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Changing Views: Twentieth-Century Opinion on the Banking School-Currency School Controversy

Neil T. Skaggs

> It would be a fascinating study in itself to trace the evolution of opinion about nineteenth-century monetary controversy over this period.
> —David Laidler, "Thomas Tooke on Monetary Reform"

Anyone familiar with the secondary literature on the great nineteenth-century British monetary controversies knows that twentieth-century appraisals of the controversies vary widely. The reasons for such variation have, heretofore, gone unexplored. As David Laidler (1972) suggested more than twenty-five years ago, an examination of the factors underlying the evolution of opinion on nineteenth-century monetary thought does indeed result in a fascinating story, one that yields insights into how historians of economic thought practice their craft. The story serves as a case study of the way in which contemporary theory and empirical studies affect historical assessments, particularly in an area so given to controversy as monetary theory.

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The two great nineteenth-century British monetary controversies—the bullion controversy of the first two decades and the banking-currency controversy of the 1840s—have long fascinated monetary economists and historians of economic thought. British monetary theory evolved out of the controversies, and American and Continental views were shaped by them. The theories developed in the subsequent decades shaped the way twentieth-century commentators interpreted the controversies.

In the English-speaking world of the 1920s, the quantity theory dominated academic monetary thought. The price-specie-flow mechanism was appended to the quantity theory to explain international monetary adjustments. No generally recognized alternative existed. The monetary business-cycle analysis developed by R. G. Hawtrey, though stated in income-expenditure terms and more flexible than the rigid quantity theory favored by such older economists as Edwin Cannan and T. E. Gregory, built on the quantity theory.[1] In the United States, the anti-quantity theory views of J. Laurence Laughlin and his student H. Parker Willis, which had been instrumental in the creation of the Federal Reserve System, and the sympathetic views of Benjamin M. Anderson and the more eclectic Allyn A. Young, were ultimately overshadowed by the quantity theory.[2]

The advent of Keynesian economics in the wake of the Great Depression failed to significantly alter the situation. In the *General Theory*, John Maynard Keynes treated the quantity of money as an exogenous policy variable, and Keynesian theories of international adjustment rather added to than challenged the price-specie-flow theory. Thus, we shall see that all the twentieth-century Anglo-American commentators surveyed, from James Angell and Gregory in the 1920s to Frank Fetter in 1965, used the quantity-theory-price-specie-flow mechanism (QT-PSFM) as their analytical framework. To these commentators, no obvious alternative framework existed.

Developments in monetary theory published in the early 1970s, though germinating in the 1960s, radically changed the situation. In

1. Laidler 1993 provides an excellent short summary of Hawtrey's analysis. As Ronald Batchelder and David Glasner (1991) demonstrate, however, Hawtrey's analysis had much in common with that of some opponents of the quantity theory.

2. A referee has pointed out the existence of another alternative framework. During the bullion controversy, John Wheatley propounded the view that an overissue would be corrected by an immediate movement of the exchange rate to the gold export point, a consequent exportation of gold, and a speedy elimination of the excess money stock.

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1972, Harry Johnson formulated the monetary approach to the balance of payments (see also Mundell 1968, 1971). Johnson demonstrated that gold could flow between countries in the absence of relative price changes and that most gold flows would be self-terminating. Furthermore, the monetary approach stressed the endogeneity of the domestic money supply and the "reverse causation" of money by prices. It also carried the implication that monetary policy makers controlled not the quantity of money in circulation, but the portfolio of the central bank. That is, policy works through interest rates rather than through the quantity of money. As soon became clear, the monetary approach was not new; indeed, it was older than David Hume's statement of the price-specie-flow mechanism.

Soon after the revival of the monetary approach, Earl Thompson (1974, 427–28) published a paper demonstrating that all the major features of classical economic theory—the dichotomy between the real and monetary sectors; the absence of real balance effects; the absence of any effect of expected inflation on the real sector of the economy; and "an imperviousness of output prices and employment in a sticky-wage economy to shifts in capital productivity, thrift, liquidity preference, and the money supply of any individual"—resulted when the quantity theory was replaced by a theory of competitively supplied convertible currency. Thompson's theory of competitively supplied money, when combined with the monetary approach to the balance of payments, offered a coherent alternative to the QT-PSFM framework that had dominated monetary theory for a century.

Monetary economists soon began to apply the monetary approach, sometimes in combination with the theory of competitively supplied money, to the analysis of nineteenth-century monetary thought. The result was a major reassessment of British monetary writers. Many historians of monetary thought began to argue that the banking school writers neither lacked a monetary theory nor were simply poor quantity theorists; rather, they had an entirely different framework in mind. Commentators began to appraise the banking-currency controversy not only in terms of which school made more telling practical arguments, but also in terms of which framework better suited the Victorian situation.

Before launching into the details of the story, I will briefly recount the facts of the banking-currency controversy, since they are of considerable importance to the tale. The story itself examines how commentators from the 1920s to the 1990s have assessed the writings of the

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banking and currency schools and why the commentators adopted the positions they did. Of course, any good story has a moral, and the moral to my story is clear: Received theory dominates the writing of the history of monetary thought. I end the article by discussing some of the implications of the moral.

1. The Banking-Currency Controversy

Beginning in 1797, the British monetary system was in an unsettled condition for more than half a century.[3] The restriction of cash payments by the Bank of England during the Napoleonic Wars put Britain on a paper standard and triggered the bullion controversy. The Bank Act of 1819 set in motion the return to a gold standard, which occurred in 1821. The return to gold was accompanied by a substantial deflation of prices, which elicited a large number of pamphlets on the merits of Bank policy.[4]

The postdeflation recovery terminated in a severe banking crisis in 1825, nearly forcing the Bank of England again to suspend cash payments and leading to a new outburst of pamphlets on the currency. Further crises in 1832 and in 1836–37 kept the question of proper management of the currency a live issue. The renewal of the Bank's charter in 1844 was the occasion for the banking school-currency school controversy itself, and further banking crises in 1847 and 1857 assured the continuance of the debates.

The major currency school doctrines developed during the course of the 1830s as an extension of the ideas of David Ricardo. Despite some differences of opinion, all members of the school were united in two things: the belief that the severity of the credit cycle was attributable to improper management of the money supply by the Bank of England, and their use of the QT-PSFM framework of analysis. The currency school argued that proper Bank policy must go beyond merely ensuring convertibility of Bank notes; the Bank should cause the money supply to vary in a stabilizing manner.

The currency school definition of money included coin plus the note issues of the Bank of England and of country banks. They argued that, by controlling the quantity of currency in circulation, the Bank could

3. This section draws heavily on Skaggs 1991, 459–62.

4. Whenever the *B* in Bank is capitalized, the Bank of England is intended.

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control the behavior of prices. The currency school did not deny that deposits and bills of exchange could affect prices, but argued that the quantity of such credit instruments depended on the quantity of currency in circulation. By controlling prices, the Bank could, in turn, limit the outflow of gold that took place via the price-specie-flow mechanism. Such "drains" endangered the convertibility of the note issue.

