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REVIEW OF A HISTORY OF THE FEDERAL RESERVE. VOLUME 1 (2003) BY ALLAN H. MELTZER

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ABSTRACT

In this essay I distill the seven major themes in A History of the Federal Reserve which covers the Federal Reserve's record from 1914 to 1951. I conclude with a critique.

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The History of the Federal Reserve 1913-1951 Vol. I by Allan Meltzer: A Review Essay

1. Introduction

Allan Meltzer's A History of the Federal Reserve 1913-1951 Vol. I is a monumental accomplishment. The volume provides a very detailed history of the Fed in its formative years from its establishment in 1913 to the Federal Reserve Treasury Accord of 1951. The narrative covers the key events of four decades; getting started; war finance in World War I; the 1920-21 recession; the boom years in the 1920s; the Wall Street crash and the Great Depression; subservience to the Treasury beginning in 1934; World War II finance and the pegging of interest rates; and the 1951 Accord when the Fed regained its independence from the Treasury.

In painstaking detail Meltzer documents how the Fed grew up to be an adult central bank and what a drawn out and rocky adolescence it suffered through. The narrative in Volume I sets the stage for the yet to be completed Volume II which covers the period from the Accord to the beginning of Alan Greenspan's tenure as chairman - - the Federal Reserve's far from tranquil adulthood.

The volume complements Milton Friedman and Anna Schwartz's A Monetary History of the United States: 1867-1960 published in 1963. However unlike their work, which is a monetary history of the United States, Meltzer's book is a biography of its central bank, portrayed within the broader context of U.S. monetary history. More importantly, because Meltzer had access to a much more complete archived official record than they had (the records of the Federal Reserve Board, the Board of Governors and the minutes of the Federal Reserve Bank of New York's board of directors as well as of the Federal Advisory Council), his interpretation of many of the key episodes in Fed history greatly expands upon and in several episodes, differs considerably from theirs. This is most evident in Volume I's treatment of the Fed's policy failure in the 1920s and 1930s that culminated in the debacle of the Great Depression. Indeed his chapters four and five are the signature chapters in the book, as of course is chapter seven The Great Contraction, 1929-1933 in Friedman and Schwartz. They are essential reading for any serious student of that disaster.

Section 2 of my essay discusses what I distill to be the seven major themes in History of Federal Reserve. A History is an excellent source for any serious student of the Federal Reserve. It is also very detailed and a time consuming read. Appendix I offers a succinct Readers Guide to the Historical Narrative in Volume I. Section 3 concludes with some critical insights.

2. Major Themes

Seven major themes knit the historical narrative together and are the essence of Meltzer's thesis: (1) the Fed followed the wrong model from the beginning and never really got it right even by 1951; (2) as in Friedman and Schwartz, the structure of the Federal Reserve was flawed from the beginning and contributed greatly to its inability to learn; (3) in distinction to Friedman and Schwartz, the effects of adhering to a flawed policy model outweighed the contribution of bright officials, even Benjamin Strong, who may have known better; (4) the interpretation of the Great Depression by Friedman and Schwartz and other scholars such as Bernanke and Eichengreen is wanting; (5) economic forces in the rest of the world are important and the Fed had ongoing problems coming to grips with them; (6) the Fed had a long and protracted struggle in maintaining its independence from the Treasury; (7) Meltzer views the history of the Fed through monetarist glasses.

2.1. The Fed followed the Wrong Model

A theme that determines Meltzer's interpretation of Federal Reserve history is that from its very outset the Federal Reserve Act of 1913, was based on two precepts: the real bills doctrine and the gold standard. These precepts led it on many occasions to follow policies that were detrimental for the U.S. economy. The same point was made by Friedman and Schwartz (1963) and West (1979), but Meltzer takes it much further. His analysis (to be developed further in Appendix I) starts with the problems that the Fed had in operating monetary policy.

