practice by loan contractors to depress bond prices prior to auctions by "selling out the stock which they owned and also in making sales of stock of which they were not possessed. The sales would depress the price against the day of the contract, so as to make the new stock obtainable as cheaply as possible."

Ricardo understood the effects of the Government's financial decisions on the market, describing in the Principles [1:298] the consequences of both extensive borrowing in wartime and rapid debt reduction in peacetime: "In time of war, the stock market is so loaded by the continual loans of Government, that the price of stock has not time to settle at its fair level, before a new operation of funding takes place, or it is affected by anticipation of political events. In time of peace, on the contrary, the operation of the sinking fund...elevates the price of stock and consequently depresses the rate of interest on these securities below the general market rate." The statement refers to a sinking fund resulting from a Government budget surplus--meaning "an excess of revenue above expenditure" [4:193,194]. In practice, Britain's sinking fund was only an accounting fiction.[3] But it was an expensive fiction and

[3]The sinking fund maintained during the Liverpool administration (1812-1827) was not a true sinking fund since it bore no relation to the actual Government budget surplus or deficit. Vansittart, the Chancellor of the Exchequer from 1812 to 1822, directed an artificially high fund repayment schedule

Ricardo observed in his Funding System [(1819) 4:173] that because Government loans were unnecessarily large, "the contractor must make a large purchase and he must wait before he can make his sale of ten millions to the commissioners. He is induced then to sell much more largely before the contract which cannot fail to affect the market price."[4] Only in June 1819 was the fictitious sinking fund temporarily abandoned, when, fearing that a large loan was unfeasible because the Bank had threatened to withhold its normal advances to loan contractors, the Government issued £12 millions in bonds instead of the expected £24 millions. Ricardo cited the event as an illustration of the effects of Government borrowing on the bond market [(1819) 4:173]: "In lieu of a loan of twenty-four millions from the contractor, there was one only of twelve millions; and as soon as this arrangement was known, previous to the contract, the stocks rose 4 or 5 per cent., and influenced the terms of the loan in that degree." Because of the effects of Government borrowing on interest rates, Ricardo was thus forced to closely monitor the Government's financial needs and the size of the Exchequer's intended sinking fund.

Bond prices also depended on the supply of loanable funds, which, Ricardo understood, was affected by political events, by conditions in foreign and domestic commerce and by fluctuations in the money supply. He attributed the financial panic of 1797 to "political alarm" [3:365],[5] and likewise noted "the great effect" which a pending conflict between

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which caused Government debt issues to be higher than necessary and thereby depressed the prices at which Government bonds were auctioned.

[4]In Parliament Ricardo noted that, as a loan contractor, it was in his interests to see the Fund maintained as it ensured high premiums to the contractors. Consulting the "advantage of the country", however, he opposed its continuation [5:4-6].

[5]Malthus similarly acknowledge the influence of war on markets. One day after Waterloo he cautioned Ricardo that "Should the allies be successful at the commencement of the campaign, Omnium will certainly rise very considerably, but on the other hand if Bonaparte should begin prosperously, I think there might be a panic which would occasion a rapid fall." His concern was great enough that

Russia and Turkey in 1821 "would have on the price of the public securities" [9:39]. As an illustration of the influence of domestic commerce on financial markets, he credited low interest rates in 1817 to the relocation of capital from wartime to peacetime production: "May not the derangement which the different employments of capital have experienced from the termination of the war have thrown an unusual quantity in the market to seek new occupations. Although there is no amount of capital which may not be employed in a country there is probably an interval while it is seeking its ultimate destination, during which it particularly operates on the rate of interest. May we not be experiencing such an interval now when so different a direction is given to capital from the change from war to peace?" [Heertje (1991 [1817]) p.521]. The vigour of Britain's foreign trade similarly affected the market: "In our case the market rate of interest has been lowered by causes which may be considered permanent...and also by causes which may be considered temporary such as the derangement of foreign commerce; that as the last of these causes shall cease to operate by things getting into their natural order the rate of interest will have a tendency to rise" [Heertje (1991 [1817]) p.522].

Ricardo further understood how changes in the monetary base disturbed private credit and thereby, at least temporarily, altered interest rates. Critics sometimes confuse his comments about the long-term effects of a change in the money supply on the rate of interest--Ricardo said there were no effects--with the immediate results of that change. But Ricardo himself was careful to distinguish between the short-run and long-run, making his position clear in the High Price of Bullion [(1810) 3:91,92]:

> I do not dispute, that if the Bank were to bring a large additional sum of notes into the market and offer them on loan, but that they would for a time affect

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Malthus sold his £5000 share of the Omnium before news of the battle reached London, after which time the Omnium rose to a 13 per cent. premium [6:231,233].

> the rate of interest...It is only during the interval of the issues of the Bank and their effect on prices that we should be sensible of an abundance of money; interest would, during that interval, be under its natural level; but as soon as the additional sum of notes or of money became absorbed in the general circulation, the rate of interest would be as high, and new loans would be demanded with as much eagerness as before...To suppose that any increased issues of the Bank can have the effect of permanently lowering the rate of interest and satisfying the demands of all borrowers so that there will be none to apply for new loans...is to attribute a power to the circulating medium which it can never possess.

His opinion was later confirmed in testimony before the Commons Resumption Committee [Report (1819) 5:445]:

> Question: Would those reductions [of paper in circulation] have any very sensible effect on the general rate of interest or discounts?
> Answer: Reductions or Increase of the Quantity of Money always ultimately raises or lower the price of commodities; when this is effected, the rate of interest will be precisely the same as before; it is only during the interval, that is, before the prices are settled at the new rate, that the rate of interest is either raised or lowered.

And yet again in Chapter 21 of the Principles [(1817) 1:198]:

> If by the discovery of a new mine, by the abuses of banking, or by any other cause, the quantity of money be greatly increased, its ultimate effect is to raise the prices of commodities in proportion to the increased quantity of money; but there is probably always an interval, during which some effect is produced on the rate of interest.

The reference to "abuses of banking" suggests that Ricardo extended his analysis to the country banks. For though he never explicitly described the causal relation between country bank operations and interest rates, it is apparent from a letter of December 1815--at the height of the country banking crisis--that he recognized how the precarious situation of the country banks affected the demand for Bank of England notes [DR, 6:343]: "there has been a considerable rise in the value of money which I think has been effected by the many failures of country banks, which has increased the use of Bank of England notes in the country both

as a circulating medium and as a deposit against the alarm which always attends extensive failures in the country."

The importance of monetary fluctuations to Ricardo as a loan contractor cannot be overestimated. Though he repeatedly stated that interest rates could not be permanently altered by changes in the monetary stock [1:298; 3:88,92,150; 5:130,445], the bond auction occurred on a particular day and its outcome depended on the rate of interest prevailing that day so that short-term matters--including fluctuations in the money supply--were critical to his estimate of an appropriate bid [(1819) 4:173]: "It is the market price on the day of bidding for the loan which governs the terms on which the loan is negotiated. It is looked to both by the minister who sells and the contractor who purchases." The importance of market conditions is further evident in that on the day of the auction, contractors were known to send runners to and from the City to report current stock prices to them at Downing Street even while the auction was proceeding [10:76].

Another example of the relation between monetary fluctuations and interest rates--and one that did not escape Ricardo's notice--was the quarterly spike in interest rates that occurred as the Government amassed cash to pay the quarterly dividend on the national debt. His proposed policy solution to the quarterly crises is discussed at several points in his correspondence,[6] and receives its fullest statement in Economical and Secure Currency [4:74]: "The national debt has become so large, and the interest which is paid quarterly upon it is so great a sum, that the mere collecting the money from the receivers general of the taxes, and the consequent reduction of the quantity in circulation, just previously to its being paid to the public creditor, in January, April, July, and October, occasions for a week or more the most distressing want of circulating medium". The Bank of England intervened to some

[6]Malthus [6:299], Grenfell [6:305] and Trower [7:22] all praised the proposal in letters to Ricardo.

extent during these miniature quarterly crises by "discounting bills probably very freely" which "considerably lessened the inconvenience to the mercantile part of the community" [4:74]. But Ricardo considered the Bank's intervention inadequate since, notwithstanding its discounting, there were significant interest rate swings both before and after the dividend payment [4:74,75]:

> Nevertheless, it is well known to those who are acquainted with the money market that the distress for money is extreme at the periods I have mentioned. Exchequer bills which usually sell at a premium of five shillings per £100 are at such times at so great a discount that by the purchase of them then, and the resale when the dividends are paid, a profit may often be made equal to the rate of fifteen to twenty percent interest for money...This great distress for money is frequently, after the dividends are paid, followed by as great a plenty so that little use can for some time be made of it.
>
> The very great perfection to which our system of economizing the use of money has arrived by the various operations of banking, rather aggravates the peculiar evil of which I am speaking; because, when the quantity of circulation is reduced, in consequence of the improvements which have been adopted in the means of effecting our payments, the abstraction of a million or two from that reduced circulation becomes much more serious in its effects, being so much larger a proportion of the whole circulation.

Ricardo's policy solution was for the Bank to provide dividend warrants, payable to the bearer, but also receivable in payment of taxes [4:75,76]. He expected that most warrants would not be presented to the Bank, but would instead be applied in payment of taxes, which would obviate the need for both collecting and dispersing millions in taxes and dividend payments.

The British Government's loan of 1819 provides a final example of the effects of monetary fluctuations on the loanable funds markets. The auction for this loan occurred on 9 June 1819, at which time the Resumption Act had already passed first reading in both Houses. Being concerned about its ability to resume cash payments according to the schedule contained in the Act, the Bank of England made clear its intent to refuse its

customary advances to loan contractors after the auction. In consequence, and fearing that contractors would be unable to pay monthly instalments of the intended £24 million loan, the Government reduced the loan to £12 millions. The decision resulted in an immediate rise in the price of the funds by about 6%, which could not possibly have escaped Ricardo's attention since he bid at the auction and since, along with Grenfell, he had advocated the smaller loan in Parliament [10:84,85].

B. Sources of Information: Official Data on the Demand for Loanable Funds.

Ricardo had ready access to information on current and expected demands for loanable funds since loans to foreign powers[7] and large stock sales in the City were reported twice weekly in The Course of Exchange--a newsletter to which he subscribed [11:112]--and since pending British Government loans could be estimated by calculating the difference between the Government's tax receipts and its expenditures.[8] Once Ricardo formed his estimate of the Government's demand for funds, and given his knowledge of the readiness of the market to supply funds, he could approximate future interest rate swings, as intimated in a letter of August 1814 to Malthus [6:119]: "The fall in the Omnium is to be attributed to our continued expenses and the expectation of another loan before the payments on the present are completed".[9]

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[7]Ricardo would necessarily have known about the exodus of capital from 1817 through 1819 [see Chapter One, pp.64-66].

[8]The target level of the sinking fund was another factor to consider in estimating the size of pending Government loans. During Vansittart's (1812-22) tenure at the Exchequer the intended level of fictitious sinking fund was announced in his annual budget address.

[9]The March 1815 commercial report of the New Monthly Magazine [p.187] suggests that this was a common means of estimating future interest rates: "The expectation of a considerable loan being required for the service of the present year, will tend to prevent much if any further rise in the funds till the contract for the loan is completed. The following comparative statement of the receipts of revenue

The available data permitted fairly precise estimates of the Government's pending loans, since reports from the Treasury concerning the revenues generated by customs, excise taxes, the property tax and other taxes appeared quarterly when Parliament was in session.[10] That Ricardo was acquainted with these reports is clear from his correspondence [6:304; 9:158; 9:315]. As for Government expenditures, exact expenditure figures were published with a lag of one fiscal year, but accurate estimates of future Government spending were available from any of several sources: the reports of Finance Committees, Parliamentary votes on expenditures[11] or the annual Budget Report by the Chancellor of the Exchequer [see Chapter One, p.52].

Ricardo was familiar with the reports of the Finance Committees and refers to two of the most critical of them: the Fourth Report from the Select Committee on Finance in 1817 [DR, 4:305n] and the First Report from the Select Committee on Finance in 1819 [4:193; 5:65]. As shown in Chapter One [pp.51-53], the 1817 Report was significant because it provided a measure of the severity of the 1815-17 depression. The Report also showed that the depression began in late 1815 and was ending by early 1817. The 1819 Report was valuable because it conclusively established the prosperous state of the country in 1818.

Finance Committees used tax reports to approximate fluctuations in aggregate economic activity. Ricardo adopted the same convention, as is evident in his response to a letter of 16

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for the years 1813 and 1814, places the resources of the country in a very gratifying and satisfactory point of view, taken from official documents as laid before Parliament".

[10]Appendix E.1 lists tax reports which appeared from 1815 through 1823; Appendix E.2 summarizes the contents of these reports.

[11]The Government submitted spending proposals for the upcoming fiscal year to Parliament, which then voted whether to accept the estimates, thereby approving funding. These estimates were public information, being listed in the Appendix to the Journal of the House of Commons. The Journals for most Parliamentary sessions contain about 200 pages of expenditure estimates.

October 1815 [6:303] where Malthus expressed his belief that general economic conditions were deteriorating. Ricardo disagreed with Malthus' concern because the data available to him--in particular, the tax report of 11 July 1815--indicated that the economy was not entering a depression [6:304]: "It is dangerous to listen to reports respecting briskness or slackness of trade. It is I believe certain that the revenue has been uncommonly productive the last quarter which is no indication of diminished trade." The fact that customs and excise revenues continued to increase through the third quarter of 1815 [see Appendix E.2] was taken as evidence by Ricardo that, notwithstanding crises in specific industries, general economic activity was not diminished.

Ricardo continued to use tax data to approximate changes in general prosperity even after he closed his loan contracting business in 1819. In a letter of 1822, for instance, he noted the fact of general prosperity in spite of the ongoing agricultural depression [9:158]: "The country--on the whole--is in a flourishing condition, our wealth is daily increasing. Every thing indicates that our manufactures are in a progressive state of improvement, and from the produce of the revenue I should conclude that their prosperity more than makes up for the losses and adversity of the agricultural class." (His reference is to the tax abstract that appeared on 6 February 1822, the day before the above letter was written.) He again cited tax data in a Parliamentary debate of 1823 to reinforce his claim that only agriculture was languishing while the general economy was performing well.[12] The point of Ricardo's observation was to demonstrate to his critics--Charles Western and Mathias Attwood in this instance--that had monetary contraction caused the fall in corn prices from 1820 through 1822, other sectors should have been similarly affected [5:315]:

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[12]It is not clear which of two reports Ricardo refers to since Tax Abstracts appeared on 10 February 1823 and again on 10 April 1823. The abstracts contained the same information, except for the fact that the April report included the most recent quarterly update.

> Could the agricultural interest be ruined by an alteration in the value of money, without its affecting, in the same manner, the manufacturing and commercial interests of the country? If corn fell 30 per cent from an alteration in the value of money, must not all other commodities fall in something like the same proportion? But had they so fallen? Was the manufacturing interest so distressed? Quite the contrary. Every thing was flourishing, but agriculture. The legacy duty, the probate duty, the ad valorem duty on stamps, were all on the increase; and certainly, if a raised value of money had lessened the value of property, less might be expected to be paid generally upon transfers of property. The state of the revenue was to him (Mr. Ricardo) a satisfactory proof, if every other were wanting, of the erroneous conclusions of the hon. Gentleman.

The fact that Ricardo gauged changes in aggregate economic activity according to tax reports is no small matter since, as has already been shown in Chapters One and Two, the consecutive periods of depression and expansion that occurred during these years are unmistakably mirrored in the corresponding fluctuations in customs and excise returns [Chapter One, pp.51-53; Chapter Two, pp.93-94].

C. Sources of Information: Official Data on the Supply of Loanable Funds.

1. Bank of England Notes and Coin.

Changes in the monetary base--comprised of Bank of England notes and specie--affected the short-term supply of funds and so were of great consequence to loan contractors. Usually two reports on the level of Bank notes appeared in the first half of the calendar year. In years with extended Parliamentary sessions--such as 1819--as many as six updates appeared.[13] Data were also available on silver coin in circulation and the amount of gold coin produced by the Mint [see Chapter Two, pp.116-117]. The value of gold in circulation, however, was not known, due to the fact that the Mint coined almost exclusively for the Bank, which was

[13]Appendix A.1 lists the monthly circulation of Bank of England notes and indicates the dates on which reports appeared.

strictly secretive about its gold transactions.

Though anyone was permitted to take bullion to the Mint to have it melted into sovereigns, its exclusive connection[14] with the Bank developed because coining gold at the Mint required several weeks, whereas the Bank stood ready to purchase gold at 3£ 18s. 6d. after the War, and at 3£ 17d. 6d. after the Resumption Act took effect. Because of the delay in obtaining coin from the Mint, persons selling bullion traded with the Bank. The Bank, in turn, submitted this bullion to the Mint, later adding the returned coins to its hoard. At times the Bank issued part of the specie that comprised its hoard,[15] but no data were publicly available concerning the value of coins so issued. Bank Directors also divulged no information concerning the level of the Bank's hoard, except that under pressure from Parliament they provided index numbers[16] in 1797, 1810 and 1819 showing fluctuations in the hoard. The Bank published no reports on either its hoard or its issues of coin during Ricardo's tenure in Parliament [see Appendices A.3 & A.4]. In fact, the actual values of the Bank's hoard were not reported until 1832[17] in evidence before the Bank Charter Committee.

Ricardo used the 1810 index in Secure Currency [(1816) 4:99-101] to estimate the Bank's profitability and he cited the 1797 scale in Plan for a National Bank [(1823) 4:279]. But notwithstanding his knowledge of these series, he could not have accurately guessed the

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[14]From July 1817, when the sovereign was brought into use, through December 1825, the Mint coined only £10,930 for private persons. [see Appendices B.4, B.5, B.6]

[15]Sovereigns and half-sovereigns were issued by the Bank from July 1817 through April 1819, and again from May 1821 onwards. [see Appendix A.4]

[16]Even the index numbers were supposed to be kept secret since they contained proprietary information. This however did not occur. The 1797 report was published in the Monthly Magazine for October 1797. The Morning Chronicle printed the 1810 report. It is not clear when the 1819 index was made public, but Tooke cites it in Considerations on the State of the Currency (1826).

[17]Report from the Committee of Secrecy on the Bank of England Charter (1832) Appendix No. 5, reprinted in Parliamentary Papers (1831-32) vol.6. See also Klein (1997) p.86.

amount of bullion in the Bank because the standard interpretation of this series--referred to by him as the "ingenious calculator" [4:415-418]--overestimated the Bank's hoard.[18] And even if the interpretation of the index had been accurate, the Bank published no index after 1819. The only information available to Ricardo respecting the amount of gold coin in circulation he obtained at the Bank Court on 21 March 1822 when the Governor of the Bank reported changes in the total amount of Bank notes and gold coin in circulation annually from March 1820 until March 1822 [4:232n]. The Governor did not distinguish between notes and coin, but given that the Bank's note circulation was reported every few months, Ricardo could have inferred the value of gold coin issued by the Bank after cash payments resumed in May 1821.

Apart from the conspicuous absence of public information concerning coin issued by the Bank, another problem Ricardo faced in estimating the amount of gold in circulation was the fact that gold coins were liable to import or export en masse in response to small fluctuations in foreign exchange rates. Because of his knowledge of changes in foreign exchange rates, he would have known when and in what direction international gold movements were occurring, but not the amounts involved. There were Government reports on international gold shipments, but these reports pertained only to legal shipments. Illicit shipments, which were the norm, were of course not recorded.

Ricardo's knowledge of the money supply is significant for his analysis of postwar events. For, among other reasons, it is apparent that he would have known that the Bank failed to support private credit during the 1815-17 depression. This is confirmed by the fact that he did not dispute Sir John Sinclair's claim, as stated in On the Means of Arresting the Progress

[18]The fact was not discovered even in 1832 when the Bank published a actual values of its gold hoard, because the dates for which holdings are given do not match the dates of the index series. Judy Klein provided me with this information.

of the National Calamity (1817), that Britain's economic crisis was due to a contraction of the money supply.[19] Ricardo also knew that the circulation of Bank of England notes remained stable during the first half of 1819, which is when the 1819-20 depression began and when most of the price deflation associated with that depression occurred. He stated as much in a Parliamentary debate of 9 June 1820, saying [5:61]: "The reduction of bank-notes within the last year did not exceed £2,000,000; that reduction of £2,000,000 was all that was necessary to bring about that state of the currency which all had united with the finance committee in desiring to see obtained." Ricardo advanced a similar argument in 1822, showing that he was familiar with current data on the money supply and with fluctuations in the currency that had occurred historically: "Some gentlemen seemed to think that the contraction of two or three millions of the currency had never before the present time taken place. In the report of the committee of 1797, it was stated, that in 1782--at which time the Bank paper in circulation did not amount to more than 8 millions in addition to coin--an actual reduction of 3 millions of the amount of the money in circulation took place" [5:175]; and again: "The whole amount of circulation both in London and the country does not probably much exceed 32 millions, of which there are nearly 16 millions of Bank of England notes of 5 pounds and above, 7,500,000 of sovereigns, and nine millions of country Bank notes. If this be true there has been little or no falling off in the amount of Bank of England notes and coin together since 1819, but Country Bank notes have diminished to the amount of £7.5 millions...it is a great reduction" [(9 June 1822) 9:201].

What Ricardo did not know, and this proved important in later debates on the Resumption Act, is that the Bank of England issued almost £14 millions in sovereigns and half-sovereigns

[19]In a letter to Sinclair of 4 May 1817 [7:151], Ricardo stated: "Thank you for your pamphlet, which I have read with attention. I agree with you that a part of our distress has been occasioned by the reduction of the circulation".

from 1821 through 1823. Had he been aware of this fact, it would have strengthened his arguments against the Inflationists. His calculations in the letter of June 9th (above) were based on a report from the Mint of 18 February 1822, stating the value of gold monies coined from 1815 through 1821 [Journal of the House of Commons (1822) p.1148]. It was not known, of course, how much of this coin had been delivered to the Bank or how much the Bank had issued, but Ricardo estimated that £14 millions were still in the country--£7.5 millions in circulation, £6.5 millions at the Bank [DR, 9:202]: "By a return laid before the H of Commons more than 19 millions of sovereigns have been coined since 1817. During the period that the Bank so foolishly issued coin, when it was advantageous to export it, they got rid of 5 millions of sovereigns,[20] so that if these were all exported more than 14 millions of sovereigns must now be in the country." Given the scarcity of information, his guess was fairly accurate; at the time of writing (June 1822), there were £9.9 millions of sovereigns in circulation [see Appendix A.4] and the Bank's hoard amounted to £10 millions [see Appendix A.3].

2. Gold & Silver Prices and the Foreign Exchange.

Evidence of Ricardo's comprehensive knowledge of the money supply, and how monetary fluctuations compared historically with movements in the prices of gold and silver and foreign exchange rates, first appears in The High Price of Bullion (1810). The purpose of the pamphlet and the nature of its case against an inconvertible currency are well known. What has received less attention is the empirical dimension of the argument. Particularly valuable is a table showing how the value of the pound declined against foreign currencies as the Bank

[20]The Bank actually lost about £8 millions of its hoard. [see Appendix A.3]

of England's circulation increased from 1798 to 1811 [3:121].[21] Its full relevance becomes apparent in Chapter Six when we consider Ricardo's answer to William Blake's claim that there was no monetary inflation during the War. The breadth of Ricardo's knowledge is further evident in his Reply to Bosanquet (1811), published the following year, which demonstrates a familiarity with not only the minutiae of bullion and foreign exchange markets in Britain, but also with the markets in Europe. (These facts relate to Chapter Five, where we consider Ricardo's response to the Inflationists in Parliament--opponents of Resumption who claimed that the Act caused severe deflation both at home and on the Continent. In actuality, prices began to fall on the Continent in 1818 while gold was being exported from Britain; Ricardo understood this, being familiar with the relevant markets.)

Ricardo's knowledge of gold, silver and foreign exchange markets is further evident in an exchange with Malthus[22] relating to an early draft of Economical and Secure Currency (1816), in which he recommended a paper circulation convertible in gold bullion. Upon reading the draft, Malthus opposed the plan on two counts: because gold prices were more

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[21]Ricardo remained informed about fluctuations in gold and silver prices and the foreign exchange by reading James Wetenhall's bi-weekly publication, The Course of the Exchange [11:112]. (So it seems did many others, as Government reports on gold and silver prices and the foreign exchange always cited Wetenhall as the definitive source.)

[22]Ricardo and Malthus seemed to have studied the price of gold and the foreign exchange as leisure reading:

> I have been amusing myself for one or two evenings in calculating the exchanges, price of gold, etc,--at Amsterdam, and I enclose the result of my labours. I have every reason to believe that my calculations are correct,--though I am somewhat puzzled at the profit which there appears to be on the importation of gold from Amsterdam...I am told that Gold which cannot be exported has sunk considerably in price altho gold that may be exported keeps its price. [(30 December 1813) 6:97]

> Having finished a table for the Hamburgh exchanges, similar to that which I have already sent you for Holland, I thought you might like to have a copy of it. [(1 January 1814) 6:100]

volatile than silver prices and because a country having a paper circulation, but minimal reserves, might be forced to stop cash payments during periods of crisis:

> If you recollect, we found upon calculation that the value of gold in this country at some periods during the Peninsular war was ten and fifteen per cent higher than at Amsterdam and Hamburgh...I am not sure whether I should not myself propose silver instead [of] gold as a standard, to prevent the run upon the bank which might be occasioned by an alteration in the relative value of the two precious metals. [(15 October 1815) 6:298]

> What has happened clearly proves that there may be a great demand for the precious metals in times of war and convulsion on account of their superior convenience; and such a demand operating upon a country possessing a small quantity of them must occasion either a great rise of price or an extraordinary and most inconvenient diminution of currency. [(1 October 1815) 6:289]

Ricardo rebutted Malthus' second point on factual grounds [(17 October 1815) 6:300]: "You fear that without a metallic circulation we could not on an emergency supply a large sum of bullion for the exigencies of the state. The fact is however against you for we have supplied large sums when the metals have been absolutely banished from circulation. This has been the case during the whole Peninsular war." But he accepted Malthus' observation concerning bullion prices during the War and made the appropriate change to Section III of Secure Currency, adopting a silver rather than gold standard: "I considered gold and silver as less variable commodities than they really are, and the effect of war on the prices of these metals were certainly very much underrated by them. The fall in the price of bullion on the peace in 1814, and its rise again on the renewal of the war on Bonapartes entry into Paris are remarkable facts, and should never be neglected in any future discussion on this subject" [(25 December 1815) 6:344].

Even after Ricardo retired from business, he seems to have continued using the same sources of information, particularly the Course of the Exchange. He knew, for instance, that every step necessary to resume cash payments at the ancient par had been completed by July

1819 [8:44]: "Gold is I believe at £3 18s. per oz, silver at the mint price, and the exchanges very nearly at par. The best friends to the measures lately adopted could not have anticipated less pressure than what has been hitherto experienced, and I think it but reasonable to hope that the permanent price of bullion will settle at the present rate without adding much to the slight difficulties which we have already suffered." And later, the growing discrepancy between the market price of silver and the market price of gold indicated to Ricardo that the Bank was accumulating an enormous bullion hoard even before any public statement to this effect was made [(2 February 1821) 5:70]: "If the Bank contemplated paying in gold coin in 1823, as they were now by law required, they must purchase a quantity of gold for that purpose; and to this cause was to be attributed the present disproportion between the price of gold and silver."

3. Country Banks.

The matter of country-bank notes, and more specifically the reports on country-bank operations, posed a problem for Ricardo. For accounts from the Stamp Office, concerning how many stamps the banks had purchased for their notes, indicated nothing about the quantity of notes actually in circulation. Moreover, arbitrary assumptions were required to translate the Stamp reports into official estimates of the country circulation and this sometimes caused the reports to be misleading, as occurred in the years 1818 through 1823 [Chapter Two, pp.120-122].

Ricardo was aware of the Stamp Office reports, especially those of 1821, 1822 and 1823 [see Appendix B.2], which indicated that the country circulation had declined by as much as 60% (from £20.5 millions to £8 millions) in the years 1818 to 1822. In his letter to Trower, written 9 June 1822 [9:201], he stated that there were "nine millions of country Bank notes"

in circulation, which, by the official estimate, amounted to a reduction of £7,500,000 since 1819. The apparent decline in the country circulation weakened Ricardo's arguments against the Inflationists since he could not deny that a sizeable monetary contraction had occurred. It was only later, during the investigation of the 1832 Bank Charter Committee, that actual data on the country circulation became available; these data indicated that the country circulation was relatively stable from 1818 through 1823, never falling more than 12% [see Chapter Two, pp.120-122].

The only reliable information about country-bank operations came through bankruptcy reports in popular periodicals, several of which Ricardo subscribed to.[23] Based on these reports he could have gauged the severity of the country-banking crisis in 1814-16. He might also have been aware of the relative stability that prevailed in the country-bank system thereafter. There are, however, no references in Ricardo's writings to bankruptcy reports and it is not known whether he used them. (The data contained in these reports are summarized in Appendix B.3, which lists the number of country-bank bankruptcies that occurred monthly from 1812 through 1830.)

As a final matter, it should be noted that anecdotal evidence on the country banks appeared in several issues of the Edinburgh Review [see Chapter One, pp.43-44]. Its contributors described the collapse of the country-banking system in 1814-1816 and provided estimates of the extent of monetary contraction.

[23]Of the periodicals Ricardo read, Blackwood's, the Edinburgh Magazine, The Morning Chronicle, and The Times all listed bankruptcies.

4. Private Credit.

Much like the extent of the country-bank circulation, the state of commercial credit--comprised of bills of exchange and non-bank promissory notes--was not measured with any precision. Stamp Office reports on "Bills of Exchange" and "Promissory Notes Not Re-Issuable" were published in 1819, 1821 and 1823, but these reports only indicated the number of bills (or notes) that had been stamped. The reports indicated nothing about the proportion of private bills and notes that were actually circulating nor did they appear often enough to be of much use. Neither Ricardo nor anyone else could have measured a sudden credit contraction such as would occur during a financial panic when large numbers of bills would have been temporarily withdrawn from circulation.

It is not known whether Ricardo read the reports from the Stamp Office pertaining to private credit. In his testimony before the Commons Committee on Resumption in 1819, he correctly stated that commercial credit had been reduced in 1816 [DR, 5:419], but this reflected only on his general impression of what had occurred since no Stamp Office report on the state of commercial credit in 1816 had, up to that time, been issued. (The Stamp Office reports that appeared later showed a considerable reduction in bills of exchange in 1815, but a stable level of private credit thereafter [see Appendix B.7].)

D. Data Provided by Business Associates.

Ricardo's business associates constituted an important source of knowledge for him. Though most of his business-related letters have never been published--a trove of at least 235 unpublished letters [10:388] remains in the safe keeping of the University Library at Cambridge--some references to his colleagues in the published correspondence indicate what he would have learned through these contacts:

> Mr. Goldsmid[24] informs me that at the period of the improvement in the exchange about Christmas last there were no importations, as far as he knows, of gold from France. A small quantity was imported from Lisbon. I have consulted Wetenhall's list and the following [table enclosed] appear to be the variations in the exchange and the price of gold about Christmas last. [(29 August 1812) 6:85]
>
> As I was about leaving the city I received [Henry] Thornton's answer he is engaged on Wednesday and Thursday, and has fixed on Monday for our meeting but he wishes us to meet at his house as there is to be a debate in the House of Lords on the Bullion question and he is not sure that his presence may not be necessary in the Commons. [(17 December 1812) 6:88]
>
> I will endeavour to get Mr. Mushet[25] to meet you at my house at breakfast on Sunday morning...He is exceedingly obliging, and would I am sure not mind trouble, if he could contribute to throw light on the subject of exchanges. [(25 February 1813) 6:88]
>
> I have been making enquiries concerning a bullion merchant. I find that the trade is mostly carried on by a class of people not particularly scrupulous in their modes of getting money, and I am told that they would not be very communicative, particularly on the subject of their exports. There are however some well informed merchants who know a great deal of the trade without themselves being actively engaged in it, to whom I hope I shall be able to introduce you...Mr. Mushet will dine with us on Sunday. [(22 March 1813) 6:90]

Goldsmid provided Ricardo with information concerning the bullion trade not available in public sources, particularly the magnitude of international gold flows. Such information made it possible to approximate the value of bullion leaving the country in 1817-19, and the value of bullion imported in 1820-23. The reference to Mushet is also significant, since he was Master of the Mint, and thus knew how much gold the Mint was producing and, of this quantity, how much had been sold to the Bank. I am not certain what strictures, if any,

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[24]Isaac Lyon Goldsmid and Aaron Asher Goldsmid were partners in the house of Mocatta and Goldsmid, bullion brokers for the Bank of England. [6:85n]

[25]Robert Mushet was Master of the Mint; he was also a founding member of the Political Economy Club.

governed the release of proprietary information by the administrators of the Mint, but Mushet included a considerable amount of data in his pamphlets and he may have given Ricardo further information regarding the operations of the Mint and its transactions with the Bank.

III. Ricardo's Early Interest in Political Debates.

Ricardo's interest in Government policy began long before he entered Parliament. From his August 1809 article on bullion in the Morning Chronicle to his posthumous Plan for a National Bank, his writings--with the exception of the Principles--focused entirely on current political controversies. Accordingly, he came to study matters not directly related to loan contracting, such as the operation of the Poor Laws, the effects of the Corn Laws on economic growth and the distribution of resources, the treatment of Catholics, public education and child labour. In what follows, we describe the information available to Ricardo in the commercial press and in Government reports. We then show how this information contributed to his knowledge of the depressions of 1815-17 and 1819-20, and how it affected his understanding of the operation of the Poor Laws, and his awareness of the postwar changes in British agriculture.

A. Relevant Information in the Commercial Press.

Newspapers and magazines were important sources of information for Ricardo about economic and political issues not directly related to his loan-contracting business. He seems particularly to have relied on newspapers, as during a tour on the Continent he instructed Mill and Bentham to save papers for him, saying afterward [(7 August 1817) 7:170]: "I was very much obliged to you and to Mr. Bentham for the loan of the month's newspapers--I have read

them with very great interest and will return them when we meet in London". Of these papers, both The Times and the Morning Chronicle[26] reported on corn and coal markets, the foreign exchange and the prices of funds. Political events, and particularly the activities of Parliament, were also regular features in The Times.

With respect to the monthly magazines that Ricardo read, Blackwood's Edinburgh Magazine and the Edinburgh Magazine (originally the Scots Magazine) contained data on prices and financial markets along with detailed reports on agricultural, manufacturing and foreign trade. From his correspondence, it is evident that he received Blackwood's at Gatcomb during 1818 [7:326,332,362] and perhaps during 1817 [7:219]. McCulloch mentions Blackwood's in their correspondence of 1819 [8:25] and 1822 [9:205-6],[27] but from the context, it cannot be inferred whether Ricardo subscribed to the publication after 1818. Ricardo's correspondence also indicates that he was reading the Edinburgh Magazine in 1818 [7:315,362].

Of the policy-oriented periodicals to which Ricardo subscribed, the most important was the Edinburgh Review, which he read from his earliest studies of political economy [7:246] till his death. (There are 125 references to the Review in the index to Ricardo's Works.) Though the Review did not provide detailed monthly reports on trade and manufacturing, its contributors focused on economic principles relevant to current political debates, especially regarding monetary policy, agricultural protection and the Poor Laws [see Appendix G].[28]

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[26]The Sraffa index contains 24 references to The Times and 34 references to the Morning Chronicle.

[27]The editor of Blackwood's had a personal dislike for McCulloch and attacked him in several articles.

[28]The Review was founded by Sydney Smith, Francis Jeffrey and Francis Horner as an instrument of political suasion and "from the first issue it appeared in the blue and buff colors of the Whig party" [Fetter (1953) p.233].

Ricardo also subscribed to the Quarterly Review[29] from 1816 through 1822. This is not surprising given the significance of that journal in early nineteenth-century Britain, which Fetter [(1958) p.47] describes as "only less important than...the Edinburgh [Review] in tracing the development of English economic controversy".[30] The largest proportion of economic articles in the Quarterly Review pertained to monetary policy[31] and the Poor Laws, but there were some important discussions of Britain's general economic state in 1815, 1820 and 1823 [see Appendix G].

The fact that Ricardo read the above periodicals has great relevance for his knowledge of postwar events. The Edinburgh Review and the Scots Magazine described the extent and causes of the first agricultural depression [see Chapter One, pp.40-45]. The magazines also documented the timing and severity of the general depression of 1815-1817 [see Chapter One, pp.48-55], which must have affected his perception of Britain's economic condition since in a letter of 25 December 1815 [DR, 6:344,345] that contains his first extant reference to the general distress, he repeats the arguments of an article titled "British Finances" in the October 1815 edition of the Edinburgh Review.

Concerning the economic recovery of 1817 and the prosperity of 1818, the commercial sections of Blackwood's and the Edinburgh Magazine provided comprehensive coverage [Chapter One, pp.58-59]. Their commercial reports were equally valuable in determining the exact dates of the 1819-20 depression and in describing the extent to which it was caused by reversals in foreign trade [Chapter Two, pp.77-81]. Both magazines also began to print

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[29]There are 14 references to the Quarterly Review in the index to Ricardo's Works.

[30]The Quarterly Review was a Tory journal founded expressly to counteract the influence of the Edinburgh Review [Fetter (1958) p.47].

[31]Ricardo would certainly have given attention to the articles on monetary issues since his pamphlets were, in several instances, the topics of discussion.

glowing accounts of the return of general prosperity beginning in May 1820. (The reports, particularly respecting the improvements in Britain's foreign trade and its manufacturing, have been discussed at length in Chapter Two, pp,92-93.) Whether Ricardo read the accounts in Blackwood's and the Edinburgh Magazine from 1820-22 cannot be determined, but it is certain that he recognized that labourers had full employment and that foreign trade and manufacturing were amended:

> The manufacturers have full employment for their men...If the labouring class, in Agriculture, and Manufactures, are doing well, we must console ourselves for the misfortunes of landlords and tenants--they form but a small proportion of the whole population, and it is no small comfort to reflect that the losses they sustain are more than made up by the prosperity of other capitalists. [(9 July 1821) 9:13]

> It was not very long ago since they were all in a state of the greatest alarm on account of the distressed manufacturers. It was conceived that our manufacturers were declining and the most gloomy apprehensions were indulged on their behalf. But he took the liberty of intimating his opinion, that those distresses were not permanent; and happily, his predictions had been fulfilled. [(18 February 1822) 5:133]

> In looking at the general state of the country, it was satisfactory to find that, amid the gloom and distress in which the agricultural interests were involved, its foreign commerce was in a flourishing condition. [(12 February 1823) 5:247]

Given these statements it is evident that Ricardo was not ignorant of British economic conditions. Instead, he was able to approximate the dates of both the first and second post-war depressions and, to some extent, he was also able to gauge the severity of these depressions.

B. Relevant Information in Government Reports.

The reports of Parliamentary Committees were another valuable source of information to Ricardo. While there is no definitive list of the reports he owned, his correspondence suggests that he kept informed about a wide range of subjects:

> I applied the morning after I saw you to the proper officer in the Vote Office of the House of Commons, to get you a set of Parliamentary papers, but I am sorry to say without success...To console you under your disappointment I can assure you that it will give me great pleasure to lend you, whenever you may want them, any of my papers or reports. The report of last year respecting the employment of children in Manufactures should have been sent to you in town the other day... This year there have been very few reports,--the only one of importance is a very thick one containing the laws in reference to Roman catholics[32] in the different Protestant countries of Europe. If you would like to have this, as well as the one before named, I will send them to you.
> [(30 March 1817) 7:146]

> I thank you for your offer to lend me some of the Reports; and I am disposed to trouble you so far as to beg the use of the Police Report,[33] that on education,[34] and on the employment of Children in Manufactures[35].
> [(28 April 1817) 7:150]

> I have read the report of the Committee of the House of Commons on the Poor Laws[36] with much satisfaction--I am glad to see sound principles promulgated from that quarter, though I should have been still more pleased if they had insisted more strongly on an efficient remedy...All the principal Reviews write well on this subject. In the last number of the British [Review] there is a very

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[32]Report from the Select Committee on Laws respecting Roman Catholic Subjects (1816), reprinted in Parliamentary Papers (1816) volume 7.

[33]Report from the Committee on the State of the Police of the Metropolis (1816), reprinted in Parliamentary Papers (1816) volume 5.

[34]Report from the Select Committee on the Education of the Lower Orders in the Metropolis (1816), reprinted in Parliamentary Papers (1816) volume 4.

[35]Report by the Select Committee on the State of Children Employed in the Manufactories of the United Kingdom (1816), reprinted in Parliamentary Papers (1816) volume 3.

[36]Report from the Select Committee on the Poor Laws (1817), reprinted in Parliamentary Papers (1817) volume 6.

good review of the Commons' report. [(10 December 1817) 7:219]

The Poor Law report referred to by Ricardo was the report of the Commons Committee of 1817. This report was preceded by two reports on the State of Mendicity in the Metropolis in 1815 and 1816 and was followed by two further Commons Committee reports on the Poor Laws in 1818 and 1819. Apart from the fact that Ricardo owned Poor Law Committee reports, we can infer his interest in the matter because his first appointment upon entering Parliament was to the Poor Law Committee of 1819.

Given the contents of these reports, Ricardo must have been well informed about the history of the Poor laws and their legal interpretation. He would have known that resident landlords paid a disproportionate amount of the poor rates and that this burden had been increasing since, in some districts, the Rates were even used to subsidize the wages of manufacturing labourers. From the 1817 Poor Law Report Ricardo also would have learned that in those districts in England and Wales where compulsory provisions for the poor were most generous, the number of persons receiving relief was greatest. This was in marked contrast to Scotland, where poor relief came from voluntary contributions except in times of crisis and where no increase in the number of persons seeking poor relief had occurred.[37] These facts came to be important in his analysis of the 1819-20 depression, for he concluded that the extreme hardships of the poor were, in part, caused by an undue increase in the supply of labour resulting from too liberal provisions from the Poor Rates.

The Corn Laws were another, and more contentious, topic of Parliamentary inquiry. Ricardo had a thorough knowledge of the Corn Laws and the state of British agriculture, in a

[37]The conclusions of the Poor Law Committees were reinforced by articles in magazines such as the Edinburgh Review, the Quarterly Review and the Scots Magazine which described the English Poor Laws and their many shortcomings, especially as contrasted with the successful poor relief system in Scotland. [see Chapter Two, pp.90-91; see also Appendix G]

large measure, because he read[38] the principal Parliamentary Reports on the Corn Laws that appeared during the 1813-16 agricultural depression: the First and Second Reports from the Lords Committees Respecting Grain and the Corn Laws[39] and the Commons Report on Petitions Relating to the Corn Laws.[40] The Commons Report focused on the "Extension and Improvement of the Agriculture of the United Kingdom"; agricultural production costs; a remunerating price for domestic growers; and the competitive threat of Continental producers. The Lords Report explored the same subjects in less depth.

Both Reports established factual points critical to Ricardo's interpretation of the 1813-16 agricultural crisis, the first being that vast tracts of formerly waste land had been brought under cultivation during the War and that, at the same time, additional capital had been applied to land already being farmed. Many witnesses before the Committees commented on extensions of both the extensive and intensive margins of cultivation, which the Commons Report [(1814) p.3] described in the following terms: "within the last twenty years a very rapid and extensive progress has been made in the Agriculture of the United Kingdom...great additional capitals have been skilfully and successfully applied, not only to the improved management of lands already in tillage, but also to the converting of large tracts of inferior pasture into productive arable land, and the reclaiming and inclosing of fens, commons and wastes, which have been brought into a state of regular cultivation". The second factual point emphasized in the Commons Report [p.3]--and contained in testimony before the Lords

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[38]Writing to Malthus in August 1814, Ricardo asked [6:130]: "Have you read the report of the Lords Committee on the corn question? It discloses some important facts, but how ignorant the persons giving evidence appear to be of the subject as a matter of science". Since he read the Minutes of Evidence, which includes the testimony of more that two dozen witnesses, it can be assumed that he was acquainted with the contents of the actual Report, which is only a few pages long.

[39]The Reports appeared 25 July 1814. Parliamentary Papers (1814-15) vol.5, p.1035.

[40]The Commons Report appeared 26 July 1814. Parliamentary Papers (1813-1814) vol.3, p.195.

Committee--was that improvements had occurred in techniques of husbandry and that these improvements had made possible the production of higher yields. The final point made by the Committees was that the return of foreign competition in 1813 placed such pressure on domestic growers that it was unlikely that the British agricultural sector could continue on a scale close to what it had formerly been. Illustrating the extent of this competition, the quantities of foreign corn entering Britain were cited in the Appendices to the Reports.

The Committees of 1814 attributed the vast importations of corn to the fact that foreign producers had lower production costs, on average, than British farmers. This finding was substantiated by a mass of data and testimony documenting both foreign and domestic agricultural production expenses. Based on this data the 1814 Commons Committee established that "80s. per quarter is the lowest price which would afford to the British grower an adequate remuneration. The Evidence [supporting this finding] is inserted at length in the Minutes; and the names [of witnesses] will be found to include many of the most eminent surveyors and land agents from different parts of Great Britain, as well as some persons who have been long and very extensively engaged in the Corn Trade, and several occupiers of land distinguished for their practical knowledge" [Report, pp.4-5]. These same witnesses testified that corn on the Continent could be produced with so little expense that "there is scarcely any price in our own market, which, under circumstances of a general abundance in the other parts of Europe, would be sufficiently low to prevent an importation of corn from those foreign ports at which a considerable supply is annually accumulated for exportation only" [Report, p.6]. Given the contents of these reports, Ricardo could not have been ignorant of the state of agriculture at the close of the War, nor would he have been uninformed about the causes of the 1813-16 agricultural depression.

Apart from Ricardo's direct reference to the Lords inquiry, his knowledge of the Reports--and agriculture generally--is evident in passages in the Essay on Profits (1815) where he reiterates arguments found in the Reports, stating, for example, that "improvements in agriculture, or in the implements of husbandry lower the exchangeable value of corn" [4:19], and again, that "great improvements have been made in agriculture, and that much capital has been expended on the land, it is not attempted to deny; but, with all those improvements, we have not overcome the natural impediments resulting from our increasing wealth and prosperity, which obliges us to cultivate at a disadvantage our poor lands, if the importation of corn is restricted or prohibited" [4:32]. His statements accord fully with the findings of the Committees and it is clear that his analysis is not a matter of abstract theorizing, but reflects a thorough knowledge of current economic conditions.[41]

Similarly, his correspondence indicates that he was aware of agricultural conditions. In December 1815, when wheat was selling for less than 60s., he described corn prices as "unnaturally low" [6:344].[42] He also made repeated observations concerning the poor state of the 1816 harvest: "The continuance of the cold and wet weather does not afford us a very

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[41]Ricardo also kept informed about agricultural issues because his friends were foremost among the pamphleteers, writing both for and against agricultural protection. There was, for instance, Lauderdale's Letter on the Corn Laws (1814), which Ricardo read though he disagreed with Lauderdale's analysis of the effects of protection [6:169; 6:189]. Ricardo read at least four works by Torrens on money and the Corn Laws--Essay on Money and Paper Currency (1812); Essay on the External Corn Trade (1815); Letter to the Rt. Hon. Earl of Liverpool on the State of Agriculture of the United Kingdom (1816); Letters to the Earl of Lauderdale (1816)--and he makes repeated references to the pamphlets in their correspondence [(17 April 1815) 6:212; (23 February 1816) 7:24; (24 April 1816) 7:28]. Ricardo also expressed approval for Edward West's Essay on the Application of Capital to Land [(9 March 1815) 6:179; (18 September 1818) 7:298], which addressed agricultural protection. As for Malthus' pamphlets on the Corn Laws, these are too important to relegate to a footnote and will be considered in Chapter Four.

[42]Corn prices began to rise shortly after Ricardo made this prediction; within eight months wheat sold for more than 80s.

good prospect for the harvest, and I am very much afraid that the poor will have much to suffer during the next winter" [(8 September 1816) 7:66]; and again: "the short crop of this year was most unfortunate, it aggravated all our former ills" [(17 November 1816) 7:90]. Concerning the fine harvest of 1817, he wrote to both Mill and Malthus that "With the rest of the country we are looking forward to abundant crops" [(7 August 1817) 9:170] and then after the season, "Our harvest in this part of the country is almost entirely got in. The crops are I believe generally good and we are very grateful for the fortunate change in the weather which enabled us to reap and house them in a state of perfection" [(10 October 1817) 7:192].

IV. Ricardo in Parliament.

A. He Aligns with the Whigs.

In Autumn of 1815 Pascoe Grenfell, a prominent Whig and member of Parliament,[43] enlisted Ricardo's support in the campaign to end the Bank Restriction. He suggested a pamphlet on the subject and to this end provided Ricardo with a wealth of information, including: historical documents on the Bank of England [6:242]; reports detailing financial arrangements between the Bank and the Government [6:257]; current reports of Bank notes in circulation [6:259; 6:281]; reports on the Bank's expenses and revenues [6:282-284; 6:276]; a detailed list of the sources of excess profits for the Bank;[44] and information concerning dividend payments by the Directors [6:276,277]. (I include this information

[43]The Dictionary of National Biography [(1949-50) vol.8, p.553] describes Grenfell as "a vigilant observer of the actions of the Bank of England, and a great authority on finance. On the latter subject he made many speeches...and it was chiefly through his efforts that the periodical publication of the accounts of the bank was commenced."

[44]Sources such as: (1) the fact that the Bank did not purchase stamps on their notes as country banks did [(25 August 1815) 6:260; (8 September 1815) 6:266] and (2) the management fee received by the Bank for administering the public debt [(20 September 1815) 6:275].

under the heading of Ricardo's political involvement because it did not relate directly to his loan-contracting business.)

Ricardo incorporated all of these materials in Secure Currency. The pamphlet begins with a detailed history of Bank operations. It proceeds to policy recommendations (sections I - V) and then concludes with criticism of the Bank's excessive profits (sections VI - VII). The appendices to Secure Currency provide estimates of the Bank's financial statements for the years 1797 to 1815 and also contain data on the Bank's revenues and its note circulation.

Opponents of the Bank recognized political promise in Ricardo, and indeed from 1816 onwards he became progressively involved in the Whigs' strategy[45] to restore a metallic standard and at the same time limit the perquisites enjoyed by the Bank. Ricardo was not new to Whig circles. Henry Thornton and Francis Horner [6:xxxv] had been his friends at least from the time of the Bullion Committee; so too were Richard Sharp[46] and John Whishaw.[47] Both Sharp and Whishaw are mentioned in Ricardo's correspondence and shared, with him, mutual friends in Malthus and Thomas Smith. They also attended the King of Clubs[48] where Malthus was a member and which Ricardo visited on occasion. Pascoe Grenfell was a friend--and political ally in the monetary policy debate--from 1815 till

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[45]There was coherent development and enforcement of party policy by the early nineteenth century, since "the features of party management had long been in existence" [Aspinall (1926) p.389].

[46]Richard Sharp was a Whig member of Parliament, described as being "very active in the background." He served for a time on the finance committee and was also on Horner's bullion committee. At his home Sharp "gathered around him the chief persons of the day and he knew their characters so well that he could hit them off in a moment." He resigned from the constituency of Portarlington to permit Ricardo to enter the House. [Dictionary of National Biography, vol.17, pp.1351,1352]

[47]Sraffa [DR, 6:66n] notes that John Whishaw was a prominent member in Whig society and that he had been a contemporary of Malthus at Cambridge.

[48]The King of Clubs was comprised mostly of Whig politicians. Malthus became a member in 1812; Ricardo in 1817. [6:87n]

Ricardo's death. In the years before his fame Ricardo had, to a lesser extent, also been acquainted with Henry Brougham,[49] George Tierney[50] and Lord King.[51]

These acquaintances developed into working relationships as Ricardo gained prominence among the Whigs--a rise evident by early 1818. Lord Grenville's[52] opinion of the Principles was "favourable beyond my expectations" [(10 December 1817) 7:220] according to Ricardo. Grenville's reaction led to their first meeting (probably in March 1818) whereafter Ricardo became an unofficial counsellor to him on economic matters [(22 March 1818) 7:259; (13 February 1819) 8:19n]. Ricardo's ascent continued when on 13 March 1818 Lords Essex and Holland supported his election to Brooks's [8:28n], the premier Whig club in London. By mid-1818 Brougham, Warburton[53] and Parnell[54] were negotiating with Lord Portarlington

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[49]Henry Peter Brougham, Baron Brougham and Vaux (1778-1868), lord chancellor. Brougham joined the Edinburgh Review in 1802. He entered Parliament in 1810 and by 1815 was "the most prominent member of the opposition in the commons." Brougham defended Queen Caroline before the Lords in 1820. He was elevated to the peerage and became chancellor in 1830; as chancellor he worked diligently, though "he gave some offence by boasting publicly and repeatedly of achievements that he had not performed and that were indeed beyond mortal power" [Dictionary of National Biography, vol.2, pp.1356-1366].

[50]George Tierney (1761-1830). Tierney entered Parliament in 1789. He opposed Pitt's financial schemes in a manner Wilberforce described as "truly Jacobinical" and the conflict culminated in a pistol duel between them in 1798. After Lord Grenville's administration Tierney became more prominent among the Whigs. "His undaunted tenacity, his knowledge of business, his readiness in debate, his clearness of expression gave him great claims to the leadership of his party in the House of Commons...in 1817 he became the acknowledged leader of the opposition" [Dictionary of National Biography, vol.19. pp.865-867].

[51]Peter King, seventh Lord King, Baron of Ockham (1776-1833). Lord King was active in the House in opposing the suspension of cash payments and the Corn Laws. He wrote several pamphlets on the currency, Roman Catholics and the Corn Laws. [Dictionary of National Biography, vol.11, pp.147-148]

[52]William Grenville, Baron Grenville (1759-1834). Lord Grenville entered the House of Commons in 1782; the House of Lords in 1790. He formed the Ministry of All the Talents in 1806, which ended in 1807 as the King objected to Grenville's liberal treatment of Catholics. Grenfell opposed the suppression of Catholics, slavery and the Corn Laws. [Dictionary of National Biography, vol.8, pp.576-581]

[53]Henry Warburton (1784-1858). Warburton was a timber merchant early in life; he entered Parliament in 1826. He was a founding member of the Political Economy Club. [Dictionary of National

(Parnell's brother) on the price for Ricardo's seat in Parliament. At the same time, his correspondence shows that he became increasingly involved in the Whigs' campaign to restore a metallic standard:

> Mr. Vansittart had a ridiculous project I hear of creating a new circulating medium and legal tender...I am told that he has now abandoned it, and indeed it is difficult to believe that he ever entertained so ridiculous a project, tho' my authority for the fact is no less than that of Mr. Tierney. [(22 March 1818) 6:260]
>
> To morrow evening there is to be a long debate in the House of Lords on the Bank Restriction Bill, on which occasion Lord Grenville means to speak. Lord King mentioned to me his idea of proposing that the Bank should be forbid making any dividend on their stock while the price of gold was above the mint price...Sir James Mackintosh has been reading Bentham and was just beginning to give me his opinion of the book when we were interrupted. [(25 May 1818) 7:262,263]
>
> From what you [Richard Sharp] say, I fear that you have some reason to think, that the Bank will not place themselves in a situation to resume cash payments next year. What possible excuse can now be offered, either by the Bank, or by ministers, for not fulfilling the engagement which they have so solemnly contracted? [(27 August 1818) 7:291,292]
>
> The inquiry into the state of our currency, and exchanges, is proceeding in both houses very satisfactorily. I have had many conversations with several of the Committees of both Houses--with Lord Grenville, Marquis of Lansdowne, Lord King, Mr. Huskisson, Mr. F. Lewis, Mr. Grenfell and others. All have a very perfect knowledge of the subject. [(28 February 1819) 8:19]

(It should be noted that the reference of 27 August 1818 to the "engagement" of the ministers indicates Ricardo's knowledge of the fact that the Government and the Bank had on several

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Biography, vol.20, pp.753-4]

[54]Henry Parnell, first Baron Congleton (1776-1842). Parnell entered Parliament in 1802 and for a time represented the borough of Portarlington. He served on the Bullion Committee and was chairman of the 1813 committee on the Corn Trade of the United Kingdom. As a colleague of Ricardo, Parnell supported Resumption and the retrenchment of public expenditure. [Dictionary of National Biography, vol.15, pp.342-345]

occasions pledged to resume cash payments, but just as frequently had reneged on the promise [see Chapter One, pp.70-72]. The relevance of this fact becomes apparent in Chapter Six when we consider Ricardo's support for the Resumption Act in 1819 when the Government finally reversed its long-standing opposition to ending the Bank Restriction.)

B. His Participation in Parliament.

Ricardo took his seat in Parliament on 26 February 1819. As a member of the House he gained further access to information on national affairs because he could submit motions to Parliament that specific economic reports be prepared and because he participated directly in the proceedings of Parliamentary Committees. The section below discusses knowledge Ricardo is likely to have gained from Parliamentary economic reports and, more particularly, from his involvement with Parliamentary Committees.

1. The 1819 Poor Law Committee.

Ricardo's first committee appointment was to the 1819 Poor Law Committee.[55] Inquiries concerning the Poor Laws had historically focused on two issues: the disproportionate tax burden imposed by poor rates on landed interests[56] and the fact that poor relief encouraged and perpetuated misery in the lower classes by taxing industry and subsidizing procreation. The Committee of 1819 recognized both problems and suggested sweeping reductions in poor relief though with the caveat that changes to the laws not occur in 1819 because of the current distress.

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[55]For a full discussion of the investigation of this Committee see Chapter Two, pp.86-91.

[56]In the Principles Chapter XVIII, titled "Poor Rates", Ricardo discusses the tax burden associated with the Laws.

According to the Committee's report, the current distress of the labouring class reflected a low demand for labour at a time when the labour force was expanding. They linked rapid population growth (along with "sloth" and "vice") to the operation of the Poor Laws [Report, p.7] and attributed low labour demand to, among other things, the reduction in households' disposable incomes caused by the Poor Rates [Report, p.9]. The Committee envisaged no short-term solution to the disproportion between labour and capital apart from emigration; long-term solutions were looked for in the eduction of the lower orders and in an increase of the national capital stock. These facts concerning the Committee's report are especially relevant because Ricardo's analysis of the sufferings of labourers during the Winter of 1819-20, and his proposed solutions to the crisis, are similar to the analysis and policy proposals put forward by the Committee.

2. The 1821 Agricultural Committee.

Ricardo also served on the Agricultural Committees of 1821 and 1822. This work formed the most significant aspect of his Parliamentary career since the political debates respecting both the Resumption of cash payments and agricultural protection centred around the Committees' investigations. Ricardo figured so prominently in the attending debates that Lord Londonderry (Castlereagh), when presenting the Report of the 1822 Agricultural Committee, remarked how his belief that a new corn bill would not remedy the current agricultural distress had been "fortified considerably by the discussions which have since taken place on the subject, and more especially by the sanction and confirmation which the opinion I expressed has received in the able work[57] which has recently been published by the hon. member for Portarlington (Mr. Ricardo), whom it is impossible for the House on such

[57] On Protection to Agriculture (1822).

questions to have higher authority" [Hansard 2s, 7:152]. In a later debate on the Report, Attwood referred to the "hon. member for Portarlington--and if he referred so repeatedly to the opinion of that hon. gentleman, it was because he was the only individual of equal authority who had given any consistent exposition at all of the causes of agricultural distress...although he (Mr. Attwood) did not agree with him, in scarcely any one of the opinions he entertained" [Hansard 2s, 7:379].[58]

As shown in Chapter Two [pp.106-110], the Report of the 1821 Agricultural Committee demonstrated that unprecedented Irish corn imports and the bumper harvest of 1820 were significant causes of low corn prices. The Report thus refuted the Inflationists who argued that monetary contraction had caused a general depression, with a corresponding fall in prices. The Committee's Report also helped explain the extreme volatility in corn prices after the War, which they attributed to the operation of the 1815 Corn Law. The 1815 Law prohibited foreign corn imports when the domestic price was below 80s. per quarter but allowed unlimited, duty-free importation once the price of wheat exceeded 80s. for three consecutive weeks--a provision that caused the market to be "overwhelmed with foreign corn" according to Ricardo [8:350]. The Committee documented both the amounts of foreign corn currently warehoused at British ports and the speed at which it could be brought to the British market. This was a point of concern for Ricardo since, given the inelastic domestic demand for corn,[59] sudden corn importations of as much as 15% of annual consumption were

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[58]These comments "naturally brought forward the hon. member for Portarlington, as the gladiator, on the other side of the question," noted Londonderry [Hansard 2s, 7:396].

[59]Ricardo was especially pleased with Tooke's testimony before the Committee because Tooke argued that domestic corn demand was inelastic [(21 April 1821) 8:370-371]: "Mr. Tooke who is a good political economist gave us some valuable information of the effect of abundance on price...This is in fact the present cause of the great depression in the price of corn. A little effect may be ascribed to the currency; but abundance is the great operating cause."

certain to have a ruinous effect on domestic farmers. His views were apparently well known, for Lord Londonderry stated that "No member of that committee [1821 Agricultural Committee] went further in allowing the extent of that danger [sudden corn imports] than the hon. member for Portarlington" [5:157]. His concern is further evident in Protection to Agriculture, where he described "the temptation to import into this country" [4:242] due to the discrepancy between corn prices in Britain and on the Continent.