At the center of the currency school's policy proposals was the currency principle, the proposition that a mixed (metallic and paper) currency should fluctuate exactly as a purely metallic currency would. The Bank Act of 1844 attempted to actualize the currency principle by limiting the maximum quantity of country-bank notes in circulation and by placing a 100 percent marginal reserve requirement on the issue of Bank of England notes. Above a fixed fiduciary issue of £14 million, the Bank could issue notes only in exchange for gold coin or bullion, a task to be carried out by the newly created Issue Department. The Banking Department, which would carry on a normal banking business, issuing loans and holding deposits, would hold Bank notes as reserves. The intent of the act was to force the currency to contract whenever gold was withdrawn from the Bank for exportation. By preventing the Bank from reissuing notes received in exchange for gold, the act was intended to force an automatic contraction of the note issue when gold left the Bank.

Unlike the currency school position, whose development can be traced through numerous books and pamphlets stretching back to the late 1820s, a unified banking school position emerged late on the scene.[5] Thomas Tooke, the major figure in the school, did not begin to express views clearly associated with the banking school position until 1840; his major statement of banking school doctrine, *An Inquiry into the Currency Principle*, appeared in 1844. John Fullarton's *On the Regulation of Currencies* ([1845] 1969) appeared later the same year. The tardiness of the banking school in putting their views into print undoubtedly contributed to the ease with which Prime Minister Robert Peel navigated the Bank Act through parliament. Indeed, the major legislative battle was fought in the Committee on Banks of Issue in 1840–41 (O'Brien 1996).

5. This despite the fact that many banking school principles had been around for decades. J. S. Mill wrote an essay espousing banking school views in 1826 (Skaggs 1994, 548–50), and virtually all the points of banking school doctrine that later became part of British monetary orthodoxy originated in the writings and speeches of Henry Thornton (Skaggs 1995a).

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The banking school focused on credit—financial assets convertible into gold—rather than currency and attached no particular importance to banknotes, which they viewed as merely a particular form of credit. Spending was undergirded by credit in whatever form it might take. The banking school thought the quantity of banknotes in circulation was demand determined, and both Tooke and Fullarton propounded a "law of reflux" whereby unwanted notes would be returned to banks in exchange for deposits or coin or in the repayment of loans (see Laidler 1972; Skaggs 1991). Going beyond this, both argued that the total quantity of credit was an endogenous variable that was more apt to react to changes in prices than to cause them. While admitting that bank accommodation of speculation in commodity markets could fuel price increases, the banking school did not see the credit system as the initiator of credit cycles. Nor did they see the price-specie-flow mechanism as having much significance. The balance of payments could be disturbed by a variety of factors, most of which were temporary. Their major policy proposal followed directly from this view: The Bank should hold large bullion reserves, enabling it to ride out temporary bullion drains without disrupting credit markets.

2. Opinion on the Controversy: 1926–1965

During the first eight decades of this century, five works achieved recognition as the "standard treatments" of the banking-currency controversy: Gregory's introduction to Tooke and William Newmarch's *History of Prices* (1928); Jacob Viner's *Studies in the Theory of International Trade* ([1937] 1975); Lloyd Mints's *History of Banking Theory* (1945); Lionel Robbins's *Robert Torrens and the Evolution of Classical Economics* (1958); and Fetter's *Development of British Monetary Orthodoxy, 1797–1870* ([1965] 1978). Laidler's statement, quoted at the beginning of this article, refers to these five. To them might be added a number of less well-known, but typically insightful, treatments of the controversy: Angell's *Theory of International Prices* ([1926] 1965); Gregory's introduction to *Select Statutes, Documents and Reports Relating to British Banking, 1832–1928* (1929); Arthur Feavearyear's *Pound Sterling* (1931); Marion Daugherty's "Currency-Banking Controversy" (1942–1943); and Victor Morgan's *Theory and Practice of Central Banking, 1797–1913* ([1943] 1965).

Assessments of the banking school and currency school positions by

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the nine commentators vary widely. Yet all shared the same basic theoretical framework, as either their commentaries or other writings make clear.[6]

Proceeding chronologically, we begin with Angell's ([1926] 1965) discussion. Although Angell made no attempt to treat the controversy in any well-rounded manner, he touched on those elements of currency school and banking school thought relevant to his topic, the theory of international prices. Angell viewed banking school doctrine as a novel departure from the price-specie-flow analysis of Ricardo, used (with modifications for bank credit) by the currency school (75). The crucial features of banking school thought, for Angell's purposes, were the denial that external bullion drains were closely related to relative price levels and the assertion that internal prices were determined by bank credit, not by the amount of currency in circulation. The banking school maintained that the quantity of currency reacted endogenously to the state of trade, automatically maintaining an equilibrium level. This seemingly circular argument—credit causes prices which cause currency—was broken by the convertibility of the pound, which established an equilibrium price level. However, Angell argued that relying on convertibility as the anchor for prices (as Fullarton had done) meant that the theory was based on international trade flows triggered by relative price differentials, a mechanism Fullarton and Tooke explicitly rejected (76 n. 2). Clearly, Angell evaluated banking school theory through the prism of the price-specie-flow mechanism, though a flexible version of the theory (Iversen 1935, 236).[7]

Gregory's (1928, 1929) treatment of the controversy is hardly better rounded than Angell's, being constrained by the presentation venue: introductions to Tooke and Newmarch's *History of Prices* and to *Select Statutes, Documents and Reports Relating to British Banking, 1832–*

6. Perry Mehrling (1996) demonstrates that an antiquantity theory element contested with the quantity theorists over the course of U.S. monetary policy in the 1920s. The antiquantity theorists had little impact on the development of the history of monetary thought literature, however, since most of them gravitated toward the world of finance (Anderson, O. M. W. Sprague) or policy (Willis). A partial exception is Angell, who studied under Young and remained an academic economist.

7. Angell's assessment of banking school thought is relatively positive. He argued that the banking school "established tenable grounds for attacking and rejecting the whole price-specie flow mechanism, at least within considerable limits, by their doctrines of the elasticity of a country's bullion reserves and of the lack of a direct connection between money and prices" ([1926] 1965, 77).

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1928. He could do little more than evaluate Tooke's contributions to the banking-currency controversy in the first and present the basic currency school position that inspired the Bank Act of 1844 in the second.

Gregory (1929, xix) believed the issue of principle underlying the debate over the Bank Act to be the following: "Given a metallic standard, with convertible notes circulating side by side with coin, was it true that the self-interest of *issuers* of notes and the self-interest of *holders* of notes would form such a system of checks and counter-checks as automatically to adjust the amount of notes issued to the volume which *ought* to be issued?" Focusing specifically on the note issue is a characteristic of currency school thought. Gregory's willingness to accept the currency school viewpoint presages his treatment of the relative merits of the two schools.

