

## **Highlights of The Bullionist Controversy\***

**by**

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\*This expository essay builds upon material presented in a lecture given at the Stockholm School of Economics in October 1999. It also draws upon an earlier, shorter, paper (Laidler 1987). As I hope is clear from the frequency of references to the works in question, it owes a considerable debt to the classic studies of this controversy by Jacob Viner (1937, Chs. III and IV) and Frank W. Fetter (1965, Chs. I - IV)

### **Abstract**

This paper surveys the literature of the Bullionist controversy which dominated the development of Classical monetary economics between 1797 and the early 1820s. It highlights the contributions of Henry Thornton to the early phase of the debate, particularly his refutation of the Real Bills doctrine, and of David Ricardo to its later phases. The role of the Real Bills doctrine in the evidence given by directors of the Bank of England to the Bullion Committee of 1810 is also analysed. Ricardo's subsequent work on the resumption of convertibility, and the dissenting, sometimes inflationist, opinions of Thomas Attwood and the Birmingham School are then discussed. The paper ends with a brief account of how the Bullionist controversy influenced the later development of classical monetary economics in the 19<sup>th</sup> century.

## Introduction

The "Bullionist Controversy" was not a clear-cut argument about a well-defined issue, but rather a series of overlapping debates about a number of related questions. These exchanges took place in Britain against the background of the wars which that country and a shifting coalition of allies fought against Revolutionary and Napoleonic France between 1792 and 1815, and of the peace that followed. They were always concerned with immediate policy problems; but their participants developed a remarkable series of insights into the general nature of a monetary economy that would provide foundations upon which economists could build for the next hundred years or so, as I shall try to show in this essay.

In the opening stages of the wars precipitated by the French Revolution, France's armies experienced remarkable and unforeseen success, so much so that, by late 1797, among her enemies, only Britain remained a combatant. Early in that year, widespread rumours of an imminent French invasion - a small French force did in fact land on the coast of Wales - created enough consternation in Britain to provoke a run on the banks, to which the British government responded on February 27th by suspending, by Order in Council, the Bank of England's obligation to convert its notes into gold bullion on demand. This "temporary" suspension, was extended for a further month by legislation in May 1797, but was to last until 1821.<sup>1</sup>

### *The Monetary System in the 1790s*

At this time, Britain, though nominally on a bimetallic standard, had been on a *de facto* gold standard since 1717, as a result of gold's mint price having been set too high in that year, at the culmination of a series of reforms to the coinage that had begun in 1696. The Bank of England had been founded in 1694 to create and manage a market for government debt, but, by the end of the 18th century, its status as the only joint-stock bank in England and Wales and its monopoly of note issue in the London area had given it a pivotal position in an already complex British banking system. In England and Wales, outside of London, the so-called "country banks", which were private partnerships, both issued notes and accepted deposits. The Scottish banking system was governed by a legal framework distinct from that in force in England and Wales, and consisted of a mixture of large chartered joint stock banks and smaller private partnerships which also issued notes and took deposits. Like the English country banks, however, the Scottish institutions, particularly the chartered joint-stock banks, held a substantial part of their reserves in claims on deposit-taking private banks located in London. These, in turn, held reserves in the form of Bank of England liabilities, both notes and deposits, though at this time notes seem to have dominated. It is, therefore, possible to speak of a single British monetary

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<sup>1</sup>Fetter (1965, Ch. 1) provides a fuller account of the historical and institutional background to the controversy.

system, centred on the Bank of England, which in turn held its own reserves mainly in the form of gold bullion. Ireland, however, had its own system at this time, centred on Dublin.

British banking did not, of course, form quite so neat an inverted credit pyramid as this brief description might suggest. Bank of England notes, for example, circulated outside of London and were directly held by country banks, as indeed was a certain amount of gold bullion; and, to complicate matters further, a substantial amount of gold coin both circulated as currency and was held by banks. Nevertheless, both the export and melting of coin was forbidden, and the monetary system's reserves of gold bullion were heavily concentrated in the Bank of England. Though not widely recognized as such, this institution was thus Britain's *de facto* central bank, and the 1797 suspension of its obligation to convert its notes into bullion shifted the British monetary system from a commodity standard towards a flexible exchange rate. The actual transition was not an abrupt one, however, being complicated by the fact that, initially, illegal melting and export of coin, which continued to trade at par with Bank of England notes, limited the extent to which their price in terms of gold bullion could fall.

### *The State of Monetary Economics*

All of this is easily grasped in the light of modern ways of thinking about monetary matters, but at the end of the eighteenth century, the development of monetary institutions was substantially ahead of that of monetary theory. David Hume (1752), perhaps building on the earlier and at that time unknown work of Richard Cantillon (first published in 1755), had already developed the basic properties of the quantity theory of money as it applied to a commodity money, and he had also worked out what was later called the "price-specie-flow" mechanism of the balance of payments.<sup>2</sup> Hume had only a little to say about banking, but, in the *Wealth of Nations* (1776), Adam Smith provided an extensive account of the operations of a system of competitive note-issuing commercial banks against a background of specie-convertibility. Smith's analysis, however, was heavily conditioned by contemporary Scottish experience, and was limited to the case of a small price-level-taking open economy.

Thus, in 1797, monetary economics, at least as it existed in the English language, lacked both a theory of flexible exchange rates and a theory of central banking under either a commodity standard or flexible rates. In fact, during the Seven Years War (1756-63) a Swedish literature had already made substantial headway with these questions, as

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<sup>2</sup>Cantillon had died in 1734, and, though he is one of the few economists referred to by name in the *Wealth of Nations* his work seems to have been unknown to participants in the Bullionist debates. It was not rediscovered until later in the 19<sup>th</sup> century. There is no direct evidence that Hume knew his work, but there are enough similarities in their analysis to make it a plausible conjecture that he did so.

Eagly (1968) Myhrman (1976), as well as Persson and Siven (1993) have shown, but there is no hard evidence that anyone in Britain was aware of the work in question, as opposed to the events which had generated it, at the time.<sup>3</sup> Be that as it may, in the following quarter century, English Classical monetary economics acquired the above-mentioned and much needed components, and took on a shape that remains recognizable in the subject two hundred years later.

In hindsight, the Bullionist Controversy is usefully thought of as falling into three episodes. Two bouts of inflation generated intensive debate about their causes and remedies between about 1798 and 1803, and 1808 and 1811 respectively, while, after Napoleon's retreat from Moscow in 1812, the final phase of the discussion became concerned with the restoration of gold convertibility. I shall deal with these three episodes below, before concluding with a brief discussion of the Controversy's influence on subsequent debates.

### **The Controversy's First Phase**

Any modern discussion of inflation would pay attention to the behaviour of one or more price index, but such data did not exist at the time of the Bullionist controversy. Even during the final phase of the controversy, David Ricardo (1816) would write as follows:

“It has indeed been said that we might judge of its [paper money's] value by its relation, not to one, but to the mass of commodities. If it should be conceded, which it cannot be, that the issuers of paper money would be willing to regulate the amount of their circulation by such a test, they would have no means of so doing it; for when we consider that commodities are continually varying in value, as compared with each other; and that when such variation takes place, it is impossible to ascertain which commodity is increased, which diminished in value, it must be allowed that such a test would be of no use whatever” (1816, p.59)

Though, as Fetter (1965, pp.138-9) has noted, the concept of a price index was sporadically discussed during this period, it was not until 1863 that a usable version of such a device was produced and put to work by William Stanley Jevons.

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<sup>3</sup>Henry Thornton, a key contributor to the Bullionist controversies referred to this Swedish experience in a speech delivered in the House of Commons on May 7, 1811. (See the Hayek edition of *Prosper Credit*, pp.339-40) Though Thornton himself was a London Banker, his family had been lumber merchants trading with the Baltic from Hull. A number of contributors to British monetary economics in the early 19<sup>th</sup> century, for example Thomas Tooke and Thomas Joplin also had Baltic connections, and, as with Cantillon's potential influence on Hume, though there is no direct evidence of a Swedish influence on British debates, the conjecture is plausible.