Ricardo also understood that in the event of an abundant harvest, Britain's own production was sufficient to glut the home market, and consequently to depress corn prices, since there was no vent for the surplus. A excess of domestic corn would not have caused price instability had British farmers been able to export, but the margin of cultivation had been extended during the War, and further extended in the famine of 1816-17, to the point that when corn prices were ruinous to British farmers, their marginal production costs were so high that they still could not compete on the Continent [5:74]. The extent to which corn prices were lower on the Continent was repeatedly noted before the 1821 Committee [see Chapter Two, pp.106-108].

Beginning in 1820, the great importations of Irish corn compounded the likelihood and severity of domestic corn gluts. After hearing testimony concerning Irish imports before the 1821 Committee, Ricardo described Irish farmers as "the most formidable" of all rivals, surpassing the farmers of Poland, Russia and America [(21 April 1821) 8:369]. He further emphasized their competition by including, in Appendix B of Protection to Agriculture (1822), a table showing the shipments to the port of London of Irish wheat, barely, oats, beans and peas and the average prices of these commodities from 1817 through the first quarter of 1822 [4:270].

One final empirical point established by the 1821 Agricultural Committee was that corn prices on the Continent had been declining at the same time corn prices in England had been declining. The fact was important because, given the timing of international gold flows and given the timing of fluctuations in corn prices on the Continent, it became evident that the decline in foreign corn prices could not have been caused by monetary contraction in Britain [see Chapter Two, pp.114-115].

Because of the implications for his debate with the Inflationists, Ricardo was eager to show that corn prices could be low in consequence of an abundant supply. To this end he actively sought witnesses and data that would substantiate the arguments he had advanced in the House. According to Tooke, "I was summoned to give evidence before that Committee at the instance of Mr. David Ricardo, who was a member of it. The purpose of my evidence was to state reasons for believing that the Low Price of Corn, and the consequent distress of the agricultural interests, were sufficiently accounted for by the Abundance of the supply" [Tooke (1857) pp.66-7]. Ricardo also called Edward Solly before the Committee on April 17 [Report, p.315] and after the conclusion of Solly's testimony, wrote a favourable account to McCulloch [(25 April 1821) 8:374]: "Mr. Solly, the other merchant I called, gave some valuable information respecting the price of corn in Poland, and in the Prussian Ports, and also regarding the expenses of conveying corn from the interior, to the Ports of Embarkation, and from those Ports to London." To substantiate the testimony of Tooke and Solly, Ricardo requested official accounts of foreign corn prices. Lord Castlereagh obtained accounts from British consuls and ambassadors abroad of annual average corn prices in foreign countries. The first such report was laid before Parliament on 9 March 1820 and an updated version of the report was requested by Castlereagh in April 1821, much to Ricardo's pleasure [8:374].

Ricardo also served on the Agricultural Committee of 1822. The Committee, however, produced no new evidence and its main purpose was simply to recommended revisions to the existing corn law. The only new data contained in the Committee's Report was an update on the quantity of corn warehoused in British ports.[60]

3. Other Parliamentary Committees.

One other Committee on which Ricardo served deserves mention: the 1822 Committee on Public Accounts. The Committee had been appointed to develop accounting procedures for the Government so that reports on public income and expenditure, the national debt, and foreign trade would be consistent from year to year and also understandable. Speaking to national income accounting problems, the Committee stated that: "The principal and most prominent defect in the present form of the Accounts is that they neither do nor can exhibit any Balance between the Income and Expenditure of the year...this defect is also attended with the further inconvenience that it allows the possibility of the existence of errors which [cannot] be detected."[61]

The Public Accounts were a valuable source of information to Ricardo because they included data on Public (Taxation) Income, Public Expenditures, Funded Debt amounts, Unfunded Debt amounts and Trade and Navigation statistics.[62] The fact that Ricardo was

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[60]Despite the want of Parliamentary reports in 1822, information on the state of agriculture was still publicly available. Both Blackwood's and the Edinburgh Magazine provided thorough reports on agriculture and the corn market.

[61]Report from the Select Committee on the Public Accounts of the United Kingdom (1822) pp.1,2.

[62]See the Appendix to the Report from the Select Committee on the Public Accounts of the United Kingdom (1822).

familiar with the Public Accounts, even before his appointment to the Committee in 1822, is evident in that on three occasions in 1820 and 1821 he asked the Government for more comprehensible statements of these Accounts [5:67,100,116], at one point even complaining that "it was impossible that the Members of the House could come to any knowledge of the real state of the country" on the basis of such reports [5:139]. His opinions were widely respected and it was acknowledged that the measures Parliament adopted to correct errors in the accounts were suggested by Ricardo [5:145]: "Mr. Lushington, in the course of his reply, said that the balance-sheet format was adopted at the suggestion of an hon. member (Mr. Ricardo), and was deemed to be the most compendious way of stating the accounts."

Ricardo also kept informed about committees on which he did not serve. Several deserve mention. The annual reports of the Committees on Finance were of use to Ricardo as a loan contractor and later as a member of the House [see above, p.135]. Similarly, he gave attention to the Committees on Foreign Trade, appointed in 1820, 1821, 1822 and 1823 to investigate topics that ranged from conditions in specific branches of trade to the operation and maintenance of port facilities. Ricardo had hoped to advance the cause of free trade as a member of the Trade Committees, but was frustrated when the House failed to appoint him [(13 June 1820) 8:196]. And finally, the Committee on Frame Work Knitters (1819), appointed in response to a long campaign by labourers against the introduction of machinery, could not have escaped Ricardo's notice. Machinery had been a subject of fierce debate since the early nineteenth century and, during the years that Ricardo studied political economy, many Parliamentary committees were convened in response to petitions against machines or in response to the destruction of machinery in disturbed manufactures [Chapter One, pp.55-56]. Ricardo was fully aware of the public controversy surrounding machinery and addressed the machinery issue on no less than four occasions in Parliament [5:30,31,68,93,302,303].

V. Conclusion

We have shown that Ricardo was well informed about economic and political events in contemporary Britain. Through his financial business he gained knowledge about monetary fluctuations, national finances and to a lesser extent foreign trade and domestic commerce. Thus he approached the study of political economy with an established empirical background. His interest in Government policy served to complement the understanding he had already developed in the City. His participation in Parliament capped his development as an empirical economist since he was forced to defend his policies, and did so on the basis of tax abstracts; Parliamentary reports on the Bank of England, the coinage, and country banks; Parliamentary investigations of the Poor Laws and the state of domestic agriculture; and a wealth of reports on foreign trade.

Chapter 4: Ricardo's Analysis of the 1815-18 Business Cycle

I. Introductory Remarks.

As we have shown in the Introduction, historians of economic thought typically associate Ricardo with a doctrinaire version of the Law of markets and with a deliberate disregard for the empirical verification of economic theory. To substantiate their claims, they cite his analysis of postwar economic conditions, particularly the occasions when he assumes full employment of resources and predicts the return of economic prosperity [Introduction, pp.7-8]. These passages appear to weigh heavily against Ricardo because they are inconsistent with commonly-accepted accounts of the economic history of the postwar period which picture Britain in a constant state of depression from 1815 through 1822 or 1823. Moreover, the criticisms of Ricardo that derive from his treatment of the postwar period have never been properly answered [Introduction, pp.26-27].

In what follows I show that these criticisms are unconvincing because they fail to account for the economic recovery that occurred in 1817, and because they overlook the causes of the 1819-20 depression, which were separate and distinct from the shocks that initiated the immediate postwar crisis. As a related theme I examine whether Ricardo adhered so closely to a strict version of the law of markets that he was blind to contemporary events that contradicted that theory. For this purpose, particular emphasis is given his correspondence with Malthus, which, while revealing fundamental differences in their interpretations of postwar events, suggests points of agreement between them that have not been noticed in the literature.

Like many modern authors, Malthus did not differentiate between the separate postwar crises, but treated the entire period (1815 to 1823) as a protracted depression. His analysis of

'the' postwar depression is presented in Section II. Ricardo, on the other hand, made a clear distinction between the first (Fall 1815 to Spring 1817) and second (February 1819 to May 1820) periods of general depression. He also considered the two agricultural depressions separately--the respective dates being December 1813 to May 1816 and October 1820 to Spring 1823. Regarding the causes of the 1815-17 crisis, Ricardo insisted that the transfer of capital from wartime to peacetime production was partly to blame. Malthus, in response, minimized the role of capital adjustment, focusing instead on the effects of a fall in the incomes and expenditures of landlords and farmers as the price of corn declined. Notwithstanding these differences, Ricardo and Malthus agreed that economic conditions were worsened by the country banking crisis, and consequent monetary contraction, of 1814-1816. They also understood that the reversals in foreign trade in 1815 and 1819 were in some measure due to miscalculations by British merchants. And finally, both acknowledged the significance of the sudden reduction in Government expenditures at the end of the War.

In Section III, I show that Ricardo's response to Malthus during the 1815-17 general depression was reasonable and historically accurate. Of upmost importance is his use of tax reports to gauge changes in aggregate economic activity. Based on these reports, Ricardo concluded that the economy continued to expand into the third quarter of 1815, notwithstanding the agricultural depression that began the Fall of 1813, and notwithstanding the country banking crisis that lasted from June 1814 through June 1816. Though he recognized the harmful nature of shocks to agriculture and country banking, he remained focused on aggregate activity, which continued to expand, buoyed by high Government expenditure in the final stages of the war and by the sudden expansions of foreign trade and the production of domestic exportable commodities as the Continent opened to British goods.

II. Malthus' Analysis of 'the' Depression.

As mentioned above, Malthus did not distinguish between the two postwar depressions.[1] He treated the entire period from 1815 to 1823 as one protracted crisis, which, while not accurate, at least gave rise to a consistent explanation. That explanation began with the collapse of agricultural prices during the Fall of 1813 that caused "a severe shock to the cultivation of the country and a great loss of agricultural capital" such that not even "in the most extensive mercantile distress that ever took place in this country was there ever one-fourth of the property or one-tenth of the number of individuals concerned" [(1815a) pp.139,141]. The consequent decline in cultivation forced "a great number of agricultural labourers out of employment" in spite of "so sudden a fall in the price of labour as has already taken place" [(1815a) p.155]. Malthus considered that money wages were downwardly rigid to the extent that wage reductions would not be sufficient to eliminate unemployment.[2] Given the current low price of corn, he looked only to the eventual increase of capital to restore an adequate demand for labour so that workers could again be fully employed: "In Ireland [and Britain] there are no mercantile capitals ready to take up those persons who are thus thrown out of work and...the transfer process will be slow and difficult. Our commerce and manufactures, therefore, must increase very considerably before they can restore the demand for labour already lost; and a moderate increase beyond this will scarcely make up for the disadvantage of a low money price of wages" [(1815a) p.156].

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[1]Link [(1959) p.63] has noted Malthus' confusion on the timing of the postwar depressions: "Malthus dated the postwar slump from 1813 or 1815, and again there seems to have been little recognition that there were shorter fluctuations. Judging by his review of Tooke, Malthus treated the whole period from the end of the war to 1822 or 1823 as a unit, marked by contraction and then by stagnation."

[2]In a letter to Ricardo of 16 July 1821 [DR, 9:20], he stated: "We know from repeated experience that the money price of labour never falls till many workmen have been for some time out of work."

In Malthus' analysis, the demand for manufactured produce declined in tandem with the fall in the incomes of landlords, farmers and agricultural labourers [(1815a) p.161]: "Already in all the country towns, this diminution of demand has been felt in a very great degree; and the surrounding farmers, who chiefly support them, are quite unable to make their accustomed purchases." At this stage in his reasoning, Malthus implicitly assumed that consumers--who benefitted from an increase in purchasing power made available to them by the decline of agricultural prices--failed to increase their expenditures, leading to "an actual diminution of home demand" [(1815a) p.161]. The consequent glut of manufactured goods in the home market prompted merchants to export excessively. Foreign markets were, as a result, inundated with British goods, the prices of which collapsed, eroding the purchasing power of merchants. In addition, Malthus thought that a reduction of the money supply--"chiefly [due to] the great failures which have taken place among country banks" [(1815a) p.143]--aggravated the crisis.[3] His position is summarized in the Principles [(1820) pp.493-494]:

> It [the stagnation of effectual demand] commenced certainly with the extraordinary fall in the value of the raw produce of the land, to the amount, it has been supposed of nearly one third. When this fall had diminished the capitals of the farmers, and still more the revenues both of landlords and farmers, and of all those who were otherwise connected with the land, their power of purchasing manufacturers and foreign products was of necessity greatly diminished. The failure of home demand filled the warehouses of the manufacturers with unsold goods, which urged them to export more largely at all risks. But this excessive exportation glutted all the foreign markets, and prevented the merchants from receiving adequate returns...from the diminution of the home revenues, aggravated by a sudden and extraordinary contraction of the currency, even the comparatively scanty returns obtained from abroad found a very insufficient domestic demand, and the profits and

[3]Writing to Ricardo, Malthus expressly referred to two other instances of monetary contraction: a contraction of the Bank of England notes in 1815 [(16 October 1815) DR, 6:303] and a contraction in the money supply following the Resumption Act [(16 July 1821) DR, 9:22].

> consequent expenditure of merchants and manufacturers were proportionably lowered.

The cessation of wartime Government expenditures was, for Malthus, an additional cause of diminished aggregate demand since he did not believe that the loss had been countered by a corresponding increase in private expenditures [(1820) p.499-500]:

> The returned taxes, and the excess of individual gains above expenditure, which were so largely used as revenue during the war, are now in part, and probably in no inconsiderable part, saved...[This] contributes to explain the cause of the diminished demand for commodities, compared with their supply since the war. If some of the principal governments concerned spent the taxes which they raised in a manner to create a greater and more certain demand for labour and commodities, particularly the former, than the present owners of them, and if this difference of expenditure be of a nature to last some time, we cannot be surprised at the duration of the effects arising from the transition from war to peace.

Malthus also believed that the distress experienced by the labouring poor in consequence of the decrease in the derived demand for labour had been aggravated by an increase in the population during the War: "The powerful stimulus which had been given to population during the war continued to pour in fresh supplies of labour, and, aided by the disbanded soldiers and sailors and the failure of demand arising from the losses of the farmers and merchants, reduced generally the wages of labour, and left the country with a generally diminished capital and revenue" [(1820) p.494].[4]

The central problem of the postwar depression, as perceived by Malthus, was thus a decrease in aggregate demand relative to a stable supply. His analysis of the depression is easily misinterpreted, though, and was misinterpreted by Ricardo, because Malthus also accepted the view that "over-saving"--the term refers to too rapid an investment program, not to hoarding--could, at least in theory, cause an increase in production without a

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[4]Notwithstanding this observation, Malthus believed that the supply of capital was still excessive relative to the demand for it [see Hollander (1997) p.596].

corresponding increase in aggregate demand. This could, in turn, reduce commodity prices and result in unemployed labour and idle capital [(1820) pp.352-353]:[5]

> The consumption and demand occasioned by the persons employed in productive labour can never alone furnish a motive to the accumulation and employment of capital; and with regard to the capitalists themselves, together with the landlords and other rich persons, they have, by the supposition, agreed to be parsimonious, and by depriving themselves of their usual conveniences and luxuries to save from their revenue and add to their capital. Under these circumstances, I would ask, how it is possible to suppose that the increased quantity of commodities, obtained by the increased number of productive labourers would find purchasers.

According to Malthus, capitalists invest by shifting labour from producing goods for unproductive consumption to producing capital goods, or what was referred to as the "maintenance of productive labour" [(1820) p.352]. In response to such a shift, the nominal purchasing power of labourers does not change, since they have only been re-assigned tasks, "as far as the labourers are concerned, there would be no diminution of consumption or demand" [(1820) p.352]. But the investment program expands the national capital stock and with this increase comes a corresponding increase in production. Assuming that capitalists do not increase their consumption, but continue the investment program [(1820) pp.352-353], aggregate demand will be insufficient to purchase the greater quantity of goods at current prices. Unsaleable commodities will, as a result, fall in price, eroding profits and causing unemployment [(1820) p.354]:

> In the case supposed there would evidently be an unusual quantity of commodities of all kinds in the market, owing to the unproductive labourers of the country having been converted, by the accumulation of capital, into productive labourers; while the number of labourers altogether being the same, and the power and will to purchase for consumption among landlords and capitalists being by supposition diminished, commodities would

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[5]Hollander (1997) devotes an entire chapter to Malthus' views on sustainable growth, see especially pages 514-526.

> necessarily fall in value, compared with labour, so as to lower profits almost to nothing, and to check for a time further production. But this is precisely what is meant by the term glut, which, in this case, is evidently general not partial.

As will be shown in Chapter Five [pp.217-220], part of the confusion in the Ricardo-Malthus correspondence stems from the fact that Ricardo believed Malthus was attempting to explain the 1819-20 depression in terms of oversaving. Though there is nothing to suggest that "oversaving" was part of Malthus' explanation of the depression [see Hollander (1997) p.586], this point of mutual misunderstanding between them is important since it affected Ricardo's analysis of postwar events.

III. Ricardo's Response to Malthus.

A. Low Corn Prices Had Not Caused a General Depression.

Ricardo denied the central premise of Malthus' analysis of the depression: that a decline in the incomes of the landed interests caused a reduction in aggregate demand, leading to a general depression. His response was not based on blind adherence to the Law of Markets, but instead derived from his observations that the sudden decline in corn prices and agricultural incomes in 1813 did not prevent aggregate economic activity from expanding through the Summer of 1815, while the return of agricultural prosperity in the Spring of 1816 failed to alleviate the current general depression. In fact, the highest corn prices (which exceeded 100s. per quarter) coincided with the depth of economic distress in September 1816. In view of actual events, his response seems reasonable.

Malthus first mentioned to Ricardo his concerns about the effects of low agricultural prices on general economic activity in a letter of 2 April 1815 [DR, 6:208]: "If the value of the whole raw produce falls compared with manufactured and foreign produce, does not such

a fall necessarily involve a diminution of demand for manufactured and foreign produce?" His conviction as to the effect of declining agricultural prices on aggregate demand was reinforced two months later in a meeting with Lord King, which Malthus related to Ricardo [(19 June 1815) DR, 6:231]: "I saw Lord King last night. He speaks of having heard of very general distress among farmers and shopkeepers all over the country. I confess I feel more and more convinced of the unavoidable evils attending a general fall of prices and of the unobserved advantages attending the high prices of corn and labour. [Lord King] said that the view which I took of the effect of such prices on foreign commerce appeared to him to be quite new." In response Ricardo stated that "The farmers and shopkeepers may suffer very general distress from a sudden and general fall of prices, but I hold that this would be no criterion by which to judge of the general or permanent prosperity of a country" [(27 June 1815) 6:234].

By the Fall of 1815 Malthus was convinced of the existence of a general economic crisis and of his appreciation of its causes. On the basis of this conviction he again wrote to Ricardo, asking: "Is it possible for above half the national income to fall very greatly in price, without affecting the demand and the other half. I confess I feel no doubt that the main cause of the present slackness of trade is the diminished incomes of the landlords and Farmers" [(16 October 1815) 6:303]. Ricardo responded the next day: "It is dangerous to listen to reports respecting briskness or slackness of trade. It is I believe certain that the revenue has been uncommonly productive the last quarter which is no indication of diminished trade. As you allow that the loss of the sellers is the gain of the buyers, you appear to me to attribute effects much too great to the fall of raw produce which has lately taken place" [(17 October 1815) 6:304].

Ricardo's answer at first sight suggest that naive overconfidence in abstract theory of which he has been accused.[6] But his statement was far from naive, for he refuted Malthus's theory concerning the depression on the factual grounds that "the revenue has been uncommonly productive the last quarter", referring to the "Abstract of the Net Produce of The Revenue"--that is, the Treasury report on quarterly Government tax receipts--that appeared on 11 July 1815 [House of Commons Journal (1814-15) p.726]. Chapter Three has already explained how Ricardo used tax reports to estimate the British Government's future demand for loanable funds, and how he, along with other persons interested in political economy, also used tax reports to estimate changes in national income. In refuting Malthus's position, he rightly cited the report of July 11th because it indicated that both customs and excise revenues steadily increased from the third quarter of 1813--the same quarter when agricultural prices began to decline--through the second quarter[7] of 1815--the most recent quarter for which returns were available [see Appendix E.2].[8]

By answering Malthus as he did, Ricardo certainly did not deny the existence of the current crisis in agriculture. Chapter Three [pp.154-157] has shown that he was aware of the state of particular harvests and of changes in corn prices. Moreover, the Essay on Profits cites foreign imports as a cause[9] of low corn prices [(1815) 4:26,35] and warns of the

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[6]Hollander [(1997) p.146] has interpreted the quote critically, saying: "Ricardo went so far in his reply as to deny the putative facts of excess aggregate supply."

[7]Excise revenues actually increased through the third quarter of 1815, ending in October.

[8]Gayer [(1953) p.110] assigns the cyclical peak of the cycle to March 1815. Tax returns, however, indicated that economic activity continued to increase through the third quarter of 1815.

[9]In the Essay on Profits [(1815) 4:19,35], Ricardo also cited technical improvements in cultivation as a cause of low corn prices. Similar statements appear in his correspondence with Malthus: "there has been an increased rate of profits, but it has been accompanied with such decided improvements of agriculture both here and abroad...My conclusion is that there has been a rapid increase of Capital which has been prevented from shewing itself in a low rate of interest by new facilities in the production of

possibility[10] of future agricultural crises if the corn warehoused in British ports were suddenly admitted for home consumption [4:29],[11] a concern that was not unreasonable since the 1815 Corn Law almost ensured a deluge of foreign corn when the price of wheat exceeded 80s. But notwithstanding the state of agriculture, Ricardo understood that without a change in tax rates--and there had been no change--an increase in customs and excise returns as revealed in the Government tax abstracts could not have occurred unless preceded by an increase in economic activity. The fact that such an increase had occurred at a time when corn prices were falling suggested that Malthus' conclusion--that low corn prices had caused a reduction in general economic activity--was incorrect.

B. Monetary Contraction.

Like Malthus, Ricardo attributed the 1815-17 general depression, in part, to monetary contraction, specifically that caused by the country banking crisis. This point of agreement between them has not been adequately recognized in the literature because of the excessive emphasis on their disagreement--evident in two letters of October 1815--concerning the contraction of Bank of England notes in 1815.

Writing on 16 October 1815 [DR, 6:303], Malthus asked: "Pray has there been any account lately of the number of Bank of England notes in circulation? It has been said I

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food." [(17 August 1813) 6:94-95; see also (17 March 1815) 6:194]

[10]Because the ports were open, almost 1,000,000 quarters of foreign corn were imported in 1813 and 1814. Though the ports closed following the passage of the 1815 Corn Law, the foreign corn that had already been imported, combined with the unprecedented harvest of 1813, continued to glut the domestic market for the next two years.

[11]He reiterated this view in the Notes on Malthus [(1820) 2:110]: "The money value of the whole [agricultural] produce would be less than when the quantity was less, and they would have the same money rent to pay. This was the peculiar evil under which the farmers suffered at the termination of the war, when the ports were opened."

understand that they have been much diminished lately, which is one great cause of the fall of prices. Is this so?" Ricardo answered that "The last return of Bank notes in circulation was I think larger than any that preceded it. I have not the paper in London but I think the circulation of Bank notes then (in 1815) amounted to 28,000,000 or more" [(17 October 1815) 6:304]. Ricardo's statement about the "last return on Bank Notes" again reflects the empirical basis for his assessment of economic conditions since his reference is to the "Account of the Weekly Amount of Bank Notes in Circulation" as reported by the Bank of England on 30 May 1815.[12] The account indicates no unusual change in the number of Bank notes and subsequent reports show that the circulation remained steady through October 1815 [see Appendix A.1].

Ricardo did not, however, think that the circulating medium as a whole remained constant, for he recognized that there had been a reduction in private credit as a result of the collapse of the country banking system in the years 1814 to 1816. He considered country bank failures "a cause of much mischief all over the Kingdom" [(10 September 1815) 6:268] which "occasioned much ruin and distress" [(1816) 4:73],[13] since bank failures sparked financial panic in rural districts, leading to further reductions in the country circulation and, in some instances, to desperate attempts to hoard Bank of England notes.

> I have very little doubt but that there has been a considerable rise in the value of money which I think has been effected by the many failures of country

[12]Chapter Three [pp.130-133] has already explained why, as a loan contractor, he kept informed about the Bank circulation.

[13]Country bank failures began in June 1814 and continued through June 1816. Banks in agricultural districts were affected first, followed by banks in manufacturing centers after foreign export demand collapsed. Notwithstanding the "ruin and distress" caused by bank failures, Ricardo believed, based on tax abstracts, that aggregate economic activity continued to expand through mid-1815. (This remark in Economical and Secure Currency would have been written in August or September of 1815 in the midst of the banking crisis.)

> Banks, which has increased the use of Bank of England notes in the country, both as a circulating medium, and as a deposit against the alarm which always attends extensive failures in the country. [(25 December 1815) 6:343]

> In some of the accounts of the amounts of bank notes in circulation at certain periods which I have seen, the one and two pound notes vary, very remarkably, relatively to the notes of a higher value, which may be occasioned (not that I know that it is) by the increased or diminished credit of the country banks. It appears, in 1815, that the amount of notes above five pounds was about thirteen millions, while those under five pounds were above nine millions...the same sort of inequality appears to affect the notes of the amount of ten and twenty pounds which may be supposed to be that description of notes which, as well as those of five pounds and under, are used chiefly in the country circulation, upon occasions of the discredit of the country banks. [Parliamentary Testimony (1819) 5:389,390].

Concerning the economic effects of monetary contraction, Ricardo agreed with Sinclair--an inflationist writer--that "a part of our distress has been occasioned by the reduction of the circulation" [(4 May 1817) 7:151]. His testimony before the Lords Resumption Committee of 1819 confirmed this opinion, for when questioned about the decline in prices that occurred in 1816, he responded that a reduction in private credit had contributed to a deflation "much more considerable" than 4% [5:419], which earlier in his testimony he had indicated could not occur without "some little inconvenience" [5:416].

C. Ricardo's Counter Explanation - Misallocated Capital.

Ricardo and Malthus agreed that the change from wartime to peacetime production contributed to the 1815-17 depression, but they disputed the extent to which the depression directly resulted from this transition process. Malthus minimized the effects of capital relocation. Ricardo's analysis, by contrast, centered on the issue. In the discussion to follow, it becomes clear that Ricardo's attempt to explain the 1815-17 depression in terms of the

realignment of capital was reasonable given the magnitude of the transition that occurred.[14] Moreover, we show that his optimism concerning a rapid completion of the adjustment process was vindicated by the fact that Britain's economy recovered from the depression by the Summer of 1817, within twenty-four months of Waterloo.

Chapter One has shown that the adjustment from wartime to peacetime production was formidable. Government spending decreased by £53.3 millions from 1814 to 1817, a reduction which accounted for almost 20% of aggregate demand. The decline in war expenditures entailed the demobilisation of 430,000 soldiers and the elimination of 100,000 private sector jobs in wartime industries. This proved a severe shock to labour markets since the soldiers and factory workers suddenly released from employment accounted for at least 15% of the male labour force. The transitions that occurred in British agriculture after the war were perhaps of an even greater magnitude. The abundant harvests of 1813 and 1815 combined with the foreign corn imports of 1814 caused corn prices to decline from a high of 127s. per quarter in February 1813 to 54s. per quarter by February 1816. It was impossible for British farmers to relieve the glut by selling to the Continent because during the War the margin of cultivation had been extended--and consequently production costs increased--beyond the point at which they could compete abroad. As shown in Chapter One, the agricultural crisis was no small issue since one third of the British populace were employed in farming. Finally, the reversals in foreign trade in 1815 and 1816 caused merchants and domestic manufactures to curtail their speculative investments in exportable commodities, leading to a transfer of capital away from goods that had fallen in price.

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[14]Rostow [(1942) p.19] describes the postwar adjustments at length, concluding that the resultant economic situation was "economically probably the most wretched, difficult, and dangerous in modern English history".

Ricardo's analysis of the 1815-17 depression in terms of capital adjustment first appeared in a letter to Trower of 25 December 1815 [6:345]: "In every change from peace to war and from war to peace there must be great changes in the distribution of capital and much individual distress." He remained optimistic about the return to prosperity [(15 July 1816) 7:49], even when the transition process proved more difficult than expected [(8 September 1816) 7:67]: "It appears to me that a sufficient time has elapsed to make that new distribution of employments which our altered circumstances have made necessary. The duration of the intervals between marked changes are often much longer than is generally supposed. It proceeds from the opposition which is naturally given to such change...the duration of the resistance depends on the degree of information, or the strength of the prejudices of those who offer it, and therefore cannot be the subject of any thing like accurate calculation".

The chapter "On Sudden Changes in the Channels of Trade" in the Principles (1817)[15] provides a thorough statement of his analysis, which, in short, is that fixed capital cannot easily be transferred between employments and might be rendered useless by a change in the pattern of final demand, and that labourers might also be temporarily unemployed during the transition as capitalists "are removing their capitals and the labour which they can command from one employment to another" [1:263].

> The commencement of war after a long peace, or of peace after a long war, generally produces considerable distress in trade. It changes in a great degree the nature of the employments to which the respective capitals of countries were before devoted; and during the interval while they are settling in the situations which new circumstances have made the most beneficial, much fixed capital is unemployed, perhaps wholly lost, and labourers are without full employment. The duration of this distress will be longer or shorter according to the strength of that disinclination, which most men feel to abandon that employment of their capital to which they have long been

[15]Though published in 1817, this chapter of the Principles would likely have been written in December 1816 or January 1817, when the distress was still widespread.

> accustomed. It is often protracted too by the restrictions and prohibitions to which the absurd jealousies which prevail between the different States of the commercial commonwealth give rise.
>
> When, however, such distress immediately accompanies a change from war to peace, our knowledge of the existence of such a cause will make it reasonable to believe that the funds for the maintenance of labour have rather been diverted from their usual channel, than materially impaired, and that after temporary suffering, the nation will again advance in prosperity. [1:265]

Ricardo thought that British industry was particularly liable to this type of distress because of its relatively high capital intensity.

> In rich and powerful countries, where large capitals are invested in machinery, more distress will be experienced from a revulsion in trade, than in poorer countries where there is proportionally a much smaller amount of fixed and a much larger amount of circulating capital...It is not so difficult to withdraw a circulating as a fixed capital, from any employment in which it may be engaged. It is often impossible to divert the machinery which may have been erected for one manufacture to the purposes of another. [1:266]

Apart from the shift from wartime to peacetime patterns of final demand and the reduction in demand for domestic agricultural produce because of renewed foreign competition, it can be inferred that Ricardo recognized a third cause of the postwar reallocation of capital: the miscalculation by British merchants of foreign demand for home goods. He observed in a letter to Grenfell, how "the derangement in foreign commerce" had affected the market rate of interest [Letter of 27 August 1817, reprinted in Heertje (1991) p.522], echoing an earlier complaint to Trower that the British tax system "disturbs so cruelly the prices of commodities as to give us a serious disadvantage in all foreign markets" [(25 December 1815) 6:345]. Both letters suggest that his reference to a "revulsion in trade" in the Principles (see above) is not an abstract illustration, but a practical observation, adverting to the fact that the excess of British exports as compared with foreign demand in 1815 and 1816 contributed to the 1815-17 depression [see Chapter One, pp.46-50].

. . .

Concerning Ricardo's "predictions that prosperity would soon come to England" [see Stigler (1953) p.596], it is apparent that his optimism was justified.[16] Chapter One [p.44] has shown conclusively that Britain's agricultural sector began to recover in the Spring of 1816 and was flourishing by August 1816, thirteen months after hostilities ended on the Continent. Similarly, signs of general prosperity began to appear in April 1817 and by the Summer of 1817, Britain's agricultural, manufacturing, and foreign trade sectors were thriving. The fortuitous turn of events was hailed by Ricardo in two letters to Malthus [(4 September 1817) 7:185-6; (10 October 1817) 7:192], demonstrating again both his knowledge of current events and the fact that his analysis of postwar conditions was based on this knowledge.

D. Unemployment and Money Wages.

An important aspect of Malthus' analysis of the postwar depression (recall his failure to distinguish between the two periods) was his view that money wages were downwardly rigid so that labour markets did not clear. He acknowledged that "wages, at least in the country, have fallen very low" [(6 October 1816) 7:75], but he recognized that the fall had not been sufficient to eliminate unemployment [(1820) pp.454-5]:

> An extension of foreign commerce, according to the view which Mr. Ricardo takes of it, would, in my opinion, place us frequently in the situation in which this country was in the early part of 1816, when a sudden abundance and cheapness of corn and other commodities, from a great supply meeting a

[16]The Introduction [pp.7-8] describes many of the criticisms levelled against Ricardo for his supposedly naive view that resources could be quickly reallocated after the War and that prosperity would ensue.

> deficient demand, so diminished the value of the income of the country, that it could no longer command the same quantity of labour at the same price; the consequence of which was that, in the midst of plenty, thousands upon thousands were thrown out of employment--a most painful but almost unavoidable preliminary to a fall in the money wages of labour, which it is obvious could alone enable the general income of the country to employ the same number of labourers as before, and, after a period of severe check to the increase of wealth, to recommence a progressive movement.

Ricardo similarly recognized the postwar decline in wages, writing to Malthus [(21 October 1817) 7:199]: "You think that the low price of labour which has lately prevailed contradicts my theory of profits depending on wages, because the rate of interest is at the same time very low". And although he never formally addressed the question whether, in the event of a reduction in aggregate demand, wages could decline enough to preclude unemployment, his statements do show that in the case of a change in the pattern of final demand, unemployment would occur, in spite of possible reductions in wages. Thus he explained that during the transition process resulting from a change from wartime to peacetime demand, some fixed capital would be idle and labourers in the affected industries would be unemployed as capitalists "are removing their capitals and the labour which they can command from one employment to another" [(1817) 1:263]. Ricardo did not think capitalists would normally keep funds idle [(1819) 5:399], but "during the interval while they are settling in the situations which new circumstances have made the most beneficial...labourers are without full employment" [(1817) 1:265]. Unemployment would be observed during the transition period to the extent that capitalists postponed their investment expenditures.

Because of the magnitude of the adjustment from wartime to peacetime production [Chapter One, pp.49-50] and because of the reversals in foreign trade in 1815 and 1816 [Chapter One, pp.47-49], Ricardo knew that much capital was in transition after the war:

> May not the derangement which the different employments of capital have experienced from the termination of the war have thrown an unusual quantity in the market to seek new occupations. Although there is no amount of capital which may not be employed in a country, there is probably an interval while it is seeking its ultimate destination, during which it particularly operates on the rate of interest. May we not be experiencing such an interval now, when so different a direction is given to capital from the change from war to peace.
> In our case the market rate of interest has been lowered by causes which may be considered permanent such as the accumulation of capital and people and also by causes which may be considered temporary, such as the derangement of foreign commerce; that as the last of these causes shall cease to operate by things getting into their natural order the rate of interest will have a tendency to rise. [Letter of 27 August 1817, reprinted in Heertje (1991) p.521]

> There are considerable intervals during which a low rate of interest is compatible with a high rate of profit, and this generally occurs when capital is moving from the employments of war to those of peace. [(October 1817) 7:199]

His explanation of the coincidence of high profits in certain industries and a low rate of interest seems plausible, in retrospect, for when the above statements were made, interest rates were lower than at any former point in the century.[17] More important, some industries were prospering. From April 1816 through 1818, profits were very high in corn production, attracting much capital as new lands were brought into cultivation [see Chapter Two, p.107]. Similarly, by late 1817, export-related industries were booming as foreign demand for British manufactures increased [see Chapter One, pp.57-59]. These facts are important because they support Ricardo's response to Malthus that there were profitable industries during the postwar period and that the country was not suffering a chronic general glut.

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[17]Interest rates had been high in 1816 because of the failure of 26 country banks from January through July. But when the country-banking crisis ended and calm returned to financial markets, interest rates fell sharply. The long-term yield on British Government 3% Consols declined to 3.56% in mid-1817. Short-term yields on commercial bills likewise dropped to 4%. [Homer and Sylla (1991) Tables 19 and 23]

IV. Conclusion.

In our discussion of Ricardo's analysis of the 1815-17 depression, we have shown that he did not cling to a naive or doctrinaire explanation. Rather, his statements reflect a knowledge of the shocks that actually occurred. His assessment that abundant harvests and foreign imports depressed corn prices from Winter 1813 through Spring 1816 was entirely correct. He was also correct in disputing Malthus' claim that the agricultural depression caused a decline in aggregate economic activity, for tax abstracts indicated that Britain's economy continued to expand for almost two years after corn prices collapsed. Ricardo's view that monetary contraction contributed to Britain's was also reasonable, and shows that, at least in this context, he did not accept the strict neutrality of money. Finally, his analysis of the problems associated with the adjustment from wartime to peacetime patterns of final demand has particular merit given the magnitude of the transition that occurred.

Chapter 5: Ricardo's Analysis of the 1818-25 Business Cycle

I. Introductory Remarks.

In what follows we continue the study of Ricardo's analysis of postwar events, specifically the 1818-25 business cycle. Section II considers his interpretation of the general depression that began in February 1819 and continued through May 1820, focusing on "temporary"--as opposed to "permanent"--aspects of the crisis. We show that he understood how reversals in foreign trade and domestic manufacturing were the immediate causes of the depression, and this gives us reason to re-evaluate, at the close of the section, an oft quoted passage from his testimony before the 1819 Commons Resumption Committee in which he denied being very knowledgeable about the state of Britain's trade.

Section III examines Ricardo's view that a disproportion between labour and capital was a "permanent" cause of Britain's woes. Reasoning within the context of his growth model, he believed that the Corn Laws and high taxes burdened the economy, thereby slowing the rate of growth of labour demand. He also believed that the Poor Laws encouraged excess population growth, resulting in an increase of the labour supply that further depressed wages.

Chapter Two has shown that a price deflation began in Fall 1820 and continued through 1822. Ricardo's analysis of this deflation is taken up in Section IV. Opponents of the Resumption Act in Parliament claimed that monetary contraction caused the 1820-22 deflation, which they estimated to be as great as 50%. Ricardo disputed their claims, arguing that the fall in prices was largely confined to agricultural produce, and that it was the result of a corn glut, itself owing to Irish imports and a series of abundant harvests. He mistakenly allowed that some degree--at most 10%--of monetary deflation had occurred, because reports from the Stamp Office indicated that the country-bank circulation contracted after 1820. The

money supply actually increased from 1819 through 1823, but Ricardo did not know this for he lacked accurate data about the country-bank circulation, and he lacked information about the value of gold sovereigns being issued by the Bank.

The debate between Ricardo and Malthus concerning the events of 1820-22 is addressed in Section V. Ricardo mistakenly thought that Malthus was attempting to explain current conditions in terms of "oversaving", in the sense of overinvestment, not hoarding. He responded by arguing that "misallocation of capital" caused the economic crises experienced from 1820-22. In so doing, he did not contend that "misallocation of capital" was the result of a transition from wartime to peacetime production, as some commentators have asserted and as Malthus believed. Rather, he thought that too much capital had been invested in foreign trade, aggravating the 1819-20 general depression, and that too much capital had been invested in corn production, contributing to the 1820-22 agricultural depression.

In Section VI we show that Ricardo's criticism of William Blake's Observations on the Effects Produced by the Expenditure of Government was reasonable. Blake's pamphlet argues that wartime inflation resulted from high wartime Government expenditures and was in no way due to monetary expansion. Like Malthus, he perceived of a postwar depression lasting through 1822; and this he attributed to the reduction in Government wartime spending. While Ricardo did not deny that Government spending affected the pattern of final demand and thus the demand for labour--an argument not contained in the Observations--he rejected Blake's views on the grounds that they were inconsistent with actual events. Specifically, Blake failed to account for the trebling of the money supply during the War; the agricultural prosperity of 1816-18; the boom in foreign trade of 1817-18; the decline of export demand in 1819; the recovery in trade and manufacturing beginning in 1820; and the importance of bumper harvests and Irish corn imports in the 1820-22 agricultural depression.

II. Ricardo's Analysis: Immediate Causes of the 1819-20 General Depression.

A. Overview of His Position.

When describing the postwar period Ricardo distinguished between causes of economic distress that would "slowly recover" and those of a more "permanent" nature. His position is evident in a letter commending a speech delivered by William Grenville[1] in the House of Lords on 30 November 1819:

> I hope your Lordship will not think I take too great a liberty, in expressing my satisfaction at finding that my opinions on the causes of the present distresses, concur with those which your Lordship has so ably stated in the pamphlet before me. The distress which proceeds from the misapplication of capital, and the miscalculation of demand by our manufacturers may, it is to be hoped, be slowly removed, but that which arises from the disproportion between capital and population will necessarily be of a more permanent description. [Letter dated 10 January 1820, quoted in Heertje (1991) pp.523-4]

Grenville attributed the fall in export demand to the "distresses of foreign nations"; this fall, coupled with the "hazardous and groundless speculations" in trade, he considered "temporary causes of depression". In a "more permanent view" of the situation, he thought that the nation was suffering from a disproportion between labour and capital [Hansard 2s, 41:452-3].

That Ricardo was aware of the depression in foreign trade and domestic manufacturing in 1819 and 1820 cannot be doubted, for in a letter to Thomas Smith in April 1819 he provided a full account of the crisis:

> You will find the politicians of this country in a very gloomy mood. Commerce in languishing--merchants and manufactures are failing--overtrading has become general and all our markets are glutted with goods. Cotton and many other articles are lower in price here than they can be grown

[1]Grenville responded the following day: "I am unaffectedly gratified by knowing that the general view which I take of the causes of the present distress is sanctioned by your high authority" [(11 January 1820) DR, 8:150].

> for in the countries where they are produced. Pauperism is increasing and employment cannot be found for the industrious. To crown the whole we are labouring under great financial difficulties, our revenue being insufficient[2] to meet our expenditure. [Letter dated 27 April 1819, quoted in Heertje and Weatherall (1978) p.570]

His remark about excessive imports--"cotton[3] and many other articles"--reflects an understanding that there had been miscalculations in foreign trade. It is not clear whether his allusion to "markets glutted with goods" refers to foreign or domestic markets, but since Grenville clearly described a decline in the demand for British exports, and since Ricardo lauded these comments, and since he also mentioned "merchants and manufacturers failing", it is not unreasonable to suppose that he recognized the extent to which foreign markets had been glutted with British goods. There is also his comment to Grenville about the "misapplication of capital and the miscalculation of demand by our manufactures", which, interpreted in the context of current events, seems to refer to the losses incurred by domestic manufactures and probably foreign merchants as well. This would have been in keeping with reports in the popular press--i.e. Blackwood's, the Edinburgh Magazine, and the Edinburgh Review--assigning the stagnation in domestic manufacturing to reductions in foreign demand [see Chapter Two, pp.75-80].

The distinction made by Ricardo between temporary and permanent causes of the depression is a significant one, but it has been overlooked by commentators who have

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[2]Though Ricardo does not name his sources of information concerning national affairs, his mention of the "revenue being insufficient" is instructive and suggests, again, a familiarity with Government tax reports. When writing to Smith, he could have seen two quarterly tax reports for 1819--the first appeared on February 4th, the second on April 6th. The February report showed an increase in total tax revenues over the previous quarter, though customs returns were down; the April report showed a decline in customs, excise and total tax revenues. (Appendix E.2 records the data from both reports.)

[3]It is interesting to note that cotton and wool were two commodities associated with especially heavy losses in import trading, losses Blackwood's [(February 1819) p.630] estimated at not less than £3 millions.

wrongly assumed that he vacillated between different explanations of the crisis, at times focusing on a "deficiency of capital", while at other times speaking of "misallocation of capital" or other short term shocks.[4] Having shown that Ricardo's analysis proceeded on parallel planes, however, it becomes apparent that he did not provide alternate explanations.

More importantly, the section above demonstrates that Ricardo's statements about "misallocated capital" after 1819 did not refer to an ongoing transfer of capital from wartime to peacetime manufacturing, which has been the usual interpretation of these passages in the literature.[5] Rather, he was describing the well-publicized miscalculations in foreign trade and domestic manufacturing that began in late 1818. (Even in 1820, when the home market was glutted with sugar and cotton, enormous importations of these commodities occurred [see Chapter Two, pp.80-81].) Ricardo made additional references to misallocated capital after 1820, but as will be shown below [pp.224-225], these statements applied to overextensions of the margins of agricultural production and the need to withdraw capital from farming to manufacturing. At no time after 1819 do his remarks suggest that he believed the earlier, wartime-to-peacetime transition was continuing.

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[4]Hollander [(1979) p.518] makes such an inference, writing: "By the end of 1819 Ricardo felt obliged to alter his diagnosis [of the depression]. In his speeches of December we find no reference to capital immobility, but rather the emphasis is placed upon an inadequacy of capital supply relative to population which is explained in terms of low profitability due in turn to agricultural protection...But by mid-1820 Ricardo had reverted to his original argument that the postwar problem in manufacturing was entirely due to capital misallocation". Winch [(1987) p.81] similarly fails to differentiate between "temporary" and "permanent" causes of the depression.

[5]Ricardo's explanation of the hardships attending the transition from wartime to peacetime production has generally been viewed favourably by modern authors, at least in his account of the years 1815 to 1817. But by not realizing that there were two distinct business cycles in the postwar decade, and by neglecting the miscalculations in foreign trade in 1819 and in corn production from 1820-22, critics have mistakenly assumed that he analyzed events from 1819 onwards in terms of the postwar adjustment of capital [Blaug (1958) p.77; Link (1959) p.63; Tucker (1960) pp.125-6; Hollander (1979) p.518].

B. Ricardo's Allowance for Monetary Contraction.

Another aspect of Ricardo's analysis that has been missed by critics is the extent to which he believed that monetary contraction associated with the Resumption Act aggravated 'the' postwar depression.[6] The oversight has, in part, resulted from undue emphasis being placed on a Parliamentary speech by Ricardo in which he described the monetary contraction associated with the Resumption Act as "totally inadequate to produce such an effect [the current distress] and therefore the evil must be traced to other sources" [(24 December 1819) 5:37]. In what follows we show that his evaluation of the significance of monetary contraction during the 1819-20 depression was both reasonable and based on the available data.

Ricardo's letter to Thomas Smith of April 1819 [above, pp.190-91] indicates his knowledge of the fact that the depression began in early 1819. Given the timing of the depression, his statement of December 24th is clearly valid, since no contraction of Bank notes occurred till the Fall of 1819, and since most of the notes withdrawn were replaced by silver coin, leaving the total circulation--excluding country bank notes--only slightly reduced, from £30.8 millions at the end of 1818 to £29.9 millions at the close of 1819 [see Appendix B.6]. That Ricardo was aware of both the timing and the extent of monetary contraction cannot be doubted since he bid for the Government loan of June 9th[7] and since, in a Parliamentary speech of 9 June 1820 [5:61], he expressly stated that "the reduction of bank-notes within the last year did not exceed £2 millions".

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[6]I refer to 'the' depression since the fact that there were two business cycles in the decade following the War has been forgotten by historians of thought. The present section addresses only a part of the postwar period, namely, the 1819-20 general depression.

[7]As a loan contractor Ricardo would have carefully studied reports from the Bank concerning its circulation. Seven reports appeared in 1819, on the following dates: February 1st, March 3rd, April 28th, May 24th, July 6th, December 3rd and December 23rd.

His assessment of the extent of monetary contraction began to change in 1820, however, as the market price of gold dropped below the Mint price [(9 June 1820) 5:61] and as the foreign exchange rate continued to increase [see Appendix C.4]. He had expected the Bank *to maintain a note circulation large enough to prevent any fall in the price of gold or rise in* the foreign exchange.[8] But the Bank had not pursued this policy, so when Alexander Baring, presenting the Petition of the Merchants of London, again criticized the Resumption Act and called for a bi-metallic standard, Ricardo only responded by saying that the extent of deflation attending Resumption did not warrant abandoning the gold standard. Within days of the debate, he actually mentioned to Sinclair--an Inflationist writer--that "the public has suffered much pressure from the limitation of circulation, but Parliament is not responsible for more than about 5 or 6 per cent. of that pressure" [(11 May 1820) 8:186].

C. Ricardo's Testimony before the 1819 Resumption Committee.

Ricardo's analysis of the 1819-20 depression has been obscured by certain portions of his testimony before the Resumption Committees in 1819 where he assumed the full employment of resources or spoke as if he was unaware of current economic conditions. His remarks of 4 March 1819 before the Commons Committee are well known and have been especially troublesome in this regard [5:384,385]:

> Question: Are you aware that there is at present a considerable stagnation in trade, and that there has been a great reduction of prices in consequence?
> Answer: I have heard so; but I am not engaged in trade, and it does not come much within my own knowledge.

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[8]Ricardo stated many times in later years that this was his expectation in 1819. [(1821) 5:516-519; (1822) 9:140,141; (1822) 5:200,201; (1822) 4:225].

> Question: Might not the reduction of prices to the amount of 5% consequent on a reduction of the issues of the Bank be particularly embarrassing if it took place at a period when there appears to have been so great a reduction of prices in consequence of other causes--namely, the excess of speculation and the stagnation resulting from that?
> Answer: An alteration in the value of 5% does not appear to me very formidable; but of this matter I do not profess to know much; I have had little practical knowledge upon these subjects.

Ricardo seems to express ignorance of contemporary events and indifference to the practical consequences of his proposal to resume cash payments. But given the fact that he was informed about the causes and severity of the 1819-20 depression, it is unclear why he would plead ignorance. Two possible explanations for his testimony present themselves.

First, he may have confined his testimony to subjects of personal expertise. His knowledge of the crisis was necessarily limited in March 1819 because he could have known about reversals in foreign trade for at most four weeks. Moreover, as a conscientious witness, Ricardo might have deferred to experts in particular branches of trade--of whom several were called before the Committee--to testify respecting their businesses. Five witnesses before the Lords Committee were directly involved in foreign trade: Haldimand, who specialized in trade with Italy and France; Ward, a Mediterranean merchant; Richard Page, who traded with France, Holland and Flanders; Thomas Tooke, a Russia merchant; and Matthew Fletcher, another Mediterranean merchant.[9] Haldimand, Ward and Tooke were called before the Commons Committee as well, along with three merchants who did not appear before the Lords: John Irving, a general merchant; John Gladstone, who specialized in the East and West Indies trade; and Hieronimus Burmester, a Spanish and Portugal

[9]Their testimony, which is extensive and detailed, can be found in the Journal of the House of Lords (1819) pages 352-475.

merchant.[10] (Ricardo and Nathan Rothschild were the only other witnesses before the Committee who were not associated with the Bank of England, the Bank of Ireland, the Mint or Country Banks.)

A second--and more speculative--explanation for Ricardo's testimony is that he minimised the extent of the distress in an effort to undermine opposition to the Resumption Act, particularly from Alexander Baring, whose evidence Vansittart[11] described as "the most important of any" [quoted by Sraffa in DR, 5:352]. The reason for such importance is not immediately obvious, but it becomes clear with an understanding of the financing of the French War Indemnity.[12]

In 1816 France proved unable to pay her indemnity instalments and was forced to arrange financing for the remainder of the debt. The British Government unofficially, and Wellington overtly,[13] urged that Baring Brothers contract the necessary loans. This was done and Barings negotiated a series of loans at or exceeding 100,000,000 francs each, the final one, arranged in October 1818, to be paid at intervals during the initial months of 1819 [Jenks (1963) pp.35-39]. The scheme began to unravel, however, only days after the final loan was contracted, when the Bank of France curtailed credit to protect what remained of its

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[10]Their testimony appears in the Report of the Commons Committee on Resumption (1819) pages 94-103, 104-113, 153-156.

[11]Vansittart was loath to consider Resumption in 1819, and so approved of Baring's opposition to the Act. Ministers wanted to prolong the Bank Restriction, but they were forced to convene the Resumption Committees to preempt the Whigs gaining a political advantage after Tierney--leader of the Opposition in the Commons--threatened to move for a committee of inquiry on the matter. Attesting to this fact, Huskisson warned that "if Tierney were to beat us, it would be fatal" [Hilton (1977) p.40].

[12]Article 4 of the Definitive Treaty of Peace stipulated that France was to pay the Allied Powers, in instalments, an Indemnity of seven hundred millions of francs [Annual Register (1815) p.412].

[13]Wellington's interest was due to the fact that proceeds from the Indemnity funded the army of occupation in France under his command.

bullion hoard. The resulting financial crisis, mentioned in Chapter Two, threatened to undermine the credit of the French Government, bankrupt Barings, and postpone indefinitely the final instalment of the Indemnity. To avert such catastrophe, the French extended the time for Barings to pay the loan to eighteen months, and the Allies agreed to more generous terms for the indemnity in accord with the declining price of stock [Jenks (1963) pp.39-40]. Barings was still faced with the task of selling the loan, however, so when Alexander returned from Paris in February 1819, he was unnerved by the possibility that Resumption might actually occur--a fact Mallet noted in his diary after discussing the matter with him: "Narrower means of credits, a closer system of discounts, a return to a sound currency in this great commercial country could not fail affecting all Europe for a time; and it is for a time and for that very time that Baring wants facilities of every kind."[14] Before the Resumption Committees Baring recommended that cash payments be delayed four or five years [Hilton (1977) p.43]. And to this end he greatly emphasized the hazards of appreciating the currency--then about 4% below par--while deflecting attention[15] from the fact that Baring Brothers, who had already profited more than a million sterling from the financing of the French loans [Jenks (1963) p.36], wanted to sell the final instalment as dearly as possible.

Ricardo was well aware of all this. It is not unthinkable that he might have minimized the potential hazards of Resumption so as not to reinforce Baring's testimony, for Mallet provides the following account of a meeting at Ricardo's home in London: "Everyone is full of Mr. Baring's evidence before the Lord's Committee. Admirable as to principles, but

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[14]J.L. Mallet's diary entry of 2 March 1819, cited by Sraffa in DR, 5:352n.

[15]At the introduction of his testimony before the Lords Committee, he described himself as a "merchant in general business," carefully omitting reference both to his involvement in the Baring Brothers banking establishment and to the fact that he had just returned from France after negotiating a loan on behalf of the French Government for 179 million francs. [Baring's testimony of 3 March 1819, reported in the Journal of the House of Lords (1818-19) vol.52, p.389]

letting out all sorts of difficulties as to the practicability of resuming Cash payments; and hinting that it cannot be done in less than four or five years. Everyone agrees that it is knocking the thing on the head; and that such an extension of time is tantamount to doing nothing."[16] Whether Ricardo feigned ignorance before the Commons Committee so as not to lend credibility to opponents of the Resumption Act cannot be determined from the extant Works. What is certain, however, is that he was well informed about the current crisis and understood its implications for the conduct of restrictive monetary policy.

III. The Permanent Aspect of Britain's Economic Troubles: The Disproportion between Capital & Labour.

A. The Capital/Labour Disproportion and the 1819-20 Depression.

What Ricardo perceived as the "permanent" causes of economic distress related to the apparent disproportion between labour and capital. He identified three institutional factors tending either to retard the rate of capital (both fixed and circulating) accumulation, or to encourage an excessive increase of the labour supply: high taxes and the Corn Laws discouraged domestic investment and encouraged capital flight, while the Poor Laws subsidized the expansion of the labour supply, thereby depressing real wages. These factors, and the consequent disproportion between capital and labour, he considered proximate causes of the 1819-20 depression [(December 1819) 5:38]:

> He conceived that the distress was chiefly to be ascribed to the inadequacy of the capital of the nation to carry on the operations of trade, manufacture, and commerce. But why was the capital more inadequate now than formerly? If the profits on capital were higher, and labour more productive in other countries, it could not be doubted that capital would be transferred to those countries: no proposition in Euclid was clearer than this. Now, he thought they had greatly aggravated this evil by bad legislation, and he had formerly

[16]Mallet's diary entry of 6 March 1819 is cited by Sraffa in DR, 8:18n.

> mentioned instances. He had referred to the corn laws as one example; and however unpopular the doctrine might be with some gentlemen, he would state his opinion freely, that he believed the corn laws to have materially increased the evil. These laws had tended to raise the price of sustenance, and that had raised the price of labour, which of course diminished the profit on capital.

The problem, in Ricardo's view, was especially troublesome in 1819 and 1820, but he recognized that a deficiency of capital relative to the labour supply did not permit of any short-term solution, and repeatedly referred to the issue in later years. In what follows we show that Ricardo's position remained consistent throughout the postwar period. We also demonstrate that his views were well founded on contemporary economic data.

B. The Corn Laws as an Impediment to Capital Accumulation.

1. General Case.

Ricardo thought corn tariffs discouraged the expansion of the national capital stock, including the wages fund, by raising the real costs of the wage basket, which eroded profits and discouraged investment.[17] His reasoning was based on his growth model, according to which, ceteris paribus, the profit rate and the rate of capital accumulation in a free trade regime exceed that in a protectionist system. In terms of the model, the causal sequence whereby agricultural protection discourages capital accumulation is as follows: The Corn Laws prohibit the import of foreign produce, leading to an increase in the demand for

[17]Hollander [(1979) p.600] has recognized this aspect of Ricardo's argument, observing: "The Corn Laws rendered the profit rate in Britain, and accordingly the rate of capital accumulation, lower at any and every point of time than would otherwise be the case in an open economy." A similar analysis is contained in Tucker [(1960) pp.168-171,178].

domestic corn. Farmers respond by increasing output at both the extensive and intensive margins of cultivation. With each extension, production costs increase [(1820) DR, 5:49] since marginal lands are less fertile and since there are diminishing returns to variable inputs [(1822) 5:167]. The Corn Laws consequently generate an increase in the real costs of a given wage basket [(1820) 5:50]. Manufactured goods, in general, have the same money prices under free trade or protection so industrial capitalists receive the same gross revenues. But since money wages are higher under protection, their profit margins are reduced, leading to lower investment than in a free trade regime [(December 1819) 5:33]:[18] "Corn laws made the price of that necessary of life, grain, higher than in neighbouring countries, and thus interfered with the article which was considered the chief regulator of wages. Where grain was dear, wages must be high, and the effect of high wages was necessarily to make the profits on capital low." By contrast, his model suggests that profits would not fall secularly under free trade because there would effectively be no land constraint, and consequently no increase in marginal production costs as a result of economic growth:

> I contend for free trade in corn on the ground that while trade is free, and corn cheap, profits will not fall however great be the accumulation of capital. If you confine yourself to the resources of your own soil, I say, rent will in time absorb the greatest part of that produce which remains after paying wages, and consequently profits will be low. Not only individual profits but the aggregate amount of profits will be diminished, notwithstanding an increase of capital. [(1820) 8:208]
>
> There would always be a limit to our greatness while we were growing our own supply of food: but we should always be increasing in wealth and power whilst we obtained part of it from foreign countries and devoted our own manufactures to the payment of it. [(1822) 5:180]

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[18]The same argument appears elsewhere in his Works: (1817) 1:122, (1819) 5:32,38 and (1822) 4:237.

Domestic lands are limited but with free trade the extensive and intensive margins only extend until (marginal) domestic costs equal those on the Continent. Thereafter domestic resources are allocated to other sectors--particularly manufacturing--and manufactured goods are exchanged for corn imports.

Ricardo thus believed that under Britain's protectionist system, the real costs of the wage basket were artificially high to the detriment of profits. Our earlier historical chapters have shown that his view was valid. As early as 1814, Parliamentary Committees[19] reported that the margin of cultivation had been greatly extended during the War [Chapter One, pp.40-42]. It was the most rapid period of enclosures, as from 1800 to 1819 there were 1700 Enclosure Acts, compared with 2200 in all other decades combined from 1720 to 1829 [Porter (1836) pp.155-6]. In terms of acreage, land holders enclosed 273,891 acres of common pasture and wastes (30,432 acres annually) from 1793 to 1801, while from 1802 to 1815, 793,743 acres (or 52,838 acres annually) were enclosed [Barnes (1965) p.106].

This extension of cultivation led to a corresponding increase in marginal production costs, so that, according to the Report of the Commons Committee on the Corn Laws [(1814) p.6], "there is scarcely any price in our own market, which, under circumstances of a general abundance in the other parts of Europe, would be sufficiently low to prevent an importation of corn from those foreign ports". Moreover, based on studies by the Board of Agriculture, Arthur Young determined [Report of the Commons Committee on the Corn Laws (1814) pp.80-83] that the expense of cultivating 100 acres of arable land had increased from £411 in 1790 to £547 in 1803 and again to £771 in 1813--a rise of almost 90%. Accordingly, he stated that the remunerative price of wheat could not be less that 87s. per quarter; 34s. was

[19]Chapter Three [pp.153-155] has shown that Ricardo was familiar with the reports of the Committees on the Corn Laws.

his estimate for oats. This contrasted with corn prices on the Continent that tended to be lower by about one half [see Chapter Two, pp.109-111]. Poorer farms were abandoned in the agricultural depression of December 1813 to April 1816, but as corn prices began to rise in 1816--and eventually surpassed 100s. per quarter in 1817--these farms were again brought into cultivation. Ricardo was well informed of the investments both in land and farm machinery made from 1817 through 1819, for these were documented by the 1821 Agricultural Committee.[20]

2. The "Ricardo Effect".

Related to Ricardo's concern that the Corn Laws impeded capital accumulation was his understanding that a secular increase in real labour costs could lead capitalists to switch to capital intensive modes of production or even transfer resources from labour-intensive to capital-intensive industries,[21] an idea referred to in the literature as the "Ricardo effect". Ricardo first mentioned the possibility of an induced change to capital-intensive production in the 1817 edition of the Principles [1:61,349]. He subsequently elaborated on the concept in the machinery chapter added to the 1821 edition [1:395]: "The consequence of a rise of food will be a rise of wages, and every rise of wages will have a tendency to determine the saved capital in a greater proportion than before to the employment of machinery...In America where the food of man is easily provided, there is not nearly such great temptation

[20]Key witnesses, including Mathias Attwood and David Hodgson, attested to the increase of cultivation since 1816. [Report, pp.245,265,276]

[21]The term "Ricardo Effect" was coined by Hayek; his understanding of the effect is made clear in an article titled "The Ricardo Effect" in Economica (1942) 9:127-52. Ricardo's case for the secular substitution of fixed capital for labour has been appreciated by many authors [see Ferguson (1973) p.93; Berg (1980) p.60; Hollander (1997) pp.195-6].

to employ machinery as in England, where food is high and costs much labour for its production...with every augmentation of capital, a greater proportion of it is employed on machinery. The demand for labour will continue to increase with an increase of capital, but not in proportion to its increase." Ricardo believed that the secular substitution of capital for labour in response to rising real labour costs contributed to Britain's rapid industrialization, and that it was thereby "very injurious to the interests of the class of labourers" since "the substitution of machinery for human labour" slowed the increase in labour demand [1:388].