Gregory admitted that Tooke's criticisms of the Bank Act had merit, but he attempted to defend the currency principle against those criticisms (see, e.g., 1929, xxiii, xxvi–xxvii). Despite recognition of the practical problems involved in implementing the currency principle, Gregory never indicated any doubt about the wisdom of the basic currency school position. On the other hand, he had difficulty defining what the banking school position was (1928, 80). Gregory believed that "differences in emphasis are more important than differences in fundamental theory" between Tooke and the currency school, a view indicating a lack of understanding of Tooke's basic vision of the economic process (21).[8]

The differences Gregory chose to emphasize are the relationship of prices to money and the distinction between capital and credit, on the one hand, and currency, on the other. Most modern readers would characterize Gregory's treatment as uncharitable. Gregory interpreted Tooke's argument that changes in prices cause alterations in the quantity of currency in circulation to be a denial that an excessive expansion of bank credit could accommodate an increase in prices driven by commodity speculation (81). Tooke's point, that the form taken by credit instruments is demand determined and that accommodative extension

8. Gregory (1928, 21) perceived that, over time, Tooke "evolved a theory which, in its general tendency, is singularly close to those Income Theories of Prices which in recent years have been adumbrated by Wieser, Hawtrey, Aftalion and others." How he could maintain that Tooke's theory was fundamentally the same as that of the currency school while recognizing Tooke as a pioneer of a type of theory Gregory thought to be quite different than the quantity theory is not clear.

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of credit is what matters for prices, was completely lost. Furthermore, an excellent short summary of what today we would call the theory of competitive note issue passes with only a comment on its "optimistic chain of argument" (Gregory 1929, xx).

The same lack of charity emerges in Gregory's discussion of the "so-called Principle of Reflux." The basic idea behind the principle (or "law") of reflux is that holders of banknotes can determine the quantity of currency in circulation by returning any excess to the issuers in exchange for deposits or coin or in repayment of loans. As Gregory (1928, 85) maintains, convertibility itself guarantees that unwanted notes can be exchanged for coin. But the principle of reflux, as espoused by Fullarton and adopted by Tooke, asserted that *in the ordinary course of things* (as Fullarton said), the note issue would automatically conform to the quantity demanded through the reflux of unwanted notes to issuing banks in the repayment of loans or placement on deposit. Gregory seized upon the latter as invalid, because placing notes on deposit does not destroy purchasing power (87). Indeed, it does not; but Fullarton and Tooke applied the principle of reflux to the note issue, not to credit or to purchasing power. Gregory's virtual equation of currency with purchasing power appears to have led him into outright error in interpreting the banking school position on the reflux of convertible notes.[9] Gregory's error follows from the quantity theory, which fails to distinguish between types of circulating media. Though clearly recognizing the operational shortcomings of the Bank Act and appreciating the wisdom of the banking school's call for a large bullion reserve, Gregory appears in both his introductions as a determined defender of the currency principle.[10]

Feavearyear's (1931) treatment of the banking-currency controversy focuses on the actual state of the circulating media, avoiding explicit treatment of larger theoretical issues. He viewed the currency school's focus on coin and notes as hopelessly outdated and thought it was motivated perhaps by a desire to justify their simple policy prescription. The broader banking school view of "money" (which included bank credit) was sounder. However, like the currency theory, the banking theory was "an attempt to form a too-simple explanation of complicated phenomena" (Feavearyear 1931, 248).

9. This is not to say that the banking school position was free of error. Tooke, in particular, claimed too much for it. Fullarton's version was more subtle. (See Skaggs 1991.)

10. He referred to it as a "wholly admirable ideal" (1929, xxi) and even went so far as to refer to the currency school as "the Elect" (1928, 77).

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Viner's ([1937] 1975) balanced appraisal of the banking-currency controversy is much superior to Gregory's. Viner criticized the currency school more for their application of the currency principle, as embodied in the Bank Act, than for their often more subtle theorizing. He noted, for example, that "Torrens and Overstone had never committed themselves to the doctrine that regulation of the note issues was a remedy for all banking ills, although this was often charged against them[.] . . . They had recognized that careful management by the Bank of its discounts would be necessary if its banking department reserves were not to be exhausted through drawing down of deposits" (231). However, "The great fault of the currency school was the exaggerated importance which they encouraged the public to attribute to the automatic regulation of the issue department as contributing to the proper functioning of the Bank of England as a whole" (231).

Viner's discussion of the currency school's exclusion of deposits from their definition of money is especially perceptive. He demonstrated, through extensive quotation, that various members of the school focused on notes because they assumed the quantity of notes controlled the quantity of deposits *and* because they believed the velocity of deposits to be much lower than that of notes. However, since purchasing power was really at issue, there was no justification for excluding deposits simply because they might have a lower velocity of circulation than notes. Unless their velocity were zero, or the ratio of deposits to currency were stable, excluding deposits would permit unwanted fluctuations in spending (248, 253).

Viner thought that the banking school position was based on the denial that a purely metallic currency would operate as the currency school thought. The widespread use of credit, even in the absence of a note issue, and the existence of bullion hoards in a purely metallic system (in bank reserves or otherwise) break the tight connection between money and prices posited by the currency school (222).[11] Viner also recognized the importance the banking school attached to credit as a potentially destabilizing factor in the economy, and he linked their objection to the Bank Act to their belief "both that it was no remedy against overexpansion of bank *credit* and that overexpansion of convertible bank *notes* was impossible" (233).

11. It is worth noting that the banking school did not argue that large bullion hoards existed within England but outside the Bank of England in the 1840s. Rather, they argued (as Viner noted) that such hoards existed in countries with more nearly pure metallic currencies.

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Unlike Gregory, Viner appreciated the banking school's emphasis on the substitutability of currency instruments (252 n. 36), but he was as unappreciative of the law of reflux as was Gregory.[12] His final appraisal of their policy positions was a good deal more judicious, however: "The final outcome of the discussion was that the currency school agreed with the banking school that deposits and other forms of 'auxiliary currency' or 'economizing expedients,' as well as bank notes, could be a source of difficulty, but that the two groups appraised differently the relative importance of variations in the two types of means of payment as causes of currency and credit disturbances" (252).

The most curious feature of Viner's treatment of the banking-currency controversy is the slight attention given to either school's theory of international adjustment. From scattered passages, one can glean the well-known fact that the currency school based their policy prescription on a standard Ricardian price-specie-flow approach. However, Viner had almost nothing to say about the banking school's viewpoint on the issue that is the major topic of his book.[13]

Daugherty's (1942, 140) two-part paper, "The Currency-Banking Controversy," based on her doctoral dissertation, was intended merely to tell the story "in a rounded way." Her discussion of the facts of the matter is unexceptionable. However, Daugherty's analysis of the currency and banking positions is less balanced, and she adopts a condescending tone toward banking school views. This is surprising in light of the fact that Mints supervised and Viner served on her dissertation committee (Patinkin 1981, 262–63). Both were far more evenhanded in their treatments of the subject.