The data to which participants in the Bullionist controversy paid attention were the prices of specific, widely traded, commodities such as wheat, the price of sterling bills of exchange, notably in the financial centres of Hamburg and Amsterdam, both of which operated on the silver, rather than gold, standard, and, above all, the sterling price of gold bullion. Classical value theory, to which Ricardo (1817) was a major contributor, held that any commodity's "natural", that is long-run equilibrium, value was determined by cost of production; and it was also believed, not least by Ricardo, that the production costs of gold and silver were relatively stable. It is hardly surprising, therefore, that any tendency for the exchange rate on currencies which had remained convertible after 1797 to fall, or of the sterling price of gold bullion, into which Bank of England notes had been convertible before 1797, to rise, was treated by protagonists in the Bullionist controversy as evidence of inflation.

### *The Simple Bullionist Position*

The years 1798-1801 saw all three of the above-mentioned indicators giving signs of trouble: agricultural prices rose, as did the price of gold bullion, while exchange rates fell. It is generally agreed that the publication in 1801 of Walter Boyd's *Letter to the Right Honourable William Pitt on the Influence of the Stoppage of Issue in Specie at the Bank of England on the Prices of Provisions and Other Commodities* marked the real beginning of the Bullionist Controversy. Boyd had a personal axe to grind, his company, Boyd, Benfield and Co. having recently failed in the wake of the government's refusal to employ it as contractor for a major loan in 1799; and his analysis was rather crude. Nevertheless, his pamphlet set out the essentials of what in due course came to be called the Bullionist position: namely, that rising prices and the falling exchanges had a common source in an over-issue of Bank of England notes, that this had been undertaken to buy government debt, and that it would have been impossible had the Bank not recently been relieved of its obligations to convert its liabilities into gold on demand. In the subsequent debate, this position, whose basis in the quantity theory of money is readily evident, was taken up by, among others, John Wheatley (1803), perhaps, the leading exponent of the so-called extreme-Bullionist position in the first phase of the controversy.<sup>4</sup>

### *Anti-Bullionism*

The Bank of England did not lack for defenders, and among them there would in due course develop an "anti-bullionist" position, whose features were given different weights by different protagonists, but included the following propositions.

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<sup>4</sup> For an extensive listing of participants in this first stage of the controversy, see Viner (1937, pp. 120-21)

First, rising agricultural prices were the result of poor harvests, and the falling exchange rate was both a by-product of the extra food imports that these had generated, and a consequence of an outflow of funds needed to pay subsidies to Britain's allies in the war against France. In the latter suggestion lies one important origin of the Classical analysis of what was, in due course, to be called the "transfer problem", while the former is a prototype of many a "real shock – cost push" explanation of inflation. Secondly, to the extent that an over-issue of notes had anything to do with rising prices, the fault lay with the country bank note issue, which could fluctuate significantly and independently of that of the Bank of England. Thirdly, and at the very heart of the anti-bullionist position, there lay a precept for the proper conduct of monetary policy which Lloyd Mints (1945) would, a century and a half later, call the *Real Bills Doctrine*<sup>5</sup>.

### *The Real Bills Doctrine*

The origins of the Real Bills Doctrine are complicated, as Thomas Humphrey (1982) has shown, but one branch of its ancestry surely goes back to the following passage from the *Wealth of Nations*:

“When a bank discounts to a merchant a real bill of exchange drawn by a real creditor upon a real debtor, and which, as soon as it becomes due is really paid by that debtor; it only advances to him a part of the value which he would otherwise be obliged to keep by him unemployed and in ready money for answering occasional demands. The payment of the bill, when it becomes due, replaces to the bank the value of what it had advanced, together with the interest. The coffers of the bank, so far as its dealings are confined to such customers, resemble a water pond, from which, though a stream is continually running out, yet another is continually running in, fully equal to that which runs out; so that, without any further care or attention, the pond keeps always equally, or very nearly equally full. Little or no expense can ever be necessary for replenishing the coffers of such a bank.” (1776 p.304)

This passage occurs in the course of Smith's discussion of the workings of competitive commercial banks operating against a background of strict gold convertibility, or, more specifically, of the Scottish banking system as it was in the third quarter of the eighteenth century. Given this context, it is probably best understood as good advice to the individual bank, urging it to concentrate on short-term lending secured by "real bills". These - good quality commercial bills of exchange, typically of two or three months maturity, secured by goods in progress or in inventory - tended, from the point of view of the individual bank, to be self-liquidating: the completion and/or sale of the goods against which any bill had been drawn would automatically yield to borrowers the wherewithal to eliminate the debt

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<sup>5</sup> The Real Bills Doctrine is sometimes referred to as the *Needs of Trade Doctrine*, and the *Commercial Loan Theory of Banking*.

that it represented; another round of production could then be financed by issuing a new bill; and so on. Also, and crucially, from the point of view of the individual bank operating in an economy which was itself a price taker in the goods market, it was quite irrelevant that, despite the adjective, a *real* bill was in fact a *nominal* instrument.

In the Bullionist controversy the Real Bills doctrine took on a form that differed from Smith's version in two ways. First it was stated as an operating principle suitable, not to an individual competitive commercial bank, but to the Bank of England, not least by several of its directors; and, second, in the monetary system over which that Bank presided as a central bank, the price level was not anchored by gold convertibility. In its anti-Bullionist form, therefore, the Real Bills doctrine held that, if the Bank of England confined itself to discounting any and all good quality commercial paper offered to it, the volume of its liabilities would merely move with the "needs of trade" and could not itself be a cause of any disturbances to the price level. Since the anti-Bullionist defenders of the Bank claimed that it did in fact follow this precept, it was, in their eyes, an innocent bystander to any processes that might drive prices up and the exchange rate down.

The attractiveness of this doctrine to any central bank, let alone the early 19<sup>th</sup> century Bank of England, is obvious enough. It seems to provide both a simple rule to guide operations and a ready-made defence against charges of malfeasance during periods of monetary instability. That perhaps explains its durability, for it has turned up, among other places and times, at the Reichsbank during the Weimar Republic's hyperinflation, and at the Federal Reserve Board during the great contraction of 1929-33, which is one reason why Mints (1945) paid so much attention to it. And yet a still classic rebuttal of the doctrine appeared at almost the outset of the Bullionist controversy, and even before it attained the central position in the anti-bullionist case that it would come to occupy by, say 1810. This rebuttal appears in *An Inquiry into the Nature and Effects of the Paper Credit of Great Britain* (1802), written by Henry Thornton, a London banker and Member of Parliament, who was perhaps better known among his contemporaries as a leading member of the Evangelical movement and a pioneer of the campaign against slavery than as a monetary economist.

### *Thornton's Paper Credit*

*Paper Credit* is an outlier in the literature of the Bullionist controversy in more ways than one. To begin with, that literature is largely made up of pamphlets, newspaper and review articles, not to mention political speeches and parliamentary reports, but *Paper Credit* is a systematic monograph; indeed, though its scope is narrower, its title seems to invite comparison with no less a work than the *Wealth of Nations*. Though the book's appearance towards the end of the first phase of the Bullionist controversy places it firmly in the context of the then ongoing debate, the editor of its standard modern edition, which appeared in 1939, Friedrich von Hayek, suggests that it may have been as long as six

years in preparation. Furthermore, its position in that debate is hard to classify, because though its analytic content places it firmly in the Bullionist camp, it nevertheless defends the policies pursued by the Bank of England after 1797.<sup>6</sup> Finally, but particularly noteworthy, and its early appearance notwithstanding, the book's intellectual quality arguably marks it as the single most important product of the Bullionist controversy, perhaps indeed of the whole 19<sup>th</sup> century literature of monetary economics before the appearance of Knut Wicksell's *Interest and Prices* in 1898.