His statements have historical validity, for though historians generally assume that the proportion of total capital in machinery increased little during the early nineteenth century, Berg [(1980) p.21] cites the following statistics: in 1750 machinery constituted 5% of domestic fixed capital; in 1850 the level was 17%. Beginning in the 1780s and continuing through about 1840, the introduction of machinery was particularly rapid in cotton and textile industries [Berg (1980) p.23-24] which were singled out by Ricardo in his chapter [1:390,391]. Moreover, a great proportion of the petitions presented to Parliament from distressed labourers related to the competition posed by machinery.

Another relevant historical fact is that even after the decline of agricultural prices in 1820, corn remained more expensive in England than on the Continent and in America [see Chapter Two, pp.109-111]. The real costs of a given wage basket were consequently higher in Britain, providing an additional incentive to adopt capital-intensive modes of production.

C. Altered Pattern of Final Demand.

Ricardo believed that a postwar change in the pattern of final demand contributed to the disproportion between labour and circulating capital. Since different economic sectors operate at different factor intensities, he understood that a change in the pattern of final

demand might alter the derived demands for factor inputs and could be detrimental to the employment and/or wages of labourers. He considered this an actual problem after the War as the pattern of final demand switched from labour-intensive services--namely, the military--to capital intensive, luxury goods.[22]

The effects of a change in the pattern of final demand were first described in his Notes on Malthus [(1820) 2:235,236]: "A society does one or the other in proportion to the demand for either the objects of men's work; or for objects which are almost exclusively produced by machinery...to the capitalist it can be of no importance whether his capital consists of fixed or of circulating capital, but it is of the greatest importance to those who live by the wages of labour." There is a subsequent reference in the third edition of his Principles [(1821) 1:392-394]:

> In the same manner, a country engaged in war, and which is under the necessity of maintaining large fleets and armies, employs a great many more men than will be employed when the war terminates [because] at the termination of the war, when part of my revenue reverts to me, and is employed as before in the purchase of wine, furniture or other luxuries, the population which it before supported, and which the war called into existence, will become redundant and by its effect on the rest of the population and its competition with it for employment, will sink the value of wages and very materially deteriorate the condition of the labouring classes.

Since the extent of the postwar demobilisation was common knowledge, and since Ricardo allowed that wartime expenditures were directed towards labour-intensive services, it is not unreasonable to infer that he recognized how the postwar change in the pattern of final demand had affected the demand for labour. He does not mention whether the sudden

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[22]There is little dispute about the existence of passages in Ricardo's Works which suggest the possible conflict between fixed capital and labour. What is argued in the literature is whether Ricardo's observations on machinery were relevant to his interpretation of the postwar depression [Berg (1980) pp.70-73,76]. That Ricardo understood that the postwar change in the pattern of final demand potentially could have affected the demand for labour has been noted by Hollander [(1995) pp.196-7; (1979) p.519,520].

reduction in labour demand might contribute to short-run excess labour supply, but this does not negate our inference. For by the time Ricardo was writing in 1820 and 1821, the postwar change in the pattern of demand would have been manifested in a lower labour demand, and thus lower wages, than otherwise.

D. High Taxes and Capital Accumulation.

Another aspect of Ricardo's argument concerning the disproportion between capital and labour relates to the high taxes required to finance Britain's War debt. This taxation, according to Ricardo, impeded the accumulation of both fixed and circulating capital:[23] "All taxation had a tendency to injure the labouring classes, because it either diminished the fund employed in the maintenance of labour, or checked its accumulation" [(June 1819) 5:27]. In practice, he did not believe that there had been an absolute reduction in the national capital stock, but its accumulation had been slowed [(10 March 1821) 5:95], and there was a further problem in that capitalists were emigrating to escape the high taxes, thus draining the country of entrepreneurial ability:

> The national debt...occasioned many persons to emigrate to other countries, in order to avoid the burthen of taxation which it entailed, and hung like a mill-stone round the exertion and industry of the country. [(June 1819) 5:21]

> Another cause of the existing disposition to send capital out of the country was to be found in the national debt...it became a matter of calculation whether it was worth a capitalist's while to continue in a country where he not only obtained small profits, but where he was subjected to a great additional burthen. Every pecuniary motive impelled him rather to quit than to remain. [(December 1819) 5:33]

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[23]Many statements to this effect appear in his Works [(7 August 1817) 7:171; (16 December 1819) 5:33; (24 December 1819) 5:38; (28 January 1820) 8:153n; (29 March 1820) 8:168-169; and in the Notes on Malthus (1820) 2:452].

Ricardo's statements have historical merit. The exodus of capital from Britain during the years 1817 to 1819 and the concurrent emigration of wealthy British families--in part to escape the taxation--was unprecedented [Chapter One, pp.64-65]. Moreover, the problem seemed to be worsening as Parliament passed a tax increase of £3 millions in 1819, an amount exceeding the combined total of all other tax increases in the decade following the War. Given the facts of the postwar period, Ricardo's view that the Corn Laws and high taxation slowed the rate of domestic capital accumulation seems reasonable.

E. Poor Laws & Excess Population Growth.

By 1820 Ricardo was also concerned that population was increasing too rapidly to maintain adequate wages. He had long believed that the Poor Laws encouraged population growth [(27 January 1817) DR, 7:125],[24] but he gave particular emphasis to the problem after serving on the 1819 Poor Law Committee.

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[24]In his 1963 article, "The Myth of the Old Poor Law", Blaug questions whether the Poor Laws promoted population growth and thereby depressed wages. Having introduced the question, however, his argument proceeds to address an entirely different matter, leading to his conclusion--one not stated till a subsequent article [(1964) p.229]--that "the Old Poor Law was essentially a device for dealing with the problems of structural unemployment and substandard wages in a lagging rural sector of a rapidly growing but still underdeveloped economy". This is an altogether different issue from whether the Poor Laws encouraged an excessive increase in the labour supply that depressed wages and thereby aggravated the troubles of the poor.

Concerning the effect of the Poor Laws on population, he concludes only that "simply not much can be said" [(1963) p.173]. With respect to the effect on wages, he concedes that "On the face of it, it seems that the Speenhamland policy depressed agricultural wages between 1795 and 1824", but he claims that "this should not be submitted as evidence that subsidies depressed wages. On the contrary, the causal relationship seems to run the other way: wages were only subsidized when, for other reasons, they were too low to provide a minimum standard of living" [(1963) pp.168-9].

The empirical merit of Blaug's argument is suspect since he could have reached the same conclusion with any data set. The positive correlation between poor relief and unemployment demonstrates, according to Blaug, that greater relief was needed in areas of high unemployment, not that dependence was encouraged by more generous relief systems. Had the data shown no correlation between poor relief and unemployment, Blaug presumably could have reached the same conclusion.

> The distress of the poor is considered as synonymous with diminished resources. Suppose a nation to increase its capital annually at the rate of 2% but that at the same time its population increases at the rate of 2 1/2 % is it not clear that there will be annually new demands on its charitable funds? Its annual net revenue...would increase but would be accompanied with a diminution of happiness, if not positive misery to the great mass of the people. [(29 March 1820) 8:170,171]

> I am particularly pleased with your observations[25] on the state of the poor--it cannot be too often stated to them that the most effectual remedy for the inadequacy of their wages is in their own hands. [(4 May 1820) 8:183,184]

Ricardo's view has considerable merit, given the findings of the Poor Law Committees of 1817, 1818 and 1819, and the fact that Scotland, which had only a limited public relief system, was relatively exempt from the sufferings of the poor experienced in England and Wales [see Chapter Two, pp.90-91].

Unlike certain of his contemporaries, however, Ricardo never suggested that secular stagnation was imminent because of excess population growth.[26] Writing to Trower in 1816, he stated that "we are happily yet in the progressive state, and may look forward with confidence to a long course of prosperity" [7:16,17]. Again in 1821, in response to McCulloch's concern[27] about secular stagnation, he replied: "I am by no means ready to admit that we may not have a more limited measure of prosperity notwithstanding the continued operation of our corn laws and the existence of our debt" [(March 1821) 8:358].

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[25]The reference is to a passage from Malthus' Principles (1820) [DR, 2:262].

[26]Hollander [(1979) pp.600-605] makes a similar case.

[27]In December 1819, McCulloch had written to Ricardo that "Though very far from being an alarmist I think it must be admitted by all that the situation of the country is now critical in the extreme--With ignorant and despotic ministers, a million of paupers, a taxation three times as oppressive as in any other country in the world, and corn laws forcing the cultivation of the poorest soils and proportionably reducing the rate of profit, it is quite impossible to suppose that this country can bear up under the difficulties with which she is surrounded without a total change of system--It is worse than ridiculous to talk of the present distresses being temporary--They will at least continue as long as the causes by which they are produced" [DR, 8:139].

IV. Ricardo's Analysis of the 1820-22 Price Deflation.

As shown in Chapters Two and Three, the national debates concerning Resumption and agricultural protection and whether monetary contraction caused a general deflation were hotly contested from 1819 through 1823. Ricardo was prominent in these discussions and in what follows, we consider his analysis of the alleged monetary contraction and the decline in agricultural prices that began with the harvest of 1820.

A. Monetary Contraction.

1. Contemporary Data Suggested Monetary Contraction had Occurred.

Ricardo's misgivings about the Bank's policies [above, pp.193-194] were confirmed in the Spring of 1821 when it became evident that the Bank had acquired vast amounts of gold. The Bank was secretive about its bullion hoard, but Ricardo noticed a growing disproportion between the market price of gold and the market price of silver which he attributed to gold purchases by the Bank:

> If the Bank contemplated paying in gold coin in 1823, as they were now by law required, they must purchase a quantity of gold for that purpose; and to this cause was to be attributed the present disproportion between the price of gold and silver. [(2 February 1821) 5:71]

> What was it that at that moment produced the variation between the metals, to the higher price of gold? Was it not the operations of the Bank? That corporation were so timid...had taken alarm and had made great and unnecessary purchases of gold. [(8 February 1821) 5:75,76]

Evidence confirming his suspicions appeared on 19 March 1821 when the Government, at the request of the Bank, proposed the Bank Cash Payments Bill to allow the Bank to pay its notes in specie instead of ingots. The professed purpose of the Bill was twofold, according to Vansittart, (1) to prevent the forgery of small Bank notes by gradually substituting coin for these notes and (2) to reverse the "drain which was made by the Bank on other countries for

the precious metals...because that drain rendered the circulation of other countries more restricted" [(19 March 1821) Hansard 2s, 4:1315-16]. The forgery argument was obviously a ruse, for as Ricardo pointed out, "such a plan would be wholly ineffectual [because] whether the issues consisted altogether of Bank-notes, or half in Bank-notes and half in sovereigns, the danger of forgery would be the same" [(19 March 1821) Hansard 2s, 4:1331]. But to the Bill, generally, he raised few objections. The issuance of coin was at variance with the Ingot Plan--designed to minimise the purchases of bullion in returning to gold--but he considered the damage, in the sense of a rise in the relative price of gold, to have been caused when the Bank accumulated its bullion hoard. The fact that this hoard was now to be issued to the public in the form of specie would have no additional effect on the price of gold [(3 January 1822) 9:141]:

> The Bank had strong prejudices against the [Ingot] plan and immediately commenced purchasing bullion and coining money, and were absolutely forced to come to the legislature for permission, last year, to pay in specie, as they had accumulated a large quantity of coin. After they had been foolish enough to do so, it became a matter of indifference whether parliament agreed to their request or refused it--indeed it was more desirable to comply with it--the evil had already been done by the purchase and accumulation of gold, and no further mischief could arise from the substitution of the coins (in circulation) for the paper which they were desirous of withdrawing.

Learning of the Bank's accumulation of gold,[28] however, Ricardo revised his estimate of the extent of monetary deflation--which had earlier been 5% or 6% [(11 May 1820) 8:186]--arriving at a figure of 10% deflation. His calculation assumed a constant relative price of

[28]Based on the same information Ricardo was also able to approximate the increase in the Bank's hoard. Given a 5% decline in the paper price of gold (from £4 2s. to £3 17s. 10.5d.) and a 10% rise in the foreign exchange, he estimated the increase of the world relative price of gold at 5%. Assuming then that the world demand for gold was unit elastic, and assuming that the international gold stock amounted to £400 millions, Ricardo figured that the Bank of England had amassed a hoard of £15 to £20 millions [(12 June 1822) 5:209,210]. The accuracy of this estimate reflects favourably on his empiricism since the Bank purchased gold worth £16 millions between mid-1819 and June 1822 as compared with his estimate of £15 to £20 millions.

silver, so that changes in the nominal price of silver, which he determined by looking to the foreign exchange with France, would reflect the appreciation of sterling: "The surest test [of deflation] was the rate of the foreign exchanges; and if his hon. friend looked at what a pound sterling was worth in 1816 in the silver coin of France and what it was now worth, he would find it difficult to make out a variation of more than 10 per cent" [(18 March 1821) 5:95]. He knew that the world relative price of silver might have changed due to the current war in South America which "impeded the regular supply of the precious metals to Europe" [(12 June 1822) 5:205], but there was no way to determine if this had occurred.[29]

In any event, the extent of deflation was at least double what he had anticipated in 1819, prompting a letter to Malthus, saying, "I very much regret that in the great change we have made from an unregulated currency to one regulated by a fixed standard we had not more able men to manage it than the present Bank Directors. If their object had been to make the revulsion as oppressive as possible, they could not have pursued measures more calculated to make it so than those which they have actually pursued" [(9 July 1821) 9:15]. (It is doubtful whether, in referring to the "oppressive revulsion", Ricardo intended to suggest that there was a current general depression. For he was well aware of the revival in foreign trade and manufacturing that began in 1820 [see Chapter Three, pp.136-137,151]. And, on the day of writing to Malthus, he mentioned to Mill [(9 July 1821) 9:13] that "Manufacturers have full employment...[and] the labouring class in Agriculture and Manufactures are doing well".)

Notwithstanding his recognition of the fact that aggregate economic activity was expanding and that labourers were well employed, a Parliamentary speech of 12 June 1822

[29]According to figures compiled by British Consuls, bullion exports from Mexico in 1820 and 1821 were actually higher than usual. Similarly, the production and export of bullion from South America does not seem to have diminished. [Digest (1833) 2:173]

shows that he believed monetary contraction had caused economic hardships:[30]

> It was undeniable that the manner in which the Bank had gone on purchasing gold to provide for a metallic currency had materially affected the public interests...His hon. friend had said, that whilst the Bank was obliged to pay its notes in gold, the public had no interest in interfering with the Bank respecting the amount of the paper circulation, for if it were too low, the deficiency would be supplied by the importation of gold...In this opinion he did not entirely concur, because there might be an interval during which the country might sustain great inconvenience from an undue reduction of the Bank circulation...before it [gold] was coined the currency would be at a very low level, the prices of commodities would fall and great distress would be suffered. Something of this kind had in fact happened. The Bank entirely mismanaged their concerns in the way in which they had prepared for the resumption of cash payments; nothing was more productive of mischief than their large purchases of gold. [5:199,200]

That Ricardo thought monetary contraction had hampered aggregate economic activity cannot be doubted. Whether he believed monetary deflation was still a problem in 1821 or 1822 is less clear, though he stated repeatedly that monetary contraction had aggravated the agricultural crisis by causing nominal corn prices to fall an additional 10% [(2 March 1821) 8:350; (19 March 1821) 5:95; (11 December 1821) 9:122-3; (25 January 1822) 9:152; (7 May 1822) 5:165].

2. Actual Data Show No Monetary Contraction.

Ricardo allowed for a considerable degree of monetary contraction because of his belief that the "country circulation is...very much reduced" [(5 March 1822) 9:176]--a reduction he estimated at almost 50%:

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[30]His view is repeated in comments of December 1821 [5:519] and January 1822 [9:140] and in Protection to Agriculture [(1822) 4:225].

> The whole amount of circulation, at the present moment, both in London and the country, does not probably much exceed 32 millions, of which there are nearly 16 millions of Bank of England notes of 5 pounds and above, 7,500,000 of sovereigns, and nine millions of country Bank notes. If this be true there has been little or no falling off in the amount of Bank of England notes and coin together since 1819, but country Bank notes have diminished to the amount of 7,500,000£...How badly has this business been managed!" [(9 June 1822) 9:201-202].

Concerning the historical accuracy of Ricardo's position, he correctly stated that the total of Bank notes and coin had remained stable since 1819 [see Appendix B.6]. Further, his view that the country circulation had declined from £16.5 millions to £9 millions derived from Stamp Office reports submitted to the House of Commons in 1821 and 1822 [see Appendix B.2], which indicated a reduction in the number of stamps purchased for country-bank notes. It was not until the 1832 investigation by the Committee of Secrecy on the Bank of England Charter that actual data on the country circulation appeared, revealing that at no time after passage of the Resumption Act did the country circulation decline by more than 12%, a figure far below the 50% suggested by Stamp Office reports [see Chapter Two, pp.121-122].

Had Ricardo possessed accurate information concerning the country circulation, he could have more effectively refuted opponents of the Resumption Act on the grounds that there had been little or no contraction of the circulating medium after 1819. But this was not the case, so that when opponents such as Baring called for the devaluation of the currency by the adoption of a bi-metallic standard [Hansard 2s, 4:523-529,1317-1328], or when Baring and Attwood together argued that the Resumption Act should be overturned [Hansard 2s, 4:91-130], Ricardo was obliged to refer to alternative explanations for the fall of prices and, by a circuitous course of reasoning, argue that monetary contraction had not caused more than a 10% price deflation. These alternative explanations focused particularly on the increased supply of agricultural produce beginning in 1820.

B. Glut of Agricultural Produce.

1. Explanation of Low & Volatile Corn Prices.

British corn prices were extremely volatile in the years 1813 through 1823, ranging from a high of 128s. per quarter to a low of 38s.[31] Attending this volatility there occurred two periods of ruinously low prices, lasting from Fall 1813 to Spring 1816 and from Fall 1820 through 1822. The section below considers Ricardo's analysis of the second agricultural crisis.

Corn prices fell sharply after the harvest of 1820 and continued to decline for the next 27 months as the home market was glutted by a series of bumper crops and high imports from Ireland [Chapter Two, pp.104-109]. Ricardo initially attributed the fall in corn to excess domestic production, itself caused by excessive agricultural investment. He was at a loss to explain how farmers could have mistakenly invested in corn production to the extent that it caused the severe fall in prices, but he believed that corn prices would rebound as capital was withdrawn from agriculture [(9 October 1820) 8:277; (December 1820) 8:334n].

Ricardo did not learn of the extent of the 1820 harvest nor of the quantities of Irish corn being imported until the hearings of the 1821 Agricultural Committee [Chapter Three, pp.162-164]. After the hearings, however, he correctly attributed low corn prices to "abundant harvests...the vast importations from Ireland...[and] the late improvements[32] in agriculture" [(1821) 5:94], coupled with extensions of the margins of cultivation[33] [(1822)

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[31]"An Account Showing the respective Weeks in which the Average Price of Wheat was Highest and Lowest," Parliamentary Papers (1826-27) vol.16, p.13, microfiche #29.128.

[32]Technical progress in the methods of cultivation did not contribute to the agricultural depression, since these changes led to reductions in production costs. Technical improvements did, however, lead eventually to lower corn prices.

[33]The margin of cultivation increased during the War, contracted in the 1813-16 agricultural depression, then increased again in response to a prolonged period of high corn prices. Wheat prices

4:259]--causes he repeatedly mentioned in private correspondence [(1821) 8:369; (1822) 9:157], Parliamentary debates [(1821) 5:108; (1822) 5:125; (1822) 5:151] and in Protection to Agriculture [(1822) 4:259-261].

Unlike the landed gentry in Parliament who argued that higher tariffs or the repeal of the Resumption Act would end the agricultural crisis, Ricardo considered periodic agricultural depressions (and unstable corn prices) inevitable so long as the 1815 Corn Law remained in effect.[34] For because of agricultural protection, the margin of cultivation had been extended--and consequently real production costs had increased--to the point that when an abundant domestic harvest reduced corn prices to levels ruinous to British farmers, they still could not export to the Continent [(8 February 1821) 5:74]: "It was certainly desirable that those engaged in the production of corn should have a vent when an excess of supply existed. When two or three good harvests followed in succession, we might, if prices were at all on a level with those on the continent, export it after a fall of three or four shillings a quarter; but at present there must be a destructive fall before it could be sent abroad." Similarly, the 1815 Law ensured that domestic prices would be very high if the harvest was ever deficient, for the ports were closed to foreign corn till a threshold price (80s. per quarter of wheat) was attained in the domestic market. Once the threshold price had been reached, however, the ports opened to unlimited, duty-free importation of foreign corn, at which point the home market was "overwhelmed with foreign corn" [(2 March 1821) 8:350].

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surpassed 70s. in May 1816 and remained high, selling for 73s. per quarter even in September 1820.

[34]In Protection to Agriculture (1822), "the weight of emphasis was placed by Ricardo upon the excessive grain-price fluctuations engendered by the protective system...[And] In the Commons a very great deal of attention was paid by Ricardo to the question of corn price instability due to protection" [Hollander (1979) pp.553,601,647].

To remedy the problem of extreme price volatility, Ricardo called for the repeal of the Corn Laws. He argued that domestic agricultural production was too high and that if British agriculture was to become profitable, large tracts of marginal land would have to be withdrawn from cultivation: "He agreed with an observation of a Noble Person [Lord Liverpool] in another place, that part of the distress was owing to too much corn being produced, and agriculture must lessen its produce so as to suit the demand...It had been said that importation would throw the whole of the lands out of cultivation. But this was assuming that the remunerating price was for every grower the same; whereas, corn was raised in some lands at 40s. and in others at not less than 70s." [(7 March 1821) 5:84,85]. Some reduction in domestic cultivation occurred when corn prices declined after the famine of 1816-1818, but Ricardo hoped for an even greater contraction of the margin: "Open the ports, admit foreign grain," he said in May 1820 [5:49], "and you drive this land [poor or unprofitable soils] out of cultivation; a less remunerating price would then do for the more productive lands." He restated his position in Protection to Agriculture, attributing the low corn prices in Britain to "unusually abundant...harvests of 1819 and 1820", in addition to "importations from Ireland [that] were unusually great" [4:260]. He also observed that "If the [corn] price obtained be less than remunerative, profits will b depressed, or will entirely disappear...[and] capital will be withdrawn from the land and the supply will gradually conform to the demand" [4:219]. Even so he was conscious of potential hazards in the transition process, particularly the fact that landed interests might suffer financial ruin, and so recommended only a gradual dismantling of the protective system [(13 October 1819) 8:103; (6 May 1820) 5:44].

2. Low Corn Prices did not Cause a General Stagnation.

Concerning the effects of the 1820-22 agricultural depression on aggregate economic activity, Ricardo recognized that the fall in corn had not caused a general depression.[35] Writing to James Mill [(9 July 1821) 9:13], he observed that "If the labouring class, in Agriculture, and Manufactures, are doing well, we must console ourselves for the misfortunes of landlords and tenants--they form but a small proportion of the whole population, and it is no small comfort to reflect that the losses they sustain are more than made up by the prosperity of other capitalists." Similar statements appear in his correspondence of 1822 [9:158] and 1823 [9:315]. Ricardo also published his views in Protection to Agriculture, especially Section V, in what was a direct attack on the Inflationists who argued for the repeal of the Resumption Act on the grounds that monetary contraction caused a general depression [Chapter Two, pp.99-102].

Contemporaries were unable to dispute his analysis. The available tax abstracts and the commercial reports in the popular press, attested that the 1819-20 general depression had ended by the third quarter of 1820, and that general economic activity rapidly increased thereafter. By comparison, the decline in corn prices and the attending agricultural depression did not begin until October 1820.

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[35]He consistently adhered to this view. In the 1820 edition of the Principles, for instance, Malthus described a hypothetical situation where, in response to a fall in the price of raw produce, "many labourers will be thrown out of work [and] wages, after a period of great distress, will generally be lower in proportion." Ricardo responded that "If the supply be increased without any diminution of the supply of other things, it cannot diminish the power of the country generally to employ labour, but on the contrary must increase it" [DR, 2:229-230].

V. The Ricardo-Malthus Debate Concerning the Events of 1820-22.

A. Overview of the Debate.

Concerning the Ricardo-Malthus correspondence after 1819, Malthus himself said "it seems as if we should never thoroughly understand each other, and I almost despair of being ever able to explain myself" [(16 July 1821) DR, 9:19]. It is a sentiment shared by secondary authors, especially those who have studied the progress of the general-glut debate. A key point of mutual miscomprehension between Ricardo and Malthus related to the causes of postwar economic crises. As shown in Chapter Four [pp.171-175], Malthus explained 'the' postwar depression in terms of deficient aggregate demand.[36] However, both in the Principles (1820) and in correspondence with Ricardo after 1819, he also discussed the possibility that "oversaving"[37] could result in falling commodity prices, low profits, and thus a reduction in the demand for labour, causing unemployment. Though Malthus did not suggest that excessive investment contributed to postwar distress, this escaped Ricardo, who, from 1820 onwards, responded to Malthus' analysis of current events by rebutting the "oversaving" thesis.

Ricardo had been acquainted with Malthus' embryonic ideas about capital accumulation from the time of their debate in 1814 concerning "the proportion of production to consumption" [DR, 6:108,111] and whether effectual demand was likely to change in the

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[36]Malthus' explanation of 'the' postwar depression remained unchanged in later years except on two points: first, he no longer mentioned the country banking crisis of 1814-16; and second, he believed that some monetary deflation associated with Resumption had occurred as the Bank directors "managed the matter of the currency so ill" [DR, 9:22]. Even so, Malthus retained his original position that "there is a further effect of the same kind both here and in America occasioned by the diminution of demand and relative excess of supply, and that more is attributed both to the paper and the Bank directors than belongs to them" [(16 July 1821) 9:22].

[37]By "oversaving" Malthus meant a glut of commodities, resulting from an increase in production--itself attributable to an increase in capital--without a corresponding increase in demand. Malthus' explanation involved too rapid an investment program, not hoarding or a reduction in aggregate demand.

same proportion and at the same time as aggregate production.[38] But he recognized that these discussions were purely theoretical and that Malthus was not explaining actual events in terms of a model that involved excessive investment. His view began to change, however, in early 1820.[39] Writing to McCulloch after Malthus had "passed 2 or 3 hours with me last week", Ricardo complained [(28 February 1820) 8:159,160]: "Mr. Malthus continues stoutly to deny that demand[40] is only limited by production--he thinks that capital might be very mischievously augmented in a country...he maintained the opinions which he has long held, and which I cannot but think very far from being the correct ones". Within weeks of this meeting, in April 1820, he read Malthus' Principles and concluded--particularly because of arguments in the chapter "On the Immediate Causes of the Progress of Wealth"--that Malthus attributed the current economic distress to oversaving:

> The most objectionable chapter in Mr. Malthus' book is that perhaps on the bad effects from too great accumulation of capital and the consequent want of demand for the goods produced. This doctrine naturally leads to the conclusion which Mr. Malthus draws from it. I could not have believed it possible, if I had not read it, that so enlightened a man as Mr. Malthus should recommend taxation as a remedy to our present distresses. [Letter to McCulloch dated 2 May 1820, 8:181]
>
> I differ as much as I ever have done with you in your chapter on the effects of the accumulation of capital...Admitting that you are correct on this [page torn]

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[38]They discussed the topic of oversaving again in 1816 [7:70] and 1817 [7:122].

[39]Ricardo and Malthus began to debate this matter in February 1820, when the economy was generally depressed. Malthus continued to speak of 'a' general depression long after the economy recovered in mid-1820, which added confusion to their correspondence.

[40]Ricardo's observation that "demand is only limited by production", does not imply that he thought demand would always be at this limit. The statement means nothing more than that real aggregate demand cannot exceed the real aggregate supply. His intent is illustrated by an early letter to Mill on the subject [(1811) 6:56]: "You observe that the demand for corn is unlimited. It is clear that you attach a different meaning to the word demand to what I do. I should not call the mere desire of possessing a thing a demand for it, such desires are undoubtedly unlimited, but by demand I should understand a desire to possess with the power of purchasing. If so demand is limited."

> inference you draw is the correct one...If individuals would not do their duty in this respect, Government might be justified in raising taxes for the mere purpose of expenditure. [Letter to Malthus dated 4 May 1820, 8:185]

Ricardo's view of Malthus' position was reinforced by a second reading of the Principles, which he described in letters to both McCulloch and Trower: "Mr. Malthus speaks of an indisposition to consume being very common--I say it never exists any where, not even in South America to which he has so triumphantly alluded" [(2 August 1820) 8:216], and again, "You will not...adopt the great and fundamental error of Mr. Malthus, who contends that there may be at one and the same time a glut of all commodities, and that it may arise from a want of demand for all--he indeed argues that this is the specific evil under which we are at present suffering" [(26 September 1820) 8:257]. Malthus did little to correct his misunderstanding, for in two letters of July 1821, he seemed to imply that "oversaving" was a factor in the depression:

> We see in almost every part of the world vast powers of production which are not put into action, and I explain this phenomenon by saying that from the want of a proper distribution of the actual produce adequate motives are not furnished to continued production...I dont at all wish to deny that some persons or others are entitled to consume all that is produced; but the grand question is whether it is distributed in such a manner between the different parties concerned as to occasion the most effective demand for future produce: and I distinctly maintain that an attempt to accumulate very rapidly which necessarily implies a considerable diminution of unproductive consumption, by greatly impairing the usual motives to production must prematurely check the progress of wealth. This surely is the great practical question, and not whether we ought to call the sort of stagnation which would be thus occasioned a glut. [(7 July 1821) 9:10,11]

> I think we may now be said to agree that a certain amount of unproductive expenditure on the part of those who have the means of setting industry in motion is necessary in order that they may be awarded a proper share of the produce; but you think that in the case of this country the evils we complain of do not in any degree arise from a partial approach to the kind of stagnation above described. On the propriety of applying our principles respecting profits to the case of this country I will not now enter into a discussion, but

> will only say that the symptoms appear to me exactly to resemble those which would arise from the sudden conversion of unproductive labour into productive, and the diminution of unproductive consumption. [(16 July 1821) 9:21]

Ricardo mistakenly concluded that Malthus' Principles (1820) analyzed events from 1820 onwards in terms of his theory of sustainable growth, in the sense that capital had accumulated too rapidly, resulting in a glut of output with no corresponding increase in aggregate demand [(21 July 1821) 9:26,27]: "I should not make a protest against an increase of consumption, as a remedy to the stagnation of trade, if I thought, as you do, that we were now suffering from too great savings. As I have already said I do not see how stagnation of trade can arise from such a cause...Such and such evils may exist, but the question is, do they exist now? I think not, none of the symptoms indicate that they do." There are two aspects of Ricardo's response to his reading of Malthus. The first concerns whether, in principal, oversaving could occur, the second his evaluation of whether oversaving was an immediate problem for Britain's economy. In what follows we address both points.

B. Ricardo's Answer to Malthus' Oversaving Thesis.

Ricardo did not think that Malthusian oversaving could ever occur, since excessive investment (he made no distinction between fixed and circulating capital in this context) would, in his view, result in higher wages and would transfer purchasing power from capitalists to labourers,[41] thereby lowering profits so that the motive for further accumulation would cease [(1820) 2:302,303]: "If capital increased too rapidly for the population, instead of commanding seven eighths of the produce, they might command ninety nine hundredths,

[41]The extent to which wages would increase would depend on "the proportions between capital and labour" [2:304].

and thus there would be no motive for further accumulation. If every man were disposed to accumulate every portion of his revenue but what was necessary to his urgent wants such a state of things would be produced...But the condition of the labourer would then be most happy, for what can be more prosperous than the condition of him who has a commodity to sell for which there is almost unlimited demand while the supply is limited and increases at a comparatively slow rate." As for the contemporary situation, Ricardo did not believe that inadequate consumption was a problem for the British economy, nor did he think there had been excessive investment, stating to Malthus [(9 July 1821) 9:16]: "There could be no adequate motive to push production to this length, and therefore it would never go so far...you often appear to me to contend not only that production can go on so far without an adequate motive, but that it actually has done so lately, and that we are now suffering the consequences of it in stagnation of trade,[42] in a want of employment for our labourers &c. &c., and the remedy you propose is an increase of consumption."

Ricardo's answer to what he understood as Malthus' explanation of the current economic situation was reasonable. He could not accept that "oversaving" contributed to the 1819-20 depression and the 1820-22 agricultural crisis for he recognized the actual causes of these events: the collapse of export demand in 1819 and the increase in the corn stock in 1820. Moreover, he knew that tens of millions in capital had been withdrawn to the Continent in the decade following the War [see Chapter One, pp.64-66] in consequence of the low profits, high taxes and high wage costs in Britain. And he attributed the sufferings of the working class, in part, to the resultant deficiency of capital relative to the domestic labour supply. That excessive investment could have been a current problem thus seemed to him untenable.

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[42]His mention of a "stagnation in trade" refers either to the current agricultural crisis or to a general crisis that Malthus believed was occurring. Ricardo knew that economic distress was limited to agricultural districts after 1820.

A final empirical observation confirmed Ricardo's opinion that Malthus had mis-diagnosed the current crisis--namely, the general depression had ended by the third quarter of 1820. The same day he mentioned a "stagnation in trade" to Malthus (see paragraph above), Ricardo sent a letter to Mill, describing the current industrial progress [(9 July 1821) 9:13]: "Manufacturers have full employment for their men; Osman told me yesterday that Mr. Hicks was employing his men extra hours, and of course giving them extra pay. If the labouring class in Agriculture and Manufactures are doing well, we must console ourselves for the misfortunes of landlords and tenants...it is no small comfort to reflect that the losses they sustain are more than made up by the prosperity of other capitalists." (His reference to the losses of agriculturalists being counteracted by the prosperity of industrial capitalists suggests again Ricardo's use of tax data to measure aggregate economic activity since customs and excise reports show an increase in trade beginning in mid-1820 [Appendix E.2].[43])

C. Ricardo's Counter Explanation: Misallocated Capital.

Responding to Malthus' views on the causes of economic distress, Ricardo countered that both the 1819-20 depression on the 1820-22 agricultural crisis were, fundamentally, caused by the misallocation of capital. The Rev. Benjamin Grey described a conversation between Ricardo and Malthus in December 1820 when their differences were expressed at length: "Mr. Ricardo and Mr. Malthus came and entertained us for two hours and upwards with an argument in defence of their respective theories of Political Economy. Mr. Malthus contending that the present distress arose from unemployed capital and Ricardo from misemployed capital which would soon assume its proper channels" [note by Sraffa in DR,

[43]The amount of money collected from customs and excise taxes increased little after 1820, but this is because taxes were reduced by one third from 1821 to 1825.

8:334n]. Grey's account confirms the contents of earlier letters in which Malthus and Ricardo defended similar views. A frequently quoted letter is that of 25 September 1820 from Malthus [DR, 8:260]:

> The present state of things indeed in England America Holland and Hamburgh still more than in France does appear in the most marked manner to contradict both his [Say's] and your theory. The fall in the interest of money and the difficulty of finding employment for capital are universally acknowledged and this fact, none of your friends have ever accounted for in any tolerably satisfactory manner; but what confidence can be placed in a theory, as the foundation of future measures which is absolutely inconsistent with the past and the present state of things.

Ricardo defended his misallocated-capital theory in response:

> The difficulty of finding employment for Capital in the countries you mention proceeds from the prejudices and obstinacy with which men persevere in their old employments,--they expect daily a change for the better, and therefore continue to produce commodities for which there is no adequate demand. With abundance of capital and a low price of labour there cannot fail to be some employments which would yield good profits...Men err in their productions, there is no deficiency of demand...we are guilty of some such folly now, and I can scarcely account for the length of time[44] that this delusion continues. [(9 October 1820) 8:277]

Malthus was critical of Ricardo's argument because he understood Ricardo to mean that Britain's economy was still adjusting from wartime to peacetime production, failing to recognize the economic changes that had occurred since the War--in particular, the recovery of 1817, the prosperity of 1818, and the fact that a trade crisis in 1819 initiated a second depression. Modern critics have made similar mistakes.[45] Hollander [(1997) p.608] cites

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[44]I am not certain what Ricardo knew about the current economic situations in America, Holland, Hamburgh and France. But in Britain, the crisis in manufacturing and foreign trade that began in February 1819 was nearing an end by the Summer of 1820. It is possible that Ricardo was referring to conditions in domestic agriculture, for corn prices fell sharply after the harvest of 1820.

[45]Many authors admit the validity of Ricardo's misallocated capital explanation in the years 1815 to 1817, but question his continued use of the argument in 1820, five years after the war ended [Blaug (1958) p.77; Link (1959) p.63; Tucker (1960) pp.125-126; Hollander (1979) p.518]. What these authors

passages from Malthus' Principles [(1820) pp.333-334] which read: "Where is there any considerable trade that is confessedly understocked, and where high profits have been long pleading in vain for additional capital? The war has now been at an end above four years; and though the removal of capital generally occasions some partial loss, yet it is seldom long in taking place" and again [(1820) pp.498-499] "I cannot bring myself to believe that this transfer can require so much time as has now elapsed since the war; and again ask, where are the understocked employments, which, according to this theory, ought to be numerous and fully capable of absorbing all the redundant capital". On the basis of these passages, Hollander describes Ricardo's misallocated capital explanation as "incompatible with the evidence, particularly with the pervasiveness of the depression and the absence of those potentially profitable industries presumed to exist in that account." In the same vein, Peach [(1993) pp.139,140] alludes to Malthus' letter of 25 September 1820 (quoted above) and to Ricardo's response as proof that Ricardo "believed passionately in the practical relevance of his doctrine [the law of markets] to such an extent that he blamed reality for not conforming to the 'model', not vice versa."

Like Malthus, Hollander and Peach fail to recognize that from 1820 onwards Ricardo was not referring to the postwar relocation of capital. Moreover, by assuming that Britain's economy was continually depressed from 1815 through 1823, they fail to assess his position in an accurate historical context. Interpreted correctly, Ricardo's misallocated-capital argument appears reasonable, for British merchants actually did fail to anticipate the collapse of foreign export demand in 1819, and the 1819-20 depression was worsened by the excessive production and export of home goods and by the enormous imports, particularly of

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have not recognized is that Ricardo's comments in 1820 about misallocated capital do not refer to transitions from wartime to peacetime production, but instead address the excessive allocation of capital to agriculture and to certain branches of foreign trade.

wool and cotton. Similarly, the 1820-22 agricultural depression was the result of a corn glut that, in turn, owed partly to overextensions of the margins of cultivation.

D. The Question of Labour-Displacing Technical Change.

At some point in early 1821--Hollander [(1979) p.366] sets the date between 25 January and 12 March--Ricardo came to allow for the possibility that a sudden change in technology could, in principal, lead to an absolute reduction in the demand for labour, not merely a reduction in the growth rate of labour demand.[46] A statement of his new position appears in the third edition of the Principles [(1821) 1:390]: "The discovery and use of machinery may be attended with a diminution of gross produce; and whenever that is the case, it will be injurious to the labouring class, as some of their number will be thrown out of employment and population will become redundant, compared with the funds which are to employ it." There have been questions in the secondary literature concerning whether current economic events affected Ricardo's position on machinery and whether he intended to explain current postwar unemployment or underemployment in terms of sudden technical innovation.

Hollander [(1979) p.367] attributes the change to a purely theoretical discussion between Malthus and Ricardo on the effects of machinery.[47] I find no reason to question this given Ricardo's note at the close of the Principles chapter "On Machinery" [1:395]: "To elucidate

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[46]Both Hollander [(1987) p.103] and Berg [(1980) pp.65-66] discuss Ricardo's case for the substitution of machinery for labour in response to sudden technical progress.

[47]With respect to the influence of John Barton and his Observations on the Circumstances Which Influence the Condition of the Labouring Classes of Society (1817), Hollander [(1979) p.357] allows that Barton may have sown the seeds of Ricardo's change concerning machinery, but he minimizes Barton's role on the grounds that the Observations do not refer to a conversion of circulating into fixed capital that would reduce gross produce--the concept central to Ricardo's revised position.

the principle, I have been supposing, that improved machinery is suddenly discovered, and extensively used; but the truth is, that these discoveries are gradual, and rather operate in determining the employment of the capital which is saved and accumulated, than in diverting capital from its actual employment." Moreover, an extensive study of the contemporary labour unrest related to machinery yields no evidence of unusual events in 1820 or 1821 that would have caused Ricardo's viewpoint to change. The "Battle of Bonnymuir" occurred in April 1820 and there was a violent colliers' strike in Shropshire in January 1821, but riots and machine-breaking had been commonplace since the 1790s and, by comparison, the disturbances of 1820-21 were mild.

VI. Ricardo's Notes on Blake.

A. Blake's Position.

Ricardo's Notes on William Blake's Observations on the Effects Produced by the Expenditure of Government During the Restriction of Cash Payments (1823) have been a source for many critics who contend that he accepted a doctrinaire version of the law of markets and that he deliberately rejected empirical evidence which contradicted that theory [Introduction, p.8]. In what follows we show that too much has been made of Ricardo's Notes, for Blake's analyses of both wartime and postwar events contain severe factual errors, and it is these errors to which Ricardo objected. Because modern authors have assumed that Blake's Observations contain a sophisticated account of deficient aggregate demand, they have interpreted Ricardo's Notes as implying a more radical position than he intended.

The central thesis of Blake's Observations is that neither the increase in prices from 1797 through 1815, nor the postwar crises in trade, manufacturing and agriculture were monetary

phenomena, but that both originated in high Government wartime expenditures and the cessation of that expenditure when the War terminated [pp.1-5]:

> We have seen landed proprietors without rents; farmers and manufacturers without a market; the monied capitalist ready to lend, and the merchant not wanting to borrow; a redundant capital, yet a redundant population; and the industrious poor compelled to apply, like mendicants, at the parish workhouse...We have witnessed a depression of the exchanges. We have had the market price of gold exceeding the mint price...And all this accompanied by a general rise of price in most of the articles of consumable produce.
>
> I have, however, perfectly convinced my own mind that all the results above specified may have arisen from causes not necessarily connected with an alteration in the value of currency; and, moreover, that such other causes are not hypothetical merely, but have been in actual operation.
>
> I have very little doubt that the whole of these appearances may be traced, and will be found to have originated in the enormous expenditure occasioned by the late war.

When reading Blake, critics such as Blaug [(1958) p.79] and Hollander [(1979) p.519,520] have assumed that the Observations contain a theoretically-sophisticated and empirically-based explanation of the postwar crisis. The mistake is made easily enough if excerpts from the pamphlet are read through the prism of modern macroeconomic theory and if they are also removed from the context of the entire work. But read as a whole, and if compared with actual events, many of his statements are shown to be unreasonable.

B. Factual Errors in the Observations.

Concerning factual errors in the Observations, there is, first, Blake's argument that the increase in domestic commodity prices and the fall of the pound on the foreign exchange market during the War were in no way caused by an overissue of paper money, but were instead due, respectively, to "internal" and "foreign" expenditures by the British Government. This is questionable given the fact that the Bank of England increased its circulation from £9.8 millions in 1797 to £27 millions in 1815 [Digest (1832) pp.179,180], and given that

there was a corresponding increase in the circulation of the country banks. Blake's explanation seemed absurd to Ricardo, who, years earlier in the High Price of Bullion (1810) had given a detailed, statistical account of how the increase in the Bank circulation corresponded directly with the fall in the foreign exchange [DR, 3:121] and with the rise in the price of gold [3:76-78].[48]

The second half of the Observations advances the argument that the postwar reduction in Government expenditure caused the "distress that has prevailed since its termination" [p.120]. Ricardo knew that there had not been an ongoing depression since the end of the War, but even if there had been, Blake's analysis was not persuasive, for he lacked a theory of aggregate demand and simply assumed that demand would be inadequate to purchase an expanding aggregate supply.

Following Adam Smith's "increasing competition of capitals" thesis [p.57], Blake argued that without debt-financed Government expenditure, aggregate demand would necessarily be deficient, and he cited the fact that capitalists loaned money to the Government as evidence that these monies would otherwise have been hoarded [pp.62,63]:

> The purchase of an annuity is a complete proof that the owner of the capital has not the means of employing it advantageously. The loan contractors thus become the channel through which all the accumulations of capital that are feebly employed, or that are without employment, find their way into the hands of government; whence they immediately pass into a state of complete activity amongst the producers who furnish the warlike stores, or such other commodities as the subordinate agents of government require...The tendency [of government expenditure] would be to relieve all capitalists from excess of stock; to create a demand for their goods, whilst it diminished the competition of new capitalists, and thus increased both prices and profits.

Blake's conclusion that the reduction in Government expenditure was the "chief cause...of the distress that has prevailed since its termination" was flawed, not just because there had been

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[48]Ricardo stated his objections to this part of Blake's argument often in his Notes [4:329-336].

no ongoing depression, but because he failed to consider alternative causes of the crises that were experienced.

If Blake had limited his argument to the twenty-four months following Waterloo, his Observations probably would have been received less critically since Ricardo also allowed that, partly because of the cessation of wartime demand, capital and labour were not fully employed in these months [Chapter Four, pp.182-186]. But instead of restricting the period under consideration, Blake extended his analysis of the depression to the year 1822, ignoring almost every significant aspect of the period. He failed to mention that a bumper harvest and high imports caused the 1813-15 corn glut. He likewise provided no account of the agricultural prosperity that began in mid-1816 and continued into 1819. He did not address the boom in foreign trade and manufacturing from mid-1817 through 1818, or observe that export demand collapsed in 1819. He also ignored the return of prosperity in foreign trade and manufacturing in mid-1820. Finally, Blake actually ridiculed the idea that the abundant harvests of 1820 and 1821 contributed to the second agricultural depression [pp.93-4]:

> The universality of this distress[49] is not to be accounted for on any other supposition [than a general diminution of demand], and can hardly be attributed to abundant harvests for so many years together, in all the different quarters of the globe. More especially as there does not appear to be any conclusive evidence of such abundance,[50] except what is inferred from the lowness of price. Moreover, the lost prices are not confined to corn alone. It is well known that manufactures are less in quantity,[51] and less in price also...To what then can we attribute this universal effect, but to the general diminution of demand?
>
> To those who imagine consumption not to be a necessary ingredient of

[49]Agricultural interests were depressed, but it has been established that industrial capitalists and those involved in foreign trade were prospering in 1822.

[50]Blake ignored the findings of the 1821 Agricultural Committee. He failed to account for the abundant harvest of 1820 and for the unprecedented corn imports from Ireland.

[51]Chapter Two [pp.92-94] has shown that manufacturing output was increasing after 1820.

> demand, and that in order to make a market for commodities, it is only necessary to produce more, these phenomena offer problems not very easy of solution; nor is the difficulty less for those who conceive the previously existing capital to have been diminished by being converted into revenue. Accordingly, every drowning theorist has caught at the various straws that crossed him.

In his Notes, Ricardo responded to this final paragraph, writing [DR, 4:352]: "Drowning theorist! I am not one for I as well as you say the supply was too great for the demand." Blake objected to this comment, showing again a lack of factual knowledge [DR, 4:352]: "The author certainly did not apply the term drowning Theorist to the Critic [Ricardo] but perhaps the Critic may be included in the class of those who just keep their heads above water by supposing a cycle of abundant harvests since the termination of the War".

C. Ricardo's Response.

Given Blake's omission or misstatement of so many factual points, it is not surprising that Ricardo ignored the "empirical" aspect of his work, and later complained to McCulloch that "Mr. Blake's arguments respecting the effects of a war expenditure are still more objectionable,[52] I cannot say one word in defence of this theory" [9:287].[53] His comment should not be construed as meaning that he considered the postwar change in government expenditure irrelevant, for we have already shown that he thought the postwar transition from labour-intensive military service to capital-intensive consumption demand had a negative

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[52]Blake's views on war expenditure were "more objectionable" than his argument that the difference between gold and paper during the War was due entirely to a rise in the value of gold [9:287].

[53]On the basis of this remark to McCulloch, Hollander [(1979) p.520] observes: "Blake's case--which relates to the effectiveness of injections of purchasing power by government expenditure in times of unused capacity and conversely to the depressing effects of their termination--is quite different from Ricardo's whereby one might anticipate a fall in demand for labour on the return to peace, but it is to be expected that Ricardo would make some reference to this relationship if he had regarded it as significant in the postwar period. In fact he relies solely on 'misallocation' of capital as the cause of the depression".

effect on the demand for labour [above, pp.203-205]. Rather, he could not accept the pseudo-empirical aspect of Blake's argument, nor Blake's unfounded assertion that effectual demand would always be deficient unless buoyed by high Government expenditures.

VII. Conclusion.

This chapter has addressed Ricardo's analysis of the 1818-25 business cycle, up to 1823, the year of his death. We have shown that his treatment of events was, by and large, grounded in his considerable knowledge of business and political conditions. He correctly attributed the 1819-20 crisis to a decline in export demand and to excessive imports. He also recognized that the 1820-22 agricultural distress resulted from a series of abundant harvests, coupled with unprecedented Irish corn imports. When addressing these two situations, his references to misallocated capital did not refer to the transition from wartime to peacetime production, as secondary critics (and Malthus) assumed; rather, he believed that merchants miscalculated the demand for both imports and exports in the first instance, and that the margin of cultivation had been overextended in the second. Ricardo allowed that monetary contraction contributed to price deflation during the cycle by as much as 10%. Based on data from the 1830s concerning country-bank issues and the value of gold coin entering circulation, it is doubtful whether a 10% monetary deflation occurred, but Ricardo's estimate was as accurate as possible given the reports from the Stamp Office on country notes and given the fact that the Bank of England revealed nothing about its transactions in gold. Finally, it appears that in well-known instances where Ricardo assumed full employment--particularly his critique of Blake and his testimony before the Commons Resumption Committee--his position does not imply that he accepted Say's Identity, rather, he was only making reasonable responses to the arguments of others.

Chapter 6: Ricardo's Monetary and Fiscal Policy

I. Introduction.

The Introduction to this study has described the tendency in the secondary literature to depict Ricardo as an abstract theorist who was ignorant of current events, but who nonetheless pronounced freely on economic policy. In what follows I examine Ricardo's monetary and fiscal policy with this position in mind.

That Ricardo supported Britain's return to gold during the middle of a depression demonstrates, according to some critics [see the Introduction, p.9], the ill-conceived nature of his policies. I take issue with this view in Section II below and demonstrate that his support of the Resumption Act was not unreasonable, given the political and economic conditions of the time.

Section III addresses the extent to which Ricardo countenanced the exercise of discretionary monetary policy, and whether he can justly be characterized as a crude bullionist and father of the Currency School. I give particular attention to Arnon, who claims that Ricardo considered the exercise of discretionary monetary policy a matter of practical importance, but who further argues that he did not come to this realization till 1823. I demonstrate that Ricardo understood the importance of controlling the money supply and that he supported the exercise of discretionary monetary policy to counteract destabilizing fluctuations in private credit or country bank notes. His primary policy objective was price stability, but he also wanted to preclude the output effects associated with financial crises. This aspect of his position is presented best in Economical and Secure Currency (1816).

The extent to which Ricardo countenanced discretionary policy has, in part, been obscured by an earlier pamphlet, the High Price of Bullion (1810), that advocates a restrictive monetary policy, in response to a failed domestic harvest accompanied by an external drain, on the grounds that the central bank cannot simultaneously defend the gold standard and sustain the prevailing level of credit. We compare his position with that of Henry Thornton, showing that Ricardo's proposal--effectively, to maintain the rule of the gold standard rather than leave the Bank unregulated--was reasonable, given that during the Restriction period, the Bank of England tended to act like an ordinary commercial bank, and that it staunchly resisted returning to the discipline of gold when 'temporarily' relieved of that obligation in 1797.

Section III concludes with a discussion of Ricardo's view of the central bank as lender of last resort. We show that while he acknowledged that the Bank of England could serve this function, it was not unreasonable to omit any reference to this duty in his posthumously published Plan for a National Bank (1824) for two reasons: First, the Exchequer was currently functioning as lender of last resort; the Bank was not. A fact not appreciated by historians of thought is that, while the Bank was willing to increase its discounts during minor economic troubles, in instances of severe financial crises (such as occurred in 1793 and 1811), it behaved as any other commercial institution and reduced its liabilities by withdrawing credit. The Exchequer was consequently forced to assume the duty of lender of last resort, there being constant opposition from the Directors of the Bank to this obligation. Second, the fact that Ricardo implicitly assigned the duties of lender of last resort to the Exchequer in National Bank is seen to have practical merits when viewed in the context of the 'rules versus discretion' debate. For while his proposal did not grant new discretionary powers to the Bank--powers the Bank had shown every inclination to misuse--it retained the

Exchequer's ability to provide credit in financial crises. As in his earlier pamphlets on money, National Bank imposed sufficient constraints on the Bank to maintain price stability, and a strong case can be made for the merits of this decision given the Bank's conduct.

Ricardo's view of fiscal policy is addressed in Section IV, where we seek to determine whether his general dislike for Government spending implied acceptance of a simplistic version of Say's Law. We show that Ricardo was not primarily concerned with the immediate effects of public spending on aggregate demand; rather, he emphasized that "wasteful" public consumption tended to slow the rate of capital accumulation, and thus economic growth. This is a long-run policy issue and not directly relevant to the law of markets. There are, however, instances where he addresses the short-run effects of public expenditure. On the basis of these passages, some critics have concluded that he must have adhered to Say's Identity, and the view now so pervades the literature that it might be assumed that there exists a corresponding weight of textual evidence. In fact, only a few excerpts have been identified, and these I examine below.

As with any classical economist, Ricardo's statements on theory and policy, made at different times and in various circumstances, are not entirely consistent. This is unavoidable. His discussions of the short-run effects of public expenditure fall into this category, for, interpreted without regard to the context in which he was writing or to the relevant historical situation, they seem to imply his acceptance of Say's Identity. I propose alternate readings of these passages, particularly his Notes on Malthus and Notes on Blake, but I recognize that there may remain inconsistent aspects of his work.

II. Resumption of Cash Payments.

No aspect of Ricardo's proposal to resume cash payments was formulated carelessly. He weighed the important matters, including the choice of the standard, the possibility of devaluation and the timing and means by which cash payments were to be restored, and after much consideration developed a plan by which the Bank of England would gradually return to a gold standard at the ancient par. By interpreting Ricardo's recommendations in the light of the economic and political conditions of the day, I demonstrate the merits of each aspect of his proposal, beginning with the question of whether a monetary standard should even exist.

A. Metallic Standard or Inconvertible Paper?

The basic question of monetary policy in the postwar period was whether Britain should return to a metallic standard or should continue with an inconvertible paper currency. Concerning the ultimate resolution of this issue, Tooke [(1838) 2:107] reports that "To the principle of the eventual restoration of the value of paper to gold at £3 17s. 10.5d., there was a pretty general assent". Such broad consensus on the matter resulted, largely, from the Bank of England's management of the inconvertible pound, which, as shown below, was poor. This fact has not been adequately appreciated by historians of thought, who have criticized Ricardo for supporting Resumption. They assume that he rejected Britain's existing monetary system--an inconvertible but well-managed paper currency--in lieu of a rigid gold standard, notwithstanding that returning to gold would entail monetary deflation and economic hardships.

Contrary to the stylized economic history, the supposed dichotomy of policy alternatives before Ricardo has no factual basis. The inconvertible pound was not well managed. The Bank of England instead aggravated Britain's economic crises by expanding its note issue

during periods of prosperity, then contracting its notes during depressions. Many in Parliament cited price fluctuations during the Restriction period as evidence that an inconvertible paper system was both inherently unstable and unsuitable. The best formal statement of this view is contained in the report of the Bullion Committee of 1811, many members of which remained in Parliament through 1819 and continued to press for Resumption.

The widespread opposition to the paper pound seems to be justified by at least three episodes during the Restriction period. The first is the speculative boom of 1808-1810 when, according to Sir Francis Baring, the Bank liberally discounted commercial paper, even to "clerks not worth £100" [Duffy (1982) p.73]. By so doing, the Bank encouraged excessive importations at a time when both foreign and domestic markets were already saturated. This, in turn, contributed to the economic crisis that began in 1810 and continued through 1811. The crisis of 1815-16 was a second event due, in part, to the Bank's mismanagement. At the depth of the depression, when the country banks and merchants were in greatest need, the Bank of England reduced its commercial discounts, producing a monetary contraction that further aggravated the current depression [see Chapter One, pp.60-62]. The final incident concerns the Bank's advance of £12 millions on Exchequer Bills to the Government at a time--the Summer of 1817--when the economy was nearing full employment. The Bank's Directors were opposed to the loan, fearing that it would lead to further inflation, but, under pressure from the Government, they granted the advance. Referring to this event years later, Ricardo noted "how little [the Bank Directors] have been able to withstand the cajolings of ministers; and how frequently they have been induced to increase their advances on Exchequer bills and Treasury bills, at the very moment they were themselves declaring that it would be attended with the greatest risk to the stability of their establishment and to the

public interest" [DR, 4:282]. The effects of the Bank's decision in 1817 were amplified the following year when applications for commercial discounts increased and, according to Duffy [(1982) p.80], "the Committee in Waiting made no attempt to restrict credit". As a result of the Bank's extensions of credit in 1817 and 1818, the speculative boom of 1818 was prolonged needlessly. In addition, the Bank's policies abetted another round of inflation and, given that the foreign exchange became unfavourable in July 1817, caused the Bank to lose much of its bullion hoard [see Chapter One, pp.63-67]. It is perhaps with these events in view that Ricardo observed in the Principles [1:356]: "Experience shews that neither a State nor a Bank ever have had the unrestricted power of issuing paper money, without abusing that power: in all States, therefore, the issue of paper money ought to be under some check and control".

The complete statement of Ricardo's opposition to an inconvertible currency--or what he termed "a currency without a specific standard" [4:59]--appears in Section II of Secure Currency (1816), where he observes two principal faults. First, it seemed impossible to Ricardo to regulate the value of such a currency, since "no one has yet been able to offer any test by which we could ascertain the uniformity in the value of a money so constituted" [4:59]. He understood that, in theory, a price index could be used to approximate changes in the value of the currency, something referred to as "judging of its value by its relation, not to one, but to the mass of commodities" [4:59]. But practical obstacles made price indices unsuitable because "To determine the value of a currency by the test proposed, it would be necessary to compare it successively with the thousands of commodities which are circulating in the community, allowing to each all the effects which may have been produced

upon its value by the above causes. To do this is evidently impossible" [4:60].[1]

Ricardo's second objection to inconvertible paper was that "such a currency...would be exposed to all the fluctuations to which the ignorance or the interests of the issuers might subject it [4:59]. It was this concern about the management of the inconvertible pound that was central to Ricardo's recommendation to resume cash payments. In his testimony before the Resumption Committees, for instance, he acknowledged that some monetary deflation might occur as a result of restoring the gold standard, but the tradeoff seemed favourable when compared to the risks of continuing with the existing monetary system [5:396,397]:

> I acknowledge there will be some little difficulty in it [Resumption], but a difficulty which does not appear to me very formidable, and one for which we would be more than compensated by the possession of a currency regulated by a known and fixed standard.
>
> I think a very serious inconvenience results from the state of uncertainty: one of the evils attending a paper currency not convertible, is, that it encourages over-trading, and leads us into some of those difficulties into which we should not be plunged, if our paper were corrected by the issues of metals.

Having concluded the necessity of returning Britain's currency to a metallic standard, the next question faced by Ricardo concerned what standard should be chosen.

B. What Standard Should be Chosen?

In the choice of a metallic standard, Ricardo's proposals reflect his desire to employ the least variable standard possible. His concern is evident in that, during the years 1815 to 1819, his choice of a standard changed at least twice in response to new information about the current or expected volatility of metal prices.

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[1]The idea of a price index was common by 1816. Sir George Shuckburgh Evelyn published an index in 1798 that was later used by John Wheatley in 1803 in Remarks on the Currency and Commerce and in 1807 when he proposed indexing contracts [see Hollander (1979) p.416n]. Notwithstanding this fact, Hollander [pp.416-7n] notes that price indices were generally viewed as impractical.

In his earliest writings Ricardo acknowledged that there was no perfect standard of value: "Strictly speaking, there can be no permanent measure of value. A measure of value should itself be invariable; but this is not the case with either gold or silver, they being subject to fluctuations as well as other commodities" [(1811) 3:65]. But given this limitation, he still recommended a metallic standard since, as shown above, any metallic standard seemed preferable to Britain's inconvertible pound.[2]

It is not clear, at the time of writing the High Price of Bullion, whether Ricardo preferred gold or silver as a standard. He acknowledged that gold would be the standard if cash payments were suddenly to be resumed at the ancient Mint price [3:69], but this was only an observation about the practical state of affairs, not a policy recommendation. He proposed that "the Bank of England be required by parliament to pay (if demanded) all notes above 20l.--and no other, at their option, either in specie, in gold standard bars, or in foreign coin at the English mint value of gold bullion" [3:124]. But again, this does not indicate a preference for gold over silver on principle, but reflects his knowledge of current market conditions.