Since Daugherty's analysis of the views of the currency school resembles those of Gregory and Viner, I will focus on her treatment of the banking school. The crux of the banking school position, she argued, is

12. The "alleged 'law of reflux' . . . amounted to nothing more than that the notes issued by a banking system on loan at interest to their customers would return to the banks in liquidation of these loans when they matured, and therefore any excess 'would come back to the banks'" (Viner [1937] 1975, 236–37). This sounds suspiciously like the real bills doctrine, with which the law of reflux has long been equated. Glasner (1992) rebuts the thesis that the two are identical. Mints (1945) had noted the difference much earlier, as had Lawrence White (1984), but the identification of the doctrine with the law remains common.

13. Carl Iversen (1935, 229–32) classified Viner's theoretical approach as "avowedly classical," by which he meant in the PSFM tradition. He noted that, while Viner sometimes recognized that a transfer of capital can itself affect the balance of payments, Viner ended up saying that a change in prices is a necessary part of the transfer mechanism.

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an objection to unnecessary interference with free trade in banking (Daugherty 1942, 149). This is quite a different claim than that made by Viner, who argued only that the banking school denied that the Bank Act would cause the system to behave in an orderly manner. Further, Daugherty attributes to the banking school a flat rejection of "the view that changes in the whole volume of the circulating medium would cause changes in the general price level" (149). Only by interpreting *cause* in an unduly narrow sense could this attribution be substantiated.[14]

Daugherty's discussion of the law of reflux seems perfectly innocent of any recognition that competition among banks might limit the note issues of individual banks. And her argument that the banking school failed to adequately address the possibility that a government could overissue a convertible currency betrays a lack of familiarity with Fullarton's ([1845] 1969, 66–68, 109, 198, 250) discussion of how the Bank of England had actually behaved: in a manner that limited the extent of excess issue, even during the Restriction.

Daugherty (1942, 153) recognized but rejected the banking school's view that, since gold hoards act as shock absorbers in a metallic system, Bank reserves should absorb shocks in the British system. Only their proposal for a larger bullion reserve and their accurate predictions as to the probable fate of the Bank Act brought the banking school any praise (Daugherty 1943, 247–48).

Morgan ([1943] 1965, 120–42) adopted the conventional view, recognizing the quantity theory coupled with the Ricardian theory of international price adjustment (i.e., the QT-PSFM) as the only coherent monetary theory of the period. Nevertheless, his treatment of the banking school is fairly favorable. Indeed, Morgan found the banking school arguments on credit, the endogeneity of money, the existence of lags in the transmission of monetary effects to the economy, and the need for flexibility in policy making to be superior to the currency school views, which he regarded as overly rigid. Nevertheless, Morgan viewed the banking school's position not as a different theoretical approach, but as a modification of currency school doctrine.

Mints (1945) wove his discussion of the controversy into a broader treatment of the evolution of banking theory. His balanced discussion of the two schools metes out criticism to both sides, showing how the

14. See, for example, Fullarton [1845] 1969, 58, 137, 148, 170–71.

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Bank Act failed to achieve the goals of its proponents, while criticizing the banking school for their inconsistencies. Mints's searching criticism of currency school proposals demonstrates that the degree of contraction produced by the Bank Act would not, in a fractional-reserve banking system, force the currency to conform to the currency principle (75–86). He also explained the errors inherent in the tendency of most members of the school to discount the effect of fluctuations in deposits on spending.

Mints's treatment of the banking school, which inexplicably begins with a discussion of the ideas of Mill, focuses on the issues of endogeneity of the currency; the "needs of trade"; the role of convertibility in the banking school system; and the law of reflux (86–100). His discussion of the banking school doctrine of substitutability of credit instruments shows the same understanding of technical details as his treatment of currency school theory. Despite his well-known aversion to the real bills doctrine, Mints recognized the difference between it and the law of reflux and did not count the banking school among those who fell victim to "the great fallacy."

On the subject of bullion drains, Mints thought all mid-century writers to be inferior to Thornton but recognized that the banking school came closer to Thornton's position than did the currency school. He agreed that it was important for central bankers to distinguish between temporary and permanent external drains, and between external and internal drains (118–21). Perhaps a reasonable summary of Mints's view is that the banking-currency controversy did little to advance banking theory beyond the state in which Thornton left it.

Robbins (1958) evaluated the banking-currency controversy while surveying the economic contributions of Robert Torrens. Robbins's analysis of Torrens's defense of the currency principle is perceptive. While appreciative of the manner in which Torrens tackled the problems for monetary control raised by deposits, Robbins recognized that Torrens's solutions were not themselves free of problems. For even if a more or less fixed ratio existed between reserves and deposits, as Torrens assumed, the question of how multiple effects on deposits contributed to maintaining international equilibrium remained a live issue. Robbins (1958, 115) demonstrated the difficulties the multiplier implied for the currency principle and noted a lack of explicitness in Torrens's discussion of it.

Robbins presented a standard version of banking school thought. He

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recognized that the banking school applied the reverse-causation argument (prices cause money) only to the note issue. On the issue of the balance of payments and the role played by bullion hoards, Robbins expounded on Torrens's criticisms at length, then joined him in attacking the banking school position (131–37). Robbins ended his discussion of money and banking by casting his lot with the currency school. He argued forcefully that the currency principle—and, implicitly, the price-specie-flow theory on which it was based—points the way toward sound management of a convertible currency (141).[15]

Fetter ([1965] 1978) undertook the most extensive evaluation of the nineteenth-century British monetary pamphlet literature yet (or likely to be) attempted. The quantity of material being surveyed forced him to be relatively brief in his treatment of the banking-currency controversy. Fetter recognized the "theoretical vacuity" (171) of the sharp distinction drawn between notes and deposits by Lord Overstone and George Warde Norman, and the inconsistency between the currency principle and Torrens's recognition that deposits act upon purchasing power exactly as do notes (168–69). According to Fetter, the currency school based its position on a sophisticated version of the quantity theory, taken as a long-run monetary theory of prices. They then translated this long-run theory into a short-run policy of Bank behavior (189–90). Thus, the theory, even when not blatantly errant, scarcely fit the circumstances.

Fetter organized his treatment of the banking school around three points of opposition to the Bank Act: (1) Deposits act on prices in the same manner as notes; it is the total of notes and deposits that matters; (2) the Bank should distinguish between internal and external drains and respond to the situation accordingly; and (3) an increase in the note circulation is a result, and not a cause, of price changes (187–88). Fetter judged the banking school to be clearly correct regarding the first point and to have made the superior argument regarding the second. However, their discussion of the direction of causation between prices and currency was muddled. The banking school were correct in their argument that the quantity of notes held by the public, relative to other

15. Laidler (in a letter to the author dated 5 June 1995) notes that the Austrian and German hyperinflations of the early 1920s deeply influenced Robbins's views of the banking school. Many German apologists for the inflationary monetary policy drew on the banking school for theoretical support (see Ellis 1934). Denis O'Brien (in a letter to the author dated 16 April 1996) confirms Laidler's view and adds that Robbins was deeply influenced by Ludwig von Mises, who held a negative view of the banking school (see my footnote 16).