The book is comprehensive, albeit badly organised, as Francis Horner (1802) would soon point out to readers of the *Edinburgh Review*. In it, Thornton clearly described the central position of the Bank of England in the British monetary system, as both he and Francis Baring had already done in 1797; he expounded a comprehensive and coherent set of principles that should govern its policies; unlike more doctrinaire Bullionists such as Boyd or Wheatley, he argued that the Bank had applied these with reasonable skill in the early years of the suspension; and, along the way, as a corollary of according a key position to the Bank of England in the monetary system, he also questioned the capacity of the country banks to exert an independent influence on prices.

Thornton nevertheless accepted the arguments of anti-bullionists about the effects of bad harvests and the transmission of funds to allies on the Continent on the price of bullion. These had, he thought, set in motion an external drain of funds, that is an adverse balance of payments, which, given the lack of gold convertibility, had put downward pressure on the exchange rate, albeit pressure that was limited at that time by the illegal melting of coin for export. In the process of making this case, Thornton developed an essentially complete version of Classical transfer theory. Indeed he even went beyond what would become the orthodox doctrine later associated with Mill by including a brief discussion of the role of income and expenditure variations in the transfer mechanism that would not again become prominent in subsequent discussions until the celebrated exchange on the topic between Keynes and Ohlin in 1929.

An adverse balance of payments, an external drain, could, as Thornton well understood, be eliminated by the Bank of England tightening the terms on which it would grant credit, and reducing its volume too, hence lowering the quantity of its notes in circulation.<sup>7</sup> And he believed that there were circumstances in which such a policy would

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<sup>6</sup>Henry Thornton's brother Samuel was, at this time, Governor of the Bank of England. A number of subsequent commentators, for example J.R. McCulloch (1845) and J. Hollander (1911) confused the two, and treated *Paper Credit* as an interested insider's defense of the Bank. It was only with the work of Viner (1937) and Hayek (1939) that this confusion was eliminated, and the true stature of the book recognized.

<sup>7</sup>In analyzing these matters, Thornton distinguished less clearly between situations of convertibility and inconvertibility than Ricardo, writing in 1810-11, would do. This is to be explained, not by any inferior grasp of the issues involved on Thornton's part, but by the fact that, in 1802, a

be justified: namely, when the cause of the drain lay in too high a level of domestic prices that was itself the consequence of previous monetary over-expansion. However, he also knew that such contractionary measures taken to combat an external drain could easily provoke the public to shift into Bank of England liabilities and even gold for fear of being unable to obtain them when they might be needed in the future, and he was acutely aware that such an internal drain could quickly turn into a banking system crisis. This had happened in 1793, and had threatened for a short while to happen again in 1797.

It was this consideration that led Thornton to suggest in 1802 that an external drain that was likely to be temporary should not be resisted. Indeed, he went further than this, arguing that to do so threatened not just a run of the banking system, but a contraction of output and employment too.

“It is true that if we could suppose the diminution in bank paper to produce permanently a diminution in the value of all articles whatsoever, and a diminution, as it would then be fair that it should do, in the rate of wages also, the encouragement to future manufactures would be the same, though there would be a loss in the stock in hand. The tendency, however, of a very great and sudden reduction in the accustomed number of bank notes, is to create an *unusual* and *temporary* distress, and a fall of prices arising from that distress. But a fall arising from temporary distress, will be attended probably with no correspondent fall in the rate of wages; for the fall of price, the distress, will be understood to be temporary, and the rate of wages, we know, is not so variable as the price of goods. There is reason, therefore, to fear that the unnatural and extraordinarily low price arising from some sort of distress of which we now speak, would occasion much discouragement of the fabrication of manufactures.” (1802, p. 118, italics in original).

In order to be able to forestall such effects, Thornton argued that the Bank of England should hold sufficient reserves to enable it to lend freely to domestic borrowers, even while it was losing gold abroad as a result of a temporary shock to the balance of payments, arising, for example from a bad harvest. To be sure, this would involve it in holding more reserves than would be needed to ensure its own soundness, but this obligation was, he thought, precisely what was entailed in being a central bank.

### *Thornton on the Real Bills Doctrine*

The defence of the Bank of England’s policies during the early years of the suspension implicit here is clear. Poor harvests, and the need to make transfers to allies had been

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substantial amount of gold coin, into which bank of England notes were convertible at par, remained in circulation. These had largely disappeared by 1810.

proximate causes of rising prices and a falling exchange rate after 1797, but, in Thornton's view, the Bank of England had been wise not to resist them in the way that Boyd and other Bullionists would have had it do. But this was a close as he would come to the anti-Bullionist position, for he was completely unconvinced by its central theoretical argument, namely the Real Bills doctrine. The latter was, he argued, crucially incomplete in discussing the demand for bank credit on the part of the business community without making any reference to the terms on which it was being offered.

“In order to ascertain how far the desire of obtaining loans at the bank may be expected at any time to be carried, we must enquire into the subject of the quantum of profit likely to be derived from borrowing there under the existing circumstances. This is to be judged of by considering two points: the amount, first of interest to be paid on the sum borrowed; and, secondly, of the mercantile or other gain to be obtained by the employment of the borrowed capital. . . . We may, therefore, consider this question as turning principally on a comparison of the rate of interest taken at the bank with the current rate of mercantile profit.

The bank is prohibited, by the state of the law, from demanding even in time of war, an interest of more than five per cent., which is the same rate at which it discounts in a period of profound peace. It might, undoubtedly, at all seasons, sufficiently limit its paper by means of the price at which it lends, if the legislation did not interpose an obstacle to the constant adoption of this principle of restriction.

Any supposition that it would be safe to permit the Bank paper to limit itself because this would be to take the more *natural* course, is, therefore, altogether erroneous. It implies that there is no occasion to advert to the rate of interest in consideration of which the bank paper is furnished, or to change that rate according to the varying circumstances of the country.

At some seasons an interest, perhaps, of six per cent. per annum, at others, of five, or even four per cent., may afford that degree of advantage to borrowers which shall be about sufficient to limit, in the due measure, the demand upon the Bank for discounts.” (1802, pp. 253-4)

Furthermore, “. . . when the augmented quantity of paper shall have been for some time stationary, and shall have produced its full effect in raising the price of goods, the temptation to borrow at five per cent. will be exactly the same as before;” (1802, p. 257) so that “. . . the moderation and forbearance among borrowers, which were supposed likely to restrain the too great emission of paper, are only to be excited by the means of its perpetual increase;” (1802, p. 256)

The passage from which the above quotations are taken is, as Thomas Humphrey (1990) has shown, the genesis of all of those “two interest rate” models, which have ever since been appearing, disappearing and reappearing in monetary economics, and of which Wicksell's (1898) "cumulative process" provides the most famous example. Like Wicksell, Thornton stressed the consequences for prices, rather than for real variables, of differences

between the actual rate of interest and the expected rate of profit. Also like Wicksell, however, he noted other possibilities, remarking that

“ . . . provided we assume an excessive issue of paper to lift up, as it may for a time, the cost of goods, though not the price of labour, some augmentation of stock will be the consequence; for the labourer, according to this supposition, may be forced by his necessity to consume fewer articles, though he may exercise the same industry.”  
(1802, p. 239)

As Viner (1937, pp. 185-97) has shown, towards the end of the Bullionist controversy, a minority of commentators would expand this idea and deploy it as part of an argument in favour of using expansionary monetary policy, perhaps unconstrained by convertibility, to induce real economic expansion. But monetary economics had to wait a century and a quarter for the full significance of “forced saving”, as the effect so briefly discussed here by Thornton would eventually be called, to be explored in all its ramifications by a generation of economists who took their cue from Wicksell.