At some point in the next four years Ricardo concluded that gold was the preferred standard. But while writing Secure Currency in 1815, and in response to concerns voiced by Malthus, he altered his position in favour of silver. Upon reading an early draft of Secure Currency, Malthus wrote [(15 October 1815) DR, 6:298-299]: "If you recollect, we found upon calculation that the value of gold in this country at some periods during the Peninsular war was ten and fifteen percent higher than at Amsterdam and Hamburgh...I am not sure whether I should not myself propose silver instead of gold as a standard". Malthus

[2]Hollander [(1979) p.415] notes the similarity between Ricardo's sentiments and those expressed in Locke's Further Considerations concerning Raising the Value of Money (1695) which Ricardo cited favourably.

statements suggest that in an early draft of Secure Currency Ricardo had recommended a gold standard. This inference is supported by a letter from Pascoe Grenfell, to whom Ricardo had shown Malthus' letter, where Grenfell writes [(17 October 1815) DR, 6:305]: "I cannot agree with Mr. Malthus in preferring Silver to Gold as the Standard". Since Grenfell criticized Malthus' comments, but made no reference to Ricardo's proposed standard in the early draft of Secure Currency that he had read the previous month [6:285], it seems that initially the pamphlet proposed a gold standard.

Ricardo accepted Malthus' caution about the use of a gold standard, saying [(17 October 1815) 6:301]: "I think with you that on the whole silver would be a better standard than gold, particularly if paper only were used. All objections against its greater bulk would be removed." His reasoning is outlined in Section II of the pamphlet, where he writes [4:63]: "In favour of gold, it may be said, that its greater value under a smaller bulk eminently qualified it for the standard in an opulent country; but this very quality subjects it to greater variations of value during periods of war, or extensive commercial discredit, when it is often collected and hoarded, and may be urged as an argument against its use." Ricardo was not referring in an abstract way to possible changes in the relative price of gold, but instead had in mind the recent fluctuations that he had observed [(25 December 1815) 6:344]: "The fall in the price of bullion on the peace in 1814, and its rise again on the renewal of the war on Bonapartes entry into Paris are remarkable facts, and should never be neglected in any future discussion on this subject." The "facts" referred to were that "On the Peace of 1814 the price of gold had fallen from 108/- per ounce (1 March) to 90/- (28 June); on the return of Napoleon in 1815 it rose from 89/- (28 February) to 107/- (4 April)" [note by Sraffa in DR, 6:344n].

The second instance when Ricardo changed his preference for a standard occurred after he learned of the increasing application of machinery to silver mining [(3 January 1819) 8:3]: "it is confidently expected that the introduction of the most perfect machinery known into the silver mines[3] may very considerably lower the value of that metal. If so it is unfit for a standard. The same objections cannot be made to gold." He repeated this view in testimony before the Commons Resumption Committee [5:388,391]:

> [62] Question: Can a standard of currency, more invariable in its value than the value of a certain quantity of gold, be established by any system yet discovered?
> Answer: By none that I have ever even imagined.
>
> [69] Question: If one metal is preferable as affording a less variable measure, which metal would you recommend?
> Answer: I have understood that machinery is particularly applicable to the silver mines, and may therefore very much conduce to an increased quantity of that metal and an alteration of its value, whilst the same cause is not likely to operate upon the value of gold, I have come to the conclusion, that gold is the better metal by which to regulate the value of our currency.

And again before the Lords Committee [5:427]:

> I had at one Time thought Silver would be less variable in Value; but having heard that Machinery is particularly applicable to the working of Silver Mines, and cannot be applied to increase the Quantity of Gold, I now think that Gold is the more invariable metal.

Related to Ricardo's choice between gold and silver was his rejection of a bi-metallic standard. The possibility of a bi-metallism was debated often in Parliament after the Resumption Act passed for, though it would have been politically impossible to return to an inconvertible pound, opponents of the gold standard still sought a way to devalue the currency. The market prices of both gold and silver declined to their Mint values immediately after the Resumption Act received Royal Assent. But in February 1820, the

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[3]Sayers [(1935) p.91] has noted this change in Ricardo's position.

market price of silver began to fall again and continued to fall till silver was selling at 4% below its Mint price. Had Britain switched from a gold standard to a bi-metallic one after February 1820, silver would have become the de facto standard and the currency would effectively have been devalued about 4%. Ricardo's understanding of this fact is evident in the responses he gave to Baring's repeated calls for a bi-metallic standard, in one instance stating: "Were that option [bi-metallism] given to the Bank, the person who applied at present for sixty ounces of gold bullion would be told by the Bank that they would not pay him in gold, but in silver, which in its relative value to gold was lower" [(8 February 1821) 5:74-78].[3]

C. Return to the Ancient or Devalued Par?

Once Ricardo decided upon a gold standard, the next question was whether to return to bullion payments at the ancient Mint price or to devalue the currency to the current market price. Hollander [see the Introduction, p.16] has defended Ricardo's support of the ancient standard and in what follows, I provide further evidence for the reasonableness of Ricardo's case, based on the tradeoff he perceived between the economic hardships that would be entailed by the monetary deflation necessary to restore the ancient standard and the injustice that would be committed against the public creditor if permanent devaluation occurred.[4]

In instances of a severely depreciated currency, Ricardo allowed that the tradeoff would favor devaluation over restoring the standard.

> I never should advise a government to restore a currency, which was depreciated 30 pct., to par; I should recommend...that the currency should be

[3]On two more occasions in the Spring of 1821 Ricardo made similar comments [(19 March 1821) 5:96; (9 April 1821) 5:106].

[4]On this matter, see Hollander [(1979) pp.424-5, 489, 494-499].

> fixed at the depreciated value by lowering the standard and that no further deviations should take place. It was without any legislation that the currency from 1813 to 1819 became of an increased value and within 5 pct. of the value of gold,--it was in this state of things, and not with a currency depreciated 30 pct., that I advised a recurrence to the old standard. [(18 September 1821) 9:73]

> If, instead of being at 4l. 1s. bullion had been much higher, he should not have proposed a recurrence to the mint standard. What he was anxious about, was not to restore the old, but to establish a fixed standard. [(February 1821) 5:73]

But the currency was not seriously devalued in 1819--gold was selling for only 3% above its Mint price when the Resumption Committees were operating--and Ricardo understood that, given current economic conditions, the tradeoff favoured returning to the ancient par:[5]

> The time had then arrived (in 1819) for fixing a standard, and the only consideration was as to the selection of the particular standard which ought to be adopted. They had two courses of proceeding open to them on that occasion; one was either to regulate the standard by the price of gold at the moment, or to recur to the ancient standard of the country...when the currency was within 5 per cent of its par value, the only consideration was, whether they should fix the standard at 4l. 2s., the then price of gold, or recur at once to the old standard. Under all the circumstances, he thought they had made the best selection in recurring to the old standard. [(1822) 5:208]

Devaluation was the alternative to restoring the ancient standard. But this policy seemed, to Ricardo, fraught with danger since it involved the "sacrifice of a great principle in establishing a new standard" [(1820) 5:43] and since "it would be unjust to all creditors, and proportionally advantageous to debtors" [(1820) 8:186].

He also recognized that, having once devalued the currency, there would be a precedent for similar devaluations in the future by Governments facing financial hardships [3:96]: "What security has the public creditor that the interest on the public debt, which is now paid in a medium depreciated fifteen per cent., may not hereafter be paid in one degraded fifty per

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[5]This has been recognized in the secondary literature [Sayers (1953) p.59; Robbins (1976) p.72; Hollander (1979) pp.425,488].

cent.? The injury to private creditors is not less serious. A debt contracted in 1797 may now be paid with eighty-five per cent. of its amount, and who shall say that the depreciation will go no further?" Understanding that a precedent of devaluation would add a dimension of insecurity to financial markets, Ricardo recommended instead a return to the ancient par. He did not fail to understand that such a step entailed a degree of monetary deflation, but he was so much concerned by the effects of monetary deflation that he recommended devaluation in the event of a severely depreciated currency on the grounds that the harm attending the sacrifice of the standard would be far less than the economic loss attending deflation [see quotes above, 9:73 and 5:73].

Several factors contributed to his decision. First, Ricardo realized that the degree of monetary deflation necessary to return to the Mint par was not that great. The requisite degree of deflation had been 5% [5:385] when the Resumption Committees convened, it was 4% a month later [5:416], and had fallen to 3% by the time the Committees reported [5:11]. By the Summer of 1819, the necessary amount of deflation seemed even less, for though the Bank of England had not reduced its notes, the market price of gold fell to the Mint price the third week of August 1819 and the foreign exchange became favourable to Britain in July 1819. The propitious nature of these events caused Ricardo to anticipate almost no economic suffering before the final return to cash payments at par:

> Gold is I believe at £3 18. pr. oz,--silver at mint price, and the exchanges nearly at par. The best friends to the measures lately adopted could not have anticipated less pressure than what has been hitherto experienced, and I think it but reasonable to hope that the permanent price of bullion will settle at the present rate, without adding much to the slight difficulties which we have already suffered. Our opponents, whose prophecies are all proved to be unfounded, now say that we have had great good luck. [(8 July 1819) 8:44,45]

He also thought that the degree of economic hardship attending Resumption would be minimal because the expected degree of monetary deflation (about 3%) was insignificant

when compared with the nearly 20% deflation that had occurred in the crisis of 1815-16, as witness his testimony before the Commons Committee on Resumption [(March 1819) 5:419]:

> [11] Question: Paper having been, in the Middle of 1815, at upwards of 20 per Cent. Discount, and we having it in Evidence, that Gold at the latter End of 1816 would have been at the Mint Price, had it not been sustained by the Bank at the Price of £3 18s. 6d.; do you not think that the Pressure which the Country sustained at that Period must be much greater than what it will now sustain from Paper resuming its Value upon a Par with Gold, it being now at a Discount of only 4 per Cent; and can you state any Proportion which the Difficulties on one Period are likely to bear in relation to the Difficulties of the other?
> Answer: I think the Pressure sustained at that Period was much greater than would be experienced now by a Reduction of 4 per Cent. in the Amount of the Currency.

And again before the Lords Resumption Committee [(March 1819) 5:441]:

> 84. Question: Do you recollect whether within these last Eight Years we have not frequently seen the Circulating Medium of the Country undergo much more formidable Changes with respect to Value than 4 per cent., with a shorter Period than Six Months, judging of the Value of the Circulating Medium by the Price of Gold?
> Answer: In my opinion it has undergone much greater Variations than 4 per Cent.; and in the soundest State of our Currency, it would be liable to such Variations.

. . .

Ricardo's one reservation about the Resumption legislation was that there were no safeguards to prevent the Directors of the Bank of England from curtailing the circulation too severely. He had proposed[6] such a safeguard, in the form of a provision that would have

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[6]Ricardo first stated this proposal in 1811 [6:70,71]. It was repeated in Secure Currency [4:66] and in testimony before the Lords Resumption Committee [5:454].

required the Bank to purchase gold at £3 17s. 6d., but this provision was not included in the Act, leading Ricardo to say that [5:13]:

> He was only sorry that the Bank was not to be obliged by the resolutions to buy all the bullion offered to them at 3l.17s.6d. lest through excessive caution they might starve the circulation. The Mint, it was true, was to remain open to the public, who might coin the bullion which they obtained from the Bank. Mr. Mushett...had stated, that with a capital of 300,000l. the Mint could supply the public with 12,000,000l. a year. Yet a year was a long time to wait for twelve millions, and it might easily happen, that in the interim between the reduction of the Bank issues and the supply afforded from the Mint, the country might seriously feel the deficiency. It was on that account that he wished a resolution inserted to compel the Bank to give its notes for bullion (at 3l. 17s. 6d.) on demand.

Notwithstanding his awareness that the Bank Directors conceivably could overreact to the Resumption Act and contract their notes more than necessary, he was confident that this would not occur, for, in the first place, it was in the best interests of the Bank to maintain an adequate circulation: "If the Bank was desirous to follow their own interest, it was a clear and obvious one: if they were to effect a great reduction in their paper, which he should lament, the consequence would be such a rise in paper and such a fall in gold that individuals would carry their gold to the Mint and endeavour to fill up the circulation with it. As to the alarm felt by his hon. friend it was quite groundless, for there could be no fear but that the Bank would keep up a sufficient quantity of notes, as their own advantage depend upon the issue" [(9 June 1820) 5:62]. His expectations were subsequently disappointed, but as Ricardo pointed out repeatedly [(1822) 9:140-141; (1823) 5:312], there was no way that he could have anticipated, in 1819, the fact that the Bank would keep its discount rate above the market rate and so contract its note issue [(1821) 5:518-519]:

> Mr. Ricardo cannot fairly be held responsible for the narrow view, and obstinate prejudices of the Bank of England. He could not contemplate that the Bank would so narrow the circulation of paper as to occasion such a rise in its comparative value to gold and the currencies of other countries as to make

> the influx of gold into this country unexampled in amount. He could not foresee that they would immediately provide themselves with so large a quantity of gold coin...He supposed that the reverting from a currency regulated by no standard, to one regulated by a fixed one, the greatest care would be taken to make the transition as little burthensome as possible, but the fact is that if the object had been to make the alteration from the one system to the other as distressing to the country as possible no measures could have been taken by the Bank of England so well calculated to produce that effect as those which they actually adopted.

The principal reason that Ricardo did not correctly anticipate the response of the Bank was because, in testimony before the Resumption Committees, the Directors of the Bank of England had promised to maintain the circulation at an appropriate level [Acworth (1925) pp.105-6]. Another reason was that the Resumption Act did not require the Bank to pay its notes in gold until 1820, and even then, payment was to be made at a devalued rate of £4 2s. The Bank was not required to sell bullion at the ancient par until 1821, giving it almost two years to effect the requisite monetary deflation.[7] Having observed that "Peel's bill absolutely prohibited the Bank from paying in specie till 1823," Ricardo concluded that "All the friends of that bill had a right to expect that the Bank would make no preparation for specie payments till 1822" [9:141].

This conclusion was reinforced by the fact that the Ingot Plan[8] had been included in the Resumption Act to help ensure that there would be no need for excessive monetary contraction. According to the Plan, the Bank was prohibited from paying its notes in coin and was instead obligated to pay notes of large denominations in gold ingots. Because the

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[7]The Bank was required to pay its notes in ingots according to the following schedule [Smart (1910) 1:679]:

February 1, 1820	-	£4 1s. per oz.
October 1, 1820	-	£3 19s. 6d.
May 1, 1821	-	£3 17s. 10 1/2d.

[8]Again, the Ingot Plan has been discussed at length in the literature, but it is mentioned here for the sake of completeness.

Bank was not required to pay notes of all denominations in coin, and because of the inconvenience of receiving gold ingots, Ricardo assumed that less gold would be demanded of the Bank. He further realized that this would allow the Bank to maintain a smaller hoard than otherwise [(4 March 1819) 5:383]: "I think there would be no provision of gold necessary beyond that which the bank must now have, however small it may be." Given this safeguard, Ricardo expected that the Bank would not attempt to accumulate gold since "There was nothing in the plan which could cause a rise in the value of gold, for no additional quantity of gold would have been required" [4:224]. His assumption proved correct and, in total, only 13 of 2,028 ingots minted were sold by the Bank before payments in specie resumed.

D. Should Resumption Have Been Supported in 1819?

As shown in Chapter Two, the general depression ended in mid-1820, one year before the Bank of England was required to sell gold at the Mint price. Even so, critics object to Ricardo's support of the Resumption Act because it passed during a depression period. But we shall demonstrate that these criticisms are not justified, for the choice faced by Ricardo and his allies in Parliament was not whether the Act would pass in 1819 or at some more convenient date, but whether such legislation would be passed in the foreseeable future.

The Government began promising in 1814 to end the Bank Restriction. As each successive deadline approached, however, the Government's pledges were broken, and no legislation mandating resumption was presented to Parliament. Nonetheless, by the Summer of 1816, the Bank was well positioned to resume cash payments, having reduced its discounts during the postwar financial crisis. This decision added to the hardships of the country, but it contributed to the favourable turn in the foreign exchange and hastened the decline of gold

from £5 10s. per ounce to £4. Ricardo was aware of these improvements and wrote to Malthus "There can not be a better opportunity than the present for the Bank to recommence payments in specie. Silver is actually under the mint price. The change is surprising and has been brought about in a very unexpected manner" [(24 April 1816) 7:29]. Malthus agreed in his reply: "I really think that if we don't pay in Specie now, we shall never do it. In the present temper of the Country with regard to Currency, I should not wonder, if a fresh separation between gold and paper should take place, and the ministers should encourage it, as a preparation for an alteration in the coinage" [(28 April 1816) DR, 7:30]. Malthus' fears were justified because five days later, on 3 May 1816, the Government succeeded is winning the third reading of a bill to extended the period of restriction until July 1818.

On its own initiative, the Bank undertook a partial resumption of cash payments in 1816 and 1817, eventually offering to pay in gold at the Mint price all notes dated prior to 1 January 1817. But at this point, just as a return to gold seemed assured, the Government forced the Bank to advance an additional £12 millions to it on the security of Exchequer Bills. Inflation ensued, the market price of gold climbed, the foreign exchange turned unfavourably, and the Bank's hoard was depleted. Because the Government's demand for an additional £12 millions so disrupted the Bank's ability to resume cash payments, the Bank Restriction was successively extended through 1820, and the resumption at par was delayed till 1821.

Given this history, it is not surprising to find Ricardo supporting the Resumption Act in 1819. Had the Act not been approved, nothing would have prevented future episodes of monetary inflation such as had occurred in 1810, 1814 and 1818, for Government ministers had demonstrated their willingness to demand advances from the Bank rather than make difficult fiscal decisions, even when such advances created inflationary pressure.

E. A Gradual or Immediate Restoration of the Standard?

Ricardo's immediate concern was that some standard be instituted to preclude further monetary inflation. But given this security, he was willing, and in fact considered it prudent, to allow a period of months for the necessary monetary contraction and the attending monetary deflation.[9] An indication of how gradually he thought the Bank should appreciate the currency is evident from his testimony before the Lords Resumption Committee in 1819, when he allowed two years for a monetary deflation of about 4% [5:450,451]:

> 116. Question: Do you think, on the whole, that any Inconvenience would arise from prolonging that Period [of returning to Cash Payments at the Mint Price] beyond the Period of 12 Months from July next...
> Answer: I think the Advantages to be derived from a Prolongation of the Period would preponderate, provided the Public had complete Security, by obliging the Bank to sell Gold at the present Market Price, against a further Excess of Paper Circulation.
> 118. Question: Do you think the Balance of the Advantage of prolongation would extend to a Period of Two Years from July next?
> Answer: I think Two Years an ample Time; I should say a less Period; but it may be prudent to consult the Fears of even the most timid.

His arguments were repeated before the Commons Committee [5:381]:

> [35] Question: Could you assign any period of time, at the expiration of which this [Ingot] plan, in your opinion, could be safely resorted to?
> Answer: I think it ought to be immediately resorted to, either at the price of 3l. 17s. 10 1/2 d. or at some other price; because I consider that our currency is in a very unsatisfactory state...whatever regulation might be resolved on, with respect to the time of paying in the standard of the country, I should certainly recommend the adoption of this plan at some other price in the interval.
> [36] Question: That is, the bank should be under an obligation of paying their notes on demand in gold, at the present market price of gold for instance, and of making a gradual reduction in the price of gold which they should issue, until the market price of gold corresponded with the mint price?
> Answer: Precisely so...

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[9]See also Hollander [(1979) pp.494-500].

This recommendation for a gradual restoration of the standard was not a new idea to Ricardo, as it was first stated in his High Price of Bullion [(1810) 3:94] and was later repeated in a letter to Tierney where he allowed up to four years to restore the currency to its ancient value [(1811) 6:69]. Perhaps the clearest statement of Ricardo's early position appears in a communication with Spencer Perceval, then Prime Minister and Chancellor of the Exchequer [(1811) 6:43.44]: "Let the Bank be obliged to sell gold bullion, for their own notes...at the rate of £4 15s. per ounce for standard bullion...An enactment to this effect would secure the public against any depreciation of the currency beyond that to which it has already reached. The Bank would be at full liberty at their leisure, and after the most mature consideration, to adopt such other means as might be necessary, when no danger should appear even to the most timid, gradually to reduce the amount of their paper".

In all respects, Ricardo's proposal to resume cash payments at the current market price of gold and then, as appropriate, move to the ancient standard, is reasonable. Having adopted such a recommendation, the country would be protected against further depreciation of the currency. But at the same time, no monetary deflation would occur, except gradually and at such times as it would not compound other crises.

III. Discretionary Monetary Policy.

Among authors favourable to Ricardo, there is a general recognition that he accepted, at least in theory, the possibility of discretionary control of the money supply.[10] But just when he came to such an understanding and what practical significance it had for his policies are

[10]By the term "discretion" I refer to the central bank's role in stabilizing prices and mitigating financial crises by altering its discount rate or by trading bullion, government bonds or commercial paper. The term expresses the idea that the bank's policies extend beyond those required to maintain convertibility, but it does not necessarily imply a full-fledged counter-cyclical function.

both matters of debate. Viner [(1965) p.206], Niehans [(1987) pp.420,421] and Robbins [(1968) p.128] have all observed Ricardo's case for discretion in Secure Currency (1816). More recently, Arnon [(1987) p.268; (1989) p.12; (1991) p.177] has challenged this view, claiming instead that Ricardo did not come to accept discretionary monetary policy until he was writing the Plan for a National Bank (published posthumously). Arnon contends that the proposal contained in National Bank constitutes a major break from Ricardo's earlier works. Of the many reviewers[11] of Arnon's Thomas Tooke, only Hollander [(1995) pp.190-1] has questioned the assertion that National Bank contains a radical policy shift:

> All this is very difficult and doubtless the last word has not been said on the interpretation of Ricardo's banking principles. Years ago I myself wrote that Ricardo in 1824 'allowed some discretion to the authority by way of the issue of notes against government securities in the event of an improvement of the exchanges and a fall in the market price of gold and the sale of government securities under the opposite conditions' (1979, pp.492-3n). It was not clear to me then, and it is not clear now, precisely what to make of this allowance, but I have the impression that Arnon makes too much of it since the 'discretion' in question is in fact to be strictly a passive reaction to movements in the bullion price and exchange rate.

In what follows I attempt to answer some of the concerns of both Hollander and Arnon, in demonstrating that, at least by 1815, Ricardo understood the merits of discretionary monetary policy and urged that such policies be practised, provided the currency was convertible.

A. Ricardo's Theoretical Case for Discretionary Policy.

One curious feature of Arnon's claim about the change in Ricardo's policy is that it turns entirely on a single passage in National Bank [DR, 4:296-7]:

> If the circulation of London should be redundant, it will show itself by the increased price of bullion and the fall in the foreign exchanges, precisely as a

[11] O'Brien (1992); Skaggs (1992); White (1993); Winnett (1991).

> redundancy is now shown; and the remedy is also the same as that now in operation; viz. a reduction of circulation which is brought about by a reduction of the paper circulation. That reduction may take place two ways; either by the sale of Exchequer bills in the market, and the cancelling of the paper money which is obtained for them--or by giving gold in exchange for the paper, cancelling the paper as before, and exporting the gold.

On the basis of this excerpt I must agree with Hollander that there seems no compelling case for discretionary policy. Assuming a commitment to maintain convertibility, there are limits to what can be achieved by monetary policy in the event of a "redundant" circulation--indicated by an external drain or a rise in the market price of gold--for the central bank is obliged to contract its issues regardless of whether its policy is passive or active.

But to evaluate Ricardo's full position it is necessary to read the continuation of this passage as it relates to policy in the event of a "deficient" circulation--a situation that could arise from a contraction of domestic credit [4:297]: "If, on the contrary, the circulation of London were too low, there would be two ways of increasing it--by the purchase of *Government securities in the market, and the creation of new paper money for the purpose*; or by the importation, and purchase, by the Commissioner, of gold bullion; for the purchase of which new paper money would be created". The circumstances of a "redundant" or "deficient" currency are not parallel, for in the first instance the bank must contract its issues, while in the second instance the bank may pursue either a "passive" or a "discretionary" policy. Thus assuming a contraction of commercial credit, passivity by the bank would involve maintaining a fixed discount rate and acquiring bullion, in exchange for notes, as it was brought to the bank. Discretionary policy, on the other hand, would involve increasing the circulation (via open-market operations or lowering the discount rate) to affect domestic prices and exchange rates. The central bank's actions were thus of great importance, for by discretionary intervention it could maintain commercial credit while preventing both

deflation and a rise in the relative value of gold.

Assuming a contraction of credit and passivity by the Bank of England, Ricardo recognized that "the prices of commodities would fall, and great distress would be suffered" [5;199,200]. Additionally, gold--having fallen in terms of paper--would be exchanged for Bank notes or coined at the Mint, which would raise its relative price, thus restricting the circulation unnecessarily. We have shown in Chapter Five [pp.208-211] that the Bank adhered to a passive policy after the Resumption Act came into effect, and accumulated a vast bullion hoard, and that Ricardo was highly critical of this conduct. He suggested that the Bank should have increased its circulation and thereby (1) preempted the deflation that occurred, (2) prevented the accumulation of bullion by the Bank--and thus the rise in the relative price of gold--and (3) maintained a greater degree of commercial credit. He recognized that two actions by the Bank could have brought about the appropriate increase in the money supply: a reduction of its discount rate (the policy he recommended to Parliament) or the purchase of Government securities (a measure alluded to in National Bank and in Secure Currency).

Trading Government securities affects the relative price of bullion and the foreign exchange in ways not achievable by discounting bills at a fixed rate or exchanging notes for gold at the Bank's Bullion Office. And since National Bank recommends open-market operations, I cannot agree with Hollander that the policies outlined in the pamphlet constitute "passive reactions" to movements in the bullion price and exchange rate.

Having said this, I must admit to having even greater reservations about Arnon's claim that Ricardo's allowance for some discretion in National Bank indicates a significant change in his position on monetary policy. Arnon's position seems untenable, for not only does he neglect to establish that Ricardo opposed discretionary monetary policy prior to 1823--no

evidence, in fact, is presented showing that Ricardo ever held this view--he also fails to explain passages in Secure Currency (1816) that are recognized to countenance discretionary policy.[12] Attempting to give an alternate reading to Secure Currency, Arnon [(1987) p.275] simply asserts: "It is true that in 1816 Ricardo notes that one of the advantages of paper money is that it enables 'the judicious management of the quantity'...However, by judicious management Ricardo was referring to the ability of individual bankers to adjust their own note-issue to the demands of the market." By "individual bankers" Arnon presumably means country bankers, since London banks did not issue notes. And, had this been a reference to the Bank of England or to an as yet unformed central bank, it would imply the same argument for discretionary monetary policy as found in National Bank.

But clearly Secure Currency is not directed towards the country banks, for the introduction speaks only of the Bank of England and confines the scope of the pamphlet's inquiry to [4:51]:

> The following important questions concerning the Bank of England [that] will, next session, come under the discussion of Parliament:
> 1st. Whether the Bank shall be obliged to pay their notes in specie at the demand of the holders?
> 2dly. Whether any alteration shall be made in the terms agreed upon in 1808, between Government and the Bank, for the management of the national debt?
> And, 3dly, what compensation the public shall receive for the large amount of public deposits from which the Bank derive profit?

The subject of the country banks does not appear until the close of Section IV, where Ricardo proposes that they be subject to a legal minimum reserve requirement. The remainder of the pamphlet focuses entirely on questions involving the Bank of England.

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[12]Viner [(1965) p.206], Niehans [(1987) pp.420,421] and Robbins [(1968) p.128], for instance, have all observed Ricardo's case for discretion in Secure Currency.

But even supposing the text of Secure Currency did not indicate whether Ricardo was writing about the country banks or about a central bank, it could still be inferred that his proposal for a national bank as outlined in National Bank is consistent with his former views because, as early as 1815, he had developed the idea, central to his proposal in National Bank, of Commissioners who would manage a convertible paper currency under the aegis of a public, but independent central bank [DR, 6:268]: "I am convinced, if the principles of currency were rightly understood, that Commissioners might be appointed independent of all ministerial control who should be the sole issuers of paper money...These Commissioners should also have the management of the public debt, and should act as Bankers to all the different public departments. They might invest the 11 millions which is the average of public deposits in Exchequer Bills, a part of which might be sold whenever occasion required." The proposal was afterward restated in all three editions of the Principles [1:362] in essentially the same form in which it appeared in 1823.

It is also evident that Ricardo's proposal in Secure Currency in 1815 was prompted by the same concerns that inspired his National Bank in 1823. These concerns centered on the poor administration of the money supply by the Bank of England, under the sway of the Government. Having observed the way in which Government ministers and Bank Directors implemented monetary policy, Ricardo concluded that neither group could be trusted with the responsibility. His distrust of direct Government control over the money supply, which is cited in National Bank [4:282] as a justification for appointing independent Commissioners to govern the central bank, first became evident in 1814, shortly before he began work on Secure Currency: "In all countries, I should think, there exists a repugnance to entrust to Government the power of issuing paper money, and when we consider that perhaps in no instance they have not abused such a power, it is not wonderful that such fears are prevalent"

[6:165-166]. It can be inferred that his views remained unchanged during the intervening years because his distrust of Government is mentioned in all three editions of the Principles [1:362]. Similarly, Ricardo's reasons for rejecting the Bank of England as the central Bank--that the Bank profited at the expense of the public [4:281] and that its Directors were controlled by Government ministers [4:282]--had already been mentioned by him in 1815 [6:268] and were often repeated thereafter [5:9; 8:2; 9:176].

Since it is apparent that Ricardo had in view the subject of a central bank when writing Secure Currency, it remains to determine what this implies concerning his monetary policy. I contend that it demonstrates his acceptance of discretionary policy, since--at least in my reading--the opening section of Secure Currency makes as clear a case for discretionary monetary policy as could be stated:

> Amongst the advantages of a paper over a metallic circulation, may be reckoned, as not the least, the facility with which it may be altered in quantity, as the wants of commerce and temporary circumstances may require. [4:55]
>
> Whenever merchants, then, have a want of confidence in each other, which disinclines them to deal on credit, or to accept in payment each other's checks, notes or bills; more money, whether it be paper or metallic money, is in demand;[13] and the advantage of a paper circulation, when established on correct principles, is, that this additional quantity can be presently supplied without occasioning any variation in the value of the whole currency...whereas, with a system of metallic currency, this additional quantity cannot be so readily supplied, and when it is finally supplied, the whole of the currency, as well as bullion, has acquired an increased value. [4:58]

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[13]Ricardo's recognition of the importance of the state of credit first appears in his Reply to Bosanquet [(1811) 3:247]: "the demand for circulating medium is subject to continual fluctuations, proceeding from an increase or decrease in the amount of capital and commerce; from a great or less facility which at one period may be afforded to payments by a varying degree of confidence and credit". Particular reference is made to the years 1797 and 1798 when "the addition of two millions in Bank notes served only to supply the vacuum which the hoarding of money had occasioned; so that there was no real increase to the circulation of those years" [3:249]. His Notes on Bentham also mention "the fact of guineas having been hoarded in 1797 [which] is well established" [3:322].

Neither passage suggests that Ricardo wanted the circulation tied directly to gold, nor does he seem to desire that a paper currency fluctuate exactly as a metallic circulation would. Other secondary authors have interpreted these passages similarly, with Robbins [(1968) p.128] observing that "he [Ricardo] argues the merits of a paper circulation...because it can meet upward fluctuations in the demand for liquidity without delay and without involving eventual changes in the value of money." Further evidence for this interpretation can be found in Ricardo's statements concerning actual policy applications of discretionary policy.

B. Practical Applications of Ricardo's Theory.

In what follows we consider four instances in which Ricardo, when addressing practical matters, proposed that the central monetary authority--either the Bank of England or the Bank of Ireland--adjust the money supply to counteract economic shocks. In none of the cases below does he advocate that the central bank be passive, by fixing its discount rate or by refusing to engage in open-market operations. (This section pertains to the exercise of discretionary monetary policy during relatively normal periods. In severe crises--what Thornton described as "late seasons of alarm"--the Bank was notorious for acting as any other commercial institution by withdrawing credit. This latter issue is addressed when we turn to the role of lender of last resort.)

Ricardo first mentioned the possibility of discretionary monetary policy in a letter to Tierney, describing the means by which the Bank could resume cash payments and eventually return the currency to its ancient par. As part of his proposal, he recommended that the Bank's circulation not be restricted within arbitrary nominal limits since this might interfere with its ability to exercise discretionary control over the money supply in the event of a crisis [(11 December 1811) 6:67]:

> Depreciation cannot be effectually checked by any other means than by depriving the Bank of the power which they at present possess of adding indefinitely to the amount of their notes. This might be done in a direct manner, by limiting the amount beyond which their paper should not be issued; but is has been plausibly urged against such a measure that occasions may arise in which sound policy may require a temporary augmentation of bank paper, and to deprive the Bank of the power of increasing their notes at such periods might be the cause of considerable distress and difficulty to the mercantile classes...if a greater circulation were required from the operation either of increased commerce, or of embarrassed credit, the bank might augment their issues without producing any effect whatever on the price of bullion, and consequently without exposing the Bank to any inconvenience, or depriving the merchants of that increased accommodation, which might be essential to their operations. (emphasis added)

We see then that as early as 1811, Ricardo recognized the possibility of managing the money supply, assuming a convertible currency. Hollander [(1979) p.491] has questioned whether much emphasis should be given to this letter, however, since Ricardo himself acknowledged that "this argument does not appear...to have as much weight as those who advance it imagine" [DR, 6:67]. But even ignoring the letter to Tierney, Ricardo's later writings clearly indicate the practical importance he attached to managing the currency.

His warrants scheme (devised in 1815) for the payment of the quarterly dividend on the national debt is significant in this regard.[14] As noted in Chapter Three [pp.132-133], a severe shortage of funds occurred quarterly in the week preceding the payment of the dividend on the national debt as the Government collected several millions for this purpose. (The drop in the Bank's outstanding note circulation the week before the dividend payment and the subsequent increase in the Bank's circulation immediately afterward are both evident in Appendix A.1.) To help alleviate the pressures that these monetary fluctuations imposed on

[14]Hollander [(1979) p.492n] has similarly recognized the warrants scheme, writing, "Ricardo paid much attention to the problems created by the seasonal absorption and release of funds by the Treasury, and made detailed proposals to assuage that 'great mass of mercantile inconvenience' created thereby."

financial markets, the Bank of England, in the days preceding the dividend payment, would liberally extend loans to business interests that were viable, but temporarily short of cash. Ricardo approved of this action by the Bank, suggesting, again, his support for monetary intervention.

Ricardo addressed the matter of the quarterly shortage of funds on occasion [1:299; 6:312], with the most complete statement of the problem--along with a proposed policy solution--appearing in Section V of Economical and Secure Currency: "The national debt has become so large, and the interest which is paid quarterly upon it is so great a sum, that the mere collecting the money from the receivers general of the taxes, and the consequent reduction of the quantity in circulation, just previously to its being paid to the public creditor, in January, April, July, and October, occasions for a week or more the most distressing want of circulating medium" [4:74]. Ricardo acknowledged that the Bank of England intervened during these quarterly crises by "discounting bills probably very freely" which "considerably lessened the inconvenience to the mercantile part of the community" [4:74], but he did not consider the Bank's intervention sufficient, since there was still extreme distress in the money market [4:74,75]. In lieu of the current arrangement, Ricardo proposed that the Bank provide warrants to those who owned Government debt, entitling the bearer to receive a certain dividend, but also receivable in payment of taxes [4:75,76]. He expected that most warrants would not be presented to the Bank, but would instead be applied in payment of taxes. Provided the scheme worked, Ricardo knew that it would obviate the need for collecting and dispersing millions in taxes and dividend payments, and would thereby alleviate the quarterly shortage of funds.

The third practical application of Ricardo's monetary policy appears in his statements on the Irish banking crisis of 1820. The hazards of banking in Ireland came to the attention of Parliament in early 1821, after eleven of fourteen banks in the south of that country had stopped payment the previous Summer. In the Parliamentary debate concerning what should be done for (or to) the Irish, Ricardo's statements again indicate his acceptance of discretionary monetary policy because he attacked the Bank of Ireland for not having expanding its note issue to compensate for the monetary contraction that occurred as the private banks failed. Because of the Bank's inaction, according to Ricardo, "persons had been under the necessity of incurring the expense of conveying gold coin to Ireland, to remedy an evil arising out of the deficiency of circulation from the failures in the south. If the Bank of Ireland had filled the void so occasioned, as it was their duty to have done, the evil would have been avoided" [5:70]. These are not the words of an extreme bullionist, who wanted the paper currency to fluctuate exactly as a metallic circulation.

In response to the Irish banking crisis, Parliament approved a sum of £500,000 to be lent through commissioners at 5% interest to businesses that could provide adequate collateral. At the same time, the Bank of Ireland reversed its former restrictive policy and began discounting commercial notes freely. As a result of the Bank's action, the shortage of funds in Ireland was much reduced so that Irish businesses applied for only £100,000 of the £500,000 voted by Parliament [5:98]. Upon learning of the decisive action by the Bank of Ireland, Ricardo retracted his former criticism, saying [5:99]:

> They [the Bank of Ireland] did seem to him to have acted with a degree of energy, which, if it had been the case of this country, they would have found the Bank of England not ready to have adopted. What was the case of the Bank of Ireland? The stoppage of a number of private banks in the country rendered it absolutely necessary that a very great increase in the circulation, of some sort or another, should be provided. Either the diminution of the circulating medium must be supplied by coin, or a powerful effort must be

> made by the Bank of Ireland to make up the deficiency by an issue of notes. The Bank of Ireland did make that great effort to the amount, he believed, of 50 per cent; and, from what he had himself heard from the Governor of the Bank of Ireland, that issue would have been increased still farther if those securities had been offered on which the Bank of Ireland usually made their advances.

Since Ricardo approved of the Bank's increase of its circulation by as much as 50% in a time of crisis, it is again evident that he did not want a paper circulation tied directly to gold, but that he allowed some scope for discretionary monetary policy.

Finally, the fact that Ricardo criticized the Bank of England for its passive monetary policy from 1820 onwards implies that he would have preferred for the Bank to have actively pursued measures--such as lowering the discount rate--which would have increased the money supply, and thereby affected the foreign exchange rate and the market value of gold. In the Parliamentary debates on the Resumption Act in the Spring of 1819, Ricardo's one reservation about the pending legislation was that it included no check against an excessive contraction of the Bank's note issue. Because the Bank fixed its discount rate on commercial paper at 5%, regardless of the current market rate of interest, Ricardo feared that if the market rate of interest were to decline below 5%, the Bank might fail to exercise appropriate discretion during the Resumption process: "as the Bank directors were governed by certain traditional limits, or something like limits, in discounting to individual merchants, they might have difficulty in keeping up the requisite amount of currency...if they had no other means of supplying the requisite amount of circulation but by discounting bills, he feared the public might suffer from a scarcity of currency" [5:12]. He realized that if the Bank did "starve the circulation", gold would be brought to the Mint and coined, restoring the money supply to its proper level, but "in the interim between the reduction of the Bank issues and the supply afforded from the Mint, the country might seriously feel the deficiency." [5:13].

Notwithstanding this recognition, Ricardo did not think that the Bank would contract its issues since it was in the interests of that institution to maintain an adequate circulation. His expectations were disappointed. The Bank kept its discount rate at 5%--a level above the market rate of interest--causing a reduction in its commercial discounts and total circulation. There followed a rise in the value of banknotes, accompanied by a fall in the market price of gold, and many persons brought gold to the Bank, building its hoard to £14 millions in 1823, and providing enough additional gold for the Bank to issue £13 millions in sovereigns from May 1821 through December 1823.[15] Ricardo criticized the Bank's acquisition of bullion since this bid up the world relative price of gold, and thereby forced a greater degree of monetary deflation than had been necessary to resume cash payments: "they had amassed more gold than was necessary and by so doing had aggravated the evils under which the country suffered" [(8 March 1822) 5:143,144].

In response, the Directors of the Bank defended themselves, claiming that the total of Bank notes and sovereigns in circulation had actually increased the money supply after the Resumption Act passed. At the Bank Court held on 21 March 1822, for instance, the Governor of the Bank remarked that the circulating medium, comprised of coin and Bank notes, had steadily increased from 1820 through 1822 [DR, 4:232n]. Ricardo challenged this view, not on the grounds that the total circulation of Bank notes and coin had fallen, but because he knew that some coin had been exported to Ireland in 1820 and 1821, following the Irish banking crisis:

> I dispute the fact of the circulation having been even half a million higher in amount in 1822, than in 1821 and 1820. The mode of proving the proposition,

[15]We have shown in Chapter Five that Ricardo did not object to the Bank issuing coin since, by acquiring bullion, the damage had already been done, in the sense that the world relative price of bullion had been raised.

> adopted by the Bank, is not satisfactory; they say, in 1821 we had 23,800,000l. in circulation, and now the notes in circulation, with the sovereigns we have since issued, amount of 3,000,000l. more. But as sovereigns are circulated in Ireland, and in other districts of the United Kingdom, how can they affirm, that in the same channel in which 23,800,000l. bank-notes circulated in 1821, 26,800,000 bank-notes and sovereigns together are now in circulation. [4:232]
>
> It was said by his hon. friend (Mr. Haldimand), that the Bank had since 1819 kept up their circulation to the same level as before 1819, and that, therefore, they had not caused the favourable exchange, and the influx of gold. He denied this--he denied that their issues were now as large as in 1819 [because of coin shipped to Ireland]; but allowing, for the sake of argument, that they were so, he should still make it matter of charge against the Bank that they had not increased their issues so as to operate on the foreign exchanges and prevent the large importations of gold. [(1822) 5:200-201].

To the extent that gold coins had been exported to Ireland, Ricardo's observations were certainly valid. His final statement should also be noticed because he argued that, even if the Bank had increased the money supply, it had not done so enough, implying that the Bank should have actively increased their notes in order to regulate the foreign exchange and to prevent an increase in the world price of gold.

His criticism of the Bank, for not having shown sufficient discretion in the management of the money supply, relates to the Directors second defense of their administration of the Resumption process, which was that the Bank had made no attempt to acquire bullion. Instead, as the Directors explained, the Bank had been entirely passive, only purchasing gold as it was brought to them by private persons. Ricardo knew that the Bank had been passive in its control of the money supply insofar as they had made no attempt to either purchase bullion or reduce their note issue after the Resumption Act passed. He had read the pamphlet by Samuel Turner--a Bank Director--which discussed these facts [(20 May 1822) DR, 9:197], and which he subsequently cited in a Parliamentary debate, saying [(26 February 1823) 5:254,255]:

> Mr. Turner, who had been in the direction for two years, decidedly said, that as to the operations of the Bank, Mr. Peel's bill remained a dead letter. It had neither accelerated nor retarded payments in specie...Taking into consideration the rule by which the bank directors regulated their issues, namely, the application for discounts, and coupling with that the low rate of the interest of money, the circulation would have been the same, and consequently the distress of agriculture as great, even if that bill had never passed.

But what Ricardo understood--and what Viner [(1937) p.181] has pointed out--is that the Bank's supposed passivity was irrelevant, since by keeping its discount rate at 5%--a level above the market rate of interest--the Bank had in effect, though not deliberately, adopted a restrictive monetary policy. Ricardo's recognition of this fact is clear in that, when the Bank finally did reduce its discount rate (on 22 June 1822) from 5% to 4%, he remarked that "he was very glad to hear that the Bank had at length begun to discount at 4 per cent.; and he thought they should have done so long before. Had they persisted in demanding 5 per cent, they would have been without a single note to cash...[because of] the market price of the loan of money being lower [than 5%]" [(1822) 5:222,223]. Ricardo faulted the Bank for not acting more quickly to increase the money supply, since, had they reduced the discount rate earlier, they would have prevented the foreign exchange from becoming favourable and would have further prevented the importation of gold [4:232; 5:312].

In none of the above instances did Ricardo propose a "strictly passive reaction to movements in the bullion price and exchange rate" [see Hollander, above, p.252]. Rather, by recommending that the money supply be managed via open-market operations or adjustments in the discount rate, he indicated that rigid rules for granting discounts or fixed nominal limits for the money supply were inappropriate guidelines for monetary policy. This is not the same as abandoning rules altogether, for, as will be shown in the next section, he did not countenance discretionary policy at the expense of convertibility, the benefits of discretion being subordinate to the monetary stability afforded by gold.

C. The Monetary Response to Aggregate Supply Shocks.

1. Overview.

The Appendix to the High Price of Bullion (1811) advocates monetary contraction in response to an external drain of gold, in a discussion that, at first glance, seems inconsistent with the discretionary policy allowed in Secure Currency (1816). Differences between the pamphlets could be attributed to a maturing of Ricardo's views on money, a possibility allowed by Viner [(1937) pp.139-40,203-6] and Hollander [(1911b) pp.431-2]. But we shall suggest that the policies outlined in the High Price of Bullion can be reconciled with those in Secure Currency; for the issue in 1811 entailed aggregate supply shocks, whereas reductions in private credit, or a withdrawal of bank notes that would have caused a reduction in demand, were the focus of his later writings. Because the priority of both pamphlets was price stability,[16] the credit shocks addressed in Secure Currency called for monetary expansion, whereas a failed harvest, considered in the Appendix to the High Price of Bullion, required monetary contraction to maintain the convertibility of banknotes and the par of the exchange. Ricardo understood that monetary contraction could cause "considerable distress and difficulty to the mercantile classes" [(December 1811) 6:67], and that the Bank could act to prevent such distress, but this was of secondary importance; restoring the gold standard, in 1811, was the primary concern.

As for the merits of Ricardo's position in 1811, we shall show that, given the limited

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[16]His support for this view is stated at length in Secure Currency [(1816) 4:54,55]:

> All writers on the subject of money have agreed that uniformity in the value of the circulating medium is an object greatly to be desired...It was the comparative steadiness in the value of the precious metals, for periods of some duration, which probably was the cause of the preference given to them in all countries, as a standard by which to measure the value of other things.
>
> A currency may be considered as perfect, of which the standard is invariable, which always conforms to that standard, and in the use of which the utmost economy is practised.

capacity of the Bank Directors to conduct discretionary monetary policy in the modern, counter-cyclical sense--in fact, given their penchant to run the Bank like an ordinary commercial concern and conduct pro-cyclic monetary policy--his emphasis on price stability, and his proposal to increase (or decrease) the money supply in response to expansions (reductions) in aggregate supply were quite legitimate. For the choice confronting Ricardo when writing the High Price of Bullion was not whether the monetary authority should adhere blindly to the gold standard or should mitigate the output effects of a reduction in supply; rather, he was confronted with the options of either retaining the semblance of monetary stability afforded by gold, or abandoning that standard, leaving the Bank--in tandem with the Government--to continue mishandling the money supply. Along the spectrum of policies, ranging from strict rules, such as the 100% reserve ratio adopted by the Bank of Hamburg, to unrestrained management of an inconvertible currency, as then practised by the Bank of England, Ricardo opted to curb the abuses of the Bank and Government by restoring the gold standard. But assuming this security to be assured, he encouraged limited discretionary policies to maintain commercial credit and a constant relative price for gold.

2. Ricardo's Position.

According to Ricardo's argument in the High Price of Bullion, a deficient harvest might necessitate the importation of corn, which could cause the foreign exchange[17] to turn unfavourably [3:106-7]: "England, in consequence of a bad harvest, would come under the case mentioned at page [53] of this work, of a country having been deprived of a part of its

[17]Ricardo recognized that a fall in the foreign exchange could be caused by factors other than an increase in the demand for imports, specifically, he recognized that clipping coin or overissuing paper money could depreciate the exchange [3:72,78]. These were separate matters, however.

commodities, and therefore requiring a diminished amount of circulating medium. The currency which was before equal to the payments would now become superabundant...the exportation of this sum, therefore, would restore the value of her currency to the value of the currencies of other countries. Thus it appears to be satisfactorily proved that a bad harvest operates on the exchange in no other way than by causing the currency which was before at its just level to become redundant".[18] (In Ricardian nomenclature, "redundant" signifies a circulation of inconvertible paper exceeding a level that could persist if notes were convertible or if coin also circulated.[19] Similarly, when using the term "depreciation", he did not mean that money had had "an actual fall of value", but only that there was "a comparative difference between the value of money, and the standard by which by law it is regulated" [1:149].[20]) Given his description of the currency as "redundant", it can be inferred that he

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[18]A similar quote appears later in the Appendix to the High Price of Bullion [3:118]: "The operations of an increased currency are not instantaneous, but require some interval of time to produce their full effect--that a rise or fall in the price of silver, as compared with gold, alters the relative value of the currencies of England and Hamburgh, and therefore makes the currency of one or other relatively redundant and cheap;--that the same effect is produced, as I have already stated, by an abundant or deficient harvest, either in this country or in those countries with which we trade, or by any other addition or diminution to their real wealth, which by altering the relative proportion between commodities and money alters the value of the circulating medium."

[19]He first stated this definition in a letter to Malthus of 1811 [6:36]: "If [the currency] be in a greater proportion to commodities after than before the scarce harvest, whilst no such alteration has taken place in the proportions between money and commodities abroad, it appears to me that no expression can more correctly describe such a state of things than a relative redundancy of currency".

[20]Ricardo's use of the term is illustrated by his Parliamentary testimony of 1819 [5:392,393]:

> From whatever cause may arise the difference in the value between paper and gold (and I have enumerated several,) I always call the paper depreciated when the market price exceeds the mint price of gold, because I conceive that there is then a greater quantity of circulating medium than what there would have been if we were obliged to make our paper currency conform to the value of coin.
>
> The term 'depreciation,' I conceive, does not mean a mere diminution in value, but it means a diminished relative value, on a comparison with something which is a standard.

favoured a policy of monetary contraction in response to a reduction in aggregate supply following a failed harvest. The inference is sustained by many passages in the pamphlet,[21] and by the fact that Ricardo consistently applied this policy, thus advocating monetary expansion given an increase in aggregate supply [3:53]: "If in the progress towards wealth, one nation advanced more rapidly than the others, that nation would require and obtain a greater proportion of the money of the world. Its commerce, its commodities, and its payments, would increase, and the general currency of the world would be divided according to the new proportions...In the same manner if any nation wasted part of its wealth, or lost part of its trade, it could not retain the same quantity of circulating medium which it before possessed. A part would be exported, and divided among the other nations till the usual proportions were re-established."

3. The Current Options for Monetary Policy.

In the instance of a failed harvest, there were effectively three options available to Ricardo: contract the money supply, and correspondingly reduce prices, to maintain

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And in a subsequent Parliamentary speech [5:166]:

> "Depreciation meant a lowering of the value of the currency, as compared with the standard by which it was professedly regulated. When he used the word, he used it in this obvious and proper sense. The standard itself might be altered...and it might so happen that a currency might be depreciated when it had actually risen as compared with commodities".

[21]Two of these passages are quoted below:

> An unfavourable exchange can ultimately be corrected only by an exportation of goods, by the transmission of bullion, or by a reduction in the amount of the paper circulation. [3:125]
>
> [Under the Ingot Plan] The amount of the circulation would be adjusted to the wants of commerce with the greatest precision; and if the Bank were for a moment so indiscreet as to overcharge the circulation, the check which the public would possess would speedily admonish them of their error. [3:127]

convertibility and hold the exchange at par; lend freely, but maintain convertibility by having a bullion reserve sufficient to fund a prolonged external drain; or suspend convertibility and provide sufficient credit to counteract, at least partly, the output effects of the shock. A fourth option was devised later: lending freely at a high rate of interest so as to protect domestic credit and turn the foreign exchange. Whether this policy was feasible in the early Nineteenth century given the Usury Laws and the state of the international capital market is not clear; and at any rate, it was unknown to Ricardo.

The merit of the first option--the one advocated in the High Price of Bullion--is that it ensures the convertibility of the currency and thereby a degree of monetary stability. The principal shortcomings of the policy are that it aggravates the output effects of the initial shock, that it impinges on the central bank's ability to protect domestic credit, and that in extreme cases it can actually worsen the external drain of bullion. As Thornton [(1802) p.151-3] observed, a severe reduction of credit in response to an external drain could "exceedingly distress trade and discourage manufactures as to impair...those sources of our returning wealth to which we must chiefly trust for the restoration of our balance of trade, and for bringing back the tide of gold in to Great Britain". For this reason Thornton recommended that the Bank hold enough bullion to fund an external drain for up to two years (in the event of consecutive failed harvests) so that the loss of gold would not force the Bank to withdraw credit [pp.152-3].[22] But Thornton's case for supporting domestic credit is not altogether convincing, for his ensuing discussion [pp.162-4] explains why the Bank of England, as a profit-seeking establishment, cannot be expected to maintain a hoard of the

[22]Thornton distinguished between an external drain resulting from a high domestic price level, and that resulting from temporary circumstances such as a failed harvest. In the first instance he recommended a gradual monetary contraction; in the second, he allowed that the central bank might have to permit an unfavourable exchange for some time if this was necessary to protect domestic credit [Laidler (1987) 4:634].

magnitude (nineteen millions) needed to sustain a two-year external drain. In a review of Thornton, Francis Horner [(1802) p.194] likewise failed to offer a persuasive policy response to a severe external drain, concluding that "under such a combination of inauspicious circumstances, the usual means of prudence and the rules of ordinary policy might be expected to fail, and necessity would be left to justify those desperate measures which it might suggest." Ricardo never addressed Thornton's proposal--for the Bank to hold enough bullion to fund a prolonged drain--possibly because it was not a realistic option.

As to suspending convertibility--or continuing the Bank Restriction in 1811--Ricardo was loath to accept this option. For once released from the gold standard, the Bank had shown its unwillingness to return, and in the interim had mishandled the paper pound, actually amplifying Britain's economic cycle.

Concerning the fourth option, lending freely at a high rate of interest, this sophisticated policy was not devised till after 1850,[23] nor was it implemented before 1860 [Bagehot (1910|1873) pp.47-8]. Even had it been known to Ricardo, it is not clear that it could have worked in the early nineteenth century, when, according to Macleod [(1902) 2:347], communication and travel were "slow, expensive, and uncertain" so that reversing an unfavourable exchange by raising the domestic short-term rate of interest was impractical "because the cost and delay of the transport of gold would far exceed any profit to be made in

[23]As early as 1856 Henry Macleod [(1902|1856) 2:344-347] proposed raising the rate of discount in response to an external drain: "In the first edition of this Work published in 1856, we shewed that there is a Third cause of a drain of bullion, and an adverse exchange, which, however it might be known among commercial men, had never yet, that we have seen, found its way into any commercial book whatever, and most certainly had never been brought forward prominently before the public in Currency discussions...We therefore shewed that the only true method of striking at this demand for gold [export of specie] is by raising the Rate of Discount...This is now the acknowledged principle upon which the Bank of England is managed; and after our work was published, in 1856, the Usury Laws in France were modified in order to enable the Bank of France to adopt it, and, in fact, it is now universally adopted by every bank in the world."

the difference of the Rates of Discount". By mid-century, however, "railroads and steamers" had reduced the time and expense of transporting bullion, so that "a difference of 2 per cent. between the rates of discount in London and Paris will now draw bullion from one place to the other" [Macleod (1902) 2:347].

Contrary to Macleod, Eagly and Smith [(1976) p.210] found a statistically significant association between short-term interest rates in London and Amsterdam, leading to their conclusion that a rise in the rate of interest of one market would attract funds from the other. Their results, however, are not convincing, for the statistical significance only holds if the data are divided into specific sub-periods, and even then, half the sub-periods suggest that interest rates in London and Amsterdam moved in opposite directions. Larry Neal (1987) has made a similar study of the integration of capital markets, based on comparisons of the stock prices in London and Amsterdam of the Bank of England, the East India Company and the South Sea Company--joint stock companies whose shares traded both in London and in Amsterdam. Neal concludes that the markets were highly integrated because stock prices in the two markets tended to move in the same direction. His conclusion is suspect, however, for the fact that the stock price of a particular company responds similarly to information in various markets does not indicate that large amounts of capital can be transferred from one market to the other in response to variations in short-term interest rates.

Even in the light of Macleod's evidence, and the studies by Eagly, Smith and Neal, it still remains unclear whether an increase in the rate of discount in London could have attracted enough foreign capital to reverse an external drain. In any event, the discount policy of the Bank of England was restricted by the Usury Laws, which, till the year 1833, prevented it from loaning money (except to the Government) at a rate of interest exceeding five percent [Ryan (1924) pp.19-20].

4. The Merits of Ricardo's Proposal.

Whether Ricardo's policy as outlined in the High Price of Bullion was reasonable would, in a modern approach to the question, depend on the perceived tradeoff between the dangers of inflation and output effects of deflation. But, as already mentioned, the choice faced by Ricardo was not whether inflation should be permitted to maintain output stability, but whether Britain should return to gold or suffer ongoing monetary instability, with the attendant speculative booms and financial crises. He urged that price stability be the primary monetary policy objective, and thus recommended monetary contraction in response to supply shocks, while advocating monetary expansion to preempt the price effects of reductions in domestic credit (in the short-run) or economic growth (in the long-run). In all instances he allowed some measure of discretion to the monetary authority, provided that convertibility was maintained.

D. The Lender of Last Resort.

Further doubts about the merits of Ricardo's monetary policy have been raised because of the conspicuous absence of any reference in his posthumously-published Plan for a National Bank (1824) to the assumed role of the Bank of England as lender of last resort [see the Introduction, p.10]. This is especially the case because Thornton, in Chapters Four and Five of Paper Credit, argued at length that the Bank of England ought to be the ultimate source of credit. In what follows we consider the implications for Ricardo's position on discretionary policy of the omission of any reference to the denier resort in the National Bank. Our comments are prefaced by a brief account of the institutional background to Thornton's and Ricardo's writings.

During the Eighteenth Century the Bank of England successfully intervened in minor financial crises, most notably after the collapse of the Ayr Bank in 1772.[24] But it abandoned any pretense of being the lender of last resort in 1793. There has been some confusion in the literature on this point, owing, at least in part, to Hayek's introduction to Paper Credit (1802). Hayek writes that during the latter decades of the Eighteenth Century, "the Bank of England became the Bankers' Bank, the dernier resort as Sir Francis Baring described it in 1797, where in an emergency everybody expected to obtain ready money" [(1802|1939) p.38]. But Baring explained that though the Bank was, in principle, the lender of last resort [(1797) pp.22,47], in the crisis of 1793, "the Directors caught the panic; their nerves could not support the daily and constant demand for guineas; and for the purpose of checking that demand, they curtailed their discounts to a point never before experienced, and which placed every part of the commerce of the country in a considerable degree of danger" [p.21]. The Exchequer was thus forced to intervene in the crisis, and it did so with such success that the Exchequer and not the Bank of England became de facto the lender of last resort.[25] Not until the latter half of the Nineteenth Century did the Bank actually assume the duty. These facts were well known to Ricardo and to any informed person.[26] The Historical Appendix to this chapter elaborates on the matter, showing that in the crises of 1793, 1811 and 1825-26, the Bank resisted the obligation to act as lender of last resort.

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[24]For an explanation of the events leading to the crisis, see Macleod [(1902) 2:208-216]. Hamilton [(1956) 8:405-17] discusses the intervention by the Bank of England.

[25]See Hawtrey [(1934) p.21; (1970) pp.119-122], Fetter [(1965) pp.118-120] and Morgan [(1943) p.8].

[26]Speaking of the Bank's policy, Thornton, for example, noted [(1802) p.127]: "If there has been any fault in the conduct of the Bank of England, that fault, as I conceive, has rather been, as has just been stated, on the side of too much restricting its notes in the late seasons of alarm, than on that of too much enlarging them."

Even though the Exchequer served as lender of last resort during the early nineteenth century, there are criticisms of Ricardo in the literature for having neglected to address the subject in National Bank. We respond to the critical view on two counts: First, we show that Ricardo was aware of the importance of the lender of last resort, and that he clearly described how the Bank of England could function in this capacity if its Directors were willing to assume the duty from the Exchequer. Second, we demonstrate that his decision, implicit[27] in National Bank, to retain the Exchequer as the ultimate source of liquidity was reasonable since it provided for the supply of credit during financial crises, but limited the scope of the central bank's discretion. Opting for more rules and less discretion is a prudent course if the managers of the central bank are either lacking in skill or are inclined to guide policy for the profit of the bank rather than for the benefit of the nation. On both counts the conduct of the Directors of the Bank of England justified Ricardo's case for a well-defined system of rules for monetary policy.

Ricardo's Notes on the Bullion Report (1810) attest to his understanding that the Bank could operate as lender of last resort. The Report, itself, describes the crisis of 1793 as follows [quoted in Ricardo's Notes, 3:349]:

> In this crisis, Parliament applied a remedy, very similar, in its effect, to an enlargement of the advances and issues of the Bank; a loan of Exchequer Bills was authorized to be made to as many mercantile persons, giving good security, as should apply for them; and the confidence which this measure diffused, as well as the increased means which it afforded of obtaining Bank Notes through the sale of the Exchequer Bills, speedily relieved the distress both of London and of the country.

Remarking on this passage, he observed how the Bank could have pursued an equivalent policy without the intervention of the Exchequer:

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[27]Because it was understood at the time that the Exchequer was the ultimate source of liquidity [see the Appendix to this chapter], there was no need for Ricardo to make the point explicit.