Policy in the post-1914 environment was supposed to maintain gold convertibility by the passive rediscounting of self liquidating real (commercial) bills and use of the discount rate, to counter movements in the gold reserve ratio. In response to the changing environment (World War I and its aftermath) and especially heavy Congressional criticism of its performance following the severe recession of 1920-21, the Fed shifted to a more activist stance based more on the use of open market operations rather than discount policy and a new policy framework which Meltzer calls the Burgess - Riefler doctrine.[1] According to this doctrine; which was an adaptation of real bills, member banks would apply to the discount window only in time of need and not for profit, and the Fed could induce member banks to borrow to repay loans by conducting open market purchases or sales of government securities. According to Burgess-Riefler the level of member banks indebtedness in the key reserve districts of New York and Chicago, and the level of short-term nominal interest rates, would indicate whether monetary ease or tightening was in order.

Throughout the book Meltzer effectively demonstrates that by following this doctrine, the system seriously misjudged policy. Thus it viewed low member bank indebtedness and low

[1] The role of the doctrine in Fed policy making was first developed by Wicker (1966, 1967) and then expanded upon by Brunner and Meltzer (1968).They referred to it as the Burgess-Riefler-Strong doctrine. It is a bit puzzling why Meltzer dropped Strong's name from the doctrine in his latest work.

nominal interest rates from 1930-33 as evidence of monetary ease, thereby creating the Great Depression, the recession of 1937-38 and other less spectacular failures.

Meltzer goes further in his indictment of the Fed. In chapter 2 he masterfully reminds us that Henry Thornton in Paper Credit (1802) had already worked out the proper role of central bank policy under both gold and inconvertible paper money standards which was to use the discount rate to maintain price stability. Moreover, Walter Bagehot in Lombard Street (1870) gave central banks the precepts they needed to act as lenders of last resort to maintain financial stability and Irving Fisher in The Theory of Interest (1930) explained the distinction between nominal and real interest rates.

According to Meltzer, had the Fed followed the lessons of monetary orthodoxy which had been well developed in the century before its establishment, it would not have made the mistakes that it did.

2.2. The Structure of the Federal Reserve

Meltzer argues throughout the narrative, similar to a theme in Friedman and Schwartz, that the structure of the Federal Reserve System, as delineated in the Federal Reserve Act of 1913, created the conditions for continuous conflict between the 12 regional Federal Reserve banks and the Federal Reserve Board in Washington D.C. The framers of the Federal Reserve had to balance the interests of the northeast financial centers that wanted a European type central bank to manage the gold standard, with those of the interior that feared the centralization of economic power and wanted an institution responsive to local credit market conditions, smoothing seasonal stresses on interest rates and incorporating the lender of last resort reserve pooling feature of the National Reserve Associations under the Aldrich Vreeland Act of 1908. The Federal Reserve System compromise established 12 regional Reserve banks (largely owned by, and whose governors (later presidents) were appointed by the member commercial banks, with the power to regulate local credit conditions by discounting eligible commercial bills) and the Federal Reserve Board in Washington D.C. (composed of government appointed officials who were to oversee and coordinate the operations of the system as a whole).

The structural flaws emphasized by Meltzer were based on the incentive incompatibility of the two institutions within the Fed. The Reserve banks had an incentive to focus on local business and credit conditions with limited regard to the national economy. The Board, which was supposed to act in the national interest, did not have the power to compel the Reserve Banks to follow a uniform national policy. Moreover according to Meltzer, there were few individuals at the Board who had the ability to see the big picture clearly. Consequently, the early years of the system were characterized by a lack of national symmetry in Reserve bank discount rate policy as well as conflict between the Board and the Reserve banks in the setting of discount rates. Some of the early dissidence was resolved by creation in 1923 of the Open Market Investment Committee (OMIC) to oversee national open market policy.

The power vacuum was filled by Benjamin Strong, Governor of the Federal Reserve Bank of New York. Strong, with a superior intellect, extensive experience as an international banker, and great force of character, headed the influential OMIC. He was able to gain the support of the other Reserve banks. Strong's vision of a powerful central bank located in the nation's financial capital and setting both national and international monetary policy, often differed from the perspective of the members of the Federal Reserve Board in Washington as well as from those of officials of the other Reserve banks. Strong's views usually prevailed.

Meltzer largely accepts the views of Chandler (1958) and Friedman and Schwartz, that following Strong's lengthy illness and death in October 1928, the conflict reemerged. George Harrison, Strong's successor at the New York Fed had neither the intellect nor the personality to follow Strong's precedent. This surely was an important reason for the system's inability to deal with the Depression which began in August 1929.