Thornton not only repudiated the real bills doctrine as a basis for monetary policy, but he also briefly set out an alternative guiding principle.

“To limit the total amount of paper issued, and to resort for this purpose, whenever the temptation to borrow is strong, to some effectual principle of restriction; in no case, however, materially to diminish the sum in circulation, but to let it vibrate only within certain limits; to afford a slow and cautious extension of it, as the general trade of the kingdom enlarges itself; to allow of some special, though temporary increase in the event of any extraordinary alarm or difficulty, as the best means of preventing a great demand at home for guineas; and to lean to the side of diminution, in the case of gold going abroad, and the general exchanges continuing long unfavourable; this seems to be the true policy of the directors of an institution circumstanced like that of the Bank of England” (1802, p259).

This general principle stands in clear contrast to the Real Bills doctrine, and much of the debate about the proper conduct of monetary policy that has marked the two centuries since the Bullionist controversy can be thought of in terms of this contrast. At first sight, indeed, Thornton comes close to being an exponent of an early version of Milton Friedman’s (1960) quantity-theory-of-money-based money-supply growth rule. But that is not quite right, for in the above passage, Thornton is laying down a guideline that should inform the discretionary conduct of monetary policy. There is no suggestion that the Bank of England needs to be legally constrained to behave appropriately. On this matter, and closely associated, on the matter of the Bank’s proper response to an external drain, Thornton would soon change his mind. By 1810, along with his colleagues on the House of Commons Select Committee on the High Price of Gold Bullion (the Bullion Committee), he had come to the conclusion that the Bank of England was not to be

trusted, and ought to be restrained by the immediate re-imposition of the obligation to convert its notes into gold bullion on demand.

### **The Second Phase of the Debate**

The burst of inflation that had followed the 1797 suspension of convertibility was largely over by the time *Paper Credit* was published, and although debate about the Bank of England's conduct did not cease, it became less intense for a while. Irish monetary questions took centre stage, but in the course of their discussion, which culminated in the publication of a House of Commons Committee Report in 1804, many of the issues at stake in the Bullionist controversy proper received a further airing, notably by Lord King (1803), and by John Wheatley whose (1803) statement of the simple bullionist position on the relationship between money, prices and the exchange rate, already referred to, appeared during this phase of the controversy.<sup>8</sup> However, inflation in due course picked up again in Britain itself and a sharp exchange rate depreciation at the beginning of 1809 gave a new impetus to the Bullionist Controversy.

#### *Ricardo on the High Price of Bullion*

This second phase of the Bullionist controversy provided the occasion for David Ricardo's first publications on economic questions, namely his (1809) *Morning Chronicle* articles which were reworked into the (1810-11) essay on *The High Price of Bullion*. Ricardo, at that time an important bond dealer, who would later be elected to Parliament, adopted essentially the same position as Wheatley had taken in 1803, but his statement of it was, in keeping with his soon to be well known and widely admired intellectual style, both abstract (by the standards of the time) and deductive.

In Ricardo's view, the high price of gold was solely the consequence of an over-issue of Bank of England paper money, which the suspension of convertibility had permitted.. "The necessity which the Bank felt itself under to guard the safety of its establishment . . . always prevented, before the restriction from paying in specie, a too lavish issue of paper money" (1810-11, p. 76), but once this obligation had been removed, the Bank's directors ". . . are no longer bound by *"fears for the safety of their establishment,"* to limit the quantity of their notes to that sum which should keep them of the same value as the coin which they represent." (1810-11, p.78, italics in original). The country banks, moreover, were in no way responsible for any independent over-issue of their own notes: ". . . in no case can country banks add to the general circulation unless the Bank of England shall have previously increased the amount of their notes." (1810-11, p. 88)

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<sup>8</sup> On the debate about Irish monetary questions, see Fetter (1955)

*Ricardo versus Thornton on the Transfer Mechanism*

As to the possibility that transfers abroad in response to any real shock could lower the exchange rate, Ricardo was unequivocal:

“... it appears, that the temptation to export money in exchange for goods, or what is termed an unfavourable balance of trade, never arises but from a redundant currency. But Mr. Thornton . . .supposes that a very unfavourable balance of trade may be occasioned by a bad harvest, and the consequent importation of corn; . . . As it is acknowledged by Mr. Thornton . . . that the price of gold bullion is rated in gold coin; . and . . . that the law against melting gold coin into bullion and exporting it is easily evaded, it follows, that no demand for gold bullion, arising from this or any other cause, can raise the money price of that commodity. (1810-11, p. 59)

Thus, “The exportation of the coin is caused by its cheapness, and is not the effect, but the cause of an unfavourable balance” (1810-11, p. 61), and, for Ricardo, a cheapness of coin was always the consequence of an over issue of paper money.

Now, even in 1802, when a significant amount of coin seems to have been still in circulation, Thornton had not argued that the illegal melting of coin for export was either totally costless or completely risk free, and in any event, by the end of the decade, when Ricardo was writing, its disappearance had put Britain on something much closer to a pure flexible exchange rate than had existed in the early years of the suspension. It is hard to avoid the conclusion that, in denying that anything other than money creation could drive down the exchange rate, Ricardo was over-simplifying the issue, and brushing aside a considerable body of analysis devoted to the transfer problem, which his contemporaries had already developed. Though, according to Viner (1937, pp. 128 et seq.), apart from Ricardo, this extreme bullionist view was advanced by only Wheatley, it nevertheless never quite disappeared from literature in what came to be the quantity theory tradition.

There is also a sense in which Ricardo can be said to have been correct on this matter. In the analysis of the transfer mechanism, as developed by Thornton, a remission of funds abroad would lead to an excess supply of sterling bills of exchange on the foreign exchange market and a fall in their price. Under gold convertibility, this effect could go only far enough as to induce an export of specie and movements in the home and foreign price levels, but under a flexible rate this mechanism would not be activated, and the price of bills (ie the exchange rate) would depreciate to whatever level cleared the market. In either case, however, the international movement of goods that the remission of funds was meant to bring about in the first place would be induced by a fall in the foreign price of British goods, and a rise in British price of foreign goods. Thornton also canvassed the possibility of this mechanism being supplemented by income effects, while as Fetter (1965, p. 46) has noted, at least two anti-Bullionist writers, John Hill, and J. C. Herries pointed out that short term capital movements could play a role in making the transfer effective.

None of this says anything about the situation which would rule once the transfer was complete. Under convertibility, domestic monetary contraction would have ensured that the price of gold bullion remained constant throughout the process; in its absence, there would have been no such automatic contraction, and hence, at its end, the money supply and the price of bullion would have been higher, and the exchange rate lower, a state of affairs that could have been remedied by monetary contraction. In the latter, longer-run, sense, then, a higher price of bullion could have been said to have nothing to do with a bad harvest or the payment of a subsidy, and everything to do with an “over-issue” of notes. Viner (1937, p. 139-40) has noted that “Ricardo could very rarely interest himself in the immediate and transitory phases of an economic process. . .and he frequently confined his analysis to the end results, either passing over without mention or even denying the existence of the intermediate stages.” Here, we appear to have a prime example of this “Ricardian vice”, and as Viner (140–1) also tells us, he did tone down his bald insistence on this particular point a little in his later writings, partly in response to criticism from his friend Malthus, who, throughout the controversy was a systematic exponent of a moderate Bullionist viewpoint.