> If the Bank had been more liberal in their discounts at that period, they would have produced the same effect on general credit as was afterwards done by the issues of Exchequer bills. It would appear that the bank would buy the exchequer bills but would not discount the merchants bills,--or rather they would not advance money to the merchants without the guarantee of parliament. If the bank bought the bills it was then by an increase of circulating medium that public credit was ultimately relieved. If the public and not the bank purchased the bills then was a portion of the circulating medium of the country which had been withdrawn from circulation again brought forth by the credit of government being pledged for the parties requiring relief. [3:349]

> It was a want of currency which aggravated the evil arising from want of confidence [in 1793]. The issue of commercial Exchequer bills induced the Bank to advance money on them, which they would not have done on other securities. [3:399]

Clearly the passages indicate Ricardo's understanding that the Bank was able to sustain credit without the intervention of the Exchequer, since, even when the Exchequer did extend loans, "it was by the [consequent] increase of the circulating medium that public credit was relieved".

Finally, that Ricardo did not assign to the National Bank the duty of lender of last resort does not bring into question whether he allowed for discretionary monetary policy given the security of a convertible currency. For the management of the money supply and the position as the ultimate source of credit in the economy are distinct and separable functions, and the possibility that these roles can be combined is no argument that they ought to be; in practice, the roles have been held by separate bodies with considerable success. (In the United States, for example, the Federal Reserve Bank of New York manages the money supply, while the Federal Deposit Insurance Corporation[28] is the ultimate source of credit for the banking system. [Wood (1991) p.31]) Ricardo's choice to retain the separation of these roles cannot

[28]The FDIC does not act as a lender of last resort in the sense of making loans directly to banks, but, by protecting deposits, it eliminates the threat of a run on the banking system.

be viewed as irresponsible, given the Bank's imprudent monetary management. In fact, it was the handling of Resumption that motivated his attacks on the Bank in Parliament [DR, 5:76,134-5,143,193,247],[29] and eventually prompted him to write the National Bank pamphlet,[30] which, by presenting an alternative to the Bank, was an oblique, but forceful, attack on it.

E. Ricardo's Place in Contemporary Debates: a reassessment.

Having addressed Ricardo's monetary policy, it remains to determine whether his position in the Bullionist controversy and his influence on the subsequent Currency School-Banking School debate should be reassessed. To this end we consider the views of Viner and Bladen concerning Ricardo as a bullionist, followed by a discussion of his supposed parentage of the Currency School and the 1844 Bank Charter Act, as described by Fetter and Sayers. It is our conclusion that Ricardo cannot be cast as an extreme bullionist, nor do his policies support so strict an adherence to rules as found in the 1844 Act.

1. The Bullionist Controversy.

Broadly considered, 'bullionists' argued for a convertible currency and were critical of the Bank of England's conduct during the Restriction period; 'anti-bullionists' held the opposite

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[29]Speaking to the Report of the 1822 Agricultural Committee, Ricardo attacked the renewal of the Bank's charter [5:156]: "He solemnly protested against prolonging the charter of the Bank. They had repeatedly called on the chancellor of the exchequer not to enter into any engagement with the Bank for a renewal of their charter...he had hoped never to have heard of their charter being renewed".

[30]Writing to Malthus in August 1823, Ricardo mentioned [9:325], "I have been writings a few pages in favor of my project of a National Bank, with a view to prove that the nation would lose nothing in profits by abolishing the Bank of England". The National Bank pamphlet, itself, expressly states [4:278]: "Let it not then be said that the Bank Charter, as far as regards the issuing of paper money, ought to be renewed".

view [Laidler (1989) p.60]. Viner [(1937) pp.125-7] associates Ricardo with the standard bullionist position insofar as he believed that "a circulation exceeding in amount what, under otherwise like conditions, could have been maintained under a metallic standard, was in excess." Concerning the causes of an unfavourable foreign exchange and the export of bullion, however, Viner [(1937) pp.139,142] places Ricardo at the extreme end of the bullionist camp for arguing that "foreign remittances would have no effect on the exchanges whether under convertibility or inconvertibility", that without a fall in the exchange "the demands of England and the rest of the world for each other's products would necessarily so immediately and completely adjust themselves to extraordinary remittances as to result...in the maintenance of equilibrium in the balance of payments without the aid of specie movements", and that "if under inconvertibility there appeared a depreciation of sterling exchange, this was evidence of excess issue of currency".[31] "Moderate bullionists", by comparison, recognized that military remittances or large imports of grain following a deficient harvest could also affect the exchange.

Bladen [(1974) p.173] is critical of Viner's interpretation, questioning whether Ricardo actually accepted the "so-called Ricardian theory of the mechanism of adjustment". He [p.174] approves of Ricardo's focus on "the Bank and its duty to regulate the notes issue with a view to counteracting exceptional conditions in foreign trade", as opposed to Thornton's approach, which emphasized the effects of foreign remittances and corn imports and thereby "distracted attention from the real issue, the standard". As to the merits of limiting the Bank's discretionary ability with well-defined rules, Bladen observes that "the evidence given by the officers of the Bank of England was enough to convince anyone that a currency managed by

[31]Viner [(1937) pp.139-141] notes, as a qualification, that Ricardo later allowed that factors other than an overissue of currency could affect the foreign exchange.

them was unsafe" [p.170], their failure to recognize the effects of Bank notes on the price of bullion and the exchange being all the more serious since "the warning systems of the drain of reserves under convertibility had been abandoned" [p.171].

Concerning the designation of Ricardo as an extreme bullionist for his views on the balance of payments, we have already shown [Introduction, pp.23-25] that this is not a valid criticism since he recognized how factors other than currency--a deficient harvest, foreign subsidies, the foreign expenditures of the British Government, and even a change of tastes for imports--could affect the foreign exchange. It is true that in the event of an unfavourable exchange caused by non-monetary shocks he described the currency as "redundant" or "depreciated", but this signified nothing more than that the paper circulation was greater than it would have been if convertible or if the entire circulation consisted of coin [see above, p.268]. We are led to agree with Bladen's response to Viner that, given the abilities of the Bank Directors and their conduct during the Restriction period, Ricardo legitimately focused attention on the standard and urged that the Bank adhere to the rule of convertibility.

2. The Currency-Banking Debate.

The 1844 Bank Charter Act incorporated a number of tenets of the Currency School: It tied Bank notes to gold so that the Bank of England circulation fluctuated as if the money supply were fully metallic. It provided that Bank notes would gradually replace country-bank issues,[32] thus centralizing the money supply--a change intended to reduce monetary instability. And finally, the Act relieved the Bank of discretionary management of the currency to prevent economic cycles from being amplified by monetary expansion and

[32]Country bankers who ceased to issue notes were not permitted to resume such issues. The Bank of England, however, could increase the amount of securities in the issue department by two-thirds of the amount of notes withdrawn from the country circulation [Macleod (1902 [1856]) 2:158-9].

contraction [Schwartz (1989) pp.42-7]. Concerning Ricardo's influence on the Act, Sayers [(1953) pp.64-5] claims that "[he] was the father of the system adopted by the Bank of England after its internal revolution at the beginning of the 'forties and, after Peel's conversion, embodied in the famous Bank Charter Act...he must share responsibility for the Act of 1844 which gave the English currency system its peculiar form and also retarded the development of central banking". Fetter [(1969) pp.74-5] reaches the same conclusion about Ricardo's parentage of the Currency School: "What Ricardo did in the heat of controversy over the credit policy of the Bank of England was to strip from existing theory Thornton's refinements on Hume and come up with a simplistic proposition that had a tough cutting edge in the polemics of the day...Ricardo was the doctrinal father of the Currency Principle that wished to tie changes in the currency supply to changes in the specie holdings of the Bank of England; whereas Henry Thornton anticipated much of the Banking Principle".

As to the criticisms by Sayers and Fetter, we cannot agree that Ricardo was the doctrinal father of the Currency School and the 1844 Act. There is, in the first place, the 100% marginal reserve required by the Act. Ricardo was aware that the Banks of Amsterdam and Hamburg were established on this principle, but he rejected it as model for the English banking system both in the High Price of Bullion [3:126] and in his Notes on Bentham [3:288]. He instead advocated the Ingot Plan, designed to minimize the bullion hoard required by the Bank. Second, Ricardo expressly stated that he did not want the Bank circulation to fluctuate as if it was fully metallic, for this could lead to unnecessary variations in the world relative price of bullion. His criticism of the Bank's implementation of Resumption actually focused on this point, insofar as he believed the Bank had acquired too much gold, thus raising its relative price, and requiring a greater restriction of the money supply than otherwise would have been necessary. And finally, unlike the 1844 Act that

stripped the Bank of its discretionary duties, Ricardo made a clear case for discretion, subject only to the constraint of convertibility. In fact, his argument for discretion in Section I of Secure Currency actually hinged on the substitutability of credit instruments--particularly the fact that changes in the country bank circulation and in the extent of private credit could affect commodity prices just as Bank notes--in marked contrast to the standard Currency School position which adopted a narrower concept of money and tended to dismiss the role of private credit [Schwartz (1989) p.46].

IV. Ricardo's View of Fiscal Policy.

No discussion of Ricardo's macroeconomics would be complete without mentioning his position on fiscal policy. Essentially, he believed that Government spending was wasteful (except for the development of infrastructure), and that the taxation or debt required to finance public spending impeded the accumulation of capital, and thereby slowed the growth of labour demand. The fact that Ricardo opposed public expenditure is not disputed in the secondary literature; a matter that continues to be debated, however, is whether his position--usually associated with the "Treasury View"[33] of fiscal policy--implies that he adhered to Say's Identity. We shall argue that Ricardo's general position on fiscal policy did not require the assumption of Say's Identity, for he usually limited his analysis to the long-run effects of Government spending on economic growth--a subject not directly relevant to Say's Law.

[33]The "Treasury View" is that an increase in government spending will not cause an increase in aggregate economic activity; it requires at least one of two assumptions: that an increase of government spending is offset by a corresponding decrease in consumption and private investment so that expansionary fiscal measures cause no increase in aggregate demand and real output, or that resources are fully employed so that an increase in government spending changes the pattern of real final demand, but has no effect on aggregate output and instead causes inflation.

There remain, however, passages in his Works that clearly pertain to the short-run effects of public spending on aggregate demand. Critics have concluded that, because he opposed Government spending in these instances, he must have adhered to a doctrinaire version of Say's Law. This view is so pervasive that a corresponding weight of supporting textual evidence might be supposed. Surprisingly, this is not the case. Commentators instead have seized scattered excerpts from his writings, interpreted them with little heed to the historical or textual contexts, then repeatedly asserted that the passages in question demonstrate how enamoured he was with the law of markets and how irresponsible were the policy conclusions he based on this theory. A close reading yields only five cases that both pertain to Ricardo's treatment of the short-run effects of fiscal policy on aggregate economic activity and that are of sufficient detail and clarity to permit meaningful analysis. These cases will be examined below, after a brief discussion of Ricardo's general case against government spending.

Our conclusion is that Ricardo was primarily concerned with the effects of public spending on economic growth. Regarding those few instances relevant to the law of markets, we suggest that while he understood the theoretical explanations of deficient aggregate demand made by his contemporaries--as well as the implications of these arguments for fiscal policy--he rejected their policy recommendations on empirical grounds. My reading of Ricardo does not involve the assumption of Say's Identity, and thus has the merit of being consistent with his relatively sophisticated macroeconomic analysis presented in Chapters Four and Five.

A. The General Case Against Government Spending.

When Ricardo considered the matter of Government expenditure, he was not concerned primarily with the immediate effects of this expenditure on the level of aggregate output, but rather with the question of whether high Government spending, financed ultimately by high taxation, was likely to impede or encourage the accumulation of capital.[34] Concerning the effects of high Government expenditure and high taxes on the accumulation of capital, it was his conviction that "by the profuse expenditure of Government, and of individuals, and by loans...the country is impoverished; every measure, therefore, which is calculated to promote public and private economy, will relieve the public distress" [1:246].[35] As Baumol [(1997) p.219] and Kates [(1997) p.197] have observed, Ricardo's argument centered on the classical distinction between productive and unproductive expenditure, productive expenditure--or investment--being the engine of economic growth.

Thus he was particularly outspoken against wasteful Government expenditures in 1819 and 1820,[36] for, as explained in Chapter Five, it was a deficient national capital, as compared with a growing labour supply, that he considered one of the "permanent" causes of the postwar distress. Not only did Government expenditure impede capital accumulation by taking resources "from the productive industry of the country" and diverting them to "the

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[34]Churchman [(1996) p.108] has recently concluded that Ricardo's opposition to public expenditure "arose out of fear that any concession might be construed as supporting increased government spending". Her argument reinforces an earlier interpretation by Tucker [(1960) p.177].

[35]Ricardo expressed a similar view to McCulloch in 1818 after his article on Ricardo's Principles appeared in the Edinburgh Review: "I am as great a friend to economy in Governments as you can wish me to be; every guinea that is spent unnecessarily I think is a public wrong, and I should therefore be sorry to give the slightest encouragement to waste and extravagance" [7:286].

[36]Of the excerpts from his Works that secondary authors cite as evidence concerning Ricardo's "Treasury View", all were written in 1819 or 1820, with the exception of his unfinished review of Blake's Observations and his questioning of private relief efforts in 1817.

support of unproductive labourers" [1:244], according to Ricardo, but the consequent high taxes encouraged capitalists to emigrate, thereby withdrawing their entrepreneurial abilities and their capital.[37] The reduction of capital, in turn, "diminished the demand for labour [and was] injurious to the working classes" [(29 March 1820) 8:168-169].

It should be noted that Ricardo did not oppose taxation and public expenditures in all instances, for he actually endorsed taxation to finance infrastructure projects: "Taxes for the benefit of trade itself such as for Docks, canals, Roads, etc...are on a different footing from all other taxes and produce very different effects, they may and generally do promote production instead of discouraging it" [(28 January 1820) 8:155]. Again, the letter shows no concern with short-run problems, while even Ricardo's terminology--opposing "wasteful" Government expenditures, but favouring "productive" infrastructure projects--suggests a pre-occupation with the long-run issue of economic growth.

B. Specific Documents on the Short-Run Effects of Fiscal Policy.

1. Ricardo's Notes on Malthus.

The two documents most relevant to Ricardo's views on fiscal policy and the corresponding effect of Government expenditures on aggregate demand are the Notes on Malthus and the Notes on Blake. Tucker [(1960) p.177] and Corry [(1958) p.41] have correctly noted the implications of the Notes on Malthus for fiscal policy, namely, that "Governments were only too ready to spend and they required no exhortations from

[37]"[In] a country which has accumulated a large debt...it becomes in the interest of every contributor to withdraw his shoulder from the burthen, and to shift this payment from himself to another; and the temptation to remove himself and his capital to another country, where he will be exempted from such burthens, becomes at last irresistible" [1:247-248].

economists". But Corry adds that "Ricardo denied that saving could ever involve a deficiency of demand"--thus obviating the need for expansionary fiscal policy--and that he based this conclusion on strict law of markets reasoning. I question Corry's conclusions, for while it is apparent that Ricardo often simplified his arguments by assuming no deficiency of aggregate demand, and though he frequently invoked the "saving is spending" theorem, it is not correct that in the Notes on Malthus he implied that a deficiency of aggregate demand was impossible, nor would it be correct to infer that he failed to grasp the arguments in Malthus' Principles. What is reflected in the Notes is Ricardo's belief that Malthus' treatment of economic stagnation[38] in the Principles--especially in Chapter VII on "The Progress of Wealth"--was empirically invalid. For he could not accept that underconsumption was likely in an advanced economy such as Britain where consumers had sufficient wants or tastes for commodities [8:216; 8:257; see also Chapter Five, pp.220-222], and that general stagnation would be chronic unless the Government raised taxes and boosted public spending. Ricardo also thought that overinvestment, to the point that new capital generated no profits, was unlikely since capitalists were not that irrational [see Chapter Five, pp.220-222].

The adequacy of consumer spending and the willingness of capitalists to overinvest constituted fundamental points of difference. But allowing that Malthus' assumptions about inadequate consumer wants were correct, Ricardo did not dispute his case for expansionary fiscal policy:[39]

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[38]Malthus' explanation, essentially, was that there might be such a great demand for investment goods that consumption goods could not be sold at adequate prices, resulting in unemployment and economic stagnation.

[39]Ricardo made a similar remark to Trower upon reading an article in the Times, favouring spending [(2 March 1821) 8:349]: "A writer in the Times of this morning appears to have adopted some of Malthus' principles and the conclusions he draws from them are so wild and extravagant that if we had no other reason for suspecting their fallacy, these would afford them. This writer recommends that we should raise loans now instead of the taxes with which we are burthened and for

> Admitting that you are correct on this [tear] inference you draw is the correct one, and [tear] wise to encourage unproductive consumption. If individuals would not do their duty in this respect, Government might be justified in raising taxes for the mere purpose of expenditure. [(4 May 1820) 8:185]

> If his views on this question be correct--if commodities can be so multiplied that there is no disposition to purchase and consume them, then undoubtedly the cure which he hesitatingly recommends is a very proper one. If the people entitled to consume will not consume the commodities produced, themselves, nor cause them to be consumed by others, with a view to reproduction: if, of the two things necessary to demand, the will and the power to purchase, the will be wanting, and consequently a general stagnation of trade has ensued, we cannot do better than follow the advice of Mr. Malthus, and oblige the Government to supply the deficiency of the people. We ought in that case to petition the King to dismiss his present economical ministers, and to replace them by others, who would more effectually promote the best interests of the country by promoting public extravagance and expenditure. [2:307]

The empirical question at issue was not whether consumers might hoard cash or hold idle cash balances, for hoarding was not part of Malthus' analysis in the Principles, Chapter VII, and, at any rate, Ricardo acknowledged incidents of hoarding during financial panics.[40] He observed that Bank of England notes were hoarded in rural districts as a "deposit against alarm" during the country banking crisis of 1814-16 [6:343], and also recognized hoarding "by timid people" [(1811) 3:172] in the early years of the War: "the fact of guineas having

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this sagacious reason, because it will promote expenditure and take off the superfluity of our productions."

[40]The fact that hoarding was commonly practiced, and that this was well known, is clear in the first volume of Tooke's History of Prices [(1838) pp.132-133,138]: "There is scarcely an individual of a class above that which is limited to the means of bare subsistence, who had not a hoard, greater or less, of guineas that were put by as a provision against the various contingencies which were considered as endangering the value of paper, either in degree, as by depreciation, or totally, as by foreign invasion or domestic convulsion", and again, there was a "very extensive practice of hoarding...among the inhabitants of those states of the Continent which were either the seat of war or which had issued paper to excess." As further evidence concerning the prevalence of hoarding Tooke [pp.132-133] quotes from a pamphlet by William Huskisson (1810) and from Mr. Stuckey's testimony before the 1819 Lords Resumption Committee. He also makes the interesting observation that savings banks provided an avenue of investment for the "petty hoards" that otherwise would have been dormant "in the hands of mechanics and menial servants" [p.145].

been hoarded in 1797 is well established" [(1810-11) 3:322].

Similarly, Ricardo understood that capitalists might hold idle cash balances while searching for profitable investment opportunities. He believed that this had, in fact, happened in the years 1815-17 as capital was "thrown in the market to seek new occupations",[41] leaving fixed capital unused and "labourers without full employment" [1:265]. He did not think capitalists would willing keep funds idle [(1819) 5:399], but they might have no alternative since deciding on a new business venture and switching circulating capital from one employment to another required time, and since, though capitalists might lend their purchasing power to others, loans were only made upon adequate security [1:363], which could not always be guaranteed to banks [5:389,390] or to private individuals [5:386].

In brief, the idea that consumers had insufficient wants to motivate spending, and that in lieu of consuming they would pursue an irrational investment program, was very different from saying that people delayed consumption or investment because of uncertainty. Thus notwithstanding his recognition that hoarding occurred and that capitalists held idle cash balances, he would not accept the argument advanced by Malthus that underconsumption was inevitable, or at least likely, because consumers had insufficient wants or tastes for commodities, and that Government spending was necessary to prevent economic stagnation.

His position was not based on blind adherence to the law of markets, but turned rather on empirical evidence suggesting no lack of wants for commodities on the part of domestic consumers. His assessment of the postwar situation was not unusual, for in a Parliamentary debate of 26 May 1820 [Hansard 1s, 1:568-570], Lord Liverpool expressed similar conclusions, based on Government tax reports:

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[41]A letter of August 1817 to Grenfell, published in Heertje (1991) p.521.

> It is material to consider whether the distressed state of our internal commerce has grown out of any diminution in our internal consumption...I trust, that I shall satisfy the House, that there is no ground for believing that any part of the distress which pervades our internal commerce, has arisen from a reduction in the use of any of the great articles of consumption.
>
> Comparing the actual consumption of the last year with the average consumption of the three years immediately preceding [based on tax reports];[42] the result of that comparison is, that, during the last year there has not only been no diminution, but, on the contrary, some increase in the home consumption.

Since the available data showed stable and increasing domestic consumption, even during depressed economic periods, Ricardo's argument that underconsumption was not occurring nor likely to occur seems valid. There is, additionally, the fact that in 1820 excessive (realized) investment did not seem to be a problem for Britain, given the ongoing flight of capital, the high taxes, and protective tariffs that caused the cost of subsistence to be at least double that on the Continent [see Chapter Five].

2. Ricardo's Notes on Blake.

Corry [(1958) p.43] addresses Ricardo's Notes on Blake, in his critique of the orthodox classical view of general gluts, arguing that the main purpose of the Notes "was to show that government spending could not be regarded as an addition to demand [which] basically

[42]Liverpool cited excise returns for "candles, paper, hides, skins, soap, salt, bricks, &c.". The fact that the amount of excise duties collected for each of these items increased from 1817 to 1820 is confirmed by detailed statements of excise returns [Digest (1833) 2:14]. Excise taxes paid on the 27 items listed in the Digest of All the Accounts increased from 1817 to 1820 on every commodity except wine and sweets, and this was due to the fact that duties on sweets and wines were reduced in 1818. For a list of tax changes see "A return of the Gross and Net Amount of all Taxes Repealed, Expired, Reduced, or Imposed in each Year since the Termination of the War" in Parliamentary Papers (1833) 32:637-653.

involves the assumption of full employment". While Corry's interpretation is correct, insofar as Ricardo actually stated that an increase in Government demand would merely result in the transfer of resources from one line of production to another [DR, 3:356], what he does not consider, and what casts the Notes in a much more favourable light, is that Ricardo was responding to a particular aspect of Blake's argument that related to a specific period. We shall show that, though Ricardo rejected the efficacy of fiscal policy and effectively adopted the "Treasury View" in the context in which he was writing, his Notes do not imply a doctrinaire acceptance of the law of markets.

The "*proposition*" that *prompted* Ricardo's Notes relates to Blake's argument that the rise of prices during the Napoleonic War was caused by an increase in Government spending and was in no way caused by monetary expansion, and further, that the economic crises suffered from 1815 through 1823 were caused by the postwar reduction in Government expenditure [Blake (1823) p.120]: "As far as we can judge from the facts, the symptoms [of wartime inflation] cannot be traced to excess of circulating medium, but are immediately connected both in time and circumstances with the increased expenditure of government; and we are warranted in concluding that the expenditure and consumption occasioned by the war have been the chief causes of the increased production during its continuance, and of the distress[43] that has prevailed since its termination."

As shown in Chapter Five [pp.226-230], both the theoretical aspect of Blake's Observations--which centered on Adam Smith's notion of the "increasing competition of capitals"--and his empirical assessment of the causes of wartime inflation and postwar

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[43]Blake recognized that if private consumption were to increase by an amount corresponding to the reduction in government spending, then no deficiency in aggregate demand would occur and only the pattern of final demand would be affected. He did not, however, believe that private consumption had increased to this extent after the war since "new tastes, new wants, and a new population" [(1823) p.58] had been insufficient to occasion such an increase.

distress seemed absurd to Ricardo. Considering that the Notes were written in response to these assertions, the excerpts from it, cited by Corry as evidence for the simplistic nature of Ricardo's theorizing, seem much less doctrinaire. In fact, his doubts about whether the increase of government spending during the War occasioned a rise of demand that was the sole source of wartime inflation are altogether reasonable. Moreover, Ricardo's rejection of the notion that the postwar reduction in government spending caused a chronic depression from 1815 to 1822 is obviously valid. Britain's economy recovered from the postwar depression by 1818 [see Chapter One], and it was known that the 1819-20 depression was caused by the sudden collapse in foreign export demand, not by a reduction in domestic consumption [see Liverpool's speech above, p.288]. What is more, the economy had been expanding since the third quarter of 1820, and, according to customs and excise reports, there had been an increase in the consumption of basic commodities of almost 25% from 1820 through 1823--a fact directly conflicting with Blake's claim that consumption was necessarily deficient, and that economic stagnation was inevitable without the stimulus of government spending. Thus, concerning Corry's criticism of Ricardo for accepting the "Treasury View", it is true that Ricardo denied Blake's claims about the effects of government spending on Britain's economy, but, interpreted in context, it is apparent that his statements were not based on a doctrinaire view of the law of markets.

3. Two Letters of 1817 on Relief Works.

Though Ricardo made few observations concerning the effects of relief works on labourers, two of his letters to Malthus broach the subject:

> I want to hear your opinion of the measure lately adopted for the relief of the poor. I am not one of those who think that the raising of funds for the purpose of employing the poor is a very efficacious mode of relief, as it diverts those

> funds from other employments which would be equally if not more productive to the community. [(3 January 1817) 7:116]
>
> [The present relief works take capital] out of the hands of those who know best how to employ it, to encourage industry of a different kind and under the superintendence of those who know nothing of the wants and demands of mankind and blindly produce cloth or stockings of which we have already too much, or improve roads which nobody wishes to travel. [(24 January 1817) 7:121]

Hutchison [(1953) p.89] cites these letters to show "how unhistorical it would be to defend Ricardo on the ground that he was concerned simply with the abstract implications of a pure hypothetical model. He applies the model unmodified to current political issues...commenting, at the beginning of 1817, on current policies of relief works". And Hollander [(1979) p.515], in his favourable treatment of Ricardo, found himself forced to admit that "Ricardo drew some clear policy deductions from the basic [full employment] assumption. Thus, in correspondence, the 'Treasury View' is stated in the following terms", and he repeats the excerpt shown above.

In actual fact, Ricardo's references to the "relief of the poor" had nothing to do with Government expenditure, but pertained to private relief efforts, funded by donation. (It was not until April 1817 that the Government proposed the century's first public relief works in the Employment of the Poor Bill [see Chapter One, p.57]; Ricardo's extant writings, however, contain no references to this Bill.) He believed that private works merely diverted funds from one employment to another, reasoning that if monies were not donated, the alternative was not hoarding, but investing or consuming, either of which would equally be a source of effectual demand for commodities.[44]

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[44]Ricardo's argument actually went further, for he suggested that the demand for labour was unaffected by private relief works--a claim requiring the additional assumption of uniform factor proportions. We have shown in Chapter Five [pp.203-205] that he recognized the importance of factor proportions when considering the effect on the demand for labour of changes in the pattern of

His position has considerable merit. Ricardo believed that hoarding only occurred during financial crises [see above, pp.286-7]. And he knew that in January 1817 there was no such crisis; to the contrary, the national economic situation was promising: country banks had weathered the crisis of 1814-16 and had returned to relative stability; landlords and farmers were prospering, with corn prices above 100s. per quarter; and within three months the commercial press would begin to report a general economic recovery. Based on the premise that hoarding only occurred during financial crises and on the fact that there was no current crisis, it follows that persons supporting charities in 1817 were drawing their funds, not from hoards, but from alternative uses. Thus Ricardo's conclusion regarding the ineffectualness of charitable donations can be sustained by a reasoning that does not require the assumption of Say's Identity.

Ricardo's observations on private relief works are also relevant for his analysis of government expenditure, insofar as he made no allowance for hoarding, but assumed that all income would be spent, whether in relief of the poor or by investing or consuming. By implication, tax-financed expenditures, which would have the same effect on households' wealth as donations, would not increase nominal aggregate demand since there would be a corresponding reduction in private expenditure. The inference is consistent with other passages where Ricardo expresses his belief that excise taxes and income taxes are usually paid by a reduction in household consumption,[45] not by drawing on cash balances. He based this conclusion on the quasi-empirical observation that households were loath to reduce their net wealth:

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final demand for commodities, but he did not state this assumption expressly when writing to Malthus.

[45]The fact that Ricardo made this assumption has been noticed by Roberts [(1942) p.258] and Sowell [(1974) p.67].

> The desire which every man has to keep his station in life, and to maintain his wealth at the height which it has once attained, occasions most taxes, whether laid on capital or on income, to be paid from income [consequently] If he had been required to pay 100l. as a tax on income, on wine, on horses, or on servants, he would probably have diminished, or rather not increased his expenditure by that sum. [1:153]

> If an individual were called upon to pay 1000l. to the income-tax, he would probably endeavour to save the whole of it from his income; he would do no more if, in lieu of this war-tax, a loan had been raised, for the interest of which he would have been called upon to pay only 50l. income-tax. The war-taxes, then, are more economical; for when they are paid, an effort is made to save to the amount of the whole expenditure of the war, leaving the national capital undiminished. [Funding System (1819) 4:187]

Ricardo concluded that an increase of tax-financed Government expenditure would not increase nominal aggregate demand, since any increase of Government spending would be offset by a corresponding decrease in private consumption. One could argue whether the assumption that taxes are paid by reduced consumption is empirically valid, but granted this premise, the internal logic of his argument does not require Say's Identity.

Ricardo's position on debt-financed public expenditure is less clear, but his analysis leaves open the possibility that debt-financed expenditure during a financial crisis would increase aggregate demand. He recognized that since Exchequer bills, gold and bank notes were highly substitutable assets, persons hoarding bank notes during panics[46] would be willing to exchange these notes for newly created Exchequer bills [Notes on Bentham (1810) 3:349]: "If the public [purchased Exchequer Bills in time of crisis], then was a portion of the circulating medium of the country which had been withdrawn from circulation [i.e. hoarded] again brought forth by the credit of government being pledged for the parties requiring relief." His insight allows for the possibility that, by the sale of Exchequer bills--that is, by

[46]Ricardo's allowance for the hoarding of gold and Bank notes has been shown above, p.286.

the issuing of Government debt--purchasing power would be transferred from private hoards to Government coffers. He does not complete the analysis by requiring that the Government spend the monies raised on Exchequer bills, thereby boosting aggregate demand, but this outcome is consistent with his allowance that Government intervention would reduce hoarding.

4. The 1819 Lords Resumption Committee.

At times in his testimony before the Resumption Committees, Ricardo implicitly assumed a full employment model. This poses a problem for authors sympathetic to him because he made the assumption even when addressing problems that seemed to originate in a deficiency of aggregate demand. Hollander [(1979) p.514] notes "Ricardo's formal adoption of the assumption of full use of capacity, despite his keen awareness of the existence of general unemployment of both capital and labour" in his testimony of 24 March 1819 before the Lords [DR, 5:434-438]:

> Question: Supposing we were to adopt a Plan which should annihilate the demand for 15 millions of our Manufactures, do you suppose that that Portion of Wealth would at all exist, in so far is it is composed of Manufacturing Labour?
> Answer: I think it would...
>
> Question: Do you mean to say that an extra Demand for the commodities of the Country would not produce any Increase in its Manufactures?
> Answer: I should very much doubt whether it would...
>
> Question: Will not a great Diminution of the Demand for Commodities prevent his obtaining those Advantages from his Capital, which a great Increase of the Demand for them would secure?
> Answer: It may, as far as regards the particular Commodity; but if there is less Production of one Commodity, the Production of another would in a Degree be encouraged.

Hutchison [(1952) p.74] also faults Ricardo in this passage, observing: "we have Ricardo giving us the Classical Law of Markets in action. It is quite impossible that he is simply concerned with an abstract 'model' or 'first approximation' in which he is excusably omitting to state explicitly all his simplifying assumptions. He is discussing economic policy with practical men in the depressed times of 1819." Hutchison's comments appear to have merit since Ricardo speaks about aggregate demand affecting only the pattern of final output but not its magnitude.

This reading of the text, however, is not sustained by the entire passage, which centered on Ricardo's Ingot Plan, not on the "depressed times of 1819". The Committee member questioning Ricardo estimated that if the Bank of England resumed payments in coin it would require a gold hoard of £18 millions, while if the Bank paid in bullion, only £3 millions would be necessary. During the time from the passing of the Resumption Act to the beginning of cash payments, the option of paying in coin would thus require a balance of trade surplus greater by £15 millions than Ricardo's Ingot Plan [DR, 5:433]:

> Question: Suppose we were to resume Cash Payments under a Plan which required that the Bank should provide themselves with only Three Millions of Treasure, would not there be a Demand for 15 Millions less of the Produce and Manufactures of this Country, than would be created by imposing on the Bank the Necessity of providing 18 millions?
> Answer: Yes, there would; but as we should export these Commodities without procuring a Return of any other which would contribute to our Advantage, the Gold would not be a very desirable Importation.
>
> Question: Would not the additional Demand for 15 Millions enrich our Manufacturers, who are the greatest Sufferers by the present State of the Circulation?
> Answer: In the same Way as if we were to throw those 15 Millions of the Manufactures into the Sea, which would also create a Demand for them.

Ricardo was surely correct in stating that a hoard of £18 millions would not "contribute to our Advantage", for since Britain had been running a balance of payments deficit for almost

two years, and since foreign export markets had just collapsed, only a devastating reduction in the money supply could have caused a balance of payments surplus of £15 millions.

He did not, however, pursue this line of reasoning, but, assuming full employment, argued that an increase in export demand would simply divert resources from the production of goods for home consumption. Had Ricardo been speaking of events in 1819, then his use of the full employment model clearly was irresponsible. However, if he assumed that cash payments would proceed according to the schedule outlined in the Resumption Act, and if he was considering events at some future date, then his assumption of full employment was not unreasonable. For the Act did not require the Bank to pay in cash at the ancient par until May 1823 and there was no reason for the Bank to build its hoard till 1821 or 1822, by which point the general economy was prospering [see Chapter Two].

Taken literally, Ricardo's testimony before the Resumption Committee appears inconsistent with his analysis of the 1819-20 depression. If it could be shown that his testimony referred to conditions in 1821 or 1822, then the inconsistency would disappear, but unfortunately, there is insufficient textual evidence to determine exactly what time period he had in view when stating that an additional demand of £15 millions would not raise domestic production.

5. Parliamentary Speech of 16 December 1819.

British manufacturing entered a severe depression following the collapse of key export markets in the Fall of 1818 [see Chapter One]. In Scotland, private contributions were raised to support the unemployed, but given the severity of the crisis, and since there were no Poor Rates to supplement private contributions, the funds of some regions were soon exhausted [(16 December 1819) Hansard 1s, 41:1217]. As a result, citizens of Renfrew county and of

Glasgow appealed to Parliament to provide further relief. (The southwestern counties Ayr, Renfrew and Lanark had been particularly affected by the depression, for in Glasgow, the chief city of the region, almost 60% of the families were employed in trade and manufacturing in 1819 [Digest (1833) 1:13].)

The Parliamentary debate surrounding the petitions is important from an historical perspective because it provides insight into the development of fiscal policy in the nineteenth century. For the student of economics, the debate holds additional significance, because of Ricardo's opposition to public relief for the distressed manufactures. He pressed the House against "employing capital in the formation of roads and canals" on the grounds that "the capital thus employed must be withdrawn from some other quarter" [(16 December 1819) 5:32]. Citing this text, Hutchison [(1952) p.75,76] concludes, "Here again[47] is Ricardo urging upon the House of Commons the obvious practical conclusion to be drawn from the Law of Markets, that public works could not possibly help to remedy depression...the doctrine against public works was, of course, eventually to become by 1929 'the orthodox Treasury dogma steadfastly held'". Hollander [(1979) p.515] also admits that Ricardo seems to adhere to a full employment model in this instance.[48]

To determine whether Ricardo accepted the "orthodox Treasury dogma" in this instance, it is important to consider the historical context in which his comments were made. Hutchison and others have overlooked the fact that the debate of 16 December was not concerned with fiscal policy in the modern sense. Rather, Parliament was considering whether to adopt a

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[47]The "again" refers to Ricardo's testimony before the Lords Resumption Committee, concerning the possible import £15 millions in bullion if the Bank of England restricted its notes, thereby causing a balance of payments surplus, in preparation for Resumption.

[48]Blaug [(1958) pp.76-77] claims that Ricardo's statements reflect his concern with the scarcity of capital and what has more recently been labelled "Marxian unemployment".

measure, such as the 1817 Employment of the Poor Bill,[49] in which Exchequer bills would be loaned to civil bodies--such as the city of Glasgow for which the Chancellor had already arranged a loan, conditional on "security for ultimate repayment"--that would then sell the bills, or use them as collateral to obtain loans, to finance "plans of artificial labour, such as the making of roads, &c" [Hansard 1s, 41:1217] to employ labourers displaced as a result of the reduction in foreign demand for British manufactures. Some account must also be taken of the fact that agriculturalists passed the year 1819 in relative prosperity and that investments were, at the time, being made in land and farming capital. Furthermore, it was acknowledged during the debate of 16 December that in the Scottish districts in question, distress was largely confined to the manufacturing populace. And finally, because unemployment in Scottish manufactures was the direct result of a decline in foreign demand--principally for textiles--there was the possibility that the crisis could end rapidly if foreign orders returned to normal levels.

Given these facts, there were reasons to expect that unemployed manufacturing labourers would be able to find work without public assistance, and that such assistance might actually interfere with their being "dispersed and engaged in other Pursuits", as Prime Minister Liverpool observed [Hilton (1977) p.83]. Hilton [(1977) pp.83,84] notes a contemporary bias against public works on the grounds that "they merely diverted resources from a more profitable private sector". And Ricardo appears to have shared this view, commenting that a loan of Exchequer bills to Lanark, Renfrew or Glasgow to finance public works would "withdraw [capital] from some other quarter". That his remarks were based on Say's Identity--thus expressing the "orthodox Treasury dogma"--is not as apparent as Hutchison suggests.

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[49]The precedent of 1817 was, in fact, cited to urge Parliament to "try the same experiment on the present occasion" [(16 December 1819) Hansard 1s, 41:1225].

For the textual evidence also supports an interpretation consistent with Say's Equality: that since the distress was largely confined to manufactures, labourers would relocate to other sectors, and that public works would only impede the necessary adjustment process.

In point of fact, foreign orders for Scottish goods increased sharply in the Spring of 1820, bringing the demand for manufacturing labourers in the vicinity of Glasgow back to normal within six months of the debates on public works in Parliament, as witness the June "Commercial Report" of the Edinburgh Magazine [p.579]:

> It is particularly gratifying to be able to state that the trade of this town continues in progressive improvement. Commercial men are gradually extending their business and are daily getting fairer prospects. Weavers for every kind of fine plain work are in considerable request. The wages of weaving are a little higher. [Reprinted from the Glasgow Paper]
>
> We again notice an improvement in the demand for British manufactures. The advices from Germany continue to announce large sales at the different fairs...the simultaneous orders from the West Indies, the United States and the Continent of Europe must have greatly lightened the home market. [Reprinted from the Glasgow Chronicle]
>
> Several manufacturing houses could employ many more weavers than they can find at the present prices. [Reprinted from the Glasgow Journal]

Taking into account the lag of several weeks, from the time Parliament began to consider relief measures to the point at which Renfrew and Lanark counties or the city of Glasgow hired more labourers, and the fact that Scottish manufacturers returned to normal production by mid-1820, it is doubtful whether public works were of much assistance to the unemployed manufacturing labourers. As to the merits of Ricardo's view, the revival of Scottish manufacturing, and the fact that certain industries never were depressed, support his position that public works merely employed resources that would otherwise have been employed productively elsewhere. At the very least, it must be recognized that the textual evidence for Hutchison's criticism is not as strong as he suggests.

V. Conclusion.

The chapter has examined whether Ricardo's monetary and fiscal policies, as alleged in much of the literature, were irresponsible and based on an ignorance of practical matters. We began by explaining the merits of his case for Resumption--principally, that returning to cash payments, as required by the Act, need not have involved economic hardships; and second, that it was imperative to implement legislation ending the Bank Restriction since the Government had repeatedly postponed the measure, allowing the Bank leeway to mismanage the currency. We next considered Ricardo's view of discretionary monetary policy, establishing that he supported intervention by the central bank in many instances. Our arguments dispute those of Arnon, who claims that Ricardo's case for discretion in the Plan for a National Bank (1824) constitutes a radical break with his earlier views on monetary policy. Concerning the duty of lender of last resort, we have suggested that it was not unreasonable for Ricardo to disassociate this responsibility from the activities of the central bank because the Exchequer, not the Bank of England, fulfilled the role. In National Bank he implicitly assigned lender of last resort duties to the Exchequer, and this, we explained, had considerable merit since the Bank had shown a tendency to mismanage the currency and even panic during severe crises.

Regarding fiscal policy, we demonstrated that Ricardo's general position on Government spending tells us nothing about his alleged use of Say's Identity, since he was primarily concerned with the issue of economic growth. In this context, he believed that Government spending was wasteful, and that it impeded the accumulation of capital and the growth of labour demand. The question whether additional government spending would increase short-run aggregate demand is addressed in only a few instances. Of these, the Notes on Malthus

and the Notes on Blake are most applicable. We have argued that Ricardo's responses to Malthus and Blake were valid given the nature of the internal debates and the historical context. I have likewise proposed interpretations of his other comments on fiscal policy that do not require the assumption of Say's Identity. I recognize that all aspects of an authors works may not be consistent, being written at different times and in various circumstances, and it may be that Ricardo's opposition to fiscal policy is at odds with his allowances, considered in Chapters Four and Five, for the non-neutrality of money, the possibility of hoarding, and the fact of unemployment. However, the textual evidence for my favourable reading is no less than for the critical interpretations by Hutchison and others. And Ricardo has, at the very least, been shown to be a better theorist and a more responsible policy advocate than many historians of thought have recognized.

Historical Appendix to Chapter Six:
The Exchequer as Lender of Last Resort, 1793-1825

A. Crisis of 1793.

The distress of 1793 began with the collapse of a speculative boom in foreign trade. The trouble soon spread to other sectors, bringing manufactures to a standstill. Not only was there widespread unemployment, but, because of a shortage of credit, 100 of 350 country banks were forced to stop payment [Smart (1910) 1:266]. Failing to intervene in the crisis, the Bank of England reacted as the country banks had done and "contracted its issues, raised its rate of discount and looked on unmoved at the rapidly increasing number of failures going on around it" [Andreades (1966) p.188]. The chartered banks of Scotland extended credit as far as possible but their capital was inadequate to the demand. As the situation became critical a director of the Royal Bank of Scotland, came to London to seek aid from the Government, warning that "if something is not immediately done by government a very general failure may be expected" [Parliamentary History (1793) 30:744].

Based on the precedent of a similar crisis in 1697, Sir John Sinclair and leading members of the London financial community, proposed that the Government loan, upon adequate security, Exchequer bills to merchants and financial institutions [Macleod (1902) 2:216]. The Exchequer bills were expected to substitute for currency and also to provide collateral for solvent businesses that were temporarily unable to obtain credit. A Select Committee considered Sinclair's proposal, approved of the measure [Parliamentary History (1793) 30:739-740], and recommended it to Parliament, which voted an issue of Exchequer bills to the amount of £5 millions to be made available to the public through the agency of commissioners in various cities.

At the time there were questions about why the Bank of England was not performing this function. Sir Philip Francis, in particular, "asked the chancellor of the exchequer for what reason the directors of the bank of England had not been invited to undertake the management and distribution of the relief proposed to be given to the commerce and credit of individuals" [Parliamentary History (1793) 30:759-760]. Pitt proved unable to offer a convincing response to the question, leading Fox to suggest that the Bank was unwilling to risk its capital: "It was not quite satisfactory to see that government were obliged to take up what the bank of England would not touch...He could not help again observing that the bank must have some strong reasons for refusing to discount in the usual way...Who could be more interested in the general credit of the commerce of the country than the bank of England?" [Parliamentary History (1793) 30:762-763].

Fox's observation was correct. The Bank was interested in credit and commerce, but only while its capital was secure. During the crisis of 1793, the Bank's Directors did everything in their power--apart from extending loans--to mitigate the shortage of funds. Of the "eminent persons in the city of London" who proposed the issue of Exchequer bills by the Government, four served at different times as the Governor of the Bank of England and one other was a Director.[50] Of the Commissioners who administered the loans of Exchequer bills

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[50]Samuel Bosanquet, Governor from 1789-1791 and a Director from 1771-1806.
Samuel Thornton, Governor from 1799-1801 and a Director from 1780-1836.
Benjamin Winthrop, Governor from 1802-1804 and a Director from 1782-1809.
Jeremiah Harman, Governor from 1814-1816 and a Director from 1794-1827.

Thomas Boddington, Director from 1782-1809.

The sources used to identify these men were the Parliamentary History (1793) 30:753 and Roberts and Kynaston (1995) Appendix 2.

on behalf of the Government, six had been or were to become Governor of the Bank.[51] In total eight former or future Governors of the Bank actively campaigned to see the Exchequer extend credit in its capacity as the lender of last resort. They were supported by other prominent figures including then Prime Minister Pitt, John Sinclair and Francis Baring.

The scheme was executed with more success than expected. The Commissioners for Exchequer loans received 338 requests for relief of which 49 were refused, 51 withdrawn and 238 granted, bringing the total advances to £2.2 millions [Andreades (1966) p.189].[52] The effect of these loans on the general state of credit was immediate. In a subsequent report on the action, the Commissioners noted that the loans of Exchequer Bills were attended "by a speedy restoration of confidence in mercantile transactions which produced a facility in raising money that was presently felt not only in the metropolis, but through the whole extent of Great Britain" [(1826) Hansard 2s, 14:719]. One of the Commissioners, William Manning, recalled the events of 1793 when supporting similar intervention by the Exchequer in 1826:

> A measure was adopted by government in 1793 with the happiest results--the distress at that time immediately subsiding. Government then proposed to issue Exchequer bills to the amount of £5,000,000 but it appeared from the report of the commissioners, that they never found occasion to lend more than £2,200,000. Originally they were applied to for advances to the extend of

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[51]Edward Darrell, Governor from 1787-1789 and a Director from 1767-1804.
Thomas Raikes, Governor from 1797-1799 and a Director from 1776-1810.
John Whitmore, Governor from 1808-1810 and a Director from 1786-1823.
William Manning, Governor from 1812-1814 and a Director from 1790-1831.

In addition, Samuel Bosanquet (see above) and Jeremiah Harman (see above) served as Commissioners, bringing the total number of Bank of England Governors to six. The sources used to identify these men were Parliamentary History (1793) 30:753,766 and Roberts and Kynaston (1995) Appendix 2.

[52]As an aside, of the 238 loans that were granted by the Commissioners in 1793, only two defaulted, leaving the Exchequer with profits of £4,348 [Andreades (1966) p.189].

> 3,855,624 but the parties who applied found relief in other quarters; for, the moment it was known that government had authorized an issue of Exchequer bills assistance was easily procured in various quarters. [Hansard 2s, 14:722]

It was to this event that Ricardo later referred [3:349]: "If the Bank had been more liberal in their discounts at that period, they would have produced the same effect on general credit as was afterwards done by the issues of Exchequer bills." He can have been no less informed about the subsequent crisis, in 1811, when there were renewed calls for the Exchequer to intervene and support private credit.

B. Crisis of 1810-11.

The depression of 1810-11 began with another reversal in foreign trade after war in Spanish South America disrupted exports to that region, while at the same time Napoleon strengthened the Continental System and closed all ports--except those on the Peninsula--to British goods. In an appeal to Parliament for intervention by the Exchequer in March 1811, Prime Minister Perceval related how "the distress originating with the merchant and disabling him from paying the manufacturer was felt most severely by the manufacturer and those employed by him. All the principal manufacturers had been compelled to contract, and some wholly suspend their works...[this] produced a general want of confidence and suspension of credit" [Cobbett's Parliamentary Debates (1812) 19:329]. He appointed a Select Committee on the State of Commercial Credit to inquire into the nature of the crisis and to suggest possible remedies. At the close of its investigation, the Committee recommended another loan of Exchequer bills to restore private credit and in so doing appealed to the precedent of 1793: "That your Committee are warranted in stating, that there appeared a general concurrence of opinion amongst those of the witnesses who were examined as to the expediency of affording parliamentary relief in the manner in which it was afforded by the

issue of exchequer bills in the year 1793, although there was some difference as to the extent of benefit which might be expected to be derived from such relief" [Cobbett's (1812) 19:257].

In 1811, as in 1793, the charted banks of Scotland intervened to support credit but their assistance was limited "as they had their capital already locked up in an immense number of bills, the payment of which was suspended" [Cobbett's (1812) 19:255]. The Bank of England was well positioned to provide assistance but refused. Huskisson [Cobbett's (1812) 19:338] remarked on the Bank's apparent neglect of duty, but apart from his observation, no one in Parliament--and notably no economist[53]--suggested that the Bank should undertake the responsibility of lender of last resort. Of the economists in Parliament, George Rose and Lord Liverpool defended the Select Committee report. Henry Thornton also supported the Committee, though he urged that "the manufacturers should be the persons chiefly benefited by the proposed measure" [Cobbett's (1812) 19:420]. Even those economists[54] who opposed the recommendation of the Select Committee--on the grounds that further extensions of credit would not alleviate the crisis since the speculative boom was originally permitted by monetary expansion--implicitly acknowledged the role of the Exchequer as the lender of last resort.

C. Minor Events Showing the Same Principle.

The understanding that the Exchequer was the ultimate source of liquidity in England continued into later years. A loan of exchequer bills were made in 1817, for example, to "give relief where there was a temporary deficiency of credit", according to Vansittart

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[53]"Economists" as listed in Fetter (1980) Appendix III.

[54]Four economists were notable for their opposition in Parliament to the measure: William Huskisson, Lord King, the Marquis of Lansdowne and the Earl of Lauderdale.

[Hansard 1s, 36:571]. After the agricultural depression began in 1820, Lord Liverpool stated that "not a month passed at that time that he was not beset with the most urgent applications for relief by the issue of Exchequer bills as had been previously granted during the existence of commercial distress" [Hansard 2s, 14:464]. Again, the Government did not ask the Bank of England to intervene in the agricultural depression, though Liverpool promised that "if the Bank did go into the market and purchase Exchequer bills for the purpose of affording relief to the public" the Government would repay to the Bank part of its unfunded debt to prevent the Bank "from experiencing any inconvenience" by its intervention [Hansard 2s, 14:465].

Because of the Irish banking crisis of 1820, a further appeal was made to the precedent of 1811, in petitions seeking the aid of Government credit. The Government of Ireland responded favourably [Journal of the House of Commons (1820) p.936], as did the British Parliament, which made available £500,000 in exchequer bills to relieve the crisis.

D. The Crisis of 1825-26.

Not until 1826 did the Government begin demanding that the Bank of England assume some responsibility as the lender of last resort. This policy reversal occurred in the wake of a financial panic in 1825 that resulted from yet another crisis in the South America trade. In the speculative frenzy leading to the crisis of 1825-26, and in the subsequent depression, the Bank's administration of the money supply had been wholly irresponsible. The Bank allowed its note issue to increase freely in 1824, following its traditional policy of discounting, at a fixed rate of interest, all real commercial bills that were brought to it. The error of this policy became apparent in early 1825 as the Bank's hoard began to disappear. In an attempt to save its hoard, the Bank contracted its note issue by £3.5 millions from March to November 1825. This occurred at the height of the financial distress [Hansard 2s, 14:454], contributing to the

failure of 37 country banks in 1825 and 22 more in 1826.[55]

In the debates concerning how to alleviate the crisis, some in Parliament--including many economists[56]--appealed to the success of issuing Exchequer bills in 1793 to suggest a similar policy in 1826 [Hansard 2s, 14:418,421-422,482]. From without Parliament, a Petition of Merchants of London [Hansard 2s, 14:698-700] asked for relief "by an issue of Exchequer bills as on former occasions of a similar character." Liverpool refused this petition and the appeals in Parliament on the grounds that this would encourage further petitions for relief during future crises. He also noted that there was no reason for the Exchequer to intervene since the Bank of England already had the legal authority and financial means to function as lender of last resort: "Why was a new law to be passed creating the government and people into a sort of new bank for that purpose when there was already an existing law and an existing Bank competent to do the identical thing?...there was actually existing a body by law capable of giving all the relief expected or desired...[and] he could not comprehend why government was to place itself in the situation of a public banker for a purpose that any existing banking establishment might effect" [Hansard 2s, 14:708-709].[57]

The statement was not welcomed by Bank Directors. In the Commons on 23 February 1826, Alexander Baring, John Pearse and William Manning--all Bank Directors [Roberts and Kynaston (1995) pp.262-263]--mounted fierce opposition to the Prime Minister's proposal [Hansard 2s, 14:710-724]. In response to their objections, Canning reiterated the Government's position that it would not extend any aid in the form of Exchequer bills.

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[55]"Country Banks Becoming Bankrupt since 1816," Parliamentary Papers (1826) 22:10.

[56]Mathias Attwood, Alexander Baring, Henry Brougham, Lord Bexley (Vansittart) and the Third Marquis of Lansdowne (Henry Petty-Fitzmaurice).

[57]The Exchequer did offer, however, to purchase £300,000 in Exchequer Bills to help provide liquidity [Digest (1832) p.265].

> There is but one proper remedy for the distress; I say plainly and openly but one, and that is, the exercise of the power vested by charter in the Bank to make advances upon the security of property or merchandise, to those who may require them....It is in the power of the directors of that company to say they will not; and they have said they will not. They have refused to make advances upon those deposits which may be offered to them, and have called tonight upon his majesty's ministers to supply that assistance to the country which they refuse, upon grounds, of which it may be said, stet pro ratione voluntas, but which I contend, they have full power to grant, when required. We have considered it our duty to deny the assistance claimed from us; and it will remain now to be determined what means are left to meet the exigences of our situation. [Hansard 2s, 14:727-728; emphasis added]

In the days following this debate there were negotiations between the Government and the Bank which resulted in the first official acknowledgement by the Bank of some responsibility as the lender of last resort. On 28 February 1826, Robinson, then Chancellor of the Exchequer, announced the outcome of the negotiations:

> A communication had taken place between his majesty's Government and the Bank for the purpose of ascertaining how far that body would be disposed to extend relief to the existing depression in the trading, commercial, and manufacturing interests of the country, by such a departure from their ordinary rules and practice as would be involved in the principle of advancing money on the security of goods. And in answer to the communication he was able to state that the Bank had expressed their acquiescence in the principle and had now under their consideration the best means of giving effect to such intention. [Hansard 2s, 14:920-921]

This announcement was met by a storm of protest. Pearse and Manning, speaking on behalf of the Bank, immediately countered that the Bank "had consented to waive their own opinions" only at the insistence of Government and because of the national distress [Hansard 2s, 14:922,924]. They were supported by Brougham, who considered the Bank operating as the lender of last resort to be as "contrary to all the true principles of banking as any measure could possibly be" [Hansard 2s, 14:927]. Further attacks were launched by Francis Burdett on grounds that the Government's proposal violated establish precedents in favour of a novel

scheme ill-calculated to restore commercial confidence since "all the merchants of the country thought that the most effectual relief which could be administered to them would be by an immediate issue of Exchequer bills" [Hansard 2s, 14:925]. Many other members also voiced opposition to the measure.

The Government's insistence is curious but it may, in part, have been due to the success of the Scottish Banking system as compared to the system in England. The chartered banks of Scotland actively supported other banks in their region [Hansard 2s, 14:478], with the result--and this was stated by Peel in the debate--that since 1793 there had been only one Scottish Bank failure as compared with hundreds in England [Andreades (1966) p.253-254].[58] Regardless of its reasons, the Government managed to force the Bank of England to accept a greater policy role, though Fetter [(1965) pp.118-120] notes that the Bank failed to fulfil its obligations as agreed in the negotiations in 1826. And afterward, the Bank successfully freed itself from any obligation to exercise discretionary oversight by attaching a 100% marginal reserve ratio to the 1844 Bank Charter Act.

[58]Scottish banks were famous for their stability. Lord Londonderry even stated that, from 1702 to 1822, not one bank failure had occurred in the whole of Scotland [Hansard 2s, 7:162]. He may not have counted the Ayr Bank in this calculation since its financial obligations were ultimately met, even though the Bank stopped payment.

Conclusion

The preceding chapters confront the tendency in the literature to criticize Ricardo's macroeconomics, specifically his knowledge of contemporary events, his analysis of postwar crises, and his monetary and fiscal policies. To this end, the historical introduction in Chapters One and Two is critical, for it dispenses with the traditional view that the postwar decade was a period of chronic depression caused by underconsumption and, to a lesser extent, by monetary contraction associated with the 1819 Resumption Act. Chapter Three completes the foundation of our study by showing that Ricardo was well informed regarding Britain's economic and political situation. That he used this knowledge as a basis for his analysis of contemporary events is established in Chapters Four and Five, which chapters undermine the view that his treatment of postwar crises was merely a rationalization of the crude quantity theory and the strict law of markets in the face of overwhelmingly contradictory evidence. Chapter Six argues the merits of his monetary policies, particularly his insistence on the gold standard as a means to curb abuses by the Bank of England and the Government, which together were responsible for gross mismanagement of the currency. The chapter further examines whether Ricardo accepted the "Treasury View", and whether his position implies adherence to a doctrinaire version of Say's Law. It is possible that his statements on fiscal policy are inconsistent with his allowances for hoarding, the non-neutrality of money, and unemployment, but I have proposed alternative readings of his policy statements that do not require the assumption of Say's Identity. I admit that the textual evidence on the issue is mixed, but there is at least as much support for my interpretation as for the critical view. And even if Ricardo did assume full employment and something like Say's Identity when opposing public works, this cannot be taken as the sum total of his

macroeconomic theory when other passages demonstrate a more sophisticated analysis.

My conclusions differ from those of authors critical of Ricardo largely because I have adopted a methodological approach to the history of economic thought that differs from theirs. My methodology has no merit of originality, but it does incorporate two tenets of sound scholarship: first, that primary texts should be interpreted in an accurate historical context; and second, that textual exegesis involves more than piecing together scattered quotes, but should entail the interpretation of an author's complete position. These tenets, along with their implications for my study of Ricardo, are discussed below.

I. The Historical Context.

My attention to historical detail provides the background for the re-assessment of Ricardo's analysis of postwar events in Chapters Four and Five, leading to my refutations of Peach's claim that Ricardo "blamed reality for not conforming to the model" and Stigler's remark that his predictions of economic prosperity were "continuously wrong". I instead showed that his analysis, when viewed in totality and when compared with actual events, reflects both an awareness of Parliamentary and private information and keen insight into the causal relationships between economic shocks and current crises.

A. The Validity of Ricardo's "Misallocated Capital" Argument.

Of particular importance is our rehabilitation of Ricardo's "misallocated capital" explanation of postwar crises, which can no longer be dismissed as a mere rationalization of the law of markets. For, in the first place, the transition from wartime to peacetime production was of sufficient magnitude to require at least two years (1815-17), as Ricardo allowed. Also, by documenting the surge in agricultural investment from the Spring of 1816

through 1819 and the revival of foreign trade and domestic manufacturing in 1817 and 1818, we have established that there were profitable industries that were attracting capital in 1816 and 1817. We have similarly undermined the view that Ricardo explained economic conditions after 1819 in terms of capital adjustments from wartime to peacetime industries; his remarks about misallocated capital actually pertained to the speculative investments in certain branches of foreign trade from 1818 through 1820, and to the inevitable transfer of resources from agriculture to manufacturing. A comparison between Ricardo's observations and actual events corroborates his analysis. For that vast quantities of home goods were exported in 1818 and early 1819, and that foreign markets collapsed in late 1818, is incontrovertible, as is the fact that the enormous harvest of 1820, combined with high Irish imports, caused a continuous fall in corn prices from October 1820 through 1822. And finally, we have shown that Britain's foreign trade and domestic manufacturing expanded steadily from mid-1820 through 1825. Each of these historical facts validates Ricardo's observations about capital adjustment.

B. Ricardo's Empiricism vis-à-vis Smith and Malthus.

As Hollander [(1987) p.70] has observed, the tendency in the literature to assume that Ricardo thought only in terms of long-run equilibrium states has fostered the perception that he was an "irresponsible applied economist who neglected time lags" and "transition" periods, unlike Smith, who has generally had good press in this regard. Our study shows that Ricardo's analysis of the problems of postwar transitions refutes the criticisms of his empiricism and his alleged neglect of short-run phenomena, particularly as he has been contrasted unfavourably with Adam Smith. Smith summarized the transition process after the Seven Years War in the following terms [Wealth of Nations (1937|1776) 1:434]:

> By reduction of the army and navy at the end of the late war, more than a hundred thousand soldiers and seamen, a number equal to what is employed in the greatest manufactures, were all at once thrown out of their ordinary employment; but though they no doubt suffered some inconvenience, they were not thereby deprived of all employment and subsistence. The greater part of the seamen, it is probable, gradually betook themselves to the merchant-service as they could find occasion, and in the meantime both they and the soldiers were absorbed in the great mass of the people...Not only no great convulsion but no sensible disorder arose from so great a change in the situation of more than a hundred thousand men...The number of vagrants was scarce any-where sensibly increased by it, even the wages of labour were not reduced by it in any occupation, so far as I have been able to learn, except in that of seamen in the merchant service.

His analysis is essentially correct, for though there was a brief financial crisis in the Summer of 1763 [Anderson (1801) 4:8], general conditions were prosperous. The smaller scale of the transition in 1763, as compared to 1815,[1] coupled with the fact that foreign export demand increased rapidly from 1762 to 1764, whereas it collapsed in 1815 and 1816, contributed to the ease of adjustment. (There was considerable political agitation in London in 1763, complete with "fury, tumult, disorder and virulent libels" [Annual Register (1763) History 34-40], but this was owing to Parliament's passing the "cyder excise", not to a commercial depression.)