Later in 1931, in congressional hearings on reform of the Federal Reserve Act, Adolph Miller, Strong's principal opponent on the Board, blamed Strong's 'highhanded' expansionary policies in the summer of 1927 to preserve Britain's adherence to the gold standard,[2] for fueling the Wall Street stock market boom with its inevitable crash and depression. This view was accepted by Carter Glass, Chairman of the Senate Banking Committee and one of the framers of the original Federal Reserve Act. It led to major reforms of the Federal Reserve System in 1933 and 1935, which once and for all centralized power with the Board in Washington. However, as Meltzer underlines, after 1933 Franklin Roosevelt's Treasury dominated monetary policy and it took until March 1951 for the Fed to become a fully functioning central bank.

2.3. Individuals would not have saved the day

An important theme in A History is the role of individuals in developing policy. Meltzer documents in detail the role of Federal Reserve officials in the events he describes. The key players in the narrative are: Benjamin Strong, Adolph Miller, George Harrison, Henry Morgenthau, Marriner Eccles, and Allan Sproul.

Friedman and Schwartz, following Chandler(1958) view Benjamin Strong as the hero of the early Federal Reserve years. They praise his actions in the 1920s as being largely responsible

[2] Although at the time both the directors of the New York Fed and the Reserve Board (including Miller) approved the policy.

for the ‘High Tide of the Federal Reserve.’ According to them he had a clear understanding of the central bank’s role in both domestic and international policy. On the domestic side he was responsible for unifying the System in the 1920s to conduct the correct counter cyclical open market policies to offset the recessions of 1923-24 and 1926-27.

On the international side, he worked tirelessly with Montagu Norman, Governor of the Bank of England (and also later with Emile Moreau, Governor of the Banque de France and Hjalmar Schacht, Governor of the Reichsbank) to stabilize the currencies of the European belligerents in the early 1920’s, to restore general adherence to the gold exchange standard and to help the Bank of England in 1924 and especially in 1927 in its losing battle to restore and then maintain its gold parity. Finally they argue that it was Strong’s untimely death in October 1928 that allowed the System to devolve into a state of paralysis that failed to prevent the banking panics of the 1930’s. Moreover they argue that, had he lived, he would have acted after the fall of 1929 to continue open market purchases to prevent the banking panics from doing their damage.

Meltzer generally agrees with Friedman and Schwartz on Strong’s role in unifying the system in the 1920s, and in restoring the gold exchange standard, but he differs with them by also emphasizing some of his mistakes; particularly the failure to respond quickly enough to the inflation of 1919-20 after World War I and then the recession of 1921; the belief that monetary tightening was necessary to stem the Wall Street boom, and his focus on the same indicators that led the system to misjudge its policy from 1930 to 1933 and that he probably, but not definitely, would have led to the system to jettison the framework in time.

Meltzer also is much more critical of George Harrison, Strong’s successor at the New York Fed than are Friedman and Schwartz. They view him as not having the leadership capabilities to do what Strong would have done but as basically being on the same page. Meltzer demonstrates time and again how Harrison either made incorrect judgments based on Burgess-Riefler or delayed actions that had been agreed upon.

Adolph Miller also gets mixed reviews by Meltzer. Although he was Strong's fiercest opponent on the Board in the 1920s and a staunch advocate of real bills, he also pushed for the continuation of expansionary policy in 1932 while Harrison was opposed.

After the Great Depression, Marriner Eccles became chairman of the greatly strengthened Board of Governors in 1934. He generally gets low marks as an avid believer in the impotence of monetary policy "as pushing on a string" and the existence of a liquidity trap, for advocating the doubling of reserve requirements in 1936-37 out of fear of future inflation to sop up commercial banks' excess reserves, and as passively accepting Treasury domination of the Fed, although by 1949 he effectively joined the fight to regain the Fed's independence.

Henry Morgenthau Jr., Secretary of the Treasury from 1934 to 1945 generally gets very high marks for having the Treasury follow an expansionary gold purchase program, for devaluing the dollar and creating a gold-induced reflation (as well as threatening the Fed for being contractionary with the stick of open market purchases to be conducted by the Treasury's Exchange Stabilization Fund (ESF)) that pulled the U.S. out of the depression - - effectively doing what the Fed wouldn't do.