### *The Bullion Report*

Nevertheless, this question is of more than purely academic interest. The events which prompted Ricardo to take up these questions in the first place, particularly the rise in the price of gold bullion which had taken place in 1809-10, also led the House of Commons to set up a Committee to investigate them, That committee’s report - the *Bullion Report* as it is universally known (Cannan 1919) - is widely regarded as the definitive statement of the Bullionist position during this phase of the controversy, and its principal finding on this particular matter was

“. . . that the first remarkable depression of it [the exchange rate] in the beginning of 1809, is to be ascribed . . . to commercial events arising out of the occupation of the north of Germany by the troops of the French Emperor. The evil has been, that the exchange, when fallen, has not had the full means of recovery under the subsisting system. And if those occasional depressions, which arise from commercial causes, are not after a time successively corrected by the remedy which used to apply itself before the suspension of the cash payments of the Bank, the consequences may ultimately be exactly similar to those which a sudden and extravagant issue of paper would produce.” (1810 (Cannan 1919) p. 35)

Like Ricardo, the Bullion Committee attributed no blame to the country banks for this state of affairs. They laid it squarely at the door of the Bank of England, whose representatives, when examined, had been anxious to absolve that institution of any responsibility. Under questioning by the Committee, they had enthusiastically endorsed the Real Bills doctrine in answers which Walter Bagehot (1873, p.86) was later to

characterise as “almost classical by their nonsense”, while the *Report* itself would term that doctrine “. . .wholly erroneous in principle, and pregnant with dangerous consequences in practice” (1810 (Cannan 1919), p. 46).<sup>9</sup> The directors had argued that, by acting in accordance with that doctrine, “by avoiding as much as possible to discount what does not appear to be legitimate mercantile paper” (Mr. Whitmore, a former governor of the Bank, as quoted in the Bullion Report, p. 47), the Bank ensured that its note issue “. . .is so controlled that it can never amount to an excess” (Mr. Pearse, Governor of the Bank, as quoted p. 46 ). They had even denied that the volume of good quality paper offered for discount would vary with the rate of interest.

“Is it your opinion that the same security would exist against any excess in the issues of the Bank if the rate of discount were reduced from L5 to L4 per cent.?”

Answer, – ‘The security of issue would be, I conceive, precisely the same.’ *Mr. Pearse*, — ‘ I concur in that Answer.’”

“If it were reduced to L3 per cent.?” – *Mr. Whitmore*, ‘I conceive there would be no difference, if our practice remained the same as now, of not forcing a note into circulation.’ *Mr. Pearse*. – ‘ I concur in that Answer.’ (p.48)

Now the Chairman of the Bullion Committee was Francis Horner, Henry Thornton was prominent among its members, and the Committee's *Report* was largely written by these two. Its rebuttal of the Real Bills doctrine therefore follows essentially the same lines as those laid down in *Paper Credit*, and a lengthy description of its details at this point would be redundant. As in Thornton's earlier exposition, the interaction of profit expectations with the rate of interest in determining the supply of "real" bills to the banking system is stressed, as is the constraint placed upon policy by the 5 per cent. upper limit to the interest rate set by the usury laws. The discussion of the mechanisms linking monetary policy to the price level is, however, more systematic in the *Bullion Report*, and is notable for making a careful distinction between what would nowadays be called "first-round credit channel" and "second-round money channel" effects.

"In the first instance, when the advance is made by notes paid in discount of a bill, it is undoubtedly so much capital, so much power of making purchases, placed in the hands of the Merchant who receives the notes; and if those hands are safe, the operation is so far, and in this its first step, useful and productive to the public. But as soon as the portion of circulating medium, in which the advance was thus made, performs in the hands of him to whom it was advanced this its first operation as capital, as soon as the notes are exchanged by him for some other article which is capital, they fall into the channel of circulation as so much circulating medium, and

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<sup>9</sup>But the Bank's directors were by no means the only ones to embrace the Real bills Doctrine at this time. Some members of the cabinet, and a number of other commentators also did so, as Viner (1937, pp. 148 et seq.) And Fetter (1965, pp. 53-4) recount. And, as noted below, the House of Commons would reject the arguments of the Bullion Committee.

form an addition to the mass of currency. The necessary effect of every such addition to the mass, is to diminish the relative value of any given portion of that mass in exchange for commodities." (1810 (Cannan 1919), pp. 50-1)

The ultimate consequence here is that "money channel" effects dominate, so that ". . . if the amount of discounts is progressively increasing, the amount of paper, which remains out in circulation over and above what is wanted for the occasions of the public, will progressively increase also, and the money prices of commodities will progressively rise." (1810 (Cannan 1919), p. 51)

### *The Report's Recommendation of Resumption*

Not all of *Bullion Report's* conclusions echo *Paper Credit*. In 1802 Thornton had emphasised the desirability of avoiding deflationary monetary responses to real balance of payments shocks, and had argued that the Bank had followed sound principles in its conduct of policy since 1797. In 1810, even though it found that the inflation of the previous two years had been set in motion by a real shock to the balance of payments, the Bullion Committee clearly regretted that the Bank's response had not been constrained by specie convertibility. Its *Report* therefore recommended that convertibility be re-instituted at the 1797 parity, within two years, even though this would quite clearly require significant deflation, and in the midst of an ongoing war, at that; and Thornton was in full agreement with this advice.

This major shift in his policy priorities does not reflect any change of analytic view on Thornton's part.<sup>10</sup> The theoretical content of the *Bullion Report* is essentially the same as that of *Paper Credit*, as we have seen. Nor was there any fundamental shift in Thornton's long run policy priorities. He was from first to last a "hard money man", to use John Hicks' (1967) phrase, in the sense that he always regarded the maintenance of the gold price of sterling as the ultimate goal of monetary policy. In 1802, Thornton had thought that the Bank of England could be trusted to pursue this long-run end, while tempering any short-run costs of doing so by judiciously designed discretionary policies. By 1810, he and his colleagues could have no such confidence in the Bank, given its directors' enthusiastic embrace of the Real Bills doctrine: hence the *Bullion Report's* emphasis on the urgent need to re-impose convertibility as constraint on their activities.

The findings of the Bullion Committee were placed before the House of Commons in a series of resolutions that were extensively debated during 1810-11. All of them were rejected, with that recommending an early return to convertibility failing by a significantly

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<sup>10</sup> It may, though, reflect the influence of Ricardo, who had explicitly taken Thornton to task in (1810-11, pp. 59-60) as we have seen above.

larger majority than any of the others. The House did, however, at the same time affirm the desirability of its ultimate restoration.

### **Towards the Resumption of Convertibility**

The Bullion Committee's fears about the Bank of England's future conduct were not, in fact, justified by subsequent events. As matters turned out, 1809-1810 had seen the peak of Britain's wartime inflation, and the price of gold began to rise back in fits and starts towards its 1797 level, particularly after 1812, when Napoleon's retreat from Moscow marked a decisive turning point in his military fortunes.

There is no evidence to suggest that this deflation was deliberately engineered by the Bank of England, and, in any event, in the immediate wake of the debate on the *Bullion Report*, no-one was in a great hurry to see convertibility restored (See Fetter, 1965, pp. 62-3). It was not until after Waterloo and the war's end in 1815 that serious discussion of the issue began again. The first significant step to be taken here was the passage of an Act of Parliament in 1816 that defined the pound sterling solely in terms of gold at its 1797 price, thus removing the last vestiges of ambiguity about the role of silver in the British monetary system. It was only in 1819, however, that legislation mandating the restoration of convertibility was passed by Parliament, a measure that was finally implemented in 1821, albeit not quite in the manner envisaged two years earlier.