It is difficult to identify what "important empirical dimension" of Smith's work is absent from Ricardo's interpretation of similar events. At least in their analyses of postwar adjustments, Ricardo's observations seem no less empirical than Smith's, and a comparison of

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[1]The magnitude of the transition after the Seven Years War was, in relative terms, about half as great as after the Napoleonic War: In 1764 Britain's national income was approximately £130 millions [Dean and Cole (1967) p.156], and annual War expenditures were £18.6 millions [The London Magazine (March 1763) p.142], or 14% of national output. In 1814 Britain's national income was about £300 millions [Dean and Cole (1967) p.156], and the Government that year spent a combined £70 millions (23% of national output) on the military and on subsidies to Allied Powers [Digest (1833) Vol.1, Statement No.3]. In terms of the numbers of people involved, 410,000 troops were demobilised over a period of three years after the Napoleonic Wars, whereas, according to Smith, 100,000 men were suddenly demobilised in 1763.

their work does not sustain the criticisms, noted in the Introduction [pp.4-5], by O'Brien and Coleman.

. . .

The Introductory chapter reported the widespread view that Ricardo's macroeconomic model consisted of little more than a crude quantity theory coupled with Say's Identity, but that the simplistic nature of the model gave it such wide currency as to require, according to Joan Robinson [(1978) p.14], "the whole force of the Keynesian revolution to overturn it". More recently, Henderson [(1997) p.30] has stated that Ricardo's formulation of the neutrality of money "became almost a truism of economic reasoning, until Keynes threw it over in the General Theory." The references to Keynes are noteworthy, for he, perhaps more than any other commentator, was responsible for popularizing the negative view of Ricardo in contrast with Malthus [Keynes (1933) p.122,141,144]:[2]

> It was Ricardo's more fascinating intellectual construction which was victorious, and Ricardo who, by turning his back so completely on Malthus's ideas, constrained the subject for a full hundred years in an artificial groove.
>
> The almost total obliteration of Malthus's line of approach and the complete domination of Ricardo's for a period of a hundred years has been a disaster to the progress of economics.
>
> If only Malthus instead of Ricardo had been the parent stem from which nineteenth-century economics proceeded, what a much wiser and richer place the world would be today! We have laboriously to re-discover and force through the obscuring envelopes of our misguided education what should never have ceased to be obvious.

[2]His view, however, was not uncharacteristic of the period. Dennis Robertson wrote to Keynes, saying that he never read Ricardo [Keynes (1973) 13:504]. John Hicks, similarly, mentioned that he "restrained his interest in the history of theory" to authors writing after 1870 [Keynes (1973) 14:81].

Apart from the scope of his influence, Keynes' analysis is important because it illustrates the pitfalls of writing intellectual history without first becoming acquainted with the historical facts at issue. His bias towards Malthus, for example, was based on the alleged superiority of Malthus' methodology, which centered on "handling practical economic problems", especially those related to postwar distress. Keynes even went so far as to describe Chapter VII of Malthus' Principles as "the best economic analysis ever written of the events of 1815-20", in contrast with Ricardo, who failed "to see any significance in [Malthus'] line of thought" [(1933) pp.146,147]. It is interesting to note that, in contrasting Malthus and Ricardo, Keynes assumed that the postwar era was characterized by chronic unemployment stemming from a deficiency of aggregate demand. This perception undoubtedly affected his reading of the classical economists, as is suggested by Klein's [(1961) pp.125-126] description of the "profound inspiration" afforded Keynes by Malthus:

> The break between Keynes and his contemporaries can be likened in many ways to the dispute which occurred after the Napoleonic Wars between Malthus and Ricardo. The issues in each case were essentially the same. Malthus and, later, Keynes wanted to replace Say's Law with a theory of effective demand...Like the Keynesian Revolution, Malthus' contribution to the problem of unemployment was a product of his times [for] following the wars was a period of great unemployment and depression without a very rapid recovery...Malthus was impressed, as were so many economists in the recent interwar period, by the contradictory phenomenon of poverty in the midst of plenty. The prevalent unemployment was all the more a problem since it was unnecessary. The economic resources were available and the population desired the fruits of the employment of these resources. But Malthus saw something that those preoccupied with Say's Law could not possibly see, namely, that while the people desired to consume they did not demand effectually to consume..As is well known, Say, Ricardo, and Mill held that a general glut of the market could not occur.

Contrary to the mis-perceptions of Klein, and Keynes before him, we have shown that postwar economic crises did not result from a failure of domestic consumers to "demand effectually", nor was there chronic unemployment. We thus portray Ricardo as a more

practical economist than Malthus, for while Malthus treated the entire period from 1815 to 1823 as one protracted crisis, Ricardo made a clear distinction between the first and second periods of general depression. And whereas Malthus held quasi-empirical opinions--about the effects of low corn prices in 1815, for instance, or the lack of "wants and tastes" for commodities in 1820--Ricardo's analysis was decidedly empirical. Based on Government tax abstracts he determined that the fall in corn prices in 1813 and 1814 had not reduced aggregate economic activity, but as he informed Malthus, "the revenue has been uncommonly productive", indicating continued economic expansion. Again in 1820, in response to Malthus' query about the supposed absence of profitable industries [(1820) pp.333-4,498-9], Ricardo's claim that capital was misallocated had a factual basis since certain manufactures were booming by mid-1820, and since excise reports from 1817 to 1820 reveal a steady rise in domestic consumption. It is difficult to determine how his evaluation of Ricardo and Malthus might have differed had Keynes possessed a broader knowledge of nineteenth-century economic history, but certainly he could not have penned a sweeping condemnation of Ricardo's alleged lack of empiricism, nor so strongly lauded Malthus' supposedly "practical" analysis of postwar events.

C. Ricardo's Monetary Policy.

1. His Support for Resumption in 1819.

My attention to historical facts also vindicates Ricardo's support for the Resumption Act in 1819, since his proposal did not require monetary contraction during a depression period, but instead promised to end the monetary instability that began in 1810 and progressively became worse as the Exchequer and the Bank together mismanaged the money supply. Secondary authors who argue that Ricardo was "oblivious to the influence of monetary

policy" or that he "denied the damage of deflation" in his support for Resumption have not fully appreciated the requirements of the Act--which did not necessitate monetary contraction until late 1820 or even 1821--nor have they taken into consideration the fact that the 1819-20 depression ended by the third quarter of 1820. Furthermore, authors critical of Ricardo seem unaware of the fact that the Bank of England had almost completed its return to cash payments in 1817, but that its efforts were then obstructed by the Exchequer in an attempt to maintain the fictitious sinking fund. Furthermore, the literature neglects that though the Government was required by law to end the Bank Restriction six months after the Treaty of Peace and Amity in November 1815, it repeatedly reneged on its commitments to restore cash payments, permitting further monetary instability. Each of these historical facts sustains Ricardo's proposal to resume cash payments, which was the only reasonable course in the circumstances.

2. The National Bank Proposal.

Criticism of Ricardo's failure to mention the service performed by the Bank of England as the lender of last resort in his Plan for a National Bank, has been shown in Chapter Six to be unfounded on three counts: First, as early as 1810, he expressly stated that the Bank might, in principle, assume this duty. Second, in actual fact, the Exchequer, not the Bank, functioned as lender of last resort. And finally, his decision, implicit in National Bank, to retain the Exchequer as the ultimate source of liquidity was reasonable since it ensured the supply of credit during financial crises, but did not entrust the central bank with additional responsibilities--a prudent course given the Bank's irresponsible management of the currency.

D. Ricardo's Fiscal Policy in Historical Perspective.

Ricardo opposed public expenditures--apart from investments in infrastructure--mainly on the grounds that Government spending, financed by current or deferred taxation, was likely to impede capital accumulation and thus slow the rate of growth of labour demand. Secondary authors have cited Ricardo's position on public expenditure as evidence that he accepted a strict version of the law of markets. This is not a valid inference, however, because his opposition to public spending derived from a long-run concern with economic growth and indicates nothing about whether he accepted the implications of Say's Identity for fiscal policy.

There are, however, certain passages in his Works, rehearsed in the literature, that pertain to the short-run effects of public spending on aggregate demand. As for the Notes on Malthus and Notes on Blake, we have shown that, while Ricardo understood the arguments presented by his contemporaries and their implications for fiscal policy, he rejected on empirical grounds the policy conclusions in Malthus' Principles and in Blake's Observations. Since domestic consumption was rising, he could not agree with Malthus that underconsumption was likely and that general stagnation would be chronic unless the Government raised taxes and boosted public spending. Similarly, he recognized the inaccuracy of Blake's assertions that inflation during the Napoleonic conflict resulted entirely from war expenditures and that, after the War, the reduction in Government spending, combined with a deficient domestic consumption, caused an eight-year depression. He was also unpersuaded by Blake's conclusion, based on Adam Smith's "increasing competition of capitals" thesis, that underconsumption was inevitable without high public expenditures.

The section on fiscal policy considers additional documents that have been assumed to imply Ricardo's adherence to Say's Identity. I question this view, suggesting alternative

readings that do not require a strict version of the law of markets. There is not, unfortunately, sufficient textual evidence to establish which interpretations are appropriate, and I admit that Ricardo's opposition to fiscal policy may not be entirely consistent with his allowances for non-neutral monetary shocks, hoarding and unemployed resources. This would not, however, invalidate our conclusion that Ricardo was a relatively more sophisticated theorist and responsible advocate of policies than critics allow, for a fair assessment of his complete position cannot be based on a few (possibly) extreme passages.

II. A Further Point Regarding Textual Exegesis.

The preceding section alludes to what I consider an important characteristic of sound scholarship, namely, that an author's works should be interpreted in their totality, rather than piecemeal. The consequences of interpreting some documents while ignoring others are illustrated by the contrast between the selective readings of Ricardo that ignore his correspondence and his Parliamentary speeches and Hollander's Ricardo (1979) that emphasizes the importance of his correspondence, speeches and pamphlets, thereby demonstrating a sophistication of analysis not always found in the Principles of Political Economy and Taxation. By focusing on the Principles, critics have also overlooked the wealth of empirical knowledge--described in Chapter Three--evident in his correspondence, pamphlets, and Parliamentary speeches.

As with the Principles, Ricardo's High Price of Bullion has been commonly cited--again without reference to his other statements on money--as proof that he was an extreme bullionist, and that, through his influence on the Currency School and the 1844 Bank Charter Act, he hampered central banking in England for the better part of the century. In response,

we have shown that the Economical and Secure Currency presents a case for discretionary monetary policy to counteract credit shocks. His policies differed greatly from those contained in the 1844 Act, not only in his allowance for discretion, but in his refusal to tie banknotes directly to gold. Regarding the criticism of Ricardo as an extreme bullionist, we have demonstrated the strength of his case for convertibility, even in the event of an external drain, for the only other option was that of leaving the Bank to manage the currency with no restraints--a policy that had patently encouraged monetary instability.

III. The Role of Primary Sources.

A final methodological point concerns the advantage of writing economic history on the basis of primary sources, as opposed to repeating assumed histories contained in the literature. Because I found no account of the postwar years that was sufficiently detailed for my research, I was forced to write one from "scratch", as it were, beginning with Parliamentary reports and contemporary periodicals and tediously reconstructing British economic history from 1813 through 1824. An unexpected benefit of writing my historical background in this way, however, was that I became aware of many documents, relevant to Ricardo's work, but unknown to other historians of thought. These auxiliary sources proved important since, being acquainted with their contents, I was able to recognize significant aspects of Ricardo's work that would have been indistinguishable if read in isolation.

Concerning Ricardo's analysis of postwar events, there were, first of all, his many references to Parliamentary tax reports, and their use as surrogate national income statistics. Ricardo refers to fiscal reports on several occasions, justifying his analysis of current events to Malthus [(17 October 1815) 6:304], Mill [(9 July 1821) 9:13] and others, particularly his

belief that the agricultural depressions of 1813-16 and 1820-22 had not caused a decline in general economic activity. I would have been oblivious to these references were it not that the Report of the Finance Committee of 1817, Peel's reports as Home Secretary in 1822 [Hansard 2s, 7:1014] and 1823 [Hansard 2s, 9:925], and certain speeches by Lord Liverpool,[3] all expressly indicate that tax data were used to approximate changes in national income. Having read these documents, especially the 1817 Finance Report, I began to search for similar references in Ricardo's correspondence, and, finding several, I was able to determine both his sources of knowledge concerning aggregate economic activity and how he applied this knowledge to his analysis of postwar crises.

Of perhaps equal importance is a passage in the Annual Register for 1793, describing a Parliamentary debate in which the younger Pitt urged that £5 millions in Exchequer bills be issued "to support the general commercial credit of the country" during the current financial crisis. Because the account included no references to the Bank of England and what I assumed were its obligations as lender of last resort, I searched Hansard to find Parliament's response to similar commercial crises in 1811 and 1825. The results of this search are contained in Chapter Six, which defends Ricardo's omission of any reference to the Bank of England as lender of last resort. It is noteworthy that reputable authors such as O'Brien and Sayers [Introduction, p.10] have criticized Ricardo in this regard, failing to recognize that the Exchequer had historically been the lender of last resort.

The reports of the Poor Law Committees of 1817,1818 and 1819, combined with Lord Grenville's speech concerning "temporary" and "permanent" causes of economic distress, provided the background for what I consider a third significant insight concerning Ricardo's analysis: the fact that he developed separate explanations for what were considered short-run

[3]Notable are speeches on 26 May 1820 and 26 February 1822.

and long-run aspects of the postwar depressions. Prior to reading Grenville's speech I had assumed, based on Hollander [(1979) pp.516-19], that Ricardo vacillated from one explanation of economic hardships to another, at times blaming capital relocation, but in other instances attributing postwar crises to a disproportion between labour and capital. My mistake in this regard did not become clear until I read Lord Grenville's speech of 30 November 1819, in which he attributed the current distress to "temporary causes", as well as to those of a "more permanent view". Knowing that Ricardo approved of Grenville's analysis,[4] I reread his treatment of the 1819-20 depression and found the same parallel analyses of short-run and long-run aspects of the crisis. The reports of the Poor Law Committees of 1817, 1818 and 1819 confirmed my revised interpretation of Ricardo, for the Committees described "permanent" causes of economic distress in terms identical to those found in Ricardo's correspondence and in his early Parliamentary speeches.

A further benefit of focusing on primary sources was that I was able to evaluate the credibility of the documents on which my historical account was based. This is often not possible when reading secondary works because authors seldom address the validity of their sources, at times stating as fact what may only have been the perception of some historical figure. The point is well illustrated by the wage indices in Mitchell [(1971) pp.346-351], which are based on the nineteenth-century work of Bowley and Wood, but are presented without caveats regarding the sources of information used by them. Without reading Bowley's (1899) article on agricultural wages in England and Scotland, for instance, it is not apparent that the figures appearing in Mitchell derived ultimately from a montage of sometimes crude wage estimates, beginning in 1777. This is not to dispute the merit of Bowley's and Wood's research, but modern authors who cite Mitchell as a source should be

[4]See Ricardo's letter of 10 January 1820, reprinted in Heertje (1991) p.523.

aware that the data are not as pristine as they appear.

This has great importance in reconstructing historical events. Concerning the labour market, for example, Mitchell's [p.349] data indicate that wages were stable from 1814 through 1820; wages in cotton manufactures particularly are stated to have fluctuated less than 2% over the entire period. In contrast, my account in Chapters One and Two, based on the contemporary business reports, shows that wages fluctuated greatly, depending on the demand for cotton exports, and depicts a much more dynamic labour market with wages very responsive to unemployment.

IV. Concluding Remarks.

By interpreting the whole of Ricardo's works in an accurate historical context, I have shown that he was a far more empirical and sophisticated economist than historians of thought have recognized. I have further demonstrated that he was well informed about contemporary economic and political events and that this knowledge guided his analysis of postwar crises. With respect to public affairs, it is my position that Ricardo's monetary policies were highly responsible, particularly his proposal to reinstate the gold standard, which curbed the Bank's ability to mismanage the currency yet did not deprive the Bank of all discretionary powers and did not require any monetary contraction during the depression of 1819. His opposition to expansionary fiscal policy may be seen to conflict with the general argument, but I have suggested interpretations of his statements regarding public spending that do not require the assumption of a doctrinaire law of markets. And, in any event, two or three possibly extreme passages do not invalidate the conclusions as to the general merits of Ricardo's analysis and the reasonableness of his policies.

LIST OF APPENDICES

Appendix E: Public Finance

Appendix F: Wage Indices.

Appendix G: A List of Economic Articles (Arranged by Topic) in the Periodicals Read by Ricardo.

Appendix H: A Timeline to Accompany the Economic History Chapters.

Appendix A.1
Account of the circulation of Bank of England notes and post bills (monthly)

Date	Circulation (£)	Date Reported	Source
January 1813	24,390,140		
February	24,180,620		
March	23,294,790		
April	23,977,870		
May	24,471,880		
June	24,524,320		
July	23,908,500		
August	24,167,700		
September	23,964,310		
October	24,314,220		
November	24,172,710		
December	24,395,810		
January 1814	23,671,420		mf#15.68
February	25,174,860		pp (1813-14) 12:119
March	24,976,750	March 30, 1814	hcj (1813-14) p. 825
April	24,664,030		
May	26,172,760		
June	25,518,970		
July	25,901,880	July 21, 1814	hcj (1813-14) p. 826
August	29,483,480		
September	29,202,040		
October	28,336,720		
November	27,857,290		
December	28,161,020		mf#16.57
January 1815	27,549,120	Feb 13, 1815	pp (1814-15) 10:223
February	27,324,510		
March	26,969,580		
April	25,631,030		mf#16.58
May	27,568,310	May 30, 1815	pp (1814-15) 10:291
June	27,232,310		
July	27,296,540		
August	27,673,070		
September	27,290,940		
October	27,388,370		
November	26,213,690		
December	25,750,550		
January 1816	25,032,020		
February	26,816,240		
March	26,692,680		
April	26,401,820	April 29, 1816	pp (1816) 13:385 mf#17.77
May	26,931,680	June 20, 1816	pp (1816) 13:421 mf#17.78
June	25,355,390		
July	25,600,740		

Appendix A.1
Account of the circulation of Bank of England notes and post bills (monthly)

Date	Circulation (£)	Date Reported	Source
August 1816	27,619,890		
September	26,366,010		
October	25,479,980		
November	26,663,990		
December	25,342,450	Feb 18, 1817	pp (1817) 17:25,29 mf#18.83
January 1817	24,959,690		
February	27,703,780		
March	27,182,580		
April	26,984,050		
May	28,351,000	July 1, 1817	pp (1817) 17:43 mf#18.83
June	26,449,790		
July	25,800,260		
August	30,920,360		
September	28,938,560		
October	28,925,910		
November	29,658,950		
December	28,465,490		
January 1818	26,407,510	Feb 13, 1818	hcj (1818) p.748
February	28,945,580		
March	28,248,120	March 9, 1818	hcj (1818) p.748
April	26,989,740	April 15, 1818	hcj (1818) p.748
May	28,466,690	June 2, 1818	hcj (1818) p.749
June	26,605,057		
July	26,034,980		
August	27,007,919		
September	26,091,967		
October	26,289,116		
November	26,279,878		
December	25,632,155		
January 1819	25,338,830	Feb 1, 1819	hcj (1819) p.1106
February	26,157,710		
March	25,048,220	March 3, 1819	hcj (1819) p.1109
April	20,816,380	April 28, 1819	hcj (1819) p.1109
May	26,178,080	May 24, 1819	hcj (1819) p.1110
June	24,951,040	July 6, 1819	hcj (1819) p.1110
July	23,280,770		
August	26,397,310		
September	24,684,450		
October	24,348,350		
November	24,547,470	Dec 3, 1819	hcj (1819-20) p.880
December	22,586,620	Dec 23, 1819	hcj (1819-20) p.880
January 1820	23,177,920		
February	24,680,390		

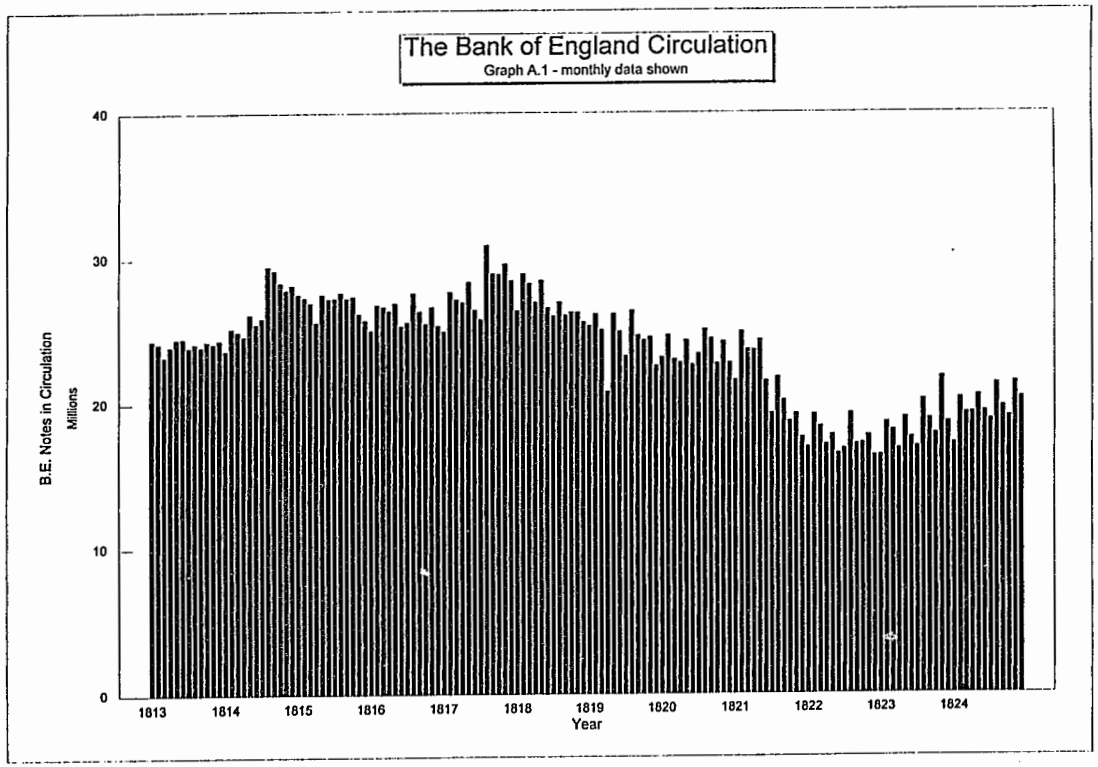
Appendix A.1
Account of the circulation of Bank of England notes and post bills (monthly)

Date	Circulation (£)	Date Reported	Source
March 1820	23,011,480		
April	22,805,400		
May	24,317,730	May 4, 1820	hcj (1819-20) p.880
June	22,655,190	July 3, 1820	hcj (1819-20) p.880
July	23,417,910	July 15, 1820	hcj (1819-20) p.880
August	25,066,740		
September	24,437,110		
October	22,736,120		
November	24,248,220		
December	22,771,180		
January 1821	21,571,700		
February	24,914,280	Feb 12, 1821	hcj (1821) p.1183
March	23,702,160		
April	23,671,260		
May	24,346,050		
June	21,512,000	June 20, 1821	hcj (1821) p.1185
July	19,304,700		
August	21,770,490		
September	20,172,200		
October	18,742,220		
November	19,259,880		
December	17,635,910		
January 1822	16,950,130		
February	19,211,830	Feb 15, 1822	hcj (1822) p.1131
March	18,387,030		
April	17,149,290		
May	17,798,280	May 10. 1822	hcj (1822) p.1140
June	16,505,280	June 27, 1822	hcj (1822) p.1140
July	16,834,780	July 29, 1822	hcj (1822) p.1140
August	19,287,780		
September	17,149,130		
October	17,231,830		
November	17,753,060		
December	16,370,590		
January 1823	16,379,510		
February	18,652,590	Feb 14, 1823	pp (1823) 14:139 mf#25.111
March	18,106,350		
April	16,845,830	May 3, 1823	pp (1823) 14:149 mf#25.111
May	18,994,040		
June	17,602,970		
July	16,975,880		
August	20,221,900		
September	18,884,200		

Appendix A.1
Account of the circulation of Bank of England notes and post bills (monthly)

Date	Circulation (£)	Date Reported	Source
October 1823	17,879,250		
November	21,779,650		
December	18,664,200		
January 1824	17,220,790		
February	20,309,170	Feb 16, 1824	pp (1824) 15:597 mf#26.98
March	19,301,020		
April	19,313,980		
May	20,514,120		
June	19,396,850		
July	18,804,980		
August	21,312,110		
September	19,737,820		
October	19,065,310		Digest of Evidence.
November	21,413,880		Bank Charter Committee (1832)
December	20,352,080		Appendix #13

Sources:
"Account of the Weekly Amount of Bank Notes in Circulation."
These Reports can be found both in the Journal of the House of Commons (abbreviated HCJ above) and in the Parliamentary Papers (abbreviated PP).


The Bank of England Circulation
Graph A.1 - monthly data shown
B.E. Notes in Circulation
Millions
40
30
20
10
0
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
Year

Appendix A.2

Account of the Annual Average Amount of Commercial Paper under Discount at the Bank of England.

Year	Discounted Commercial Paper
1805	£11,366,500
1806	12,380,100
1807	13,484,600
1808	12,950,100
1809	15,475,700
1810	20,070,600
1811	14,355,400
1812	14,291,600
1813	12,330,200
1814	13,285,800
1815	14,947,100
1816	11,416,400
1817	3,960,600
1818	4,325,200
1819	6,515,000
1820	3,883,600
1821	2,676,700
1822	3,366,700
1823	3,123,800
1824	2,369,800
1825	4,941,500

Sources:

The Report of the Committee of Secrecy on the Bank Charter, Appendix No.59, reprinted in Parliamentary Papers (1831-32) vol.6.

Data for the years 1778-1831 can be found in Digest (1833) 2:171.

Another source is "The Average Quarterly Amount of Bills and Notes Under Discount at the Bank of England, 1797 to 1831", printed in the Report of the Bank Charter Committee (1832) Appendices #56 & #58 mf# 35.39-45

Appendix A.3

Account of the Bank of England cash and bullion hoard

Date	Amount of Hoard
January 1814	£2,192,813
February	
March	
April	2,391,881
May	
June	
July	2,173,170
August	
September	
October	2,166,383
November	2,161,000
December	
January 1815	2,049,679
February	2,009,000
March	2,034,000
April	2,091,689
May	
June	
July	3,492,281
August	
September	
October	4,002,838
November	
December	
January 1816	4,474,028
February	4,566,000
March	4,678,000
April	5,346,745
May	5,816,300
June	
July	6,645,973
August	7,403,500
September	
October	8,779,749
November	9,626,100
December	
January 1817	9,922,034
February	9,990,000
March	9,674,000
April	10,047,279

Appendix A.3

Account of the Bank of England cash and bullion hoard

Date	Amount of Hoard
May 1817	10,770,900
June	
July	11,483,701
August	11,719,300
September	
October	11,803,941
November	11,449,100
December	
January 1818	10,848,808
February	10,481,500
March	10,078,000
April	8,743,371
May	8,348,000
June	
July	7,159,998
August	6,729,500
September	
October	5,417,850
November	5,078,900
December	
January 1819	4,562,946
February	4,354,000
March	
April	3,870,685
May	3,825,900
June	
July	
August	3,685,300
September	3,570,000
October	
November	4,079,000
December	
January 1820	
February	4,907,000
March	4,964,000
April	
May	5,969,400
June	
July	
August	7,979,200

Appendix A.3

Account of the Bank of England cash and bullion hoard

Date	Amount of Hoard
September 1820	
October	
November	10,046,200
December	
January 1821	
February	11,639,000
March	
April	
May	13,329,000
June	
July	
August	11,149,400
September	
October	
November	11,577,000
December	
January 1822	
February	10,958,000
March	11,086,000
April	
May	9,909,300
June	
July	
August	10,078,300
September	
October	
November	9,855,000
December	
January 1823	
February	10,331,500
March	10,372,000
April	
May	11,857,100
June	
July	
August	12,557,700
September	
October	
November	13,761,700
December	14,142,000

Appendix A.3

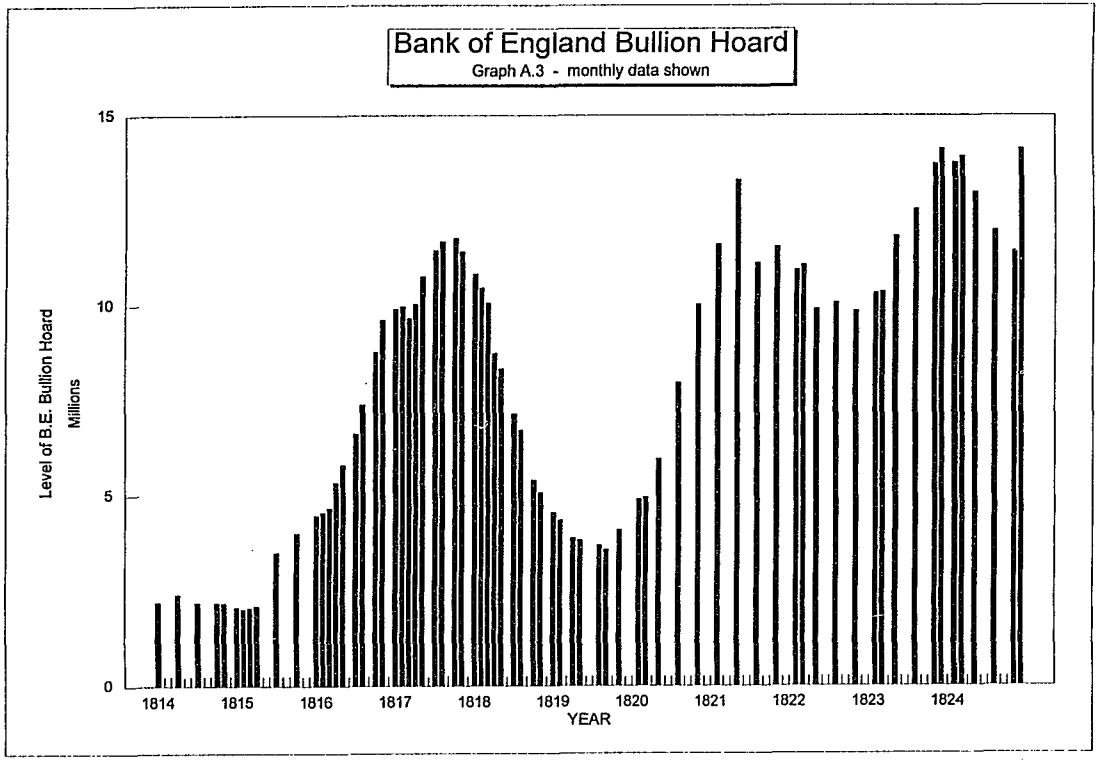
Account of the Bank of England cash and bullion hoard

Date	Amount of Hoard
January 1824	
February	13,782,700
March	13,945,000
April	
May	13,007,700
June 1824	
July	
August	11,990,700
September	
October	
November	11,448,000
December	14,142,000

Sources:

Judy Klein (1997) pages 78-82. Her data was taken from
Memorials, Contracts, Accounts for Parliament.
Vol. 1, 1819-1843. Bank of England Archives c66/1, pp.24-5.

Digest of Evidence on the Bank Charter taken before
the Committee of 1832, Appendices Nos. 1 and 2


Bank of England Bullion Hoard
Graph A.3 - monthly data shown
Level of B.E. Bullion Hoard
Millions
15
10
5
0
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
YEAR

Appendix A.4

Gold Issued from the Bank of England (monthly)

Date	British Gold Coin Issued	Foreign Gold Coin & Bar Gold Issued by the Bullion Office
Janaury 1815		£60,243
February		29,746
March		39,804
April		92,962
May		22,880
June		62,529
July		21,501
August		104,380
September		77,159
October		19,499
November		41,839
December		16,895
January 1816		7,151
February		8,931
March		10,659
April		62,554
May		8,058
June		10,954
July	£15,355	22,935
August	7,184	6,785
September	0	8,731
October	0	5,635
November	0	8,781
December	0	5,224
January 1817	32,585	62,371
February	5,435	29,754
March	0	17,570
April	0	47,501
May	0	48,076
June	0	64,330
July	120,158	65,530
August	78,821	35,962
September	44,921	86,499
October	432,921	59,196
November	289,234	48,706
December	274,367	54,947

Appendix A.4

Gold Issued from the Bank of England (monthly)

Date	British Gold Coin Issued	Foreign Gold Coin & Bar Gold Issued by the Bullion Office
January 1818	365,664	40,212
February	416,548	56,168
March	540,665	25,146
April	469,455	24,525
May	440,763	45,729
June	446,505	23,155
July	646,346	35,508
August	423,574	46,911
September	239,284	45,412
October	273,076	22,469
November	293,950	11,471
December	220,695	15,399
January 1819	259,305	14,222
February	194,889	26,169
March	203,850	36,046
April	36,336	40,422
May	0	
June	0	
July	0	
August	0	
September	0	
October	0	
November	0	
December	0	
January 1820	0	
February	0	
March	0	
April	0	
May	0	
June	0	
July	0	
August	0	
September	0	
October	0	
November	0	
December	0	

Appendix A.4

Gold Issued from the Bank of England (monthly)

Date	British Gold Coin Issued	Foreign Gold Coin & Bar Gold Issued by the Bullion Office
January 1821	0	
February	0	
March	0	
April	0	
May	1,968,871	
June	1,625,487	
July 1821	1,138,609	
August	624,085	
September	456,557	
October	833,134	
November	253,022	
December	284,735	
January 1822	1,154,976	
February	363,163	
March	415,747	
April	552,977	
May	199,383	
June	24,881	
July	740,586	
August	135,250	
September	82,075	
October	675,147	
November	0	
December	0	
January 1823	712,380	
February	0	
March	133,391	
April	381,366	
May	12,341	
June	85,071	

Appendix A.4 Gold Issued from the Bank of England (monthly)

Sources:

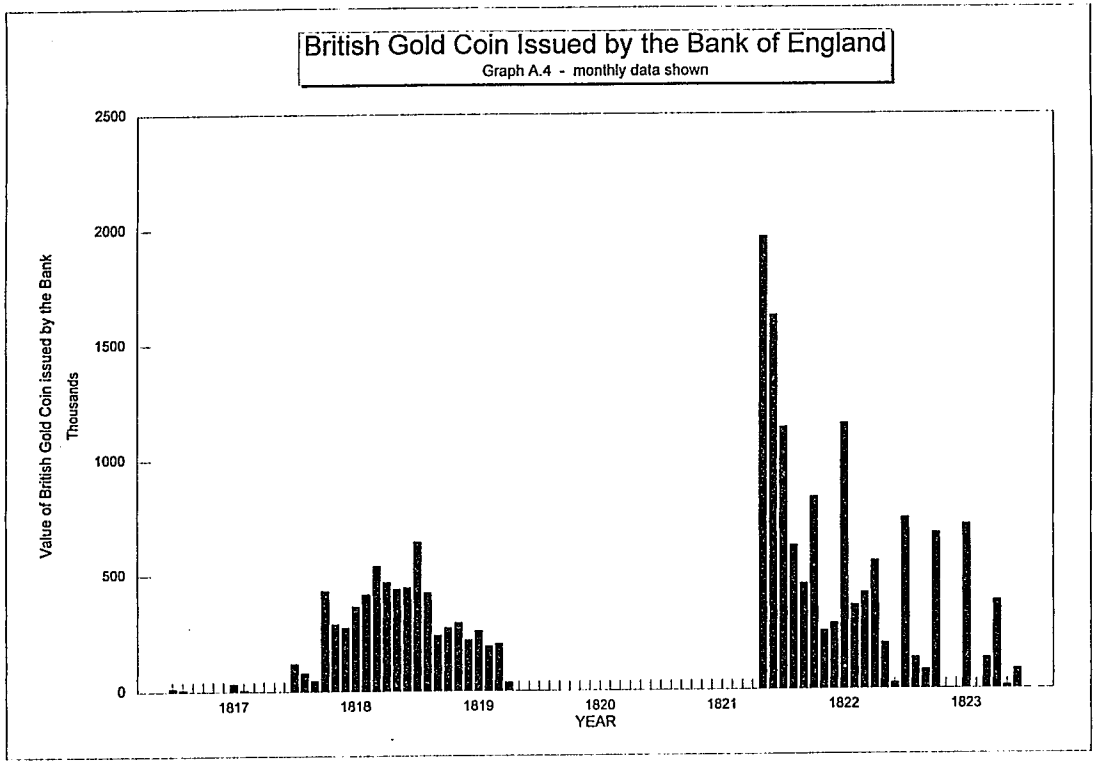
"An Account of Sovereigns and Half-Sovereigns Issued by the Bank," HCJ (1818) p.765.
The report is dated 20 April 1818.

"An Account of the Total Number of Sovereigns and Half Sovereigns Issued from the Bank of England," HCJ (1819) p.1117.
The report is dated 1 February 1819.

Appendix D.3 in the Second Report of the Lords Committee...on Resumption of Cash Payments (1819) p.372.
The report was submitted 12 May 1819.

The Report from the Committee of Secrecy on the Bank of England Charter, App.76, reprinted in Parliamentary Papers (1831-32) vol. 6.

"An Account of the Amount of Monthly Sales of Gold and Silver in the Bullion Office of the Bank of England from April 1810 to April 1819," HCJ (1819) p.1118.


British Gold Coin Issued by the Bank of England
Graph A.4 - monthly data shown
Value of British Gold Coin issued by the Bank
Thousands
2500
2000
1500
1000
500
0
1817
1818
1819
1820
1821
1822
1823
YEAR

Appendix A.5

Government and Private Deposits in the Bank of England

Year	Public Deposits	Private Deposits
1810	£11,093,648	£1,428,720
1811	11,950,047	1,567,920
1812	10,191,854	1,573,950
1813	10,390,130	1,771,310
1814	12,158,227	2,374,910
1815	11,737,436	1,690,490
1816	10,807,660	1,333,120
1817	8,699,133	1,672,800
1818	7,066,887	1,640,210
1819	4,538,373	1,790,860
1820	3,713,442	1,325,060
1821	3,920,157	1,326,020
1822	4,107,853	1,373,370
1823	5,526,635	2,321,920
1824	7,222,187	2,369,910
1825	5,347,314	2,607,900

Sources:

"An Account of the Average Aggregate Amounts of private Deposits in the hands of the Bank, from the Year 1800," Report of the Committee on the Bank of England Charter, Appendix No.32, reprinted in Parliamentary Papers (1831-32) Vol. 6.
mf#35-39-45

"An Account of the Average Deposits held by the Bank for each Quarter in the Years from 1814 to the present time," Report of the Committee on the Bank of England Charter, Appendix No.36, reprinted in Parliamentary Papers (1831-32) vol.6.
mf#35:39-45

"Deposits in the Bank of England", Digest (1833) 2:172.
The report covers the years 1807 to 1831.

Appendix B.1

Annual Estimated Circulation of Country Bank Notes
(figures are in £ millions)

Year	Official Estimate	Bankers' Estimate	Burgess Index
1810	21.8		
1811	21.5		
1812	19.9		
1813	22.6		
1814	22.7		
1815	19.0		
1816	15.1		
1817	15.9		
1818	20.5	20.5	100.0
1819	15.7	20.1	98.3
1820	10.6	19.3	94.2
1821	8.3	19.1	93.1
1822	8.4	18.1	88.3
1823	9.9	18.1	88.1
1824	12.8	19.6	95.4
1825	14.9	21.0	102.3

Note:
The actual country circulation in 1818 was not known, so we used the official estimate for that year. Based on Burgess' data, changes in the circulation relative to 1818 are, however, known accurately for 1819 to 1825.

Sources:
"Country Bank Notes Stamped in Great Britain," JHL (1826) ccvii.273.
The report provides annual data for the years 1804 to 1826.

"Country Bank Notes Stamped in Great Britain," JHL (1826) ccvii.277.
The report provides quarterly data for the years 1819 to 1825.

Testimony on 27 July 1832 by Henry Burgess before the 1832 Bank Charter Committee. See the Minutes of Evidence, pp.412-416, reprinted in Parliamentary Papers (1831-32) vol.6

"Estimate of Amount of Country Bank Notes in each Year from 1809 to 1818, inclusive," Second Report of the Lords Committee on the Resumption of Cash Payments (1819) Appendix, F.8.
Note: This report by Sedgwick contains data copied in Acworth.

Digest of all the Accounts (1833) 2:55

Appendix B.1 (supplement)

Appendices Nos. 60 & 62 of the Digest of Evidence before the Committee on the Bank Charter (1832) contain the following estimates of the values of Country Bank notes stamped and the actual amount of stamp duties paid.

Year	Estimated Value of Country Bank Notes Stamped	Stamp Duties Paid On Country Notes
1810	£10,517,519	£99,633.00
1811	8,792,433	101,941
1812	10,577,134	119,562
1813	12,615,509	130,830
1814	10,773,375	103,314
1815	7,624,949	88,900
1816	6,423,466	83,213
1817	9,075,958	139,628
1818	12,316,868	148,320
1819	5,640,313	62,325
1820	3,574,894	53,654
1821	3,987,582	66,957
1822	4,217,341	62,178
1823	4,657,589	65,051
1824	6,093,367	93,274
1825	8,532,438	114,913

Notes:

The figures are estimates of the amounts of Country Notes stamped in particular years. The data do not indicate the actual circulation.

Country Bank notes valued less than £2 2s. were discontinued after 1825.

Digest [(1833) 2:172] provides the same data for a longer period of time.

Appendix B.2

Parliamentary Reports on Country Bank Notes, 1814 to 1823

Report Date	Source	Period Covered
Mar 23, 1814	HCJ (1813-14) p. 824	Oct 1812 - Oct 1813
Feb 17, 1815	JHL (1815) p.52	Oct 1813 - Oct 1814
Feb 14, 1815	HCJ (1814-15) p.890	Oct 1813 - Oct 1814
May 3, 1816	JHL (1816) p.577	Oct 1813 - Oct 1815
Feb 28, 1818	HCJ (1818) p.759-760	Oct 1814 - Feb 1818
Jan 25, 1819	JHL (1819) p.22	Jan 1815 - Jan 1819
Feb 15, 1819	Commons Resumption Report (1819) Appendix 32 Reprinted in PP (1819) 3:332-333	Jan 1811 - Jan 1819
May 7, 1819	Lords Resumption Report (1819) Appendices F.1 and F.2 Reprinted in PP (1819) 3:761-768	Oct 1805 - Oct 1818
Mar 15, 1821	HCJ (1821) p.939-941	Jan 1819 - Jan 1821
Apr 11, 1821	HCJ (1821) p.942	1805 - April 1821
Mar 14, 1822	HCJ (1822) p.1143	Oct 1818 - March 1822
Apr 16, 1822	HCJ (1822) p.1143	Oct 1818 - Oct 1821
Mar 15, 1823	PP (1823) 14:311	Oct 1821 - Jan 1823

Appendix B.2 (supplement)

Parliamentary Reports on Scottish Banks

"Comparative Statement of the Notes of the British Linen Company in Circulation from 1810 to 1822," HCJ (1822) vol.77, p.1143.

"An Account of the Number and Value of unstamped Small Notes issued in Scotland by the Bank of Scotland, the Royal Bank, and the British Linen Company for the 10 Years prceding the 5th of January 1819," Report of the Lords Resumption Committee (1819) Appendix F.3

"An Account of the Number of Banks in Scotland for which Licences to issue Promissory Notes have been taken out in each Year from 1808 to 1818," Report of the Lords Resumption Committee (1819) Appendix F.10

Comparative Statement of the Notes of the British Linen Company, the Royal Bank of Scotland, and the Bank of Scotland," Report of the Commons Resumption Committee (1819) Appendix 31
Note: The report provides quarterly data from 1810 to 1819.

Appendix B.3

An Account of the Number of Country Banks Committing Bankruptcy Each Month from January 1812 to December 1826.

Date	Commissions of Bankruptcy by Country Bankers	
January 1812	3	
February	3	
March		
April	1	
May		
June		
July		
August	3	
September	1	
October	2	
November	3	
December	1	17
January 1813	1	
February	1	
March		
April	1	
May		
June		
July	2	
August		
September		
October		
November	1	
December	2	8
Janaury 1814		
February		
March		
April		
May	2	
June		
July	9	
August	2	
September	6	
October		
November	6	
December	2	27

Appendix B.3

An Account of the Number of Country Banks Committing Bankruptcy Each Month from January 1812 to December 1826.

Date	Commissions of Bankruptcy by Country Bankers	
January 1815	3	
February		
March	1	
April	1	
May	3	
June	4	
July	3	
August	5	
September		
October		
November	3	
December	2	25
January 1816		
February	3	
March	6	
April	6	
May	2	
June	3	
July	6	
August	1	
September	1	
October	4	
November	4	
December	1	37
Janaury 1817	1	
February		
March		
April	2	
May		
June		
July		
August		
September		
October		
November		
December		3

Appendix B.3

An Account of the Number of Country Banks Committing Bankruptcy Each Month from January 1812 to December 1826.

Date	Commissions of Bankruptcy by Country Bankers	
January 1818		
February		
March		
April		
May		
June		
July		
August	1	
September		
October	1	
November	1	
December		3
January 1819		
February		
March	2	
April	1	
May	2	
June		
July	2	
August		
September	1	
October	1	
November	1	
December	3	13
January 1820	1	
February		
March		
April	1	
May		
June		
July		
August		
September		
October		
November	1	
December	1	4

Appendix B.3

An Account of the Number of Country Banks Committing Bankruptcy Each Month from January 1812 to December 1826.

Date	Commissions of Bankruptcy by Country Bankers	
January 1821	1	
February	2	
March		
April		
May		
June	2	
July		
August	1	
September		
October		
November	2	
December	2	10
January 1822	1	
February	3	
March	1	
April	1	
May	3	
June		
July		
August		
September		
October		
November		
December		9
January 1823		
February	2	
March	2	
April	1	
May		
June	1	
July		
August		
September	1	
October	2	
November		
December		9

Appendix B.3

An Account of the Number of Country Banks Committing Bankruptcy Each Month from January 1812 to December 1826.

Date	Commissions of Bankruptcy by Country Bankers	
January 1824	2	
February	1	
March		
April		
May	1	
June	3	
July		
August		
September	2	
October		
November		
December	1	10
January 1825	1	
February		
March		
April		
May		
June		
July		
August		
September	1	
October	5	
November		
December	30	37
January 1826	12	
February	10	
March	11	
April	3	
May	5	
June		
July		
August		
September	1	
October		
November	1	
December		43

Appendix B.3 - Sources

An Account of the Number of Country Banks Committing Bankruptcy Each Month from January 1812 to December 1826.

"Numbers of Commissions of Bankrupt issued against Country Banks," Report from the Committee of Secrecy on the Bank of England Charter, Appendix No.101. Reprinted in Parliamentary Papers (1831-32) vol.6.

Annual data for the years 1790 to 1822 can be found in HCJ (1822) p.1305.

Appendix B.4

Annual Data on the British Coinage

Year	Gold Coined at the Mint	Silver Coined at the Mint	British Silver Coin Issued by the Mint	Silver Tokens Issued by the Bank of England
1810	£316,935	£120		
1811	312,263	nil		
1812	nil	52		
1813	519,722	89		
1814	nil	161		£545,827
1815	nil	nil		322,139
1816	nil	1,806,181	nil	745,757
1817	4,275,337	2,439,894	£4,245,060	
1818	2,862,373	576,236	574,212	
1819	3,574	1,267,847	1,219,561	
1820	949,516	847,816	897,130	
1821	9,520,758	433,766	420,975	
1822	5,356,787	31,430		
1823	759,748	285,271		
1824	4,065,075	282,070		

For Notes on these figures and a list of sources, see the following page.

Appendix B.4 (Continued)

Notes:

(1) From 1760 to 1820, only £64,271 of British silver coin was produced at the Mint.

(2) The new silver coinage, which the Mint began to produce in 1816 was not issued to the public until 1817, when a sufficient amount had been produced to replace the old silver coin, which--whether defaced or reduced in weight--was to be exchanged at its nominal value.

(3) The new silver coinage was completed on 12 February 1817. The exchange of the new coin for the old was completed in two weeks.

(4) From 1804 through 1815, the Bank issued £4,457,649 in dollars and tokens, but because of the success of the new silver coinage, these were deemed unnecessary. In consequence, the Bank stopped issuing tokens in 1817, and no longer received Bank dollars and tokens after 1819. Tokens were largely replaced with new silver coin.

(5) The "Sovereign", being valued at 20 shillings, was made current by proclamation on 1 July 1817. The half-sovereign was made current on 10 October 1817.

(6) All copper coin, except that coined at the Mint after July 1797, was withdrawn from circulation in December 1817.

(7) Of the gold coined in 1817, £4,261,320 was issued to the Bank. None was issued to private persons. [HCJ (1818) p.765]

(8) Coins were struck of the following metals:
Gold - guinea, half, and quarter guinea, seven shilling piece, the sovereign and half-sovereign.
Silver - crown, half-crown, shilling, sixpence, fourpence, threepence, twopence, penny.
Copper - twopence, penny, halfpenny, farthing.

Sources:

The principal sources are listed in Appendix B.5, but another valuable source is Rogers Ruding (1840) Annals of the Coinage of Great Britain, Vol. II.

Appendix B.5

A List of Parliamentary Reports on the Coinage, 1813 to 1823.

I. Reports on the Gold Coinage Only.

Journal of the House of Commons (1818) p.765.
The report appeared 15 April 1818. It pertains to gold coin issued by the Mint to the Bank in 1817. The Mint issued no gold coin to private persons that year.

Report of the Lords Resumption Committee (1819) Appendix D.2, reprinted in Parliamentary Papers (1819) 3:737.
The report provides annual data, showing the amount coined in each year from 1760 through April 1819.

Journal of the House of Commons (1819) p.1119.
The report appeared 15 February 1819. It pertains to gold coin issued by the Mint during 1818, distinguishing between sovereigns and half-sovereigns.

Journal of the House of Commons (1822) p.1148.
The report appeared 18 February 1822. It contains annual data on gold coined at the Mint from 1815 through 1821.

Journal of the House of Commons (1823) p.991.
The report appeared 24 February 1823. It shows the amount of gold coined at the Mint in 1822.

Digest of All the Accounts (1833) 2:170.
The report provides annual data on the amount of gold coined at the Mint from 1778 through 1829.

II. Reports on the Coinage of Both Gold and Silver.

House of Commons Journal (1818) p.765.
The report appeared 11 February 1818. It contains annual data on the coinage for 1816 and 1817.

Parliamentary Papers (1828) 16:493-497, mf#30.105.
The report provides annual data for the years 1815 through 1824.

Appendix B.5 (continued)

Parliamentary Reports on the Coinage, 1813 to 1823.

III. Reports on the Amounts of Silver Coined at the Mint.

Report of the Lords Resumption Committee (1819) Appendix D.1, reprinted in Parliamentary Papers (1819) 3:735.
The report shows the amount of silver coined at the Mint in each year from 1760 through April 1819.

Report of the Lords Resumption Committee (1819) Appendix D.10, reprinted in Parliamentary Papers (1819) 3:744-745.
The report explains the transition to the new silver coinage in 1817.

Journal of the House of Commons (1821) p.1188.
The report appeared 9 March 1821. It provides annual data on all silver coined at the Mint from 1816 through February 1821.

Journal of the House of Commons (1822) p.1149.
The report appeared 17 April 1822. It provides annual data on all silver coined at the Mint from 1816 through February 1822.

IV. Reports on Gold Issued by the Bank of England.

Journal of the House of Commons (1818) p.765.
The report appeared 20 April 1818. It shows the total amount of sovereigns and half-sovereigns issued by the Bank since these coins were introduced in 1817.

Journal of the House of Commons (1819) p.1117.
The report appeared 1 February 1819. It shows the total amount of sovereigns, half-sovereigns, guineas, half-guineas and seven-shilling pieces issued by the Bank from January 1816 through January 1819.

Report of the Lords Resumption Committee (1819) Appendix D.3.
The report provides monthly data on gold coin issued by the Bank from July 1816 through March 1819.

Report of the Bank Charter Committee (1832) Appendix 76, reprinted in Parliamentary Papers (1831-32) 6:555.
The report provides monthly data on sovereigns and half-sovereigns issued by the Bank from March 1819 through May 18132.

Appendix B.5 (continued)

V. Reports on New Silver Coin Issued by the Mint.

Journal of the House of Commons (1817) p.831.
The report appeared 5 July 1817. It provides data on the exchange of the Old for the New Silver Coin.

Journal of the House of Commons (1818) p.765.
The report appeared 15 April 1818. It provides data for the year 1817.

Journal of the House of Commons (1819) p.1119.
The report appeared 15 February 1819. It provides data for the year 1818.

Journal of the House of Commons (1821) p.1188.
The report appeared 9 March 1821. It covers the years 1816 through February 1821.

Journal of the House of Commons (1822) p.1149.
The report appeared 17 April 1822. It covers the years 1816 through February 1822.

VI. Reports on Silver Tokens Issued by the Bank.

Journal of the House of Commons (1813-14) p.533.
The report appeared 22 March 1814. It covers the period December 1812 to March 1814.

Journal of the House of Commons (1815) p.890.
The report appeared 13 February 1815. It covers the period March 1814 to February 1815.

Journal of the House of Commons (1816) p.989.
The report appeared 27 April 1816. It covers the period February 1815 through March 1816.

Journal of the House of Commons (1817) p.831.
The report appeared 18 February 1817. It covers the period January 1816 through January 1817.

Appendix B.5 (continued)

VII. Reports on Gold Coined at the Mint for Private Persons.

From August 1821 to December 1825 the amount of gold coined for private persons was negligible, only £10,930. From January 1826 to May 1828, £174,093 in gold was coined for private persons. Data on the coinage can be found in Parliamentary Papers (1830) 17:371, mf#32.131.

VIII. Reports on Copper Coined at and Issued by the Mint.

Journal of the House of Commons (1819) p.1123.
The report appeared 24 May 1819. It provides annual data for the period 1790 to 1819.

Appendix B.6

Estimate of the Total Circulating Medium (Annual)

Year	B.E. Notes	Silver Coin	Gold Coin Issued at B.E.	Gold Coin Issued to Private Persons	Country Bank Notes	Total excluding Country Banks	Total including Country Banks
1818	26005240	4819272	0	0	20500000	30824512	51324512
1819	23910800	6038833	0	0	20149450	29949633	50099083
1820	23278030	6935963	0	0	19302800	30213993	49516793
1821	18515920	7356938	7184500	5711	19075250	33063069	52138319
1822	17165940	7388368	11528685	9164	18109700	36092157	54201857
1823	19121690	7673639	13749898	10930	18060500	40556157	58616657

Comments/Assumptions:

(1) Bank of England notes are 4th quarter averages, as reported in Digest (1832) Appendix 12.

(2) *All silver coin issued from 1817 onwards remained in circulation.*

(3) Gold issued from the Mint to private persons at a rate proportionate to the issue of gold from the Bank of England.

(4) The circulation of Country Bank notes in 1818 was 20.5 millions. *(An estimate made by the Stamp Office)*

(5) The Burgess estimate of Country notes is more accurate than that of the Stamp Office after 1818.

(6) The Bank of England note figures do not include Bank post bills.

(7) Gold coin issued before August 1819 was exported.

Sources:

Appendices A.4, B.1, B.4 and Digest (1832) Appendix 12.

Appendix B.7

An Account of the Amount of all Stamps on Bills of Exchange Issued from the Stamp Office in each Year from 1804 to 1825

Year	Amount of Stamps Issued on Bills of Exchange
1805	£384,449
1806	458,656
1807	464,417
1808	454,050
1809	541,804
1810	588,753
1811	530,520
1812	520,891
1813	537,239
1814	560,504
1815	673,116
1816	568,431
1817	552,965
1818	589,331
1819	575,782
1820	544,978
1821	527,877
1822	519,203
1823	535,847
1824	556,919
1825	597,080

Sources:

"An Account of the Amount of all Stamps on Bills of Exchange." Parliamentary Papers (1826) 22:17, mf#28.140.
The report shows annual data from 1805 to 1825.

Report on Bills of Exchange, 1793 to 1822.
HCJ (1823) vol. 78, p.844.
For an acount of the request for and submission of this report see the HCJ (1823) pp.181,184.

"An Account of the Number of Stamps on Bills of Exchange and Promissory Notes not reissuable." HCJ (1821) vol. 76, pp.940,941.
The report provides quarterly data from Jan. 1819 to Jan. 1821.

"An Account of the Produce of the Duties on Bills of Exchange and Promissory Notes, not re-issuable." Second Report of the Secret Committee on the Resumption of Cash Payments (1819) Appendix 33.
The report provides annual data from 1809 to 1819.

Appendix B.8

An Account of the Number of Licenses Granted to Country Banks and the Number of Banks Actually Issuing Promissory Notes

Year	Number of Country Banks in England and Wales	Licenses Granted for Country Banks
1808-09	755	573
1809-10	783	631
1810-11	741	654
1811-12	739	656
1812-13	761	646
1813-14	733	660
1814-15	699	657
1815-16	643	626
1816-17	585	575
1817-18	576	577
1818-19	587	596
1819-20	595	595
1820-21		606
1821-22	552	609
1822-23		623
1823-24		641
1824-25		660

Sources:

"An Account of the Number of Country Banks in England and Wales for which Licences to issue Promissory Notes have been taken." Second Report of the Lords Committee on the Resumption of Cash Paymen (1819) Appendix F.9.

"An Account of the Number of Country Banks in England and Wales, which Issue Promissory Notes, payable on demand." HCJ (1822) vol. 77, pp.1143,1144.

"Number of Licenses Granted to Country Bankers" Digest of All the Accounts (1833) 2:172.

Note: A list of the locations (by county) of country banks can be found in the House of Commons Journal (1822) page 1144.

Appendix C.1

Account of monthly wheat prices (per Winchester quarter)

Date	Price (in shillings)	Data Source
January 1813	122.7	
February	127.5	
March	126.5	
April	127.4	
May	122.7	
June	120.1	
July	117.9	
August	113.8	
September	91.1	
October	91.9	
November	83.7	
December	66.7	
January 1814	76.4	
February	77	
March	73.4	
April	77.2	
May	66.2	
June	72.6	
July	68.2	
August	70.9	
September	82.6	
October	77	
November	70.4	
December	69.6	
January 1815	59.4	
February	59.6	
March	70.2	
April	69.4	
May	67.1	
June	65.4	
July	64	
August	67.9	
September	59.1	
October	63.1	
November	60	
December	57.5	

Appendix C.1

Account of monthly wheat prices (per Winchester quarter)

Date	Price (in shillings)	Data Source
January 1816	54.1	Parliamentary Papers (1816) vol.14,
February	54.3	mf#17.83
March	57	
April	58.7	
May	70.1	
June	77.9	
July	75.2	
August	77.4	
September	85.4	
October	85.9	
November	95.9	
December	101.7	
January 1817	103.4	
February	100.9	
March	97.5	
April	102.1	
May	102.8	
June	107	
July	108.4	
August	86.9	
September	81.5	
October	74.8	
November	78.7	
December	85.6	
January 1818	87.5	
February	84.9	
March	85.3	
April	87.9	
May	98.7	
June	83.6	
July	83.4	
August	84.6	
September	80.3	
October	80.4	
November	80.3	
December	80.6	

Appendix C.1

Account of monthly wheat prices (per Winchester quarter)

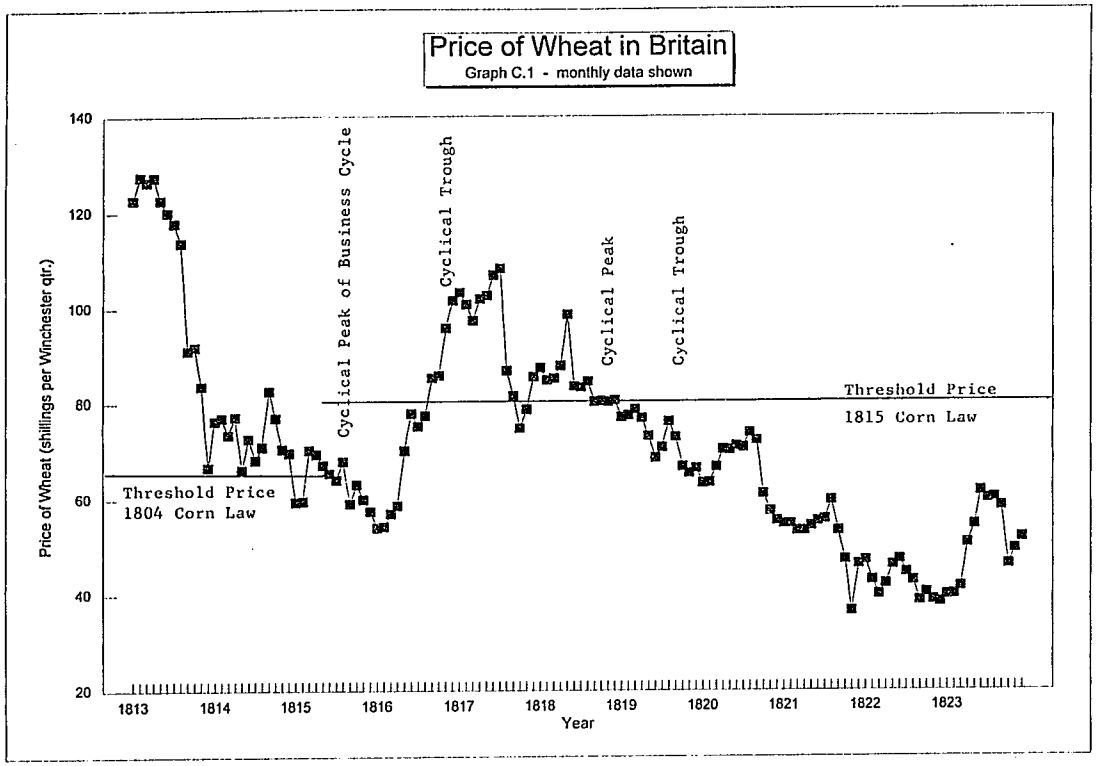
Date	Price (in shillings)	Data Source
January 1819	77.1	Report of the Agricultural Committee (1821)
February	77.5	Appendix No.1, reprinted in PP (1821) 9:381-382
March	78.7	
April	76.9	
May	73.1	
June	68.6	
July	70.7	
August	76.2	
September	72.9	
October	66.8	
November	65.4	
December	66.4	
January 1820	63.3	
February	63.5	
March	66.7	
April	70.3	
May	70.2	
June	71	
July	70.7	
August	73.8	
September	72.2	
October	61.1	
November	57.5	
December	55.5	Journal of the House of Commons (1821) p.1033
January 1821	54.8	
February	54.8	
March	53.4	
April	53.4	
May	54.4	
June	55.4	
July	55.8	
August	59.8	
September	53.4	
October	47.4	
November	36.6	
December	46.4	

Appendix C.1

Account of monthly wheat prices (per Winchester quarter)

Date	Price (in shillings)	Data Source
January 1822	47.2	
February	43	
March	40	
April	42.2	
May	46.2	Journal of the House of Commons (1822) p.983.
June	47.4	The report appeared 5 August 1822; it stated
July	44.6	prices in terms of shillings per barrel.
August	42.9	
September	38.7	
October	40.4	
November	38.9	
December	38.5	
January 1823	39.9	
February	40	
March	41.6	
April	50.8	
May	54.6	
June	61.6	
July	60.1	
August	60.3	
September	58.5	
October	46.3	
November	49.6	
December	51.9	Parliamentary Papers (1824) 9:103

Measures:
Winchester quarter = 8 bushels
Winchester quarter = 2 barrels
Cwt. = 4 Winchester quarters


Price of Wheat in Britain
Graph C.1 - monthly data shown
Price of Wheat (shillings per Winchester qtr.)
140
120
100
80
60
40
20
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
Year
Cyclical Peak of Business Cycle
Cyclical Trough
Cyclical Peak
Cyclical Trough
Threshold Price
1804 Corn Law
Threshold Price
1815 Corn Law

Appendix C.2

Monthly Wheat Prices (in shillings) at Amsterdam and Danzig

Month	Amsterdam	Danzig
July 1822		26.6
August		26.5
September		26.6
October	26.4	26.6
November	25.4	26.6
December	30.6	27.0
January 1823		26.4
February		26.4
March	29.0	26.2
April	28.5	26.1
May	32.0	26.4
June	26.6	26.4
July	23.3	24.5
August	32.5	24.4
September	28.4	24.3
October	23.0	20.0
November	25.0	20.0
December	20.9	20.2

Source:
Parliamentary Papers (1824) 9:103-105.