Finally Allan Sproul, appointed President of the New York Fed in 1940, is given the highest marks for consistently and coherently making the case for ending the interest rate peg in the late 1940's and restoring Federal Reserve independence.

Many other characters slip in and out of the narrative and are generally dismissed as ineffective advocates of real bills and other sins. Two of the most reviled were Governors MacDougal of Chicago and Young of Boston.

2.4. A Reinterpretation of the Great Depression

A key feature of A History is the treatment of the Great Depression. Meltzer agrees with Friedman and Schwartz and others (Hamilton 1987) that the Great Depression was caused by monetary forces - - the pursuit by the Fed of tight money in 1928-29 to stem the stock market boom and the failure to offset the banking panics of 1930-33 by expansionary open market policy. The key difference between his treatment and that of Friedman and Schwartz is in the reason why the Fed was at the center of the forces creating the depression. As discussed above, he attributes it primarily to the Fed's adherence to the Burgess-Riefler doctrine and more fundamentally real bills. According to Meltzer (and also Friedman and Schwartz), the Fed in the late 1920s was obsessed with the U.S. stock market because an important element of the real bills doctrine stated that the central bank should not accommodate lending to finance speculation in asset markets. That would fuel asset price inflation which would inevitably spill over into general inflation and inevitably lead to deflation and depression. Hence all the players in the system, including Strong, sought to deflate the boom, although he and the New York Fed wanted to do it by raising the discount rate, and the Board which favored regulating restrictions on member bank lending.

Once the crash occurred, and after a brief period in the fall in 1929 when the New York Fed, with the permission of the Board, followed an expansionary lender of last resort policy, the system reverted to a neutral to tight policy based on its readings of the indicators of the Burgess-Riefler doctrine as signifying monetary ease, i.e. member bank borrowing was low as were nominal interest rates.

The Fed's policy, according to Meltzer in A History Vol. I, Brunner and Meltzer (1968) and Wheelock (1992), was perfectly consistent with that followed in the earlier recessions of 1923-24 and 1926-27. The only difference was that member bank borrowing was low because of the depression, and nominal rates were low reflecting expectations of deflation. In contrast to Friedman and Schwartz, who view the 1930-33 episode as a departure from the sound policies of the 1920's, Meltzer et al view the Fed's policy as consistent between the 20s and the 30s. The only difference was that economic conditions had changed but were not taken into account by Fed officials. Hence Meltzer is less sanguine than Friedman and Schwartz that, had Strong lived he would have saved the day. Moreover he posits that all of the members of the OMPC (Open Market Policy Committee, the successor to the OMIC) who set policy in 1930-33 following the Burgess-Riefler doctrine, had also done so several years earlier. Meltzer agrees with Friedman and Schwartz on the importance of the flawed structure of the Fed, but emphasized that it increased the difficulty of developing the consensus that would have produced the required change in policy.[3]

[3] Meltzer also expresses considerable differences with Bernanke's (1983) view of the banking panics as a non-monetary event, identifying the key channel separate from the effects of a decline in money supply, by which the banking crisis impacted the real economy as the rise in the cost of credit intermediation to small firms. Meltzer (pp.313-314, 396) argues that commercial paper declined much more than bank lending to small firms and that the decline in bank lending to small firms most likely reflected a response to a decline in the demand for loans as borrowers incomes fell. He expresses similar reservations to the related approach by Calomiris (1993).

2.5. The Rest of the World

The gold standard was one of the two pillars of the Federal Reserve Act and Federal Reserve officials paid considerable attention to it over much of the period covered in volume I. According to the rules of the gold standard, the monetary authority was supposed to define the value of its currency in terms of a fixed weight of gold and then maintain the gold peg by freely buying or selling gold coins or bullion. The gold standard embodied an automatic adjustment mechanism whereby shocks to the balance of payments would be accommodated by gold and short-term capital flows and domestic money supply; interest rates, prices and output would adjust. Monetary authorities were supposed to follow the 'rules of the game' and raise and lower their discount rates to speed up the adjustment mechanism. They were supposed to subsume domestic policy objectives to maintain external convertibility but over short periods of time, they could engage in the temporary smoothing of real output and interest rate shocks.[4]