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circulating media, was demand determined. However, they sometimes argued as though prices determined the size of the entire circulating medium. Furthermore, Fetter doubted the real commitment of Tooke and Fullarton to convertibility, since their arguments appeared to indicate that controlling the total circulating medium was a sufficient guarantee against rising prices. Fetter saw in these arguments elements of the real bills doctrine sufficient to lead him to suspect that Tooke and Fullarton based their thinking on it (191–93).[16]

The assessments of the controversy by these nine Anglo-American commentators vary considerably, ranging from the tenacious defenses of currency school doctrine by Gregory, Daugherty, and Robbins to the relatively positive assessments of banking school thought by Angell, Morgan, and Fetter. Since even those most favorably disposed toward the banking school shared the currency school's quantity-theoretic framework, it is perhaps surprising that the banking school received even mildly favorable reviews. Why would economists wedded to the QT-PSFM view of the world present favorable assessments of a school that rejected—or, in their eyes, failed to understand—their theoretical framework?

Angell's willingness to consider the merits of banking school thought may have resulted from his own research into the behavior of prices. Angell ([1926] 1965, 395 n) subscribed to the view that long-term movements in gold prices could be explained by changes "in the volume of gold holdings and in the methods of economizing its use," an approach consistent with the quantity theory. However, his empirical work led him to conclude that, over shorter periods, "the corresponding changes in money and credit are more results than causes of the general

16. Three other authorities on monetary theory should be cited for completeness, although none contributed much of interest to our subject. Although not Anglo-American, the work of Mises was well known to English readers in the 1920s. Mises's ([1924] 1980) treatment of the banking-currency controversy is exceedingly brief, and his disdain for the banking school's position is crystal clear. While granting the justice of banking school criticisms of the currency principle, Mises argued that the banking school itself lacked a comprehensive theory of the monetary and banking system (383). Interestingly, Mises believed that a truly competitive banking system could produce behavior of the currency similar to that which the banking school thought the English system actually produced (346–47). Joseph Schumpeter (1954) almost trivializes the "Controversy about Peel's Act of 1844," going so far as to aver that little of fundamental theoretical importance was at issue. He argued that "disagreements as regards analysis" were minor (728). Arthur Marget ([1938–1942] 1966), although mentioning Tooke frequently and other banking school or currency school adherents occasionally, contributes nothing resembling an assessment of the ideas of the period.

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cyclical oscillations" (395–96). Angell concluded that "a doctrine of wider scope than that contemplated by the older theories of money and prices is therefore necessary" (395).[17]

Morgan interpreted the banking school as having set forth reasonable modifications of currency school doctrine. Fetter's favorable treatment of the banking school reflects his acceptance of banking school criticisms of the Bank Act and the currency principle which underlay it. The same can be said of Viner and Mints; they praised the banking school more for their critique of currency school thought than for their positive contributions to theory and policy.

3. Opinion on the Controversy: 1972–1994

Laidler's "Thomas Tooke on Monetary Reform" (1972) differs in obvious ways from the Anglo-American literature that preceded it. Because Laidler was a monetary economist just venturing into the history of monetary thought, he brought to his analysis a keen awareness of modern monetary theory. Though he wrote the paper before the seminal literature on the monetary approach to the balance of payments and the theory of competitively supplied money appeared, Laidler was aware of the theoretical milieu out of which the new theories emerged.[18] The extant theory of international adjustment distinguished between "temporary and more fundamental imbalances" in the balance of payments, just as Tooke had (Laidler 1972, 171). What appeared as controversial in 1844 (and in 1928) was accepted theory in 1972. Tooke's proposal that the Bank of England hold a sufficiently large bullion reserve to enable it to weather temporary drains without contracting the currency was no longer shocking.

Laidler also possessed the tools to analyze Tooke's theory of asset substitutability. Laidler noted that, though Bank of England notes and deposits and country-bank notes, country-bank deposits, and bills of exchange may have been substitutes in demand, they were not necessar-

17. Gregory (1928, 9) criticized both Angell and N. J. Silberling, another American collector of price data, for their views on currency school doctrine. Recall that Tooke was also a prodigious collector of data. For all three, the empirical evidence told a story quite different than the rigid quantity theory.

18. Laidler wrote the first draft of the paper during the 1965–66 school year. A draft "which seems to be pretty much the final version" was completed in May 1969 (Laidler, letter to author, 18 April 1995). Denis O'Brien kindly provided me with a copy of that draft, a comparison of which with the published version substantiates Laidler's recollection.

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ily substitutes in supply. A contraction of banknotes could force, through its effect on liquid reserves, a contraction of the supply of country-bank deposits and bills of exchange. The possibility of substituting one type of "circulating medium" for another was not unlimited. Still, the currency school doctrine that the circulating medium could be adequately controlled by regulating the note issue expressed more optimism than was warranted.[19]

Laidler cast the debate over the short-run efficiency of convertibility as a check on depreciation in terms of the transactions cost of redemption, another modern touch (178–79). Tooke argued that the convertibility of banknotes prevented them from ever depreciating, while Torrens argued that notes would be presented in exchange for specie only after prices had risen. Laidler expressed doubt that the transactions cost of redemption was so high as to permit prices to rise much before note holders would undertake conversion.

But there was more to it than this. If most disequilibria arose from overissue of banknotes, as the currency school argued, then the currency principle would address the problem. Tooke argued that most balance-of-payments deficits had other sources: crop failures, perhaps, or monetary expansions that arose independently of the note issue. Relying on an automatic policy rule such as prescribed by the Bank Act would do nothing to offset such disequilibria until gold had already begun to flow abroad. Laidler commented, "There is quite a modern touch to Tooke's views here, for he appears to have appreciated, to some extent at least, the importance of lagged responses in the monetary mechanism" (180).

Laidler's assessment of Tooke's effort was highly, though not uniformly, positive. In particular, "Tooke's emphasis on bank lending as a key variable in short-run business fluctuations surely put him closer to the truth than did the currency school's emphasis on the size of the note issue" (183). Furthermore, Laidler argued that Tooke's emphasis on the importance of maintaining the liquidity of the financial system and on the nature of external drains was perceptive. He concluded that "on the whole Tooke's programme is a more appealing one than that of the Currency School" (185).

19. As Denis O'Brien has pointed out to me, the currency school realized that a lag existed between changes in the quantity of Bank notes and consequent changes in the quantity of country-bank notes; hence the importance of the fixed limit placed on the issue of country-bank notes by the Bank Act.

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Laidler's favorable assessment of Tooke's positive contributions represents a sharp departure from the earlier literature. Yet the bulk of the more recent literature goes well beyond Laidler in its appreciation of the banking school. Crucially, nearly all the recent literature uses the monetary approach to the balance of payments and, usually, the theory of competitively supplied money to evaluate the banking-currency controversy.