Appendix C.3

An Account of Annual Average Prices of Corn in Russia, Prussia, Germany and Holland
(prices in shillings per Winchester quarter)

Year	Archangel Wheat	St. Petersburg Wheat	Riga W. R. B & O	Konigsberg, E. Prussia Wheat	Rye	Barley	Oats
1810	27.5	30.9	data only	25.6	11.7	10.7	7.0
1811	29.2	34.1	in roubles	23.7	13.5	14.9	11.0
1812	40.1	52.4		33.5	26.1	24.2	22.0
1813	34.7	50.5		30.3	17.8	13.9	10.0
1814	29.0	36.3		29.3	19.5	13.5	10.0
1815	33.1	32.9		34.5	22.3	15.9	11.0
1816	26.7	42.6		39.5	25.1	15.3	12.0
1817	57.2	56.7		57.7	33.5	21.4	16.0
1818	40.2	44.4		51.1	29.3	22.7	17.0
1819	21.7	29.6		33.9	22.7	18.6	13.0
1820	20.1	25.8		27.0	16.8	11.2	8.0
1821	17.5	22.3		22.8	13.5	9.3	7.0
1822	14.2	29.9		22.8	13.0	10.2	8.0
1823	14.6			22.3	16.2	13.9	9.0
1824	14.3			17.7	8.9	6.5	5.0
1825	17.8	26.6		16.8	8.9	6.5	5.0

Source:
Parliamentary Papers (1826-27) 16:139-170, mf#29.129.

Notes:
(1) For St. Petersburg and Archangel, quantities exported are also shown.
(2) The Konigsberg data covers 1700 to 1825.
(3) The Rotterdam data covers 1769 to 1825.
(4) Data on other ports extends from 1792 to 1825.

Appendix C.3

	Meclenburgh-Schwerin				Hamburg			
Year	Wheat	Rye	Barley	Oats	Wheat	Rye	Barley	Oats
1810	31.1	13.7	9.5	8.7	33.9	20.1	17.5	14.5
1811	31.6	17.9	9.0	7.6	34.2	22.5	16.7	12.5
1812	32.1	23.2	16.3	23.3	52.5	40.2	26.5	21.8
1813	36.3	25.9	16.3	12.2	58.0	40.5	24.4	20.0
1814	36.9	27.4	16.3	12.8	49.0	35.0	19.6	16.7
1815	36.3	29.0	15.9	12.8	48.0	32.3	18.7	14.8
1816	36.9	23.7	15.3	12.2	56.5	35.7	23.2	16.0
1817	64.2	39.0	28.4	21.3	80.0	49.0	33.9	24.2
1818	58.5	33.8	29.5	19.9	62.7	41.7	36.5	24.7
1819	35.3	26.3	20.0	15.2	41.0	32.7	26.3	18.8
1820	28.4	17.4	11.6	11.2	35.5	23.5	17.0	13.0
1821	23.2	13.2	9.0	7.6	33.7	17.9	11.5	9.7
1822	21.1	12.7	9.0	8.7	27.5	15.4	13.0	9.3
1823	21.1	16.3	10.5	8.7	27.5	18.3	14.5	11.0
1824	17.9	10.0	7.9	5.6	24.0	13.0	12.5	8.5
1825	18.4	9.5	9.5	6.6	20.5	12.8	13.9	8.5

Supplementary Source:
"An Account of the Grain of all sorts, Imported into Great Britain from Foreign Parts, from 1800 to 1824," Parliamentary Papers (1825) 20:233, mf#27.165

Notes:
(1) This document shows the quantities of particular commodities imported annually and the counties from which exported.
(2) Wheat, Rye, Barley and Oats were primarily imported from Russia, Prussia and Germany. Holland was an important supplier of oats. This explains the choices of ports above.

Appendix C.3

	Bremen				Rotterdam			
Year	Wheat	Rye	Barley	Oats	Wheat	Rye	Barley	Oats
1810	36.4	26.7	18.3	13.3	55.1	29.2	20.9	14.2
1811	37.4	30.0	16.7	11.0	56.5	42.7	29.7	12.5
1812	60.1	40.0	23.3	15.0	81.8	68.3	34.9	19.6
1813	48.8	33.3	25.3	16.0	69.8	48.1	33.1	20.4
1814	47.2	30.0	23.3	15.3	49.1	32.6	21.4	19.9
1815	43.9	30.9	18.3	12.7	48.2	32.4	21.1	19.6
1816	60.9	40.0	25.9	14.3	65.4	44.3	31.6	21.1
1817	78.7	58.3	33.3	20.0	104.4	56.9	43.1	30.0
1818	61.8	38.3	37.5	21.0	70.1	43.9	37.0	29.0
1819	47.2	36.0	30.0	16.7	48.6	35.4	29.5	22.8
1820	34.2	25.0	18.3	10.7	43.9	27.5	19.8	17.2
1821	32.5	18.3	11.7	6.7	41.2	21.8	14.9	12.3
1822	29.2	18.3	11.7	6.3	35.0	21.1	14.9	10.2
1823	26.7	20.0	13.3	8.3	32.4	24.3	19.4	13.9
1824	24.4	11.7	11.7	5.7	26.4	15.8	14.0	10.1
1825	21.2	14.2	10.9	6.7	28.0	16.9	16.9	12.3

Note:
Castlereagh obtained and presented to Parliament reports similar to these on 9 March 1820. In April 1821, he requested further accounts on foreign corn prices. These accounts were not delivered to Parliament until 1824. They were reprinted in Parliamentary Papers (1824) 18:103.

Appendix C.4

An Account of the Monthly Prices of Gold and Silver and the Foreign Exchange

Month	gold price s. / ounce	silver price s./ ounce	Hamburg exchange Flemish s./ # sterling	Data Sources
January 1813	86.50	5.75	32.40	
February	89.00	5.90	32.00	
March	94.00	5.90	32.30	Report of the Lords
April	107.00	6.75	28.20	Resumption Committee
May	106.00	6.75	28.50	(1819) Appendix C
June	102.00	6.75	26.50	
July	106.00	6.80	26.50	
August	110.00	7.00	26.00	
September	108.00	6.90	26.50	
October	108.00	6.90	26.50	
November	110.00	7.00	26.50	
December	110.00	7.00	28.00	
January 1814	108.00	6.95	29.00	PP (1813-14) 12:119,123.
February	108.00	6.95	29.00	mf#15.68
March	108.00	6.90	29.00	
April	105.00	6.90	29.00	
May	103.00	6.90	28.00	
June	100.00	6.50	28.50	
July	91.00	5.90	30.00	
August	84.00	5.50	33.00	
September	86.00	5.50	33.00	
October	85.00	5.70	32.70	
November	88.00	5.90	32.00	
December	86.50	5.75	32.33	
January 1815	86.50	5.75	32.30	
February	89.00	5.90	32.10	HCJ (1814-15) p.890
March	94.00	6.00	30.00	
April	107.00	6.75	28.20	
May	106.00	6.80	28.40	
June	104.00	6.50	28.00	
July	92.00	5.75	32.00	
August	89.00	5.50	32.50	
September	88.00	5.75	32.75	
October	83.00	5.30	34.20	
November	83.00	5.40	34.00	
December	82.00	5.30	34.30	
January 1816	82.00	5.40	34.40	
February	82.00	5.33	34.50	
March	82.00	5.33	35.10	
April	81.00	5.20	35.40	HCJ (1816) p.989
May	80.00	5.10	35.70	
June	80.00	5.10	36.10	

Appendix C.4

An Account of the Monthly Prices of Gold and Silver and the Foreign Exchange

Month	gold price s./ ounce	silver price s./ ounce	Hamburg exchange Flemish s./ # sterling	Data Sources
July 1816	79.00	5.00	36.90	**Note:**
August	79.00	5.00	36.80	Par was at 35.95 Flemish
September	79.00	4.90	36.90	shillings per £ sterling.
October	78.50	5.00	37.80	
November	78.50	5.00	37.00	
December	78.50	4.95	36.80	HCJ (1818) p.767
January 1817	79.50	5.00	36.00	
February	78.50	5.10	36.20	
March	78.50	5.10	36.50	
April	78.50	5.20	36.10	
May	79.00	5.20	35.50	
June	79.00	5.20	35.30	*Exchange 2% below par
July	80.00	5.30	35.00	
August	80.00	5.30	35.10	
September	80.00	5.25	35.10	
October	80.00	5.25	35.10	
November	80.05	5.30	34.80	
December	80.05	5.30	34.50	
January 1818	80.50	5.30	34.20	HCJ (1818) p.765
February	82.50	5.40	34.00	
March	81.00	5.40	34.40	
April	81.50	5.45	34.30	
May	82.00	5.45	33.90	
June	81.20	5.45	34.00	
July	81.50	5.45	34.30	
August	81.50	5.40	34.50	
September	80.00	5.40	35.00	
October	81.50	5.40	34.50	
November	82.00	5.50	33.90	
December	81.00	5.50	33.75	PP (1819) 15:457,
January 1819	83.00	5.50	33.75	mf#20.137
February	83.00	5.60	33.60	
March	81.50	5.50	34.10	
April	82.00	5.50	34.00	
May	82.00	5.50	34.25	
June	79.00	5.20	35.33	*Exchange 2% below par
July	78.00	5.17	35.75	
August	77.88	5.17	36.50	*Gold at mint price
September	77.88	5.17	36.50	on August 20th
October	77.88	5.17	36.50	
November	78.50	5.17	35.90	
December	77.88	5.17	36.17	

Appendix C.4

An Account of the Monthly Prices of Gold and Silver and the Foreign Exchange

Month	gold price s. / ounce	silver price s./ ounce	Hamburg exchange Flemish s./ # sterling	Data Sources
January 1820	77.88	5.17	36.00	
February	77.88	5.17	36.20	
March	77.88	5.13	36.50	
April	77.88	5.08	36.60	*Exchange 2% above par
May	77.88	5.04	36.90	
June	77.88	5.00	37.00	
July	77.88	5.00	37.40	
August	77.88	5.00	37.50	
September	77.88	4.96	37.60	
October	77.88	4.96	37.67	
November	77.88	4.96	37.50	
December	77.88	4.96	37.70	
January 1821	77.88	4.96	38.20	
February	77.88	4.96	38.20	
March	77.88	4.96	38.40	
April	77.88	4.90	38.65	
May	77.88	4.90	38.65	
June	77.88	4.85	38.80	
July	77.88	4.90	38.80	
August	77.88	4.90	38.20	
September	77.88	4.90	38.20	
October	77.88	4.90	38.00	
November	77.88	4.90	37.80	
December	77.88	4.95	37.50	
January 1822	77.88	5.00	37.40	
February	77.88	4.95	37.40	
March	77.88	4.95	37.30	
April	77.88	4.95	37.30	
May	77.88	4.95	37.50	
June	77.50	4.95	37.80	
July	77.50	4.95	38.00	
August	77.50	4.95	37.80	
September	77.50	4.95	38.00	
October	77.50	4.95	37.90	
November	77.50	4.95	37.70	
December	77.50	4.95	37.70	
January 1823	77.50	4.95	37.70	
February	77.50	4.95	37.90	
March	77.50	4.95	38.40	
April	77.50	4.90	38.20	
May	77.50	4.95	38.40	
June	77.50	4.95	38.10	

Appendix C.4

An Account of the Monthly Prices of Gold and Silver and the Foreign Exchange

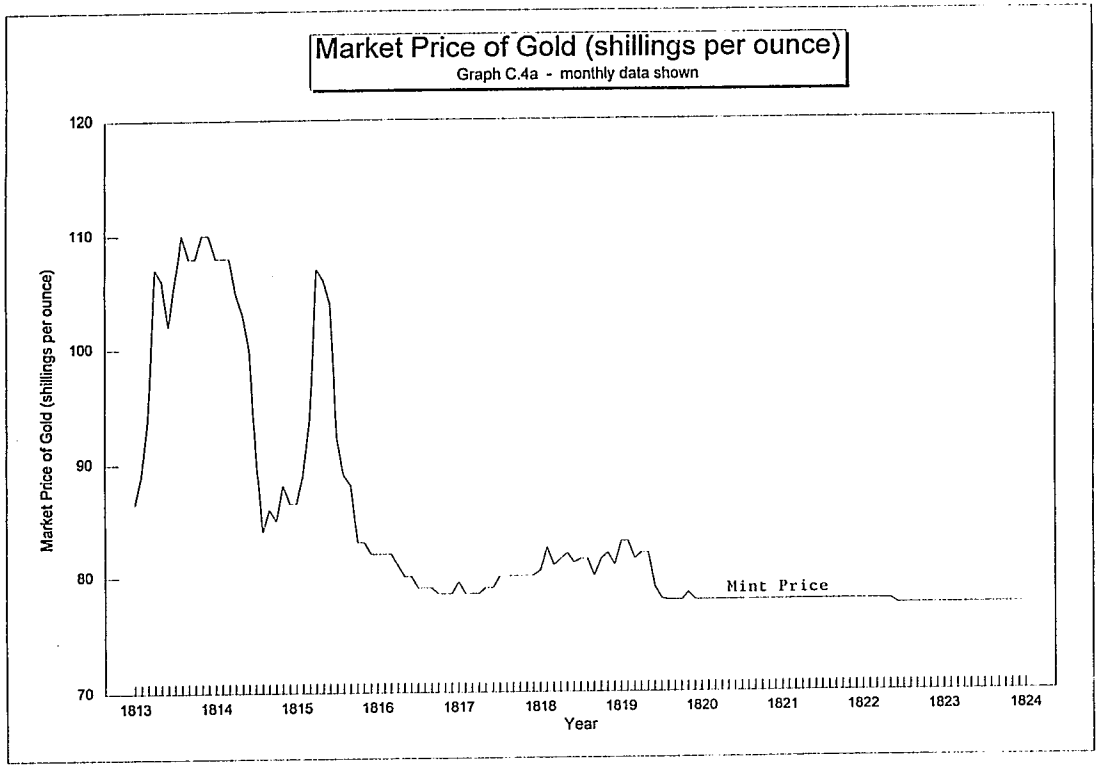
Month	gold price s. / ounce	silver price s./ ounce	Hamburg exchange Flemish s./ # sterling	Data Sources
July 1823	77.50	4.95	38.20	
August	77.50	4.95	38.20	
September	77.50	4.95	38.20	Report of the Bank
October	77.50	4.95	38.00	Charter Committee (1832)
November	77.50	4.95	37.80	Appendix 96, reprinted in
December	77.50	4.95	37.70	PP (1831-32) 6:581.
January 1824	77.50	4.95	37.60	mf#35.45

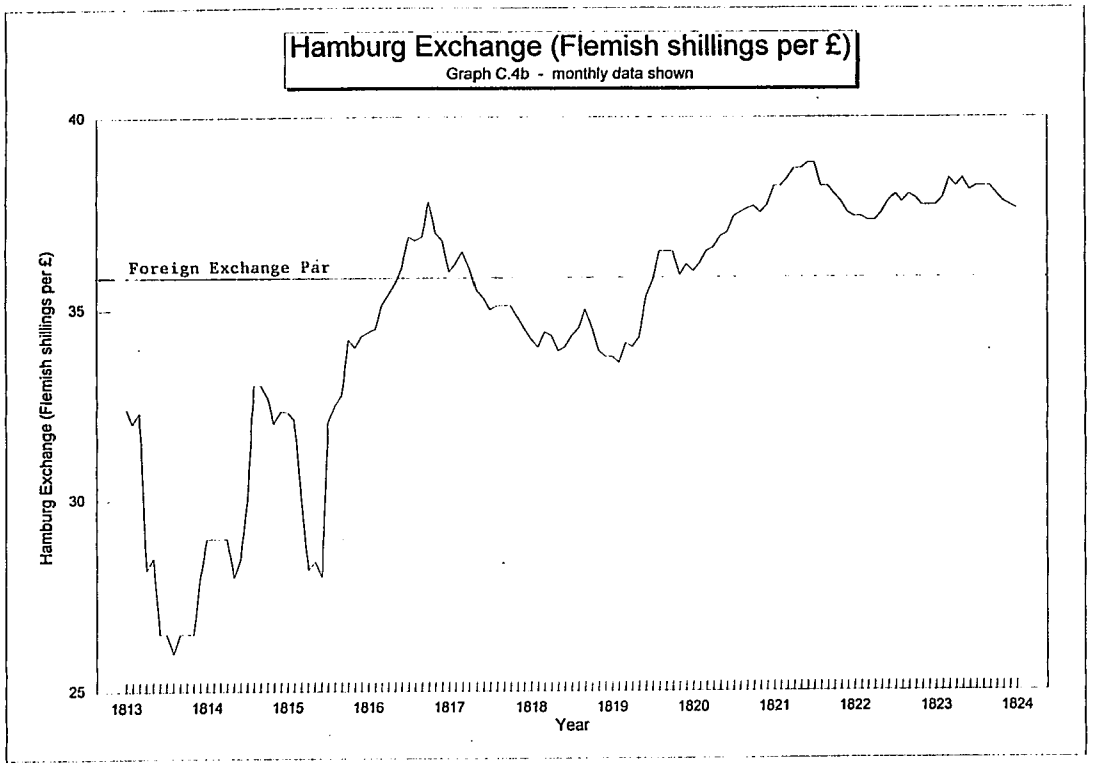
Notes:

(1) The Mint Price of gold was £3 17s. 10 1/2 d. (or 77.88 shillings per ounce)

(2) The Par of the Foreign Exchange was 35 23/24 Flemish shillings per £ sterling, given that the market ratio of gold to silver was 15 1/2 to 1.

(3) During the eighteenth century, the market ratio of gold to silver had been closer to 14 4/5 to 1, and thus the corresponding foreign exchange parity had been 34 7/20 Flemish shillings per £ sterling. [Morgan (1939) p.214]


Market Price of Gold (shillings per ounce)
Graph C.4a - monthly data shown
Market Price of Gold (shillings per ounce)
120
110
100
90
80
70
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
Year
Mint Price


Hamburg Exchange (Flemish shillings per £)
Graph C.4b - monthly data shown
Foreign Exchange Par
Hamburg Exchange (Flemish shillings per £)
40
35
30
25
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
Year

Appendix C.5

Commodity Price Indices: Domestic & Foreign Goods
Source: Gayer (1953) Tables 40 & 41

Date	Domestic Price Index	Foreign Price Index
January 1814	156.4	173.5
February	160.5	180.3
March	163.8	178.6
April	156.6	176.5
May	144.7	168.2
June	142.8	162.4
July	136.5	155.8
August	141.6	158.1
September	147.5	164.8
October	146.6	162.4
November	140.4	162.1
December	144.2	160.7
January 1815	129.1	154.9
February	125.5	148.6
March	129.3	143.7
April	130.1	145.9
May	130.3	145.6
June	129.8	144.2
July	125.0	140.8
August	125.5	143.9
September	123.1	144.2
October	119.3	143.5
November	115.7	140.3
December	112.3	136.1
January 1816	107.1	132.3
February	104.4	129.7
March	102.8	131.8
April	104.0	132.8
May	112.6	131.8
June	113.5	127.4
July	113.3	125.8
August	118.1	123.4
September	121.9	125.3
October	122.4	125.8
November	126.0	126.0
December	133.7	127.2
January 1817	132.5	127.2
February	134.9	128.7
March	135.3	128.0
April	130.5	128.2
May	134.6	128.0
June	138.7	127.4

Appendix C.5

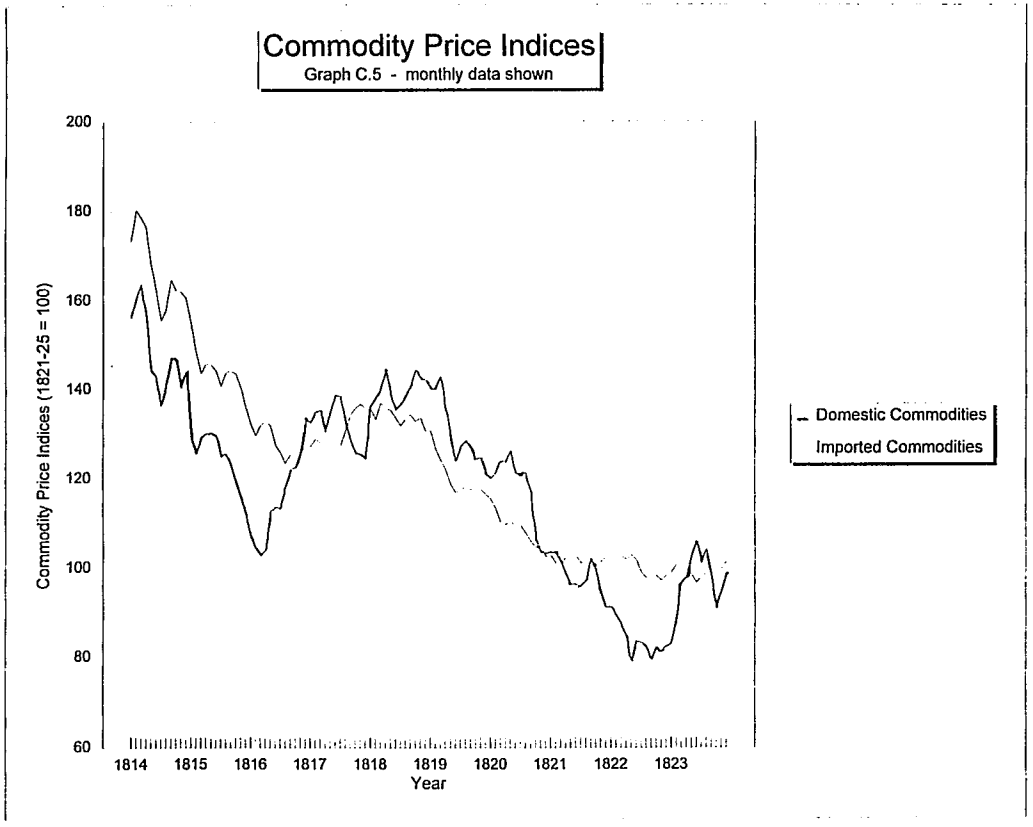
Commodity Price Indices: Domestic & Foreign Goods
Source: Gayer (1953) Tables 40 & 41

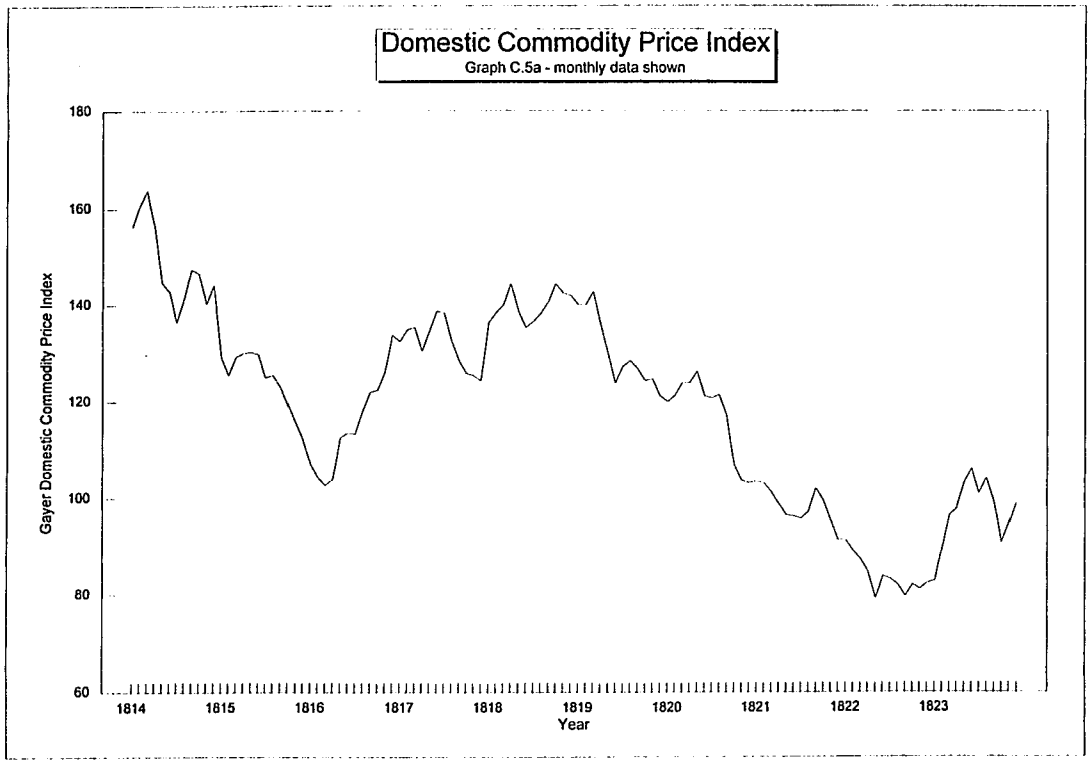
Date	Domestic Price Index	Foreign Price Index
July 1817	138.4	127.4
August	132.5	130.7
September	128.4	134.2
October	125.8	135.7
November	125.3	136.7
December	124.3	135.7
January 1818	136.3	135.5
February	138.4	133.3
March	140.1	136.9
April	144.4	135.9
May	138.7	135.2
June	135.3	133.5
July	136.5	131.8
August	138.2	133.3
September	140.8	134.2
October	144.4	132.8
November	142.5	133.5
December	142.0	130.6
January 1819	140.1	130.6
February	140.1	126.5
March	142.8	124.1
April	136.3	122.1
May	129.8	118.7
June	123.8	116.8
July	127.2	117.5
August	128.4	118.1
September	126.7	117.5
October	124.3	117.7
November	124.6	117.5
December	121.2	116.4
January 1820	120.0	115.4
February	121.2	113.2
March	123.8	110.3
April	123.8	109.8
May	126.2	110.3
June	121.2	109.6
July	120.7	109.6
August	121.4	107.9
September	117.0	105.9
October	106.8	104.5
November	103.7	105.0
December	103.2	102.4

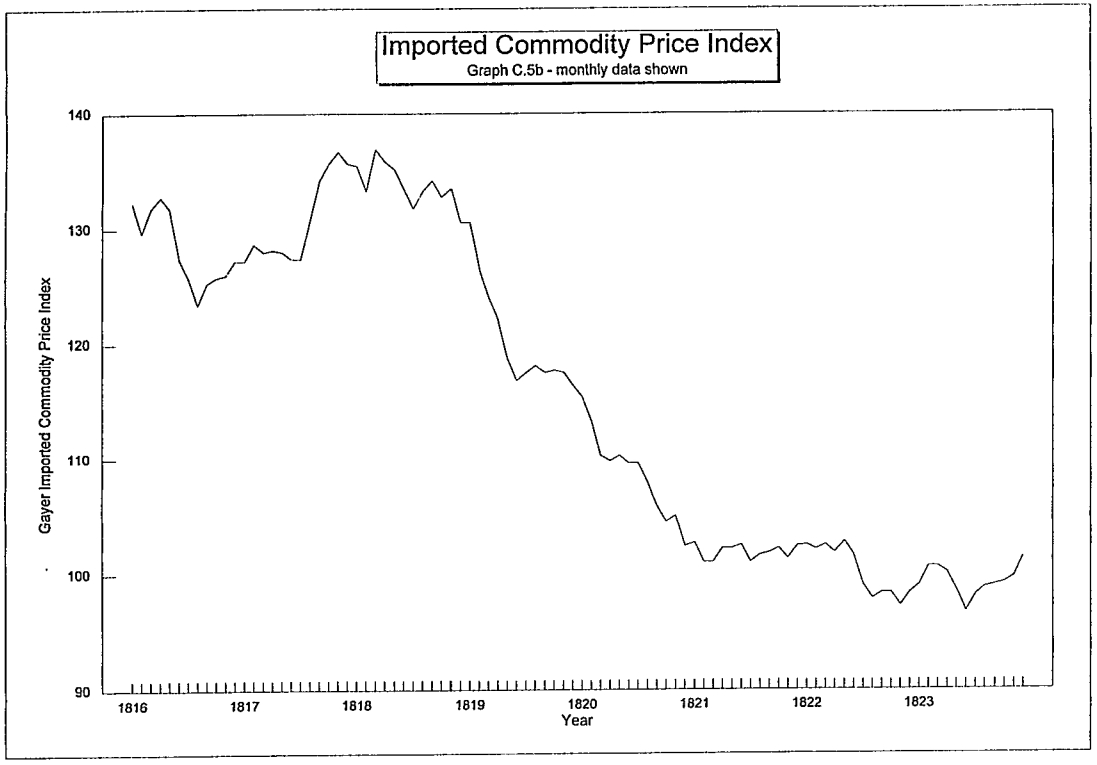
Appendix C.5

Commodity Price Indices: Domestic & Foreign Goods
Source: Gayer (1953) Tables 40 & 41

Date	Domestic Price Index	Foreign Price Index
January 1821	103.5	102.7
February	103.2	101.0
March	101.3	101.0
April	98.9	102.2
May	96.5	102.2
June	96.3	102.5
July	95.8	101.0
August	97.2	101.6
September	102.0	101.8
October	99.6	102.2
November	95.3	101.3
December	91.3	102.4
January 1822	91.3	102.5
February	89.1	102.1
March	87.4	102.5
April	84.8	101.8
May	79.2	102.8
June	83.8	101.6
July	83.3	99.0
August	82.1	97.8
September	79.7	98.3
October	82.1	98.3
November	81.2	97.2
December	82.4	98.3
January 1823	82.9	99.0
February	89.4	100.6
March	96.4	100.6
April	97.8	100.1
May	103.1	98.5
June	106.0	96.7
July	101.0	98.1
August	104.1	98.8
September	99.3	99.0
October	90.8	99.2
November	94.7	99.7
December	99.0	101.4


Commodity Price Indices
Graph C.5 - monthly data shown
Commodity Price Indices (1821-25 = 100)
200
180
160
140
120
100
80
60
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
Year
Domestic Commodities
Imported Commodities


Domestic Commodity Price Index
Graph C.5a - monthly data shown
Gayer Domestic Commodity Price Index
180
160
140
120
100
80
60
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
Year


Imported Commodity Price Index
Graph C.5b - monthly data shown
Gayer Imported Commodity Price Index
140
130
120
110
100
90
1816
1817
1818
1819
1820
1821
1822
1823
Year

Appendix C.6

London Commodity Prices as Indicated in Blackwood's Commercial Report

Commodity		Jan. 1818	Feb. 1819	March 1819	April 1819	July 1819	March 1820
Sugar (Brown)	s./cwt.	76.0	77.0	75.0	73.0	64.0	57.0
Molasses	s./cwt.	36.0	35.0	32.5	33.0	32.5	26.5
Coffee (Jamaica)	s./cwt.	106.0	140.0	140.0	125.0	116.0	122.0
Portugal Red Wine - pipe.	£	46.0	58.0	58.0	58.0	60.0	54.0
Spanish White Wine - butt.	£	55.0	65.0	65.0	65.0	68.0	55.0
Indigo	s./lb.	10.5	11.5	11.5	10.5	10.0	10.5
American Timber (Pine)	s./ft.	2.5	2.5	2.7	2.7	2.7	2.0
Tar (American)	s./brl.	19.5	19.5	20.0	20.0	20.0	21.0
Hemp (Riga) - ton	£	47.0	54.0	49.0	49.0	42.5	49.0
Flax (Riga)	£	82.0	86.0	86.0	82.0	74.0	72.0
Whale Oil	£	58.0	33.0	33.0	37.0	32.0	30.0
Tobacco (Fine)	s./lb.	0.67	1.15	0.67	0.67	0.50	0.75
Sea Island Cotton	s.	2.67	3.00	2.50	2.50	2.50	2.20

Comments:
(1) London prices are shown (where available).
(2) The upper end of price ranges are reported

Appendix C.6 (Continued)

Commodity		July 1820	Dec. 1820	Aug. 1821	Dec. 1821	May 1822	Dec. 1822	May 1823
Sugar (Brown)	s./cwt.	61.0	60.0	56.0	60.0	60.0	53.0	57.0
Molasses	s./cwt.	26.0	24.5	21.5	24.5	29.0	31.0	30.0
Coffee (Jamaica)	s./cwt.	128.0	125.0	109.0	107.0	106.0	108.0	105.0
Portugal Red Wine - pipe.	£	46.0	54.0	52.0	34.0	33.0	44.0	34.0
Spanish White Wine - butt.	£	55.0	55.0	55.0	55.0	55.0	55.0	55.0
Indigo	s./lb.	11.5	10.5	10.0	11.5	11.5	11.5	11.0
American Timber (Pine)	s./ft.	1.7	1.7	1.7	1.7	2.2	2.2	2.5
Tar (American)	s./brl.	19.0	19.0	16.0	21.0	21.0	20.0	17.0
Hemp (Riga) - ton	£	42.0	40.0	47.0	48.0	46.0	44.0	42.0
Flax (Riga)	£	61.0	60.0	52.0	58.0	49.0	54.0	70.0
Whale Oil	£	35.0	24.0	23.0	20.0	21.0	27.0	24.0
Tobacco (Fine)	s./lb.	0.75	0.70	0.50	0.63	0.63	0.63	0.63
Sea Island Cotton	s.	2.00	1.90	2.00	2.10	2.10	1.67	1.67

Appendix C.7

Contemporary Measures of Inflation

Parliamentary committees would, at times, attempt to measure changes in the prices of commodities generally. For this purpose, several rudimentary price indices were used. I describe some of these below, beginning with the "prices of provisions" at certain military facilities.

A complete statement of the prices of provisions at the Naval Hospital at Greenwich and the Military College at Chelsea can be found in Digest (1833) II:181.

The schedule below shows the contract price of rations in pence per day at the Military College at Chelsea for the years 1810 to 1825.

Year	Cost of Provisions
1810	12.0
1811	12.8
1812	12.8
1813	13.1
1814	13.1
1815	12.0
1816	10.0
1817	11.5
1818	10.0
1819	10.1
1820	11.9
1821	10.9
1822	8.9
1823	6.9
1824	8.8
1825	8.1

Appendix C.7 (continued)

The following is a partial list of price measurements presented to Parliament

Report from the Committee of Secrecy on the Bank of England Charter, reprinted in Parliamentary Papers (1831-32) vol.6, mr#35.39-45.

App. 90 Contract Prices of the different Articles of Provision supplied to the Royal Hospital, Chelsea, from 1818.
--Reprinted in Digest (1832) Appendix 71.

App. 91 Contract Prices of the different Articles of Provision supplied to the Royal Hospital Greenwich, from 1818 to 1831.
--Reprinted in Digest (1832) Appendix 72.

App.92 Return of the Prices of the following Articles, Wheat, Beef, Mutton, Coals, Iron, Leather, Wool, Cheese, Butter, Linen, in the Years 1819 to 1832.

App. 93 An Account of the Prices of Sugar, Coffee, Cotton, Hemp, Flour, Tallow, Whale Oil, Deals, Timber and Tobacco, in the Months of January and July, in each Year from 1819.

Report from the Commons Committee on Agricultural Distress, reprinted in Parliamentary Papers (1821) vol.9.

App. 33 Royal Hospital, Greenwich--Account of the prices of several articles of Clothing, Provisions, &c.

App. 34 Victualling Office--Account of the various contracting prices for Wheat, Flour, Beef, Pork, Butter and Cheese from 1814 to 1820, inclusive.

App.35 Bethlehem Hospital--Account of prices paid for Provisions between 24th June 1814 and 31st March 1821.

App. 36 Account of the Contract Prices paid by the Commissariat for Oats, Bread and Meal, supplied to His Majesty's troops in England, from June 1814 to April 1821.

App.37 Account of the Contract Prices paid by the Commissariat for Oatmeal, Oats, Bread and Meat, supplied to His Majesty's troops in North Britain, from June 1814 to April 1821.

Appendix C.7 (continued)

Report from the Commons Committee...Resumption of Cash Payments, reprinted in Parliamentary Papers (1819) vol.3, mf#20.26-29.

App. 36 Royal Hospital Greenwich--Account of the Contract Prices of Articles of Provisions for several intermediate Years from 1729 to 1818.

Second Report of the Lords Committee...Resumption of Cash Payments, reprinted in Parliamentary Papers (1819) vol.3, mf#20.29-34.

App. E.1 Royal Hospital, Greenwich. An Account of the Contract Prices of the following Articles of Provisions, &c.

App. E.2 Royal Hospital, Chelsea. An Account of the Prices of the following Articles of Provisions, &c.

App. E.3 An Account of the Prices of certain Articles, taken on the First Friday in each Month, in the Years 1811 to 1815.

App. E.4 A Return of the Prices of the following Articles, Wheat, Beef and Mutton, Coals, Iron, Leather, Wool, Cheese and Butter, and Linen, in the Years 1813 to 1819.

App. E.5 An Account of the Prices of Sugar, Coffee, Cotton, Hemp, Flax, Tallow, Whale Oil, Deals, Timber and Tobacco in the Months of January and July in the Years 1813 to 1818; and in January and March 1819: extracted from Prices Current.

Appendix C.8

Annual Average Prices of Wheat, Oats, Barley, Coal, Raw Cotton & Iron in Britain, 1810 to 1825.

Year	Wheat (s./qr.)	Oats (s./qr.)	Barley (s./qr.)	Coal (s./chaldron)	Raw Cotton (pence/lb.)	Bar Iron (£/ton)
1810	106.4	28.6	48.1	51.7	15.3	14.6
1811	95.3	27.6	42.2	47.7	12.5	15.0
1812	126.5	44.5	66.7	44.9	16.8	14.0
1813	109.8	38.5	58.5	52.4	23.0	13.0
1814	74.3	25.7	37.3	59.1	29.5	13.0
1815	65.6	23.6	30.2	46.7	20.8	13.3
1816	78.5	27.2	33.9	41.7	18.3	11.6
1817	96.9	32.4	49.3	40.3	20.1	8.9
1818	86.3	32.4	53.9	39.9	20.0	13.0
1819	74.5	28.2	45.7	41.9	13.5	12.6
1820	67.9	24.2	33.9	41.8	11.5	11.0
1821	56.1	19.5	26.0	42.5	9.5	9.0
1822	44.6	18.1	21.9	41.9	8.3	8.0
1823	53.3	22.9	31.5	45.1	8.3	8.6
1824	63.9	24.9	36.3	40.5	8.5	8.9
1825	68.5	25.7	40.0	39.9	11.6	14.0

Source:
B.R. Mitchell (1990) pages 747, 756, 757, 760, 762.

Notes are on the following page.

Notes to Appendix C.8:

(1) Wheat is measured in Imperial Quarters. The standard measure in the early Nineteenth Century was the Winchester Quarter, which is 31/32 of an Imperial Quarter. Prices above are in shillings sterling per quarter.

(2) The prices of Oats and Barley are also stated in shillings sterling per Imperial Quarter.

(3) The price of Coal is in shillings sterling per chaldron at London. The London chaldron weighted between 26 and 27 Hundredweight (Cwt.).

(4) Cotton prices are for Upland or Middling American cotton. The prices are in (old) pence per lb.

(5) Iron prices are for Bar Iron at Liverpool in £ per ton.

Appendix D.1

Real and Official Estimates of the Annual Values of Imports and Exports

Year	Imports (official)	Exports (official)	Exports (Real)	Re-Exports (official)	Total Exports
1810	£39.3	£34.1	£48.4	£9.5	£13.6
1811	26.5	22.7	32.9	6.2	28.9
1812	26.2	29.5	41.7	9.7	39.2
1813					
1814	33.8	34.2	45.5	19.4	53.6
1815	33.0	42.9	51.6	15.7	58.6
1816	27.4	35.7	41.7	13.5	49.2
1817	30.8	40.1	41.8	10.3	50.4
1818	36.9	42.7	46.5	10.9	53.6
1819	30.8	33.5	35.2	9.9	43.4
1820	32.5	38.4	36.4	10.5	48.9
1821	30.8	40.9	36.7	10.6	51.5
1822	30.5	44.3	37.0	9.2	53.5
1823	35.8	43.8	35.4	8.6	52.4
1824					

Source:
Acworth (1925) Appendix D

Note:
Each year hundreds of documents pertaining to foreign trade were submitted to Parliament.
Just to list these documents requires several pages in the indices to the House of Commons Journal.

Appendix D.2 **Imports of Principal Agricultural Commodities, 1810 to 1824**

	1810	1811	1812	1813
Barley and Barley Meal in Quarters	26,318	42,840	83,638	83,268
Beans and Bean Meal in Quarters	15,226	4,438	5,024	5,405
Oats and Oat Meal in Quarters				
--Foreign	116,469	11,708	15,406	60,456
--Irish	492,740	275,756	390,629	691,498
--Total Imports	609,209	287,464	406,035	751,954
Rye and Rye Meal in Quarters	90,982	27,830	72,819	35,039
Wheat and Wheat Flour in Quarters				
--Foreign	1,439,615	188,564	129,867	341,846
--Irish	127,510	147,566	158,351	217,153
--Combined Imports	1,567,125	336,130	288,218	558,999
--British Exports	75,785	94,158	83,629	no record
Butter (in Cwts.)			25,894	
Cheese (in Cwts.)			87,599	
Sugar (in Cwts.)				
--Imported	4,808,663	3,917,543	3,763,423	4,000,000
--Re-Exported	1,319,349	690,869	1,158,192	1,615,500
For Home Consumption	3,489,314	3,226,674	2,605,231	2,384,500
Tea (in Lbs.)				
--Imported	19,791,356	21,231,849	23,318,153	30,383,504
--Exported	3,346,542	4,093,560	4,004,143	3,977,713
Nutmeg (in Lbs.)	93,066	63,627	62,613	
Rum (in Gallons)	5,582,805	6,998,853	6,469,226	9,200,285

Appendix D.2

	1814	1815	1816	1817
Barley and Barley Meal in Quarters	46,031	29,578	78,403	161,811
Beans and Bean Meal in Quarters	43,385	18,362	6,699	5,850
Oats and Oat Meal in Quarters				
--Foreign	251,151	120,872	75,993	478,994
--Irish	564,010	597,537	683,714	611,117
--Total Imports	815,161	718,409	759,707	1,090,111
Rye and Rye Meal in Quarters	6,044	1,805	15,117	140,092
Wheat and Wheat Flour in Quarters				
--Foreign	626,745	194,931	210,860	1,030,829
--Irish	225,478	189,543	121,631	55,481
--Combined Imports	852,223	384,474	332,491	1,086,310
--British Exports	111,477	227,947	121,611	317,524
Butter (in Cwts.)	115,798	125,300	64,143	20,690
Cheese (in Cwts.)	145,632	106,809	75,377	26,120
Sugar (in Cwts.)				
--Imported	4,035,323	3,984,782	3,760,548	3,795,550
--Re-Exported	2,002,105	1,906,711	1,663,617	1,671,740
For Home Consumption	2,033,218	2,078,071	2,096,931	2,123,810
Tea (in Lbs.)				
--Imported	26,110,550	25,602,214	36,234,380	31,467,073
--Exported	8,576,508	5,303,078	3,654,596	3,924,980
Nutmeg (in Lbs.)	324,645	743,960	365,546	365,284
Rum (in Gallons)	8,569,067	6,817,134	2,887,102	6,355,230

Appendix D.2

	1818	1819	1820	1821
Barley and Barley Meal in Quarters	722,843	394,179	117,014	98,478
Beans and Bean Meal in Quarters	120,779	190,628	19,218	5,099
Oats and Oat Meal in Quarters				
--Foreign	989,749	586,725	683,650	103,201
--Irish	1,069,385	789,613	916,250	1,162,248
--Total Imports	2,059,134	1,376,338	1,599,900	1,265,449
Rye and Rye Meal in Quarters	78,085	18,674	12,239	660
Wheat and Wheat Flour in Quarters				
--Foreign	1,586,030	471,607	591,731	137,684
--Irish	105,179	153,849	403,407	569,700
--Combined Imports	1,691,209	625,456	995,138	707,384
--British Exports	58,668	44,689	94,657	
Butter (in Cwts.)	83,730	66,050	68,557	115,827
Cheese (in Cwts.)	114,922	84,780	83,179	84,077
Sugar (in Cwts.)				
--Imported	3,965,947	4,077,009	4,063,541	4,200,856
--Re-Exported	1,695,627	1,302,179	1,659,556	1,579,919
For Home Consumption	2,270,320	2,774,830	2,403,985	2,620,937
Tea (in Lbs.)				
--Imported	20,065,728	23,750,413	30,147,994	30,731,105
--Exported	4,378,607	4,201,873	3,504,677	4,342,396
Nutmeg (in Lbs.)	59,569	193,985	91,422	35,085
Rum (in Gallons)	5,482,571	6,386,514	7,035,909	7,127,131

Appendix D.2

	1822	1823	1824
Barley and Barley Meal in Quarters	41,690	19,770	73,591
Beans and Bean Meal in Quarters	7,234	5,768	7,876
Oats and Oat Meal in Quarters			
--Foreign	55,642	28,965	488,106
--Irish	569,237	1,102,487	1,225,085
--Total Imports	624,879	1,131,452	1,713,191
Rye and Rye Meal in Quarters	353	197	966
Wheat and Wheat Flour in Quarters			
--Foreign	47,598	23,951	85,182
--Irish	463,003	400,067	356,384
--Combined Imports	510,601	424,018	441,566
--British Exports			
Butter (in Cwts.)	118,420	122,331	160,654
Cheese (in Cwts.)	72,961	94,492	158,436
Sugar (in Cwts.)			
--Imported	3,643,122	4,012,144	4,195,970
--Re-Exported	1,048,297	1,204,329	1,190,914
For Home Consumption	2,594,825	2,807,815	3,005,056
Tea (in Lbs.)			
--Imported	27,362,766	29,046,887	31,682,007
--Exported	4,093,450	3,993,306	4,037,395
Nutmeg (in Lbs.)	45,568	14,958	
Rum (in Gallons)	4,246,096	4,864,741	4,782,837

Appendix D.2

Sources:

Data for Barley, Beans, Oats, Rye and Wheat were taken from "An Account of the Grain of All sorts, Meal and Flour, stated in quarters, Imported into Great Britain from Foreign Parts," Parliamentary Papers (1825) 20:233, microfiche #27.165.
The report contains annual data for 1800 through 1825.

Data for Butter and Cheese taken from "An Account of the total Quantity of Foreign Butter and the total of Foreign Cheese imported into the United Kingdom," Parliamentary Papers (1826-27) 18:5, microfiche #29.141.

Data for Sugar taken from Digest (1833) 2:79

Data for Tea taken from "An Account of the Quantity of Tea annually limported into and exported from Great Britain," Parliamentary Papers (1826) 22:219, mf#28.142.

Data for Nutmeg taken from "An Account of the quantity of Nutmet, Mace and Cloves Imported into Great Britain," Parliamentary Papers (1824) 17:251, mf#26.108.

Data for Rum taken from "An Account of the Quantity of Rum Annually Imported into Great Britain," Parliamentary Papers (1826) 22:173, mf#28.141.

Data for British Exports of Wheat and Wheat Flour taken from "Foreign corn imports and British corn exports," Parliamentary Papers (1826-27) 16:487, mf#29.132.
The report provides annual data for 1697 to 1814.

Appendix D.3

Annual Quantities (Winchester Quarters) of Wheat, Oats and Barley Imported into Britain from Ireland, 1813 to 1824. (Includes Corn, Grain, Meal and Flour)

Year	Wheat	Oats	Barley
1807	77,031	498,779	23,434
1808	55,178	815,143	33,408
1809	123,841	1,090,706	16,619
1810	456,269	662,526	9,882
1811	400,766	376,854	2,713
1812	494,716	575,206	44,742
1813	812,810	935,971	63,560
1814	759,079	722,107	16,779
1815	584,156	708,496	27,108
1816	426,172	795,585	62,252
1817	115,794	699,281	26,740
1818	228,709	1,429,535	25,334
1819	498,880	948,208	20,290
1820	1,073,371	1,040,917	87,944
1821	1,664,575	1,379,038	84,716
1822	1,598,167	673,755	22,531

Notes:

The figures above differ from those in Appendix D.2 because those in D.2 use a different measure of "Corn and Grain".

A Winchester Quarter is 7 and 3/4 bushels.

Sources:

"Imports from Ireland in all types of Corn, Grain & Meal," HCJ (1823) vol. 78, page 873.
This report covers the years 1820 through 1822.

"Irish grain & flour imported into Great Britain. 1807-1820," Agricultural Committee Report (1821) Appendix No.17.

Appendix D.4

Foreign Corn Warehoused at British Ports in the Years 1820 to 1823.
(quantities shown are in Winchester quarters)

	5 April 1820	5 Jan. 1821	5 Jan. 1822	5 Jan. 1823	16 April 1823
Wheat	327,893	733,762	678,609	581,583	556,681
Wheat Flour	129,964	715,004	534,608	308,772	275,296
Oats	58,721	13,369	100,196	140,126	138,636
Barley	8,333	31,422	35,955	48,906	48,461

Sources:

"Account of all Grain Warehoused under the Act 55 Geo. III, c.26,"
published and updated in the following sources:
Parliamentary Papers (1820) 12:37, mf#22.73
Parliamentary Papers (1821) 17:39, mf#23.100
Parliamentary Papers (1822) 21:69, mf#24.157
Parliamentary Papers (1823) 16:535, mf#25.131
Journal of the House of Commons (1823) p.871

"Account of the Quantities of Grain, Meal and Flour...delivered from the Warehouses for Home Consumption, in each Year, 1815 to 1820,"
Report of the Agricultural Committee (1821) Appendix No.20.

Appendix D.5

Quantities of Wool, Cotton, Timber, Silk, Flax, Tallow & Linseed Imported into Great Britain in Years 1811 through 1826.