When the Fed was established it was supposed to follow the 'rules of the game' in the way the Bank of England had done in the 1880-1914 period - - to alter the discount rate in reaction to changes in the gold reserve ratio. However, shortly after the Fed opened its doors, World War I led to the suspension of gold convertibility (de facto and de jure) in most countries. Hence the Fed did not have to worry much about external balance considerations for close to six years. From 1914 to 1917 massive gold inflows increased the gold reserve and led to inflation, but because the rest of the world was inflating even faster, and because convertibility had been suspended, the adjustment mechanism did not function. After hostilities ceased, inflation (now

[4] Bordo and MacDonald (2004) show that under the pre 1914 classical gold standard because the core countries of Western Europe had considerable credibility, the gold points surrounding gold parity served as a 'target zone' in the sense of Krugman (1990) and Svensson (1993) in which central banks could temporarily pursue domestic objectives.

paper money induced) increased, and by 1919, U.S. gold reserves began to decline. The Fed then began following the 'rules' and by dramatically raising the discount rate in 1920-21 produced a very serious deflation and recession.

The NY Fed under Benjamin Strong's leadership in the early 1920's was then instrumental in restoring the gold standard, albeit a gold exchange standard with the dollar and the pound as the key currencies. The restored gold exchange standard did not work as effectively as the pre war version. Meltzer in Vol. I, following Meltzer (1976) has a brilliant treatment of its flaws. According to him the system had two fatal flaws. First, real exchange rates were misaligned, Britain went back to gold in 1925 at the pre war parity of $4.86 to the pound at an overvalued rate. France restored convertibility de facto in 1926 at a greatly undervalued parity (as did Germany in 1924). Secondly, key adherents were unwilling to allow the adjustment mechanism to work. France followed a pro-gold policy and sterilized its gold inflows. The Fed also sterilized gold inflows in the 1920's because it feared inflation. As a consequence, gold flowed continuously to the U.S. and France from Britain and the rest of the world. Britain suffered continuous deflationary pressure and lurched from crisis to crisis in which it threatened to leave the gold standard unless it was aided by rescue loans and coordinated policy responses by the U.S., France and Germany.

Meltzer documents how this maladaptive international monetary system contributed to monetary tightening in 1928-29 that led to the depression. After 1929, gold inflows to the U.S. continued imposing deflationary pressure across the world.

Eichengreen (1992), as well as Temin (1989) argued that the gold standard was the key cause of the Great Depression because member countries, locked into a gold standard mentality, were unwilling to leave it to end deflation and bank distress, and because their commitment to defend convertibility above all else had been weakened after World War I by the rise of democracy and labor unions. Eichengreen argued that the U.S. like Belgium, the Netherlands and other countries could not follow expansionary monetary policy to end the depression for fear that gold reserves would fall below the statutory minimum. In the U.S. case he focused on the problem of 'free gold' ("gold held by reserve banks that was not required as a reserve against outstanding base money" (Meltzer p. 335)), as a key reason why the Fed was reluctant to follow expansionary policy in 1930-33.

Meltzer strongly disagrees with this position and effectively argues that except for several months between October 1931 after Britain left the gold standard, and February 1932 when the Glass Steagall Act allowed U.S. government securities to serve as eligible securities in the Fed's balance sheets, free gold was not a problem. And even in those few months when the gold reserve ratio declined to 50% (10% above the minimum) that, were expansionary policy followed and the gold reserve ratio threatened, the Federal Reserve Act allowed a temporary suspension of the gold cover ratio (which had actually been invoked in 1916), as well as other measures that could have been taken.[5]

Meltzer is also highly skeptical of another claim by Eichengreen (1992), who argued following Kindleberger (1986), that absent countries leaving the gold standard, only internationally coordinated reflation would have ended the depression. Meltzer argues that coordination would work only if it were consistent with the self-interest of all the parties concerned which, as he documents, was not the case in the failure of policy coordination during the depression and in the Tripartite Agreement of 1936-39. The only really successful example

[5] Bordo, Choudhri and Schwartz (2002)simulate a model of the U.S. as a large open economy with imperfect capital mobility, demonstrating that even in the worst case scenario in the late 1930's, had expansionary open market operations been undertaken sufficient to correct the downturn, that gold reserves would not have reached the statutory minimum. Hsieh and Romer (2001) corroborate this conclusion.

of policy coordination on record was that engineered by Benjamin Strong to save sterling in 1927.