Johnson's (1972) formulation of the monetary approach to the balance of payments had an immediate impact on historians of monetary thought. By demonstrating that international gold flows do not require relative price changes; that most gold flows are self-terminating; that the domestic money supply is endogenous and prices "cause" money; and that monetary policy makers control not the quantity of money in circulation, but the portfolio of the central bank, so that policy works through interest rates rather than through the quantity of money, Johnson opened the way for a reappraisal of banking school theory.[20]

Thompson's (1974) theory provided a description of how a commodity-based monetary system works, complementing the recently developed theory of international adjustment.[21] Starting from a purely theoretical interest "in characterizing a competitive, laissez faire, money economy,"[22] Thompson developed "a theory of money and income consistent with orthodox value theory," which he defined as "Ricardian and neoclassical value theory and the competitive model of Arrow and Debreu" (427). Consistency produced a theory of a "perfectly competitive money economy" displaying the classical dichotomy between the real and monetary sectors (with all the features described in the introduction to this article).

In Thompson's model, the quantity of money is endogenous; increases in the demand for convertible paper money induce increases in the supply. Any overissue by money producers (bankers) results in its return to the producers. Both results accord with the banking school posi-

20. Laidler (1975, xii) recognized after the fact that his 1972 paper was consistent with the monetary approach: "This essay was written between 1966 and 1969, before the current literature on the monetary approach to the balance of payments theory appeared. Thus the vocabulary it uses is not very contemporary, but the ideas with which it deals are topical in the extreme."

21. Benjamin Klein (1974) and Friedrich Hayek (1978) also made seminal contributions to the literature on competitively supplied money.

22. Thompson, letter to author, 12 May 1995.

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tion. David Glasner (1985, 1989b) combined Thompson's model with insights drawn from the monetary approach to the balance of payments to justify the arguments of Adam Smith and the banking school, among others.[23]

In "A Reinterpretation of Classical Monetary Theory" (1985), Glasner's stated purpose was to overturn a number of (fallacious) received views as to the nature of classical monetary theory. Among the views rejected were that classical monetary theory was based on the quantity theory and that international monetary equilibrium was maintained by the price-specie-flow mechanism. Glasner argued that classical monetary theory is best viewed through the lens of a model of competitively supplied convertible currency (such as Thompson's) and the monetary approach to the balance of payments. Applying this "classical model" to the banking-currency controversy, Glasner showed the consistency of the model with banking school thought. The model is particularly useful for explaining the banking school's insistence that banks could not overissue convertible notes. In Glasner's classical model, as in banking school writings, exogenous expansion of bank currency is not a problem.

In his 1989 paper, Glasner (1989b) examined the banking-currency controversy at greater length. In particular, he analyzed how Fullarton used the theory of competitively supplied currency to support the banking school's contention that convertible banknotes could not be issued to excess. Although Fullarton's theory omitted several important details, its similarity to Glasner's (i.e., Thompson's) theory is obvious. As Fullarton argued, the law of reflux did prevent overissue.

Neil T. Skaggs (1991), basing his argument on the Thompson-Glasner model, argued that Fullarton correctly applied the law of reflux both to (competitive) country banks and to the (monopolistic) Bank of England. With respect to country banks, Fullarton understood the importance of all three channels of reflux: notes could return to banks on deposit, in repayment of loans, or in exchange for coins. Fullarton's

23. Glasner studied monetary theory and macroeconomics under Thompson at the University of California at Los Angeles in the early 1970s and was familiar with Thompson's theory before he began writing on nineteenth-century monetary topics. Glasner's work also shows the influence of the literature on the monetary approach to the balance of payments; he was familiar with the historical paper by Jacob Frenkel and Johnson (1976) when he began working on historical matters (Glasner, letter to author, 3 May 1995; see also the preface to Glasner 1989a).

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message was much the same as Thompson's: the quantity of a competitively issued currency takes care of itself. However, Fullarton understood that the Bank of England could, at least for a time, force down the market rate of interest and thereby increase its note circulation. He stated that the reflux of Bank notes was automatic only if the Bank maintained the proper relationship between Bank rate and the market discount rate. For example, an inflow of bullion would depress the market rate of interest below Bank rate. The interest differential would cause the Bank of England to lose discount business to the market. Eventually, the newly arrived gold would flow into the Bank, and the market rate of interest would return to its equilibrium level. The law of reflux thus acted as an automatic hoarding rule, preventing temporary gold flows from affecting credit conditions and prices (473).

Arie Arnon (1984, 1991), though not making *explicit* use of the competitive money supply-monetary approach framework, implicitly used a similar framework in his analysis of Tooke's system. "Tooke's main innovation," said Arnon (1991, 97), "which is the cornerstone for what was to become the Banking-School approach, lay in the view that the quantity of money needed for circulation is an endogenous . . . variable." Tooke argued, as did Fullarton, that the banking system could not determine the quantity of notes in circulation: The note circulation reacted to, rather than caused, prices. Furthermore, Tooke argued that prices are determined ultimately by the incomes of consumers; of course, Tooke's analysis assumed convertibility of the currency into gold, which would, in the long run, equate the money prices of goods with the gold prices of goods.

Arnon argued that Tooke followed in the theoretical lineage of Smith, who also rejected the quantity theory and the rigid price-specie-flow mechanism espoused by the currency school. The most complete discussion of the Smithian monetary heritage, however, was set forth by Wilfredo Santiago-Valiente (1988). He drew on Laidler's (1981) treatment of Smith's monetary theory (as did Arnon) and on the monetary approach to the balance of payments in his essay on the "real-bills" banking tradition. Santiago-Valiente went beyond Laidler to argue that Smith and later writers in the tradition sought to devise a neutral monetary system. The real bills doctrine was an integral part of Smith's normative theory, in Santiago-Valiente's view. Santiago-Valiente also cited Arnon's (1984) work on Tooke's monetary theory, in which Tooke's division of the exchange process into "two circulations," of materials and

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inventories between traders and of goods between traders and households, was linked to Smith.[24]

Lawrence White's (1984) treatment of free banking in Britain covers the banking-currency controversy to the extent that it touches upon his main interest. His major concern in discussing the banking school was to demonstrate the important differences between Tooke, Fullarton, and company and free bankers such as James William Gilbart and Samuel Bailey. White noted a strong kinship between the banking school and the free-banking school, both of whom supported (in his terms) a spontaneous order in the banking system rather than the constructed order favored by the currency school (128–36). More importantly for our purposes, White noted that both the banking and free-banking schools used the model of a small open economy on an international gold standard as the basis for analyzing the behavior of the British economy (121). Thus, he recognized the banking school ties to the monetary approach to the balance of payments.

Not surprisingly, given his interest in free banking, White's criticisms of the banking school focus on their inadequate development of the theory of competitive money supply. White argued that, because the banking school favored convertibility, they cannot be charged with the "nominalist fallacy" inherent in the real bills doctrine; the price level is not indeterminate (121). He also argued that the banking school emphasis on the "needs of trade" makes sense in an economy on an international gold standard. White's major criticisms are reserved for Fullarton's statement of the law of reflux, which White finds deficient in several particulars (126–28).