	1811	1812	1813	1814	1815	1816	1817
Raw Wool Imports (in million lb.)	4.7	7.0	no record	15.7	15.0	8.1	14.7
Raw Cotton (in million lb.)							
--Imported	91.0	61.6	no record	58.9	98.8	93.7	124.8
--Re-exported	1.3	1.8		6.3	6.8	7.1	8.1
Retained for Spinning	89.7	59.8		52.6	92.0	86.6	116.7
--Average Price (pence/lb.)	14	18	30	24	20	17	19
Fir Timber Imports (1,000 loads of 50 cu.ft.)	320	235	no record	172	311	229	240
Silk (in 1,000 lb.)							
Raw Silk Imports	602	1312	no record	1663	1474	948	981
Re-Exported	29	40		10	75	269	55
Thrown Silk Imports	20	618		646	360	195	248
Re-Exported	31	86		2		5	2
Flax (in cwt.)							
Tallow (in cwt.)						20858	19298
Linseed (in bushels)						70892	162759

Appendix D.5

	1818	1819	1820	1821	1822	1823	1824
Raw Wool Imports (in million lb.)	26.4	16.2	10.0	16.7	19.3	20.7	23.9
Raw Cotton (in million lb.)							
--Imported	177.2	149.5	149.3	130.2	140.9	188.6	147.1
--Re-exported	5.2	16.7	7.4	16.3	20.2	11.6	15.9
Retained for Spinning	172.0	132.8	141.9	113.9	120.7	177.0	131.2
--Average Price (pence/lb.)	17	14	10	9.5	8.5	9.5	10.5
Fir Timber Imports (1,000 loads of 50 cu.ft.)	378	415	341	392	451	512	582
Silk (in 1,000 lb.)							
Raw Silk Imports	1745	1555	2308	2201	2178	2512	3136
Re-Exported	80	29	8	8	16	9	2
Thrown Silk Imports	461	293	334	341	503	368	342
Re-Exported	4	3	5			5	1
Flax (in cwt.)					610106	553937	742531
Tallow (in cwt.)	27149				805238	830271	680382
Linseed (in bushels)	237141				1413450	1662456	2195093

Appendix D.5

	1825	1826
Raw Wool Imports (in million lb.)	43.8	16.0
Raw Cotton (in million lb.)		
--Imported	226.1	174.7
--Re-exported	20.2	24.5
Retained for Spinning	205.9	150.2
--Average Price (pence/lb.)	11	7.5
Fir Timber Imports (1,000 loads of 50 cu.ft.)	709	556
Silk (in 1,000 lb.)		
Raw Silk Imports	3117	2488
Re-Exported	129	257
Thrown Silk Imports	778	177
Re-Exported	25	22
Flax (in cwt.)	1055233	
Tallow (in cwt.)	1164037	
Linseed (in bushels)	2888247	

Data Sources

Gayer (1953) Vol.1

Data on Cotton was found in Digest (1833) 2:112

Data on Wool found in Mitchell (1990) p.338

Data on Silk found in Mitchell (1990) pp.344-45
(Raw silk includes Knubs after 1814)
(Thrown silk includes Spun silk after 1814)

Appendix E.1

Revenue (Taxation) Reports to the House of Commons
Source: Abstract of the Net Produce of the Revenue of Great Britain

Report Date	Data	Period Covered	Source
Feb 10, 1815	quarterly	Jan 1813 - Jan 1815	HCJ (1814-15) p. 721
April 17, 1815	quarterly	Ap 1813 - Ap 1815	p. 722
July 11, 1815	quarterly	July 1813 - July 1815	p. 725
May 26, 1815	annual	1801-1814	p. 727
Feb 13, 1816	quarterly	Jan 1814 - Jan 1816	HCJ (1816) p. 837
April 11, 1816	quarterly	Ap 1814 - Ap 1816	p. 839
Feb 3, 1817	quarterly	Jan 1815 - Jan 1817	HCJ (1817) p. 687
May 21, 1817	quarterly	Ap 1815 - Ap 1817	p. 689
Feb 19, 1818	quarterly	Jan 1816 - Jan 1818	HCJ (1818) p. 630
Feb 4, 1819	quarterly	Jan 1817 - Jan 1819	HCJ (1819) p. 852
April 6, 1819	quarterly	Ap 1817 - Ap 1819	p. 854
July 7, 1819	quarterly	July 1816 - July 1819	p. 855
Dec 30, 1819	quarterly	Jan 1819 - Oct 1819	HCJ (1819-20) p.690
Feb 25, 1820	quarterly	Jan 1818 - Jan 1820	HCJ (1819-20) p. 686
May 2, 1820	quarterly	Ap 1818 - Ap 1820	p. 687
July 15, 1820	quarterly	July 1818 - July 1820	p. 688
Oct 17, 1820	quarterly	Oct 1818 - Oct 1820	p. 689
Jan 24, 1821	quarterly	Jan 1819 - Jan 1821	HCJ (1821) p. 910
April 6, 1821	quarterly	Ap 1819 - Ap 1821	p. 911
July 10, 1821	quarterly	July 1819 - July 1821	p. 912
Feb 7, 1822	quarterly	Jan 1820 - Jan 1822	HCJ (1822) p. 894
July 9, 1822	quarterly	July 1820 - July 1822	p. 896
Feb 10, 1823	quarterly	Jan 1821 - Jan 1823	HCJ (1823) p. 822
April 10, 1823	quarterly	Ap 1821 - Ap 1823	p. 824
July 9, 1823	quarterly	July 1821 - July 1823	p. 824

Appendix E.2

Abstract of the Net Produce of the Quarterly *Tax Revenue for the Years 1813 to 1822*

Consolidated Fund	April 1813	July 1813	Oct 1813	Jan 1814	April 1814	July 1814	Oct 1814
Customs	£1,146,231	£866,694	£857,271	£837,473	£1,211,507	£576,590	£1,567,749
Excise	4,197,979	4,075,382	4,995,766	4,291,905	4,192,014	4,328,057	4,975,216
Stamps	1,280,092	1,316,934	1,395,061	1,348,624	1,321,867	1,410,320	1,459,855
Post-Office	352,000	335,000	361,000	358,000	335,000	355,000	405,000
Assessed Taxes	665,508	2,402,812	624,086	2,594,406	717,926	2,533,972	577,008
Land Taxes	150,921	438,640	146,694	407,026	119,817	432,805	145,368
Miscellaneous	82,601	144,254	92,515	103,748	83,590	126,503	69,169
Annual Duties							
Customs	276,405	281,485	1,400,679	819,492	54,181	255,876	1,507,353
Excise	54,406	82,238	120,916	291,269	10,947	46,930	114,896
Pensions							
War Taxes							
Customs	823,322	640,625	1,185,181	1,073,296	590,682	576,373	1,142,602
Excise	1,334,926	1,264,588	2,111,978	1,362,041	1,172,046	1,408,540	1,960,688
Property	4,570,491	2,147,318	5,240,071	2,007,923	5,009,901	2,059,232	5,112,081
Total Net Revenue	14,934,882	13,995,970	18,531,218	15,495,203	14,819,478	14,110,198	19,036,985
Total Customs	2,245,958	1,788,804	3,443,131	2,730,261	1,856,370	1,408,839	4,217,704
Total Excise	5,587,311	5,422,208	7,228,660	5,945,215	5,375,007	5,783,527	7,050,800

Sources: Appendix E.1

Appendix E.2

Consolidated Fund	Jan 1815	April 1815	July 1815	Oct 1815	Jan 1816	April 1816	July 1816
Customs	£1,582,453	£1,288,038	£1,016,375	£1,458,946	£1,128,119	£1,394,639	£767,846
Excise	4,815,885	4,674,768	4,708,942	5,029,476	4,938,770	4,325,528	4,124,975
Stamps	1,406,531	1,278,576	1,388,944	1,686,515	1,516,378	1,520,536	1,500,414
Post-Office	355,000	411,000	396,000	387,000	354,000	378,000	353,000
Assessed Taxes	2,582,765	614,861	2,514,392	564,391	2,521,343	726,909	2,207,659
Land Taxes	431,233	104,949	447,548	143,891	383,605	133,227	426,503
Miscellaneous	137,984	58,160	80,139	78,506	150,065	72,712	70,554
Annual Duties							
Customs	800,591	54,248	611,350	1,220,465	583,081	39,143	524,691
Excise	307,125	6,290	107,022	138,118	344,520	7,654	90,732
Pensions					16		
War Taxes							
Customs	1,193,367	635,947	793,695	927,789	769,469	517,659	490,151
Excise	1,813,267	1,199,218	1,493,091	2,098,917	1,823,300	1,067,266	1,354,616
Property	2,037,119	4,869,912	2,155,021	5,196,955	2,096,684	4,861,027	2,071,776
Total Net Revenue	17,463,320	15,195,967	15,712,519	18,930,969	16,609,350	15,044,300	13,982,917
Total Customs	3,576,411	1,978,233	2,421,420	3,607,200	2,480,669	1,951,441	1,782,688
Total Excise	6,936,277	5,880,276	6,309,055	7,266,511	7,106,590	5,400,448	5,570,323

Sources: Appendix E.1

Appendix E.2

Consolidated Fund	Oct 1816	Jan 1817	April 1817	July 1817	Oct 1817	Jan 1818	April 1818
Customs	£1,499,288	£1,317,381	£1,719,314	£831,853	£1,880,180	£2,458,628	£1,991,718
Excise	4,937,055	4,484,440	3,819,211	3,831,360	4,025,209	4,695,074	4,248,082
Stamps	1,487,447	1,461,324	1,492,611	1,589,615	1,688,663	1,566,532	1,588,759
Post-Office	365,000	330,000	342,000	323,000	354,000	319,000	336,000
Assessed Taxes	714,270	2,134,484	868,104	2,216,806	782,602	2,260,017	917,414
Land Taxes	180,067	388,132	154,550	464,664	190,502	353,604	178,295
Miscellaneous	41,848	56,085	98,595	62,160	76,799	255,318	73,270
Annual Duties							
Customs	958,540	870,827	192,982	877,760	1,241,770	558,993	11,946
Excise	98,641	337,097	13,279	83,727	124,684	36,441	6,520
Pensions		4,016	0	0	0	0	0
War Taxes							
Customs	31	525	0	0	0	0	0
Excise	1,259,533	780,659	809,565	779,647	739,943	768,157	897,203
Property	2,960,576	1,292,205	0	472,338	407,072	389,048	254,190
Total Net Revenue	14,502,296	13,457,175	9,510,211	11,532,930	11,511,424	13,660,812	10,503,397
Total Customs	2,457,859	2,188,733	1,912,296	1,709,613	3,121,950	3,017,621	2,003,664
Total Excise	6,295,229	5,602,196	4,642,055	4,694,734	4,889,836	5,499,672	5,151,805

Sources: Appendix E.1

Appendix E.2

Consolidated Fund	July 1818	Oct 1818	Jan 1819	April 1819	July 1819	Oct 1819	Jan 1820
Customs	£1,568,030	£2,795,889	£1,530,779	£1,658,340	£1,335,073	£1,346,138	£1,958,855
Excise	4,658,989	4,927,456	5,113,923	4,358,557	4,704,195	4,959,207	5,746,359
Stamps	1,599,814	1,672,165	1,530,532	1,570,757	1,534,723	1,575,437	1,499,609
Post-Office	324,000	360,000	319,000	355,000	367,000	375,000	378,000
Assessed Taxes	2,208,976	787,426	2,303,778	835,246	2,257,960	781,448	2,301,875
Land Taxes	441,220	181,801	408,366	148,440	444,753	198,177	442,955
Miscellaneous	112,282	49,150	133,381	75,245	62,785	77,628	180,787
Annual Duties							
Customs	289,114	873,865	934,885	434,010	909,566	1,407,029	273,018
Excise	106,316	134,124	299,780	82,827	118,101	127,204	72,379
Pensions	0	0	16	0	0	0	0
War Taxes							
Customs	0	0	0	0	0	0	0
Excise	872,496	805,224	824,337	936,494	869,974	588,276	620,805
Property	154,439	72,249	661	0	0	0	0
Total Net Revenue	12,335,676	12,659,349	13,399,438	10,454,916	12,604,130	11,435,544	13,474,642
Total Customs	1,857,144	3,669,754	2,465,664	2,092,350	2,244,639	2,753,167	2,231,873
Total Excise	5,637,801	5,866,804	6,238,040	5,377,878	5,692,270	5,674,687	6,439,543

Sources: Appendix E.1

Appendix E.2

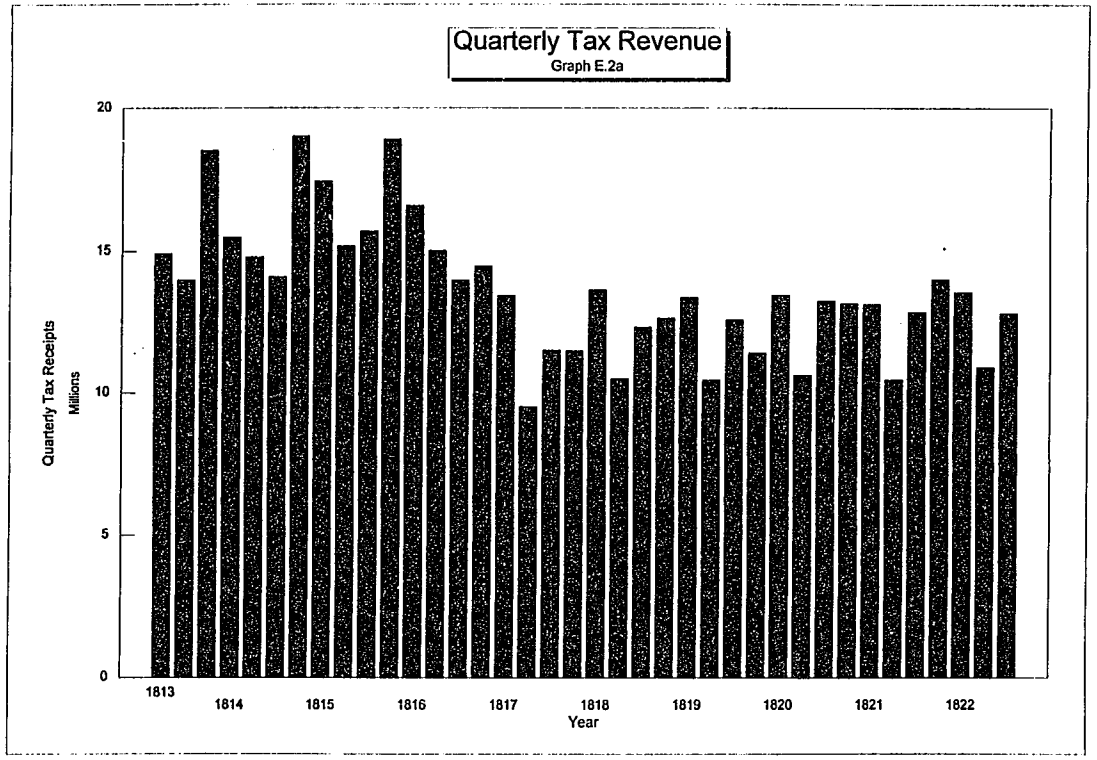
Consolidated Fund	April 1820	July 1820	Oct 1820	Jan 1821	April 1821	July 1821	Oct 1821
Customs	£1,878,412	£844,772	£1,107,921	£1,885,415	£1,792,576	£801,934	£1,251,781
Excise	5,165,663	6,003,687	6,852,987	5,656,602	5,090,931	5,694,226	7,039,890
Stamps	1,453,224	1,581,445	1,581,204	1,535,474	1,467,799	1,518,493	1,625,220
Post-Office	302,186	352,000	375,000	321,000	350,000	318,000	342,000
Assessed Taxes	873,716	2,343,380	760,576	2,333,674	842,531	2,328,040	793,532
Land Taxes	149,409	440,744	174,522	427,582	137,427	445,366	207,481
Miscellaneous	48,860	59,249	71,642	114,187	57,573	64,972	61,222
Annual Duties							
Customs	82,291	1,038,074	1,562,762	232,244	112,700	1,096,765	1,269,327
Excise	0	0	112,770	15,448	0	0	293,082
Pensions	0	0	0	0	0	0	0
War Taxes							
Customs	0	0	0	0	0	0	323,123
Excise	671,350	616,922	586,264	643,687	616,659	604,584	816,254
Property	0	0	0	0	0	0	0
Total Net Revenue	10,625,111	13,280,273	13,185,648	13,165,313	10,468,196	12,872,380	14,022,912
Total Customs	1,960,703	1,882,846	2,670,683	2,117,659	1,905,276	1,898,699	2,844,231
Total Excise	5,837,013	6,620,609	7,552,021	6,315,737	5,707,590	6,298,810	8,149,226

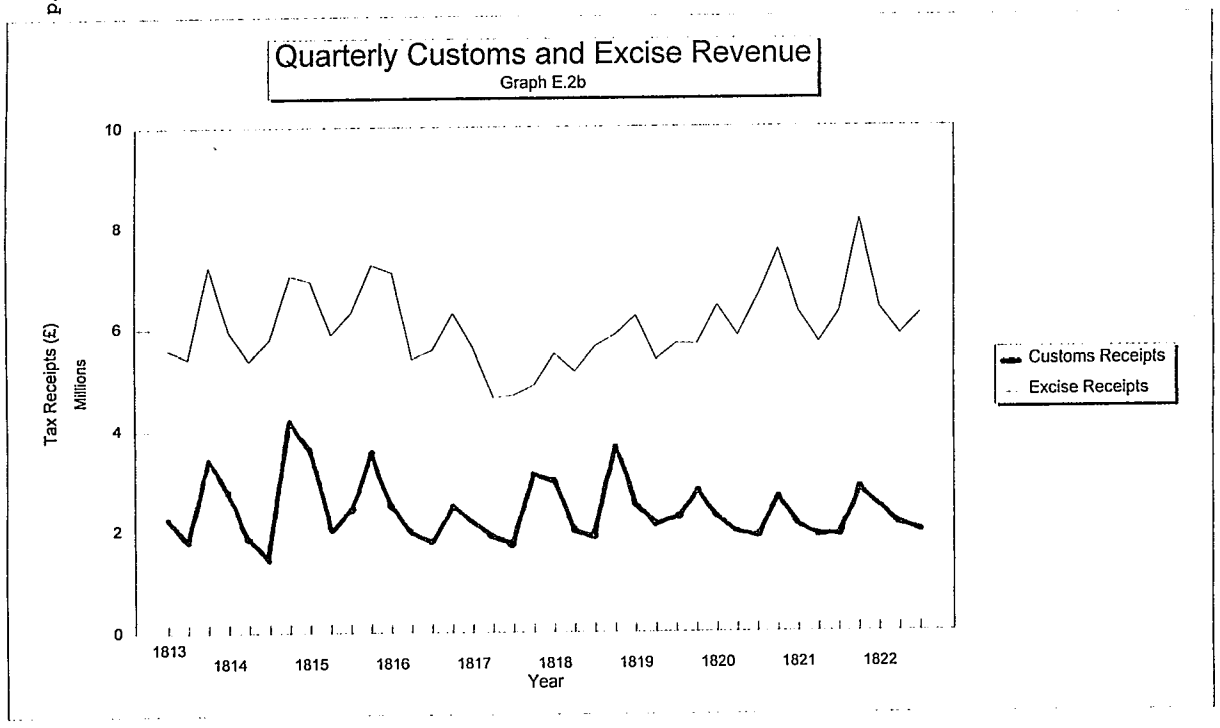
Sources: Appendix E.1

Appendix E.2

Consolidated Fund	Jan 1822	April 1822	July 1822		Oct 1822	Jan 1823	April 1823
Customs	£1,515,105	£1,983,208	£1,119,496	Accounting			
Excise	5,368,664	5,856,798	6,268,738	change	7,329,997	6,291,908	5,656,279
Stamps	1,497,128	1,582,346	1,500,716	at this point	1,674,503	1,450,987	1,573,854
Post-Office	308,000	320,000	355,000		360,000	324,000	330,000
Assessed Taxes	2,292,708	832,672	2,192,521				
Land Taxes	473,000	152,999	474,749				
Miscellaneous	119,696	56,463	99,451				
Annual Duties							
Customs	971,791	112,670	826,612				
Excise	298,119	0	0				
Pensions	0	0	0				
War Taxes							
Customs	0	0	0				
Excise	724,006	0	0				
Property	0	0	0				
Total Net Revenue	13,568,217	10,897,156	12,837,283				
Total Customs	2,486,896	2,095,878	1,946,108				
Total Excise	6,390,789	5,856,798	6,268,738				

Sources: Appendix E.1


Quarterly Tax Revenue
Graph E.2a
Quarterly Tax Receipts
Millions
20
15
10
5
0
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
Year


Quarterly Customs and Excise Revenue
Graph E.2b
Tax Receipts (£)
Millions
10
8
6
4
2
0
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
Year
Customs Receipts
Excise Receipts

Appendix E.3

Annual Public Income and Expenditure of the United Kingdom
(Amounts shown in £ millions)

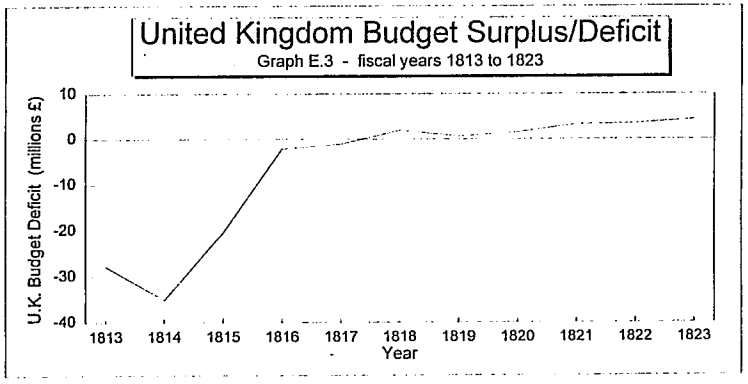
	1813	1814	1815	1816	1817	1818
Customs & Excise	£41.8	£44.3	£43.8	£38.8	£36.6	£40.2
Income & Property Tax	14.3	14.5	14.6	11.8	2.3	0.6
Other Revenue	18.6	19.1	20.7	18.7	18.7	18.7
Total Receipts	£74.7	£77.9	£79.1	£69.3	£57.6	£59.5
Debt Charges	27.3	30.1	32.2	32.9	31.4	31.3
Civil Government	1.0	10.4	10.8	10.3	9.6	10.6
Fighting Services	74.2	72.5	56.5	28.2	17.7	15.7
Total Expenditure	£102.5	£113.0	£99.5	£71.4	£58.7	£57.6
Budget Surplus	(£27.8)	(£35.1)	(£20.4)	(£2.1)	(£1.1)	£1.9

Source:
"Gross Public Income and Expenditure of the United Kingdom," Parliamentary Papers (1868-69) 35:516-535, mf#75.292.

Note: At the time these reports appeared, national income accounting procedures were different than when the Revenue reports shown in Appendix E.2 were presented.

Appendix E.3 (Continued)

	1819	1820	1821	1822	1823
Customs & Excise	£39.5	£41.5	£42.6	£42.0	£41.0
Income & Property Tax	0.2	0.0	0.0	0.0	0.0
Other Revenue	18.4	18.4	19.0	17.9	17.6
Total Receipts	£58.1	£59.9	£61.6	£59.9	£58.6
Debt Charges	31.0	32.0	31.9	31.4	30.0
Civil Government	9.8	9.7	9.9	9.9	9.9
Fighting Services	16.7	16.7	16.6	15.2	14.4
Total Expenditure	£57.5	£58.4	£58.4	£56.5	£54.3
Budget Surplus	£0.6	£1.5	£3.2	£3.4	£4.3


United Kingdom Budget Surplus/Deficit
Graph E.3 - fiscal years 1813 to 1823
U.K. Budget Deficit (millions £)
10
0
-10
-20
-30
-40
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
Year

Appendix E.4

The National Debt and Interest Charges

Year	The National Debt (£ millions)	Debt Charges (£ millions)
1800	456.1	
1801	498.6	
1802	516.4	
1803	523.8	
1804	539.6	
1805	564.4	
1806	583.1	
1807	591.3	
1808	599.0	
1809	607.4	
1810	607.4	
1811	609.6	
1812	626.9	
1813	652.3	27.3
1814	725.5	30.1
1815	744.9	32.2
1816	788.3	32.9
1817	766.1	31.4
1818	843.3	31.3
1819	844.3	31.0
1820	840.1	32.0
1821	838.3	31.9
1822	831.1	31.4
1823	836.1	30.0
1824	828.6	
1825	820.2	

Sources:

Total Debt, Mitchell (1990) p.601

For Debt Charges, see Appendix E.3

Appendix F.1

Wage Indices for Certain Industries
(Average Weekly Earnings, 1891 = 100)

Year	Agricultural Wages England & Wales	Agricultural Wages Scotland	Building Trades	Shipbuilding & Engineering	Cotton Factory Workers	Cotton All Workers
1805	100	54	60	65		
1806	105	58	61		59	98
1807	105	58	62			87
1808	105	58	62			72
1809	105	58	63			75
1810	105	58	63	71	62	76
1811	105	58	63	71	62	69
1812	105	58	63	71	62	76
1813	104	55	63	71	62	79
1814	103	53	63	72	62	92
1815	102	51	63	72	62	73
1816	101	51	63	72	62	61
1817	100	49	63	72	61	55
1818	98	48	63	71	61	53
1819	97	47	63	73	61	53
1820	95	46	63	71	61	53
1821	88	42	63	71	60	53
1822	77	39	63	71	60	53
1823	77	37	63	71	58	52
1824	72	37	63	71	58	53
1825	78	37	63	71	58	53

Source: Mitchell and Dean (1971) pp.348-349.
The data represent a summary of several articles by Bowley and Wood published in the Journal of the Royal Statistical Society from 1899-1906.

Appendix F.2

Wage Indices by Kondratieff, Bowley and Tucker

Year	Money Wages Textile Industry	Money Wages Agriculture	Money Wages London Artisans	Real Wages London Artisans
1811	55.1	198	69.5	40.2
1812	60.9	198	69.5	37.6
1813	60.4	196	70	36
1814	71.5	194	70.6	40.2
1815	63.3	192	70.6	44.5
1816	57.5	190	67.3	43.6
1817	52.7	188	66.4	41.9
1818	50.7	185	66.4	41.5
1819	51.2	183	65.1	41.4
1820	52.2	179	64.7	43.7
1821	51.7	165	65.4	48.7
1822	51.7	144	65.4	53.5
1823	51.2	144	65.4	52.7
1824	51.7	136	66.1	52.4
1825	51.7	146	66.9	48.8

Source:

The indices are reprinted in Gayer (1953) pp.135, 167, 208.

Appendix G

Economic Articles in Periodicals Used by Ricardo,
Arranged by topic, date of article and journal

Bank of England and the Money Supply

•	Blackwood's	July	1817	Grenfell's Speech
•	Blackwood's	November	1817	New Gold Coinage
	British Critic	January	1812	William Pitt - The Bullion Debate
	Edinburgh Magazine	July	1819	Principal Banking Companies of Europe
	Edinburgh Magazine	January	1819	Repeal of Bank Restriction Act
•	Edinburgh Review	August	1811	Pamphlets on the Bullion Question
•	Edinburgh Review	February	1811	Depreciation of Paper Money
•	Edinburgh Review	December	1818	Increase of Forgeries
•	Edinburgh Review	July	1821	Pernicious Effects of Degrading the Standard
	Quarterly Review	November	1810	Huskisson on Depreciation of the Currency
	Quarterly Review	February	1810	Ricardo on Bullion
	Quarterly Review	November	1810	Sinclair's Observations on the Bullion Committee
	Quarterly Review	February	1811	Sinclair's Remarks
	Quarterly Review	February	1811	Tracts on the Bullion Report
•	Quarterly Review	April	1822	State of the Currency
•	Scots Magazine	March	1818	On the State of the Currency
•	The Scotsman		1820	Reduction of the Standard
•	The Scotsman		1822	Money
•	The Scotsman		1822	Peel's Bill

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National Finance: Debt, Expenditure & Taxes

•	Blackwood's	May	1818	Thoughts concerning Tythes
	Blackwood's	January	1820	Heathfield's Plan for liquidation of National Debt
	British Critic	September	1814	Hamilton on the National Debt
	British Critic	February	1815	Communtation of Tythes
	British Critic	February	1815	Property Tax
	British Critic	January	1815	Boyd - Financial System of Great Britain
	British Review	October	1813	Review of Hamilton's ...National Debt of Great Britain
	British Review	November	1816	The Tithe System
•	British Review	February	1817	McCulloch's Interest on the National Debt
•	Edinburgh Magazine	October	1818	Effects of War and Taxes
•	Edinburgh Magazine	December	1818	Other Remarks on War and Taxes
•	Edinburgh Review	February	1815	Hamilton on the National Debt
•	Edinburgh Review	October	1815	Boyd on the Financial System of Great Britain
•	Edinburgh Review	January	1820	Finance
•	Edinburgh Review	January	1820	Taxation and the Corn Laws
•	Edinburgh Review		1821	Mushet on Gains & Losses of Fundholders
•	Edinburgh Review	February	1822	Comparative Productiveness of High and Low Taxes
•	Edinburgh Review	October	1823	The Funding System, British Finances
	Scots Magazine	November	1815	Revenue of England & Scotland - 1802 to 1814 (part 2)
	Scots Magazine	September	1815	Revenue of England & Scotland - 1801 to 1814 (part 1)
	Scots Magazine	October	1816	Revenue of England & Scotland - 1815
	Scots Magazine	February	1816	Expediency of continuing the Income Tax
	Scots Magazine	April	1817	Report from the Select Committee of Finance
	Scots Magazine	May	1817	Account of Produce of Assessed Taxes - 1815 to 1817
	Scots Magazine	January	1817	Financial Statements for 1816 and 1817
•	The Scotsman		1820	Ricardo's Plan to repay National Debt
•	The Scotsman		1821	High and Low Taxation

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Arranged by topic, date of article and journal

Poor Laws and Relief of the Poor

*	Blackwood's	June	1817	Relief of the Poor
*	Blackwood's	April	1818	On the Poor Laws in England
*	Blackwood's	June	1818	Management of Poor in Scotland
	Blackwood's	May	1819	Poor Rates
	British Critic	April	1815	Education of the Poor
	British Critic	June	1815	Review: Weyland on the Poor Laws
*	British Review	November	1817	Committee Reports on the Poor Laws
*	British Review	February	1817	Commons Rpt. on Education of Lower Orders
*	Edinburgh Review	October	1813	Guarinos on Poor Laws
*	Edinburgh Review	March	1817	Causes and Cures of Pauperism - I
*	Edinburgh Review	February	1818	Causes and Cures of Pauperism - II
*	Edinburgh Review	February	1818	Reports on the State of the Poor
*	Edinburgh Review	March	1819	Pamphlets on Education and Abuse of Charities
*	Edinburgh Review	January	1820	Pamphlets on the Poor Laws
*	Edinburgh Review	January	1820	Abuses of Charities
*	Edinburgh Review	October	1821	Mr. Scarlett's Poor Bill
	Quarterly Review	December	1812	Inquiry Respecting the Poor Laws
	Quarterly Review	October	1814	On Improving the Condition of the Poor
	Quarterly Review	October	1815	Mendicity
*	Quarterly Review	April	1816	The Poor
*	Quarterly Review	January	1818	On the Poor Laws
	Quarterly Review	January	1823	The Poor Laws
	Scots Magazine	January	1814	Loan Fund for the Poor
	Scots Magazine	December	1815	Edinburgh Charity Workhouse
	Scots Magazine	February	1816	Report of Society for the Suppression of Begging
	Scots Magazine	September	1816	Annuity Fund for the Poor
	Scots Magazine	November	1816	Commons Report: Education of Lower Orders
	Scots Magazine	September	1816	Extension of the Society for the Suppression of Begging
	Scots Magazine	January	1817	Relief of Labouring Classes in Edinburgh
	Scots Magazine	January	1817	Edinburgh Charity Workhouse
	Scots Magazine	March	1817	The Poor in London
	Scots Magazine	July	1817	Committee to Afford Relief to the Labouring Classes
	Scots Magazine	August	1817	Principles of the Poor Laws
*	Scots Magazine	June	1818	Management of the Poor in Scotland
*	Scots Magazine	July	1818	On the Poor Laws of England
*	Scots Magazine	September	1818	Management of the Poor

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Corn Laws

	British Critic	August	1814	Corn Laws - Lauderdale, Rose, Malthus...
	British Critic	March	1815	Corn Laws
	British Critic	January	1815	Corn Laws
	British Critic	March	1815	Review: Malthus' Grounds of an Opinion...
	British Critic	April	1815	Review: Malthus' Nature of Rent
•	Edinburgh Review	February	1815	Malthus on the Corn Laws
•	Edinburgh Review	January	1820	Taxation and the Corn Laws
	Scots Magazine	November	1814	Evidence before Houses of Parliament...Corn Trade
•	The Scotsman		1820	The Corn Laws

Usury Laws

•	British Review	May	1817	Bentham's Defense of Usury
•	Edinburgh Review	December	1816	Bentham's Defense of Usury
•	Scots Magazine	August	1818	Principles of the Usury Laws
	Scots Magazine	March	1819	Proposed Repeal of Usury Laws

Theory of Population

•	Blackwood's	November	1818	Reflections on the Theory of Population
	British Review	November	1816	Principles of Population and Production
	Edinburgh Magazine	January	1819	Principle of Population - Source of Vice and Misery
•	Edinburgh Review	July	1821	Godwin on Malthus
•	Quarterly Review	July	1817	Malthus on Population
•	Quarterly Review	October	1821	Godwin and Malthus on Population

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Economic Articles in Periodicals Used by Ricardo,
Arranged by topic, date of article and journal

State of the Nation

	British Critic	October	1815	Colquhoun's Treatise - II
	British Critic	September	1815	Colquhoun's Treatise - Wealth...of the British Empire
	British Critic	May	1821	Review: Craig's Commercial State of Britain since 1815
•	British Review	August	1817	Letter on Distresses of the Country
•	Edinburgh Magazine	October	1818	Commerce of United Kingdom: Public Accounts
	Edinburgh Magazine	April	1819	Commercial Embarrassments of the Country
•	Edinburgh Reivew	June	1816	Distresses of the Country
•	Edinburgh Review	December	1816	Commercial Distresses of the Country
•	Edinburgh Review	October	1819	Comparative Skill and Industry of France and England
•	Edinburgh Review	October	1819	Owen's Plans for Relieving National Distress
•	Edinburgh Review	January	1820	Speeches on the Distress of the Country
•	Edinburgh Review	May	1820	State and Prospects of Manufacturers
•	Edinburgh Review	February	1822	State of the Nation
	Quartelry Review	January	1815	Wealth, Power and Resources of the British Empire
	Quarterly Review	January	1820	State of Public Affairs
	Quarterly Review	April	1823	Tooke–On High and Low Prices
	Scots Magazine	October	1815	Causes of our Domestic Embarrassments
	Scots Magazine	December	1816	General View of British Commerce - 1814 to 1815
	Scots Magazine	August	1817	General View...Credit and Commerce of the Country

State of Agriculture

	Blackwood's	October	1822	On the Agricultural Distress
	Blackwood's	October	1822	Hints to Country Gentlemen - I
	Blackwood's	November	1822	Hints to Country Gentlemen - II
	British Critic	Janaury	1816	Agricultural Distress and the Prices of Corn & Bullion
	British Review	August	1816	On the State of Agriculture
•	Edinburgh Review	November	1814	Sinclair on the Agriculture of Scotland
•	Edinburgh Review	February	1816	Wilson on Corn and Money
•	Edinburgh Review	February	1822	Agricultural Distress, Causes and Remedies
•	Quarterly Review	July	1821	Report on the State of Agriculture
	Scots Magazine	January	1814	Sinclair - Husbandry of Scotland
	Scots Magazine	December	1815	Distress of the Landed Interest
	Scots Magazine	June	1816	Abstract: Board of Agriculture Queries & Responses
•	The Scotsman		1819	Importation of Foreign Corn
•	The Scotsman		1821	Report of Agricultural Committee
•	The Scotsman		1822	Review of Ricardo's Protection to Agriculture

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Economic Articles in Periodicals Used by Ricardo,
Arranged by topic, date of article and journal

Foreign Trade

•	Blackwood's	August	1817	Exportation of Cotton yarn
•	Edinburgh Review	July	1812	Orders in Council
•	Edinburgh Review	July	1819	Commercial Embarrassments and Trade with France
•	Edinburgh Review	May	1820	Restrictions on Foreign Commerce
•	Edinburgh Review	May	1823	The Navigation Laws
	Quarterly Review	March	1812	America - Orders in Council
	Scots Magazine	February	1814	Commercial Intelligence
	Scots Magazine	March	1815	Commercial Intelligence - Trade Data
	Scots Magazine	March	1817	Table of British Exports - 1792 to 1817
	Scots Magazine	July	1817	Official Value of British Exports - 1815 & 1816
•	The Scotsman		1820	Merchant's Petition

Ricardo

•	Blackwood's	May	1817	Ricardo on Political Economy
•	Blackwood's	October	1818	Ricardo and the Edinburgh Review
	British Review	May	1816	Review of Secure Currency
•	British Review	November	1817	Reivew of Ricardo's Principles & Say's Traite
•	Edinburgh Magazine	October	1818	Ricardo's Doctrine of Exchangeable Value
•	Edinburgh Magazine	November	1818	Vindication of Ricardo on Exchangeable Value
•	Edinburgh Review	December	1818	Economical and Secure Currency
•	Edinburgh Review	June	1818	Ricardo's Political Economy
	Monthly Review	September	1820	Ricardo's Principles
•	The Scotsman		1818	Review of Ricardo's Principles

General Gluts

	British Critic	September	1820	Malthus' Principles - General Gluts
	British Critic	December	1820	Says Letters to Malthus - General Gluts
	British Critic	February	1822	Mill's Political Economy - General Gluts
	Monthly Review	May	1821	Malthus and Say - General Gluts
	Monthly Review	May	1822	Mill's Political Economy - General Gluts
•	The Scotsman		1823	Blake's Observations on Expenditure

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Economic Articles in Periodicals Used by Ricardo,
Arranged by topic, date of article and journal

Miscellaneous

•	Blackwoods	April	1818	Banks for Saving in Scotland
	British Critic	April	1811	Three Replies to Calumnies of the Edinburgh Rev.
	British Critic	June	1811	Dugald Stewart - Philosophical Essays I
	British Critic	August	1811	Dugald Stewart - Philosophical Essays II
	British Critic	December	1811	Interest & Annuities
	British Critic	January	1812	Parliamentary Reform
	British Critic	May	1813	Sinclair's Scottish Husbandry
	British Critic	February	1814	Malthus' Letter to Lord Grenville (Hertford Coll.)
	British Critic	September	1814	Apprentice Laws
	British Critic	November	1814	Craig's Elements of Political Economy
	British Critic	February	1815	Buchanan's Edition of the Wealth of Nations
	British Critic	April	1816	Say's Catechism of Political Economy
•	British Review	May	1818	Parliamentary Reform
•	Edinburgh Review	June	1815	Savings Banks
•	Edinburgh Review	March	1821	Effects of Machinery and Accumulation
•	Quarterly Review	October	1816	Tracts on Savings Banks
	Scots Magazine	January	1814	Society for the Suppression of Begging, Report
	Scots Magazine	November	1814	Society for the Suppression of Begging, Savings Banks
	Scots Magazine	September	1816	Juvenile Delinquency in the Metropolis
	Scots Magazine	March	1817	Characters of the late Francis Horner
•	The Scotsman		1823	Combination Laws

Years Ricardo is known to have Used the above Periodicals

British Review	1817 - 1818	7:222 & 7:248-9
Edinburgh Review	1802 - 1823	See Sraffa Index pages 27-28
Edinburgh Magazine	1818	
Blackwood's	1817-1818	7:219,
Quarterly Review	1816-1819, 1821-1822	7:247, 8:44, 9:109, 122, 147, 154, 249,
The Scotsman	1817-1823	See Sraffa Index pages 51 & 92
Morning Chronicle	1815, 1817, 1822	
The Times	1817, 1819	

Appendix H: Timeline

1813 **1814** **1815** **1816**

J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A

Agricultural Depression - Low prices, Farms abandoned

Bumper Harvest

Poor Harvest

Good Harvest

High Corn

High Foreign Corn Imports

High military demand ends

410,000 Soldiers Demobilised

Depression in Manufacturing &

Crisis in Country Bank System - many bankruptcies

Hundred Days

Gold Prices High

Gold Prices Low

Gold High

Gold Prices Decline

Rapid Rise

1817 1818 1819

S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

Prices - Open Ports, Famine on Continent
Famine Poor Harvest Average Harvest Lower Corn Average

Enormous Imports of Corn & Trade items

Foreign Trade Boom in Manufacturing and Foreign Trade Depression in Foreign Trade

Manufacturing Depression

Financial Panic

Exodus of Foreign and Domestic Capital - tens of millions (£) to Continent

Foreign Exchange Unfavourable Exchange

in B.E. Bullion Hoard B.E. Bullion Hoard falls - Cash Payments Stopped

Start Partial Resumption

p.428

1820 **1821** **1822** **1823**

J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A

Prices Agricultural prices fluctuate, but decline in general

Harvest Bumper Harvest Good Harvest Good Harvest

Enormous, Unprecedented Corn Imports from Ireland

Steady Increase in Foreign Trade

Great Prosperity in all Industries during 1823

Manufacturing Revives Robust Economic Conditions

Capital Flight Stops

Millions in gold & silver Coined at Mint

Rate Favourable

Rapid Increase of B.E. Hoard Cash Payments Resume

Bibliography - Government Documents

Cobbett's Parliamentary Debates. London.

Great Britain. The Committee of Secrecy on the Bank of England Charter (1832) Digest of Evidence on the Bank Charter.

Great Britain. Index to the Journals of the House of Lords, 1780-1819.

Great Britain. Journals of the House of Commons.

Great Britain. Journals of the House of Lords.

Great Britain. House of Commons Parliamentary Papers. Published in microfiche by Chadwick-Healey.

Great Britain. The Parliamentary Debates. Published under the superintendence of T.C. Hansard. London.

Great Britain. The Parliamentary History of England. London.

Marshall, J. (1833) A Digest of All the Accounts...Diffused Through More than 600 Volumes of Journals, Reports, and Papers, Presented to Parliament during the last Thirty-five Years. London.

Bibliography - Contemporary Periodicals

The Annual Register. London.

Blackwood's Edinburgh Magazine.

Cobbett's Weekly Political Register.

The Critical Review.

The Edinburgh Magazine.

The Edinburgh Review.

The Farmer's Magazine.

The London Magazine.

The Morning Chronicle.

The New Monthly Magazine.

The Quarterly Review.

The Scots Magazine.

The Times. London.

Bibliography - Primary Authors

Anderson, Adam. (1967 [1801]) The Origin of Commerce, Vol.4. Introduction by Joseph Dorfman. New York.

Baring, Sir Francis. (1968 [1797]) Observations on the Establishment of the Bank of England and on the Paper Circulation. London.

Barton, John. (1817) Observations on the Labouring Classes of Society.

Blake, William. (1969 [1823]) Observations on the Effects Produced by the Expenditure of Government During the Restriction of Cash Payments. New York.

Colquhoun, Patrick. (1814) A treatise on the Wealth, Power and Resources of the British Empire. [2nd edition in 1815]. London.

Grund, Francis. (1834) The Merchant's Assistant. Boston.

Horner, Francis. (1802) Review of Paper Credit by Henry Thornton. Edinburgh Review. Vol.1, Pages 172-201. Tenth Edition.

King, Lord Peter. (1968 [1804]) Thoughts on the Effects of the Bank Restrictions. London.

Liverpool, Lord. Letter to Canning dated 23 September 1819. Reprinted (1959) in English Historical Documents, 1783-1832. (1959) Edited by A. Aspinall and E. Smith. London.

Lowe, Joseph. (1822) The Present State of England. London.

Malthus, T.R. (1970 [1814]) Observations on the Effects of the Corn Laws and of a Rise or Fall in the Price of Corn on the Agriculture and General Wealth of the Country. New York.

Malthus, T.R. (1970 [1815a]) The Grounds of an Opinion on the Policy of Restricting the Importation of Foreign Corn; Intended as an Appendix to 'Observations on the Corn Laws'. New York.

Malthus, T.R. (1970 [1815b]) An Inquiry into the Nature and Progress of Rent. New York.

Malthus, T.R. (1820) The Principles of Political Economy. London.

Malthus, T.R. (1964 [1836]) The Principles of Political Economy. 2nd edition. New York.

Malthus, T.R. (1963) Occasional Papers of T.R. Malthus on Ireland, Population, and Political Economy. Edited by Bernard Semmel. New York.

Porter, G.R. (1836) The Progress of the Nation, Vol. I. London.

Ricardo, David. (1951-73) The Works and Correspondence of David Ricardo. 11 Vols. Edited by Piero Sraffa. Cambridge.

Ruding, Rogers. (1840) Annals of the Coinage of Great Britain. Vol.II, 3rd edition. London.

Smith, Adam. (1937 [1776]) The Wealth of Nations, Vol.1, 5th edition (1789). Edited by Edwin Cannan. New York.

Spence, William. (1815) Objections Against the Corn Bill Refuted. London.

Thornton, Henry. (1939 [1802]) The Paper Credit of Great Britain. Edited by F.A. Hayek. New York.

Tooke, Thomas. (1823) High and Low Prices. 2 Vols. London.

Tooke, Thomas. (1829) A Letter to Lord Grenville. London.

Tooke, Thomas and Newmarch, William. (1838-1857) A History of Prices. 6 Vols. London.

Bibliography - Secondary Authors

Acworth, A.W. (1925) Financial Reconstruction in England. London.

Ahiakpor, James and Carr, Jack. (1982) "Ricardo on the non-neutrality of money in a world with taxes." History of Political Economy. Vol.14, No.2, Pages 147-165.

Ahiakpor, James. (1985) "Ricardo on money: the operational significance of the non-neutrality of money in the short run." History of Political Economy. Vol.17, No.1, Pages 17-30.

Ahiakpor, James. (1997) "Full Employment: A classical assumption or Keynes's rhetorical device?" Southern Economic Journal. Vol.64, No.1, Pages 56-74.

Andreades, Michael. (1966) History of the Bank of England 1640 to 1903. 4th English edition. London.

Arnon, Arie. (1987) "Banking Between the Invisible and Visible Hands." Oxford Economic Papers. Vol.39, No.2, Pages 268-281.

Arnon, Arie. (1989) "The early Tooke and Ricardo: a political alliance and first signs of theoretical disagreements." History of Political Economy. Vol.21, No.1, Pages 1-14.

Arnon, Arie. (1991) Thomas Tooke: Pioneer of Monetary Theory. Ann Arbor.

Ashton, T.S. (1959) Economic Fluctuations in England, 1700-1800. Oxford.

Aspinall, A. (1926) "English Party Organization in the Early Nineteenth Century." The English Historical Review. Vol.41, No.163, Pages 389-411.

Bagehot, Walter. (1910 [1873]) Lombard Street. London.

Bagehot, Walter. (1911 [1879]) Economic Studies. London.

Barnes, Donald. (1965 [1930]) A History of the English Corn Laws. New York.

Baumol, William. (1997) "J.B. Say on Unemployment and Public Works." Eastern Economic Journal. Vol.23, No.2, Pages 219-230.

Beaugrand, Philippe. (1982) "Henry Thornton: a mise au point." History of Political Economy. Vol.14, No.1, Pages 101-111.

Becker, Gary and Baumol, William. (1952) "Classical Monetary Theory: The outcome of the Discussion." Economica. Vol.19, No.76, Pages 355-376.

Berg, Maxine. (1980) The Machinery Question and the Making of Political Economy. New York.

Black, R.D.C. (1967) "Parson Malthus, the General and the Captain." Economic Journal. Vol.77, Pages 59-74.

Bladen, Vincent. (1974) From Adam Smith to Maynard Keynes. Toronto.

Blaug, Mark. (1956) "The Empirical Content of Ricardian Economics." Journal of Political Economy. Vol.64, Pages 41-58. Reprinted in David Ricardo: Critical Assessments (1985) Vol.1, Pages 157-177.

Blaug, Mark. (1958) Ricardian Economics. New Haven.

Blaug, Mark. (1963) "The Myth of the Old Poor Law and the Making of the New." Journal of Economic History. Vol.23, No.2, Pages 151-184.

Blaug, Mark. (1964) "The Poor Law Report Reexamined." Journal of Economic History. Vol.24, No.2, Pages 229-245.

Blaug, Mark. (1986) "Ricardo and the Problem of Public Policy." Economic History and the History of Economics. New York.

Blaug, Mark. (1992) The Methodology of Economics. 2nd edition. New York.

Blaug, Mark. (1994) "Not Only an Economist." The American Economist. Vol.38, No.2, Pages 12-27.

Blaug, Mark. (1995) "Why is the quantity theory of money the oldest surviving theory in economics?" The Quantity Theory of Money. Aldershot, U.K.

Blaug, Mark. (1996) "Taking Hollander Seriously: Ricardo - The New View by Samuel Hollander." History of Economic Thought Newsletter. No.56, Pages 22-24.

Blaug, Mark. (1997) "Say's Law of Markets: What did it mean and why should we care?" Eastern Economic Journal. Vol.23, No.3, Pages 231-235.

Bonar, James. (1885) Malthus and His Work. London.

Bonar, James. (1893) Philosophy and Political Economy. London.

Bowley, A.L. (1898-99) "The Statistics of Wages in the United Kingdom during the last Hundred Years." Parts I, II, III, IV, V. Journal of the Royal Statistical Society. December 1898, March, June, September and December 1899.

Bronfenbrenner, Martin. (1997) Review of Ricardo: The New View by Samuel Hollander. Published in the History of Political Economy. Vol.29, No.1, Pages 159-161.

Brunner, Karl. (1951) "Inconsistency and Indeterminacy in Classical Economics." Econometrica. Vol.19, No.2, Pages 152-173.

Buer, M.C. (1921) "The Trade Depression Following the Napoleonic Wars." Economica. Vol.1, No.2, Pages 159-79.

Cannan, Edwin. (1894 [1953]) History of the Theories of Production & Distribution. London.

Capie, Forrest and Wood, Geoffrey. (1991) Unregulated Banking: Chaos or Order? London.

Checkland, S.G. (1948) "The Birmingham Economists, 1815-1850." Economic History Review. Vol.1, No.1, Pages 1-19.

Churchman, Nancy. (1996) David Ricardo on Public Debt. Unpublished Ph.D. Dissertation.

Coleman, William. (1987) History and the Economic Past. Oxford.

Coleman, William. (1996) "How Theory Came to English Classical Economics." Scottish Journal of Political Economy. Vol.43, No.2, Pages 207-208.

Collins, Michael. (1992) "The Bank of England as Lender of Last Resort." Economic History Review. Vol.45, No.1, Pages 145-153.

Corry, B.A. (1958) "The Theory of the Economic Effects of Government Expenditure in English Classical Political Economy." Economica. Vol.24, Pages 34-48.

Corry, B.A. (1962) Money, Saving and Investment in English economics. London.

Cremaschi, Sergio and Dascal, Marcelo. (1996) "Malthus and Ricardo on Economic Methodology." History of Political Economy. Vol.28, No.3, Pages 490-509.

David Ricardo: Critical Assessments. 7 Vols. (1985-94) Edited by John Wood. London.

Dean, P. and Cole, W.A. (1967) British Economic Growth, 1688-1959. 2nd edition. Cambridge.

De Marchi, N.B. (1970) "The Empirical Content and Longevity of Ricardian Economics." Economica. Vol.37, Pages 257-276.

De Vivo, G. (1987) "Ricardo, David." The New Palgrave. Pages 183-198.

The Dictionary of National Biography from Earliest Times to 1900. (1949-50 [1885-1901]) 22 Vols. Oxford University Press. (The series was originally published in 66 volumes.)

Duffy, I.P. (1982) "Discount Policy of the Bank of England during the Suspension of Cash Payments." Economic History Review. 2nd Series. Vol.35, No.1, Pages 67-81.

Dunbar, Charles. (1887) "Ricardo's Use of Facts." Quarterly Journal of Economics. Vol.1, July, Pages 474-6.

Dunbar, Charles. (1902) Chapters on the Theory and History of Banking. 2nd edition. London.

Eagly, Robert and Smith, Kerry. (1976) "Domestic and International Integration of the London Money Market, 1731-1789." Journal of Economic History. Vol.36, No.1, Pages 198-212.

Feavearyear, Albert. (1963) The Pound Sterling. 2nd edition. Oxford. Revised by E. Victor Morgan.

Ferguson, C. (1973) "The Specialization Gap: Barton, Ricardo and Hollander." History of political Economy. Vol.5, No.1. Pages 1-13. Reprinted in David Ricardo: Critical Assessments (1985) Vol.4, Pages 90-99.

Fetter, Frank. (1942) "Life and Writings of John Wheatley." Journal of Political Economy. Vol.50, No.3, Pages 357-376.

Fetter, Frank. (1953) "Authorship of Economic Articles in the Edinburgh Review." Journal of Political Economy. Vol.61, No.3, Pages 232-259.

Fetter, Frank. (1958) "The Economic Articles in the 'Quarterly Review' and their Authors." Journal of Political Economy. Vol.66, No.1, Pages 47-64, and Vol.66, No.2, Pages 154-170.

Fetter, Frank. (1960) "Economic Articles in Blackwood's." Scottish Journal of Political Economy. Vol.7, Pages 85-107 and 213-31.

Fetter, Frank. (1962) "Economic Articles in the Westminster Review and their Authors." Journal of Political Economy. Vol.70, No.6, Pages 570-96.

Fetter, Frank. (1964) Selected Economic Writings of Thomas Attwood. London.

Fetter, Frank. (1965) The Development of British Monetary Orthodoxy, 1797-1875. Cambridge, Mass.

Fetter, Frank. (1969) "The Rise and Decline of Ricardian Economics." History of Political Economy. Vol.1, Pages 67-84. Reprinted in David Ricardo: Critical Assessments (1994) Vol.5, Pages 15-30.

Fetter, Frank. (1980) The Economist in Parliament: 1780-1868. Durham, N.C.

Fisher, Irving. (1934) Stable Money: A History of the Movement. New York.

Flinn, M.W. (1961) "The Poor Employment Act of 1817." Economic History Review. 2nd Series, Vol.1, No.1, Pages 82-92.

Fussell, G. and Compton, M. (1939) "Agricultural Adjustments after the Napoleonic Wars." Economic History. Vol.3, No.14, Pages 184-204.

Gash, N. (1935) "Rural Unemployment, 1815-34." Economic History Review. Vol.6, No.1, Pages 90-93.

Gayer, A.D., Rostow, W.W. and Schwartz, A.J. (1953) The Growth and Fluctuation of the British Economy. Volume 1. Oxford.

Gilbert, Geoffrey. (1996) Book Review of Interpreting Ricardo by Terry Peach. History of Political Economy. Vol.28, No.2, Pages 307-309.

Gillman, J.M. (1956) "Ricardo's Development as an Economist." Science and Society. Vol.20, No.3, Pages 193-226. Reprinted in David Ricardo: Critical Assessments (1985) Vol.1, Pages 132-156.

Gootzeit, Michael. (1975) David Ricardo. London.

Hamilton, Henry. (1956) "The Failure of the Ayr Bank, 1772." Economic History Review. Vol.8, Pages 405-17.

Hawtrey, R.G. (1934) Currency and Credit. London.

Hawtrey, R.G. (1970 [1932]) The Art of Central Banking. New York.

Hayek, F.A. (1942) "The Ricardo Effect." Economica. Vol.9, Pages 127-152.

Heertje, Arnold. (1991) "Three Unpublished Letters by David Ricardo." History of Political Economy. Vol.23, No.3, Pages 519-526.

Heertje, A. and Weatherall, D. (1978) "An Unpublished Letter of David Ricardo to Thomas Smith of Easton Grey." Economic Journal. Vol. 88, No. 351, Pages 569-71. Reprinted in David Ricardo: Critical Assessments (1985) Vol.4, Pages 152-155.

Heertje, A., Polak, R. and Weatherall, D. (1985) "An Unpublished Letter of David Ricardo to Francis Finch." Economic Journal. Vol.95, No.380, Pages 1091-2. Reprinted in David Ricardo: Critical Assessments (1994) Vol.6, Pages 282-284.

Henderson, John and Davis, John. (1997) The Life and Economics of David Ricardo. Edited by Warren Samuel and Gilbert Davis. Boston.

Hicks, J.R. (1967) Critical Essays in Monetary Theory. Oxford.

Hicks, J.R. and Hollander, S. (1977) "Mr. Ricardo and the Moderns." Quarterly Journal of Economics. Vol.41, No.3, Pages 351-369.

Hickman, W. (1950) "The Determinacy of Absolute Prices in Classical Economic Theory." Econometrica. Vol.18, No.1, Pages 9-20.

Hilton, Boyd. (1977) Corn, Cash, Commerce. Oxford.

Hollander, Jacob. (1911a) "The Work and Influence of Ricardo." American Economic Association. Vol.1, Pages 71-84. Reprinted in David Ricardo: Critical Assessments (1985) Vol.1, Pages 42-51.

Hollander, Jacob. (1911b) "The Development of the Theory of Money from Adam Smith to David Ricardo." Quarterly Journal of Economics. Vol.25, May, Pages 429-470.

Hollander, Samuel. (1969) "Malthus and the Post-Napoleonic Depression." History of Political Economy. Vol.1, Pages 306-335.

Hollander, Samuel. (1971) "The Development of Ricardo's Position on Machinery." History of Political Economy. Vol.3, Pages 105-135.

Hollander, Samuel. (1977) "Ricardo and the Corn Laws: a revision." History of Political Economy. Vol.9, Pages 1-47.

Hollander, Samuel. (1979) The Economics of David Ricardo. Toronto.

Hollander, Samuel. (1982) "The Economics of David Ricardo: A Response to Professor O'Brien." Oxford Economic Papers. Vol.34, No.1, Pages 224-246.

Hollander, Samuel. (1989a) "On Composition of Demand and Income Distribution in Classical Economics." History of Economics Society Bulletin. Fall, Pages 216-21. Reprinted in Hollander (1995) Ricardo: The New View, Collected Essays, Vol.1, Pages 195-201. New York.

Hollander, Samuel. (1989b) Review of History and the Economic Past by D.C. Coleman. In Albion. Vol.21, Fall, Pages 525-27. Reprinted in Hollander (1995) The Literature of Political Economy, Collected Essays, Vol.2, Pages 393-96. New York.

Hollander, Samuel. (1995) Review of Thomas Tooke: Pioneer of Monetary Theory by Arie Arnon. In Research in the History of Economic Thought and Methodology. Vol.13, Pages 271-76. Reprinted in Hollander (1995) The Literature of Political Economy, Collected Essays, Vol.2, Pages 187-192. New York.

Hollander, Samuel. (1997) The Economics of Thomas Robert Malthus. Toronto.

Horsefield, J.K. (1944) "Origins of the Bank Charter Act of 1844." Economica. Vol.11, Pages 180-189. Reprinted in Papers in English Monetary History (1953) Edited by Ashton and Sayers. Oxford.

Horsefield, J.K. (1949) "The Bankers and the Bullionists in 1819." Journal of Political Economy. Vol.57, No.5, Pages 442-448.

Humphrey, Thomas. (1974) "The Quantity Theory of Money." Federal Reserve Bank of Richmond Economic Review. Vol.60, No.3, Pages 2-19. Reprinted in Humphrey (1993) Money, Banking and Inflation. Brookfield. Pages 77-94.

Humphrey, Thomas. (1989) "Lender of Last Resort: The Concept in History." Federal Reserve Bank of Richmond Economic Review. Vol.75, No.2, Pages 8-16. Reprinted in Humphrey (1993) Money, Banking and Inflation. Brookfield. Pages 12-20.

Humphrey, Thomas. (1990) "Ricardo Versus Thornton on the Appropriate Monetary Response to Supply Shocks." Federal Reserve Bank of Richmond Economic Review. Vol.76, No.6, Pages 18-24. Reprinted in Humphrey (1993) Money, Banking and Inflation. Brookfield. Pages 264-270.

Humphrey, Thomas. (1991) "Nonneutrality of Money in Classical Monetary Thought." Federal Reserve Bank of Richmond Economic Review. Vol.77, No.2, Pages 3-15. Reprinted in Humphrey (1993) Money, Banking and Inflation. Brookfield. Pages 251-263.

Humphrey, Thomas. (1993) Money, Banking and Inflation. Brookfield.

Hutchison, T.W. (1952) "Some Questions about Ricardo." Economica. Vol.19, Pages 415-432. Reprinted in David Ricardo: Critical Assessments (1985) Vol.1, Pages 72-85.

Hutchison, T.W. (1953) "Ricardo's Correspondence." Economica. Vol.20, Pages 263-273. Reprinted in David Ricardo: Critical Assessments (1985) Vol.1, Pages 86-95.

Hutchison, T.W. (1987) "Good at the Price?" Times Literary Supplement. 17 December 1987.

Hutchison, T.W. (1992) Changing Aims in Economics. Oxford.

Hutchison, T.W. (1994) Uses and Abuses of Economics. London.

Jenks, Leland. (1963 [1927]) The Migration of British Capital to 1875. Toronto.

Jonsson, Petur. (1997) "On Gluts, Effective Demand and the True Meaning of Say's Law." Eastern Economic Journal. Vol.23, No.2, Pages 203-218.

Keynes, J.M. (1933) Essays in Biography. London.

Klein, Judy. (1997) Statistical Visions in Time. New York.

Klein, Lawrence. (1961) The Keynesian Revolution. New York.

Laidler, David. (1975) "Thomas Tooke on Monetary Reform." Essays on Money and Inflation. Chicago. Reprinted from Essays in Honour of Lionel Robbins (1972) Edited by M. H. Peston and B.A. Corry. London.

Laidler, David. (1987) "Thornton, Henry." The New Palgrave, Vol.4. Edited by Eatwell, Milgate, Newman. London.

Laidler, David. (1989) "The Bullionist Controversy." The New Palgrave: Money. London. Pages 60-71.

Laidler, David. (1991) Golden Age of the Quantity Theory. New York.

Lange, Oscar. (1942 [1976]) "Say's Law: A Restatement and Criticism." Studies in Mathematical Economics and Econometrics. Plainview, N.Y.

Leontief, Wassily. (1950) "The Consistency of the Classical Theory of Money and Prices." Econometrica. Vol.18, No.1, Pages 21-24.

Link Robert. (1959) English Theories of Economic Fluctuations. New York.

Macleod, Henry. (1902-06) The Theory and Practice of Banking. 2 Vols. 6th edition. London.

Maital, S. and Haswell, P. (1977) "Why Did Ricardo (Not) Change His Mind? On Money and Machinery." Economica. Vol.44, Pages 359-368.

Marcuzzo, M. and Rosselli, A. (1994) "Ricardo's Theory of Money Matters." Revue Economique. Vol.45, No.5, Pages 1251-1267.

Milgate, M. and Stimson, S. (1991) "Economic Opinion on Parliamentary Reform: The Case of Ricardo." Contributions to Political Economy. Vol.10, Pages 21-45.

Mitchell, W. (1949) Lecture Notes on Types of Economic Theory. New York.

Mitchell, Brian. (1990 [1988]) British Historical Statistics. Cambridge.

Mitchell, B.R. and Dean, P. (1971 [1962]) Abstract of British Historical Statistics. Cambridge.

Mitchison, Rosalind. (1959) "The Old Board of Agriculture, 1793-1822." The English Historical Review. Vol.74, No.290, Pages 41-69.

Morgan, Victor. (1939) "Some Aspects of the Bank Restriction Period, 1797-1821." Economic History. Vol.3, No.14, Pages 205-221.

Neal, Larry. (1987) "The Integration and Efficiency of the London and Amsterdam Stock Markets in the Eighteenth Century." Journal of Economic History. Vol.47, No.1, Pages 97-115.

Niehans, Jurg. (1987) "Classical Monetary Theory, New and Old." Journal of Money, Credit and Banking. Vol.19, No.4, Pages 409-424.

Niehans, Jurg. (1990) A History of Economic Theory. Baltimore.

O'Brien, D.P. (1975) The Classical Economists. Oxford.

O'Brien, D.P. (1981) "Ricardian Economics and the Economics of David Ricardo." Oxford Economic Papers. Vol.33, No.3, Pages 352-386.

O'Brien, D.P. (1982) "Ricardian Economics." Oxford Economic Papers. Vol.34, No.2, Pages 247-252.

O'Brien, D.P. (1992) Review of Thomas Tooke: Pioneer of Monetary Theory by Arie Arnon. Published in The Economic Journal. Vol.102, Pages 674-676.

O'Brien, D.P. (1994) "Classical Reassessments." Methodology, Money and the Firm. Bodmin, U.K.

O'Leary, James. (1942) "Malthus and Keynes." Journal of Political Economy. Vol.50, Pages 901-919.

Paglin, Morton. (1961) Malthus & Lauderdale: The Anti-Ricardian Tradition. New York.

Patinkin, Don. (1948) "Relative Prices, Say's Law and the Demand for Money." Econometrica. Vol.16, No.2, Pages 135-154.

Patinkin, Don. (1949) "The Indeterminacy of Absolute Prices in Classical Economic Theory." Econometrica. Vol.17, No.1, Pages 1-27.

Patinkin, Don. (1951) "The Invalidity of Classical Monetary Theory." Econometrica. Vol.19, No.2, Pages 134-151.

Peach, Terry. (1993) Interpreting Ricardo. Cambridge.

Peach, Terry. (1995) "Unemployment in Post-Napoleonic Britain: The Ricardo-Malthus Debate Revisited." History of Economic Thought Newsletter. No.54, Pages 6-8.

Peake, Charles. (1978) "Henry Thornton and the development of Ricardo's economic thought." History of Political Economy. Vol.10, No.2, Pages 193-212.

Poynter, J.R. (1969) Society and Pauperism: English Ideas on Poor Relief, 1795-1834. Toronto.

Robbins, Lionel. (1970) The Evolution of Modern Economic Theory. London.

Robbins, Lionel. (1968) The Theory of Economic Development in the History of Economic Thought. London.

Robbins, Lionel. (1976) Political Economy: Past and Present. London.

Roberts, R.O. (1942) "Ricardo's Theory of Public Debts." Economica. Vol.9, No.35, Pages 257-266.

Roberts, R. and Kynaston, D. (1995) The Bank of England. New York.

Robinson, Joan. (1978) "Keynes and Ricardo." Journal of Post Keynesian Economics. Vol.1, No.1, Pages 12-18. Reprinted in David Ricardo: Critical Assessments (1985) Vol.4, Pages 146-151.

Roncaglia, Alessandro. (1981) "Piero Sraffa." Printed in Twelve Contemporary Economists. Edited by J.R. Shackleton and Gareth Locksley. New York.

Rose, Michael. (1971) The English Poor Law, 1780-1930. New York.

Rostow, W.W. (1942) "Adjustments and Maladjustments after the Napoleonic Wars." American Economic Review, Vol.32, No.1, Supplement Part 2, Pages 13-23.

Ryan, Franklin. (1924) Usury and Usury Laws. New York.

Sayers, R.S. (1935) "The Question of the Standard, 1815-44." Economic Journal, Economic History Supplement. Vol.3, Pages 79-102.

Sayers, R.S. (1953) "Ricardo's Views on Monetary Questions." Quarterly Journal of Economics. Vol.67, Pages 30-49. Reprinted in David Ricardo: Critical Assessments (1985) Vol.4, Pages 53-68.

Schumpeter, J.A. (1954) History of Economic Analysis. New York.

Schwartz, Anna. (1989) "Banking School, Currency School, Free Banking School." The New Palgrave: Money. London. Pages 41-9.

Skaggs, Neil (1992) Review of Thomas Tooke by Arie Arnon. History of Political Economy. Vol.24, Pages 264-7.

Skaggs, Neil. (1995) "Henry Thornton and the development of classical monetary economics." Canadian Journal of Economics. Vol.28, No.4b, Pages 1212-1227.

Skinner, A.S. (1969) "Of Malthus, Lauderdale and Say's Law." Scottish Journal of Political Economy. Vol.16, Pages 177-195.

Smart, William. (1964 [1910-1917]) Economic Annals of the Nineteenth Century. 2 Vols. New York.

Smith, V.E. (1956) "Malthus's Theory of Demand and Its Influence on Value Theory." Scottish Journal of Political Economy. Vol.3, Pages 205-220.

Sowell, T. (1963) "The General Glut Controversy Reconsidered." Oxford Economic Papers. Vol.15, Pages 193-203.

Sowell, T. (1972) Say's Law: An Historical Analysis. Princeton.

Sowell, T. (1974) Classical Economics Reconsidered. Princeton.

St. Clair, O. (1965 [1957]) Key to Ricardo. New York.

Stigler, G.J. (1953) "Sraffa's Ricardo." American Economic Review. Vol.43, Pages 586-599.

Stigler, G.J. (1981) Review of The Economics of David Ricardo by Samuel Hollander. Published in the Journal of Economic Literature. Vol.19, No.1, Pages 100-102.

Tucker, G.S.L. (1960) Progress and Profits in British Economic Thought. Cambridge.

Viner, J. (1978 [1924]) Canada's Balance of International Indebtedness. New York.

Viner, J. (1965 [1937]) Studies in the Theory of International Trade. New York.

White, Lawrence. (1991) "Banking without a Central Bank: Scotland before 1844 as a 'Free Banking' System." Printed in Unregulated Banking: Chaos or Order? Capie and Wood (Eds.) London.

White, Lawrence. (1993) Review of Thomas Tooke: Pioneer of Monetary Theory by Arie Arnon. Published in the Journal of Economic History. Vol.53, No.1, Pages 202-3.

Winch, Donald. (1987) Malthus. Oxford.

Winch, Donald. (1996) "The Political Economy of Public Finance in the 'Long' Eighteenth Century." History of Economic Thought Newsletter. No.56, Page 4.

Winnett, Adrian. (1991) Review of Thomas Tooke: Pioneer of Monetary Thought by Arie Arnon. Published in The Manchester School of Economic and Social Studies. Vol.59, No.3, Pages 307-8.

Wood, Geoffrey. (1991) Comment on "Are Central Banks Necessary". Printed in Unregulated Banking: Chaos or Order? Edited by Forrest Capie and Geoffrey Wood. London.