In the interim, the end of the French wars, and the deflation that accompanied it, had been associated with considerable disruption to real economic activity. Agriculture was faced with foreign competition once again, while small arms manufacturing and the metal working trades associated with it saw a precipitous decline in demand for their output. In view of this, it was perhaps to be expected that the representatives of agricultural interests in Parliament were sometimes found attempting to obstruct the restoration of convertibility and the deflation that had to accompany it. Nor, since metal working was concentrated around Birmingham, is it surprising that this important city became the centre of a dissenting and, for its time, quite radical body of economic thought. The principal, and certainly the most able, spokesman of so-called *Birmingham School* at this time was the banker Thomas Attwood.<sup>11</sup>

#### *The Birmingham School*

Between 1810 and 1821, there was, overall, little opposition to the eventual restoration of convertibility to Bank of England notes at the old parity. The capacity of

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<sup>11</sup>The activities of Attwood and other members of the Birmingham School at this time are briefly described by Fetter (1965, pp.74-5). A fuller account of his career is given by Fetter (1964).

inflation (or rather unanticipated inflation, as we would now insist) to redistribute wealth from creditors to debtors was well understood, and the desirability of undoing any such consequences of the war-time inflation was largely taken for granted. Little attention was paid to the effects that this would have on contracts entered into during the suspension. But this morally one-sided attitude to the redistributive effects of inflation and deflation, which has permeated discussions of economic policy ever since, was not held by the Birmingham School. As Thomas Attwood remarked in 1819

"When the Bank Restriction Act was first passed, there was no difficulty or injustice in restoring the old metallic standard, and it was probably advisable to do so; because if done in the course of a year or two, or other short period, it would have prevented the breaking up of the old system of prices under which all debts and engagements of the country had been formed; and would have arrested all the misery, and injustice and distress which such a change must have occasioned in all the monied interests of the country. But when the Bank Restriction Act had time to break up the old monied relations of society, and to establish new ones, upon which all the new debts, and obligations, and establishments of society have been formed, then it became evidently, both unjust, impolitic and ruinous in Parliament to attempt to restore a standard which had no longer any reference to the transactions of life. What was correct in the first instance became incorrect. . . ." (1819, p. 3)

#### *Employment as the Test of Monetary Policy*

Attwood, moreover, went well beyond questioning conventional wisdom about what was distributively just in assessing the appropriateness of rendering bank notes once again convertible into bullion, and the price at which this might be done. He argued that the achievement of full employment, rather than any target for the price of gold provided the appropriate test of any monetary measures. "Let us . . . wait until we see all labour in full employment, and all the principles of national prosperity in full and harmonious action, before we presume to decide under what range of the prices of Bullion these great interests can be preserved." (1819, p. 13), and because he believed that falling prices could create, and indeed had recently created, serious real stagnation, he opposed the legislation of 1819 that provided for the restoration of convertibility at the 1797 parity. He wanted to see full employment achieved, and only then, after five or seven years, might he be willing to countenance the restoration of convertibility at whatever market price of bullion was then ruling.

Like his associates, Attwood was more consistent in his advocacy of full employment as the test of appropriate monetary policy than of any specific monetary measure, however. In (1816) at a time of depressed economic activity, he had gone so far as to remark that ". . . in the weighty circumstances in which the country is placed, to represent the payment of specie as any object at all, is perfect drivelling" (1816, p. 56); in (1819) he

had asserted that "Our road is clear as the bright Sun in Heaven. It is to accommodate our coinage to man, and not man to our coinage." (1819, p. 43); and so on. As Fetter (1964, p. xviii) points out, even before the Resumption ". . . he bobbed around from inconvertible paper, to silver, or to a gold standard at a price of gold that seemed to vary . . . without logic." And, as Fetter also notes, from the 1820s onwards, his writings, such as they were, largely repeated his earlier arguments. Like his brother Matthias and a number of other representatives of the Birmingham business and political community, Thomas Attwood continued to agitate against the gold standard as it was by then in place, but to no particular effect, as far as the politics of Britain as a whole were concerned.<sup>12</sup>

Underlying Attwood's sometimes extreme policy positions, as Viner (1937, pp.187 et. seq.) points out, was an appreciation of the likely real consequences of price level fluctuations that in varying degrees was shared by a number of his contemporaries, including Malthus, and the erstwhile strict Bullionist, John Wheatley. Not only did Attwood have, as has already been noted, a deep-seated fear of the adverse consequences for real economic activity of the unevenness of price falls in a deflationary situation, but he also appreciated the contrary capacity of rising prices to generate capital accumulation by way of forced saving. In the hands of Attwood and others, these arguments, in Viner's opinion, ". . . were, no doubt, carried to absurd lengths. They represent, nevertheless, a substantial contribution to economic analysis which in later years had to be rediscovered." (Viner 1937, p. 186) But as Viner also notes, Ricardo found these doctrines ". . . unpalatable, and later 'orthodox' economists, following in his path tended to ignore or ridicule them" (p. 186); and it was Ricardo who not only dominated the final phase of the Bullionist controversy while it was taking place, but whose name and reputation would provide intellectual authority in Britain to the Gold standard for the next hundred years or more.<sup>13</sup>

### *Ricardo on an Economical and Secure Currency*

"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" (1816, p. 54) These are the words which Ricardo used to describe the *Economical and Secure Currency* which he hoped to see established in Britain now that

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<sup>12</sup>But Birmingham itself nevertheless remained a stronghold of unorthodox monetary views until the 1850s. Fetter (1964, p. xxiv) tells us that "not until the election of John Bright in 1857. . . was Birmingham represented at Westminster by anyone who was not an avowed opponent of the gold standard." Note that Birmingham had no seats in the Commons until after the 1832 Reform Act.

<sup>13</sup> See for example Alfred Marshall (1923, pp. 41-42), where Ricardo is erroneously said to be one of the authors of the Bullion Report. Marshall gives no credit to Henry Thornton in this context. It is interesting to note that Marshall here cites Jacob Hollander (1911), where Thornton is confused with his brother Samuel.

the French wars were over. Unlike the Birmingham School, he simply took it for granted that most basic goal for any monetary arrangements was price stability: "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." (p.54).

As we have seen, like virtually all of his contemporaries, Ricardo had no grasp of the idea of an index number so price stability meant to him, as a practical matter, a constant price in terms of some "standard." There was, to use a modern phrase, an element of the "second best" about this solution, because Ricardo understood well enough that such an arrangement would ensure that money's value " . . . will always be subject to those variations to which the commodity itself is subject, which has been fixed upon as the standard. . ." (p. 54), but that could not be helped.

As a practical matter, Ricardo considered two possibilities for the standard, gold and silver, and in 1816 he inclined towards silver "Silver. . .is much more steady in its value, in consequences of its demand and supply being more regular; and . . . all foreign countries regulate the value of their money by the value of silver" (1816, p. 63) Perhaps there was some truth to the first of these propositions at the time, but the second was not strictly accurate. At least two important countries, France and the United States were on bimetallic standards at this time, though at different mint prices. The French price dominated world markets, and though French bimetalism at this time seems to have successful, in the sense that both metals circulated, the US was *de facto* on silver, and France too would drift towards *de facto* silver monometallism in the subsequent three decades.<sup>14</sup> Even so, these details are of only minor relevance, because, as has already been noted, 1816 was the year in which legislation firmly establishing the gold standard in Britain was passed. After that date, any scheme for restoring convertibility to Bank of England liabilities had to start from this point, though a small group of members of Parliament, including Matthias Attwood did agitate for bimetalism as an alternative to gold convertibility during 1821-22. (see Fetter 1964, p. xix)

Ricardo's proposals amounted to a good deal more than a return to the pre-1797 monetary system, for the *economical* element in them involved the abolition of gold coinage and the establishment of a purely paper circulation (except for small coins). Under his "ingot scheme", as it came to be called, Bank of England notes would be convertible only into bullion, as perhaps would country bank notes too; though Ricardo also suggested that Bank of England notes might be declared legal tender and hence become eligible as means of redeeming country bank notes. In his view

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<sup>14</sup> The US would raise its mint price of gold in 1834, thereby shifting to a *de facto* gold standard which would endure till the Civil War. As a consequence of the gold discoveries of 1849-51 France moved in the direction of gold monometallism, but her system endured until the 1870s when it was abandoned in the wake of the Franco-Prussian War, and Germany's adoption of the gold standard. On these and related matters, see Bordo (1987).