One curious feature of White's performance is the total absence of any reference to Thompson's work. White develops a competitive model of the banking system operating in a small open economy on a gold standard, a model similar to Thompson's. Making the omission even more curious is the fact that White received his Ph.D. from the University of California at Los Angeles, where Thompson teaches. However, White's original inspiration came from Mises ([1924] 1980), Klein (1974), and Hayek (1978), and he first learned of the monetary approach in Michael Darby's first-year macroeconomics course.[25]

24. Several commentators have also recognized Smith's use of the monetary approach to the balance of payments; see Bloomfield 1975; Laidler 1981; Humphrey 1981.

25. White, letter to author, 2 July 1996. Roy Green (1992) also presents a sympathetic view of the banking school, though from an entirely different vantage point than the monetary

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Not all recent students of the banking-currency controversy have revised their assessments of the banking school in light of modern theoretical developments. Neither Anna Schwartz (1987) nor Thomas Humphrey (1974, 1982, 1991) draws any attention to the banking school's use of the competitive money supply-monetary approach. Although Schwartz recognizes that the domestic price level can deviate only temporarily from the international price level determined by the gold standard, she argues against the banking school position in terms reminiscent of the older literature. Humphrey (1981) has recognized the importance of the monetary approach to the balance of payments for understanding the thought of Smith, yet he never hints that the monetary approach might be relevant in understanding the banking school's position.

Humphrey's (1974) clearest exposition of the banking-currency controversy appeared in a discussion of the historical evolution of the quantity theory. His concise description of the currency school position and its relationship to the quantity theory is exceptionally clear. However, his discussion of the banking school emphasizes their presumed reliance on the real bills doctrine and the identity of the doctrine with the law of reflux, rather than any larger theory.[26] Although Humphrey recognized the banking school's emphasis on competition among banks as a regulating feature of the monetary system, he did not link this emphasis to a theory of competitively supplied money, nor did he mention the monetary approach to the balance of payments.

The absence, in 1974, of any linkage of banking school thought to the modern theories of competitive money supply or to the monetary approach to the balance of payments may be explained by the novelty of the theories at that time. However, when reiterating his summary of the controversy in 1991, Humphrey again failed to mention either theory, despite his familiarity with the monetary approach.[27]

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approach. Green argues that classical economists used a "surplus approach" to model economic activity.

26. Humphrey again equated the real bills doctrine with the law of reflux in Humphrey 1982, using a quote from Robbins 1958 to make his argument. The errancy of Robbins's statement has been demonstrated clearly in Glasner 1992 and Skaggs 1991.

27. In a letter to the author dated 4 April 1996, Dr. Humphrey indicated that he regards the recent criticisms of currency school thought as having merit: "These new theories go a long way, I think, in filling some of the gaps in the Currency School's reasoning." However, he remains "unconvinced that the Banking School stalwarts themselves actually adhered to" the

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O'Brien is the lone recent supporter of the currency school position to explicitly recognize the theoretical framework underlying the banking school approach but to argue that the currency school's approach was superior. Potentially, this moves the argument to a different plane, that of empirical evidence.[28] Yet even O'Brien did not tackle the issue head-on until 1995. In his earlier discussions of the controversy, O'Brien (1975, 1993) never associated the banking school's position with the theory of competitively supplied money or with the monetary approach to international adjustment, and, correspondingly, his assessment of banking school thought resembled that of his mentor, Robbins.[29]

In a recent paper, O'Brien (1995) directly confronted the issue of competing visions of how the British economy worked. He argued that the work of Thompson (1974) and Glasner (1985b, 1989), and, by implication, of those drawing on Thompson's and Glasner's work, falls victim to a vice he calls the "Ricardian Telescope" (O'Brien, 1995, 52): the vice of concentrating on long-run equilibrium to the exclusion of any concern for the processes of adjustment to equilibrium.

O'Brien argued that the version of classical economics expounded by Thompson and Glasner "is hard to recognize" (54). The key assumption —the key problem, in O'Brien's view—of the Thompson-Glasner model is that the "law of one price" holds at all times. Such an assumption rules out the very problem that concerned the currency school, that changes in the supply of bank money could generate domestic price movements that would lead to international gold flows. It therefore also rules out any need for a theory of monetary control. Even the banking

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competitive money supply-monetary approach theories attributed to them. Thus, while convinced that the monetary approach to the balance of payments is an important contribution to understanding the gold standard system, Humphrey continues to believe that the appraisals of Viner, Mints, and Fetter are reasonable. He also believes that the monetary approach is better suited to long-run than to short-run analysis.

28. "It seems to me undesirable to argue as if the only alternatives are a purely quantity theory/price-specie flow mechanism approach (in the modern distinction which fixes output) and an endogenous money supply approach modeled on the Thompson-Glasner interpretation of the classical writings. The *key* issue is the direction of causality" (O'Brien, letter to author, 28 September 1995).

29. To be fair to Professor O'Brien, he did note the existence of an antiquantity theory approach in *The Classical Economists* (1975), but he rejected the approach as wrong, as he has pointed out to me (in a letter dated 28 September 1995). Despite his recognition of an antiquantity theory approach, however, he attributed no positive theory to the banking school.

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school had such a theory, O'Brien noted; they favored discretionary control over the fixed rule preferred by the currency school (63).[30]

What the banking school lacked, in O'Brien's view, was any theory of the short-run determination of prices. The currency school maintained that exogenously induced changes in the money supply normally affect the price level in the short run. Therefore, the appropriate monetary policy was countercyclical. Lacking any theory of short-run price determination, the banking school's policy proposals, though perhaps sensible, were not theoretically grounded.

Despite O'Brien's argument that the currency school's QT-PSFM system is more empirically relevant to the discussion of monetary policy than the banking school's monetary approach, he referred to only one unpublished study and to the empirical work in his 1993 book on Thomas Joplin in support of his position.[31] In this respect, O'Brien's paper is similar to the recent literature supporting the banking school view. Glasner (1985b, 1989) cited only McCloskey and Zecher 1976, and only to lend support to the description of Great Britain as a small open economy. The other recent papers discussed above rest their case entirely on theoretical arguments.[32]

The empirical literature produced from the 1920s through the early 1990s clarifies the issues involved in understanding the international adjustment process much better than does the history of thought literature. The empirical studies demonstrate that economies on the gold standard adjusted to real, monetary, and capital shocks in a number of ways.[33] The QT-PSFM approach and the monetary approach merely represent

30. The banking school openly admitted that prices fluctuated and that endogenous fluctuations in bank credit could exacerbate price fluctuations. What they denied was that banks could exogenously increase the note supply. Such a position obviously leaves room for monetary management by the Bank of England.

31. Professor O'Brien has since engaged in a more extensive investigation of the era, as discussed below

32. Of course, data for mid-century Britain are sparse. Most evidence on the behavior of the international gold standard comes from the post-1880 period.

33. The empirical literature goes back at least to the "Harvard School" (Frank Taussig and his students) in the 1920s. Gomes 1993 (134–39) provides a nice discussion of their work. Alec Ford (1962) took a neo-Keynesian approach, which Barry Eichengreen (1992) reexamined. Robert Triffin (1960) and Jeffrey Williamson (1961, 1963) set the stage for the development of the monetary approach, which was advanced greatly by Donald McCloskey and J. Richard Zecher (1976). T. J. Hatton (1992) supports only some of McCloskey and Zecher's findings. Lars Jonung (1984) and Charles Calomiris and R. Glenn Hubbard (1987) support the monetary approach.

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the opposite ends of a spectrum of international adjustment models. In between lie models that emphasize the direct effects on gold flows of changes in aggregate income and spending and models that emphasize the effects of interest rate movements on equilibrating capital flows. Even a cursory reading of the empirical literature demonstrates that the various models can—and probably should—be viewed as complements, rather than substitutes. One could blend the various models into an eclectic vision of the adjustment process, recognizing that different adjustment mechanisms may dominate in different times and places.[34]

Two empirical papers discuss the period of the banking-currency controvery. Rudiger Dornbusch and Frenkel (1984) examined the behavior of key variables during the crisis of 1847, which occurred less than three years after the implementation of the Bank Act of 1844. They used a simple monetary model focusing on capital flows and banking policy to explain the crisis. Interestingly, Dornbusch and Frenkel chose to use the monetary approach for the very reason that O'Brien rejected it: prices are assumed constant in the short run. Dornbusch and Frenkel argued that the behavior of a number of financial variables—note reserves of the Banking Department, bullion reserves in the Issue Department, the Issue Department's reserve-deposit ratio, and the quantity of Bank notes in the hands of the public—was consistent with the monetary explanation of the crisis. While not invalidating O'Brien's criticism of the banking school's theoretical model, such a finding does serve as a serious critique of the currency school's policy proposals.

Recently, O'Brien himself has conducted empirical research that casts doubt upon both the currency school and banking school theories. Using data on Bank of England note issues and private liabilities, country-bank note issues, bills of exchange, and prices, O'Brien (1997) demonstrates, among other things, that the Bank had little control over country-bank issues or prices and that country-bank issues significantly affected prices but not vice versa. Thus, the currency school's major policy proposition—that by controlling the quantity of Bank notes the Bank of England could control the larger currency supply and prices—and the banking school's major theoretical proposition—that country-bank notes react endogenously to prices, rather than driving them—both appear fallacious. O'Brien argues that Joplin understood the workings of the system better than either of the major schools!

34. A point made explicitly by Fetter (1968).

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4. The Moral of the Story

To reiterate: Received theory dominates the writing of the history of monetary thought. Careful scholarship may result in historians finding merit in systems of thought whose basics they do not understand, and individual idiosyncrasies may obscure the similarity of the theoretical views held by the historians. Although empirical studies may be used to bolster a maintained position, the positions adopted usually derive from theory. Thus, the moral: received theory dominates.

The "evolution of opinion" that caught Laidler's attention in the 1960s did not exist in the sense of a gradual development of ideas driven by an internally generated debate.[35] Personal characteristics and scholarly experience explain the differences he noticed. Angell was sympathetic to the new monetary business cycle literature and had studied the British price data. Gregory was a hard-line quantity theorist, skeptical of the "credit control" theories of younger theorists such as Hawtrey and Keynes. Viner was a careful scholar, assessing theories against the backdrop of historical events. Mints had a detailed knowledge of banking theory, which would not allow him to overlook errors, whatever their source. Daugherty was an economist in training, lacking the experience to be so judicious as her teachers. Robbins was a determined supporter of the quantity theory. Fetter, like Mints, dwelt in a world of details, but was even more inclined to evaluate at the level of the particular rather than the general.

The emergence of a theoretical alternative to the QT-PSFM system brought about an abrupt transformation in thought. Once the QT-PSFM framework lost its dominance as an explanation of economic behavior in a commodity-based monetary system, evaluations of the contributions of banking school and currency school writers changed dramatically. Arguments over the relative merits of the two systems as explanations of actual economic behavior may persist into the indefinite future, but the existence of a coherent alternative to the QT-PSFM framework has already transformed how historians of thought view the classical monetary writers. In short, this piece of the history of economic thought is part of economics proper, rather than an independent branch of the history of science.

35. In fact, such an internally driven evolution was not what Laidler had in mind. Rather, he envisioned something closer to what I have found: a change of opinion driven by developments in economic theory (letter to author, 5 June 1995).

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The importance of received theory in conditioning the views of historians can be further illustrated by considering the work of a historian of monetary thought whom I have previously ignored. Frenchman Charles Rist's *Histoire des Doctrines relatives au Crédit et à la Monnaie*, published in 1938, was translated into English in 1940 as *History of Monetary and Credit Theory*. Though thoroughly familiar with British monetary thought, Rist studied and taught outside the Anglo-American sphere. His assessment of the banking-currency controversy more closely resembles the recent literature than the older British and American literature.

Rist was a confirmed advocate of the gold standard who took a long-term view in his evaluation of monetary systems. He distinguished sharply between money—by which he meant gold and inconvertible paper currency—and credit—financial instruments convertible into money. Rist believed that the quantity theory could not be used to explain the workings of a commodity-based monetary system. He argued that convertible bank notes and deposits differed qualitatively from forced paper currencies. The value of a forced currency depends on its quantity; the value of convertible notes is tied to the international value of gold. The quantity of convertible bank notes is endogenous, depending on bank reserves and the reflux of unwanted notes. Quantitative control by the central bank is unnecessary.

Just as the banking school arguments had no effect on adherents of the currency school, Rist's presentation of the theory of a commodity-based monetary system failed to make an impression on Anglo-American commentators.[36] That the theoretical alternative to the QT-PSFM was so completely forgotten or so thoroughly ignored by Anglo-American economists is disconcerting. Many fine scholars badly misinterpreted what the banking school writers were saying, although, so late as 1902, Laughlin had set out a complete, if somewhat flawed, commodity-money alternative to the QT-PSFM framework (Girton and Roper 1978; Skaggs 1995b). Laughlin continued writing on the same theme until 1931, and from 1940, Rist's book was available in English. There can be little doubt that scholars of the stature of Mints, Robbins, and Fetter were aware of Rist's work, as well as Laughlin's. Yet the dominant

36. Rist's (1940, 205) comment is trenchant: "The beliefs of Peel and the Currency School were not weakened by Tooke's arguments; this provides a further striking example of the weight carried by great names and by over-simplified thought in the tradition of political economy."

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quantity-theoretic view of the world went uncontested. If nothing else, we should learn humility from the realization that our views of ideas and events (for the evaluation of the Great Depression has undergone a similar transformation) depend so heavily on the conventional wisdom.

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