"A well regulated paper currency is so great an improvement in commerce, that I should greatly regret, if prejudice should induce us to return to a system of less utility. The introduction of the precious metals for the purposes of money may with truth be considered as one of the most important steps towards the improvement of commerce, and the arts of civilized life; but it is no less true that, with the advancement of knowledge and science, we discover that it would be another improvement to banish them again from employment to which, during a less enlightened period, they have been so advantageously applied.." (1816, p 65)

He believed that the adoption of this improvement would require the force of law: "If those who use one and two, and even five pound notes, should have the option of using guineas, there can be little doubt which they would prefer; and thus, to indulge a mere caprice, a most expensive medium would be substituted for one of little value." (1816, p.65) Though, in the event, this proposal of Ricardo's would turn out to be too radical for its time, this element in the case for it was not particularly new. It involved nothing more than a straightforward application of arguments in favour of paper money that Adam Smith had expounded in Book II, Ch.2 of *The Wealth of Nations*. Paper was cheap, while gold was expensive and readily exchangeable for other productive resources, so that the displacement of whatever stock of the latter was tied up in the monetary system would enable ". . . the country to derive all the profit which may be obtained by the productive employment of the capital to that amount." (1816, p.69)

### *Ricardo on the Costs of Deflation*

The realisation of this gain, however, was not the only reason Ricardo advocated paper money. He is often portrayed as paying insufficient attention to short-run transitional matters in his analysis, and sometimes with good reason, as we have seen earlier. However, though Ricardo laid nowhere near the same amount of emphasis as did Thomas Attwood and his associates on the consequences of monetary contraction for real economic activity, he was sensitive to this matter.<sup>15</sup> Even in 1810-11, his advocacy of resumption had been firmly gradualist, for just this reason.

"The remedy which I propose for all the evils in our currency, is that the Bank should gradually decrease the amount of their notes in circulation until they shall have rendered the remainder of equal value with the coins which they represent, or, in other words, until the prices of gold and silver bullion shall be brought down to their money price. I am well aware . . .that even its sudden limitation would occasion so much ruin and distress, that it would be highly inexpedient to have recourse to it as the means

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<sup>15</sup>On this matter, see Samuel Hollander (1979, pp. 493-500), where, among others, he takes Fetter (1965, p. 91) to task for suggesting that Ricardo unduly neglected these questions.

of restoring our currency to its just and equitable value . . . . If gradually done, little inconvenience would be felt; . . ." (1810-11, p. 94)

These same worries informed his analysis in 1816. Though Ricardo was unwavering in his support for the restoration and then maintenance of the 1797 parity as the proper goal of monetary policy, he was anxious to minimise the deflation needed to achieve its restoration. He saw no point in putting unnecessary upward pressure on the price of bullion relative to goods. "If the increases in the circulation were supplied by means of coin, the value both of bullion and of money would, for a time at least, even after they had found their level, be higher than before. . . . This inconvenience is wholly got rid of, by the issue of paper money; for in that case there will be no additional demand for bullion" (1816, p. 57). Furthermore, such a system would also be subject to fewer price level fluctuations when fully operational. Under it, variations in the demand for currency ". . . 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." (1816, p. 58)

### *Resumption in 1821*

Now Ricardo was a member of Parliament by 1819, and his ingot scheme was the basis of the legislation of that year which set resumption in motion. The Act in question required the convertibility of Bank of England paper in gold ingots to begin on May 1st 1821, while deferring the start of redemption in gold coin until May 1823. In fact, however, Parliament would set the ingot plan aside before it could be implemented.

As Fetter (1965, pp.71-3, 95) has recounted, this seems to have been done for political rather than economic reasons. Throughout the suspension period, small denomination Bank of England notes had been widely counterfeited, and there had been over three hundred capital convictions for the offence between 1797 and 1817. The fact that clemency in these cases seems often to have been exercised or withheld on the Bank of England's recommendation had earned it considerable unpopularity among a public increasingly uncomfortable with the indiscriminate application of capital punishment. Small denomination bills convertible into ingots might have constituted an economical currency, but they were easily forged, so in 1821, they were replaced in circulation by gold coin. Ricardo himself seems to have had no great misgivings about this, because, between 1819 and 1821, the Bank of England had bought large quantities of gold bullion in preparation for the restoration of convertibility. These purchases, in his view, had been unnecessary, and had produced the very adverse effects on the price of gold that his ingot scheme had

been designed to prevent, making its implementation, to all intents and purposes, redundant.<sup>16</sup>

### **After the Controversy**

It should go without saying that the restoration of convertibility in 1821 did not bring an end to debate about monetary issues. The early 1820s saw sporadic attempts, not least by the Birmingham School and agricultural interests, to modify the monetary system that had been put in place in 1821 so as to give it a more inflationary bias, so much so, indeed, that Viner (1937) treats what he termed the "Deflationary Phase" of the Bullionist Controversy as extending until 1825, the year of the first 19th century British financial crisis to take place under gold convertibility.

#### *The Currency School - Banking School Debate*

It was not immediately apparent that the 1825 crisis was the first of a regular series of such events throughout the 19th century, but the years 1836-7 and 1839 also saw considerable difficulties for the British monetary system, making it clear that the mere existence of gold convertibility was no guarantee of its stability. In fairly short order, a quest began for principles of conduct which, if adhered to by the Bank of England, would ensure that the system would work, along Humean lines, "as if" operating with a pure commodity money. The first of these, the so-called "Palmer Rule", was enunciated by John Horsley Palmer, at that time Governor of the Bank of England, in 1832. Its basic thrust was that the Bank of England, which in normal times would hold specie reserves equal to one third of its liabilities, should keep the volume of its security holdings constant, thus ensuring that the volume of its liabilities would fluctuate one-for-one with those reserves. There is some disagreement among commentators, whose details need not concern us here, about whether subsequent crises occurred because this rule was inadequate, or because it was not, in fact adhered to in practice, (see Schwartz 1987b), but in due course the more stringent "Currency Principle" was proposed, debated, and ultimately enacted by Sir Robert Peel's *Bank Charter Act* of 1844.

This Act, and parallel legislation for Scotland passed in 1845, essentially conferred a monopoly of the British note issue on the Bank of England. Unlike the Bullionists, the

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<sup>16</sup> On this issue, see Fetter (1965, pp. 97-99), and note that Davis (1998) has made a persuasive case that, during the post-1816 period, the amount of attention that Ricardo paid to the deflationary consequences of resumption in his writings, speeches and parliamentary evidence varied systematically with both the general state of the economy, and with the amount of deflation that might be needed to restore the 1797 parity. When the economy was depressed, and the market price of bullion well above parity, he paid attention to these matters, but was more inclined to downplay their significance at other times.

Currency School who were its architects believed that the country and Scottish banks had considerable scope to vary their issues independently of the Bank's behaviour, and in a manner that destabilised the economy.<sup>17</sup> The 1844 Act also divided the Bank into an Issue Department to deal with bank notes and a Banking Department to deal with its deposit business. The latter was supposed to act just like any other deposit bank, but, apart from a fixed fiduciary issue, the Issue Department's liabilities were to fluctuate one for one with its holdings of specie. In essence, this department was turned into what we would now call a currency board, albeit one with liabilities backed by specie rather than some foreign currency.

These measures were, of course, widely debated.<sup>18</sup> Lawrence White (1984) has argued that defenders of the country and Scottish banks' note issuing privileges should be treated as a distinct "Free Banking School", separate and distinct from those who, like Thomas Tooke and John Fullarton among others, attacked the monetary policy principle underlying the Act, and are generally known as the Banking School.

As far as institutional arrangements were concerned, the Banking School favoured the *status quo*, and, because the Real Bills doctrine sometimes figured in their arguments, along with the suggestion that low interest rates would induce low, rather than high (and perhaps rising) prices, they have sometimes been classified as fundamentally misguided successors to the anti-Bullionists. To do so, however, is not really fair to them. These Banking School advocates were as staunch defenders of specie convertibility as any Bullionist had been, and under convertibility, with the long-run equilibrium value of the price level tied down by the market for specie in all its uses, these doctrines, erroneous as they are, cease to be a threat to monetary stability.

In many respects, indeed, the Banking School were intellectual heirs to the principles of discretionary monetary policy which Thornton had enunciated in 1802.<sup>19</sup> Like him they

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<sup>17</sup>In England and Wales, the country bank note issue was frozen in 1844 for existing banks, while new banks were forbidden to issue notes. In Scotland the banks were permitted to exceed an authorised amount, provided they held 100 per cent. bullion reserves against the excess. Though the English note issue has long ago vanished, it is interesting to note that Scottish banks still issue their own notes, albeit against the 100 per cent. backing of Bank of England liabilities.

<sup>18</sup>The debates in question are described in considerable detail by Viner (1937, Ch. V), Fetter (1965, Ch. VI), and Schwartz (1987a), as well as by White (1984).

<sup>19</sup>Conventional wisdom has long had it that, overshadowed by Ricardo's reputation, Thornton's work was mostly forgotten by the mid-19<sup>th</sup> century, but Neil Skaggs (1995) has shown that Thornton was in fact both influential among, and much cited by, adherents of the Banking School. It seems to have been only after the legislative victory of the Currency School in 1844 that Thornton's reputation began to fade into the obscurity from which Hayek would eventually rescue it in 1939. Bagehot's (1873) *Lombard Street*, which systematically expounded the *British Monetary Orthodoxy* from which Fetter (1965) drew his title, quite evidently owed more to Thornton than to Ricardo.

were sensitive to the capacity of real shocks to disturb the balance of payments, feared the consequences of domestic monetary contraction induced by such shocks, and recommended that the Bank of England hold large reserves of gold which, subject to the over-riding aim of maintaining convertibility at all times, it should manage in a discretionary manner in order to insulate the domestic economy from temporary disturbances. Like Thornton too, the Banking School were conscious that Britain's "circulating medium" consisted of many more instruments than bank-notes and coin. They also appreciated that Bank of England deposits had, by the 1840s, become important components of the British banking system's reserve base.

On the basis of these insights, they predicted that the Bank Charter Act would not bring the financial stability that its supporters expected. As Tooke noted in 1844, "Under a system of separation . . . what would be the operation of a demand for export to the extent of three millions of gold? In all probability this demand would almost exclusively fall upon the deposit department." (1844, p. 107) But, of course, the deposit department could only obtain gold to the extent that it held or could obtain Bank of England notes to redeem at the issue department. Thus, a few pages later, Tooke warned:

"If these [deposits] were strictly payable on demand, while the circumstances determining the efflux was strong and urgent, the payment of three million pounds accompanied by forced sales of securities might prove insufficient in point of time to arrest the demand; and in this case, while the circulating department would still have six million of bullion, the deposit department would have no alternative to stop payment. A most absurd, however disastrous a state of things. But it would be too disastrous, and too absurd to be allowed to take its course." (1844, p. 109)

He was prescient. In 1847, 1857 and again in 1866, the Bank Charter Act had to be suspended to give the Banking Department access to specie reserves held in the Issue Department in order to restore stability to financial markets.<sup>20</sup>

### *The Bagehot Principle*

As early as 1797, Francis Baring had characterised the Bank of England as the "*dernier resort*" in times of financial crisis (See Fetter, 1965, p 23), and Thornton had very soon thereafter laid down the precept that it should fulfill this role by lending freely in the face of an internal drain in order to restore and maintain confidence among participants in financial markets. But he knew only too well that internal drains tended to precipitated by external drains that sometimes required the opposite remedy. His proposed solution to

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<sup>20</sup>I have discussed Tooke's contribution to the Currency School - Banking School debate in Laidler (1972). Pivetti (1987) places his contribution in the broader context of the development of 19<sup>th</sup> century monetary economics.

this dilemma, in 1802, was for the Bank of England to distinguish between temporary balance of payments problems and those of a more deep seated nature, and to hold sufficient reserves to enable them to ride out the former and respond gradually to the latter. In the later stages of the Bullionist controversy, Thornton's subtle policy analysis faded into the background. From 1810 onwards, his health began to deteriorate, and he died in 1815. Informal leadership of the Bullionist camp passed to Ricardo, who had never had time for such complications in the first place. If the Bullionist Controversy provided an occasion for questions of "rules versus authorities in monetary policy" to be debated, it also set in motion a shift towards the deployment of rules, which was to culminate in the passage of the 1844 Act.

By 1873, however, Bagehot could characterise the Act as "only a subordinate matter in the money market" (p.1), and, as we have seen, its weaknesses had been identified before the event by critics on the basis of the very principles of discretionary policy that Thornton had developed four decades earlier. It was, furthermore, precisely these principles that Bagehot would set out in *Lombard Street*, and which would become orthodox policy doctrine in Britain until the First World War. For him, as for Thornton, the maintenance of gold convertibility was the ultimate and over-riding goal of policy; but the avoidance of the failure of sound financial institutions as a result of financial panics was the next priority. This was to be achieved by a Bank of England that stood ready to lend freely to any solvent institution in a time of crisis, even if, as was usually the case, underlying the troublesome internal drain was an external one that required monetary contraction to correct it.<sup>21</sup>

Three factors made such behaviour practical policy in the 1870s, as it had not been in earlier times. First, the usury laws had been repealed in 1833. Secondly, the evolution of a well developed international short-term capital market made it possible for the Bank of England to borrow to offset the external drain's effects on its reserves while it dealt with the immediate domestic problem. The crucial variable linking the two measures was the Bank's discount rate, which was to be set at a level high enough to attract gold from abroad, but not so high as to do more than impose a short-term penalty on those turning to the Bank as a last resort while they got their affairs in order. Thirdly, informed opinion, not to mention that of the Bank of England itself, finally came to recognise that institution's unique position in the financial system.

### *A Final Comment*

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<sup>21</sup>Though Bagehot recognized the Bank of England's position as a central bank, he nevertheless believed that it had achieved this position because of the monopoly privileges that it had received from legislators. Left unregulated, he thought that the British banking system would have evolved into a competitive system without a central bank. I have argued in Laidler (1991, pp.184-7) that Bagehot here ignored the capacity of economies of scale in reserve holding to bring about the centralization of this function, and hence to render competition unsustainable in the long run.

The triumph in the 1870s of principles that had first been clearly enunciated at almost the very outset of the bullionist controversy was rather short-lived. Attempts to restore the Gold Standard after the First World War would fail, though it is worth noting that the version of that system so briefly re-established in Britain in 1925 was consciously modelled on Ricardo's ingot scheme of 1816. And from the 1870s onwards, much more elaborate and ambitious schemes for deploying monetary policy to stabilise real economic activity had begun to permeate the academic literature, as I have shown in Laidler (1991).<sup>22</sup> But this activism too had roots that, as both Viner (1937) and Fetter (1964, 1965) understood, could be traced, not just to Thornton's restrained advocacy of discretionary policy, but to the much more ambitious, though often badly worked out, schemes of the Birmingham School. Thus, as was remarked at the outset of this essay, the Bullionist Controversy did indeed provide the basis for a century or more of subsequent developments in monetary economics.

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<sup>22</sup>Among these was Marshall's (1887) proposal for a "symmetrical" system, that was also self-consciously based on Ricardo's ingot plan. See Laidler (1991, pp.171-2).

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