More importantly, Meltzer disagrees with the basic thesis put forward by Eichengreen and other proponents of the revisionist international interpretation of the Great Depression. He convincingly argues that, the gold standard per se was not the basic problem. It was rather the fact that the interwar gold standard was based on misaligned real exchange rates and that the key members did not allow the gold standard adjustment mechanism to work.

After World War II, the U.S. was instrumental in establishing the Bretton Woods International Monetary System. The adjustable peg exchange rate arrangement, whereby countries pegged their currencies to the dollar (but could alter the peg under conditions of fundamental disequilibrium) and the dollar was pegged to gold at $35.00 per ounce, was a compromise between the interwar gold standard and floating. The U.S. negotiations over Bretton Woods were carried out by the U.S. Treasury with the Federal Reserve Board playing only a minor role. Meltzer documents the dispute between John Williams of the New York Fed, who wanted to restore a key currency arrangement based on gold as had existed under the Tripartite Agreement, and the Board, which supported the Treasury. As it turned out the Bretton Woods System evolved into a key currency gold dollar standard very close to that envisioned by Williams. Regardless, in the early years covered in Vol I, the U.S. had massive gold reserves and external balance considerations had virtually no the influence on monetary policy.

2.6. The Fed's Struggle for Independence

A theme running through A History is the Fed's struggle to maintain independence from the Treasury. The Federal Reserve Act gave the institution a considerable amount of independence from the fiscal authority. The Reserve banks could set their discount rates based on the demands by member banks to discount eligible paper. Government securities were not included in eligible paper and so the Fed was from the beginning, not supposed to be a central bank to finance short-run government revenue shortfalls, as were the Bank of England and the First and Second Bank of the United States. However, the Fed was not completely independent, the Secretary of the Treasury and the Comptroller of the Currency were members of the Board.

World War I changed the picture considerably. The system quickly became involved in war finance, absorbing short-term government securities at low pegged rates and marketing war bonds, and by 1917 became an engine of inflation. Once the war ended it took the Fed two years to regain its independence during which it fueled two more years of inflation. Although Fed officials became concerned in 1919 about the runup in inflation, they were unable to act without Treasury compliance. The Treasury wanted to keep rates low and bond prices high to protect the commercial banks, which had absorbed its debt. As a consequence, the Fed had to wait to raise interest rates beginning in late 1919, until the Treasury had completed its funding of the war debt, to stem inflationary pressures. It then waited too long to reduce rates in 1921 once a serious recession had set in. Meltzer, like Friedman and Schwartz, views this episode as the Fed's first serious policy error.

In the 1920's the Fed did conduct independent monetary policy. As discussed in section 2.1 above policy was based on the Burgess-Riefler doctrine. Meltzer, like Friedman and

Schwartz, gives it high marks for the mid 20’s. But then its flawed perception of the stock market boom, helped trigger the downturn and crash of 1929. Disaster followed in the next three years because of the Fed’s mistaken reliance on the Burgess-Riefler doctrine.

The Bank Acts of 1933 and 1935 in theory solidified the Fed’s independence by removing the Secretary of Treasury from the Board and centralizing control in the new Board of Governors. However, as Meltzer points out, although the Fed in theory had the trappings of a powerful independent central bank (‘independent within government’), in practice it was subservient to Treasury gold policy and low interest rate policy over the next 18 years.

In a fascinating discussion developed in section 3.6 below Meltzer then documents the drawn out process beginning after World War II by which the Fed regained its independence, removed the interest rate peg, and began to use once again the instruments of monetary policy developed in the 1920’s.

2.7. A History and Monetarism

Allan Meltzer was one of the pioneers of monetarism - - he and Karl Brunner along with Milton Friedman and Anna Schwartz defined the school from the late 1950’s to the present. A History Vol. I is based on the monetarist model of the macro economy: that monetary forces determine nominal income, that money is neutral in the long run, that changes in money induce changes in real output in the short-run; and that the demand for money is stable.[6]

Meltzer in A History expands on Friedman and Schwartz. Their earlier book (1963) was based on the theoretical framework in Friedman’s “Modern Quantity Theory of Money” (MQT) (1956) although no formal model was present in A Monetary History of the United States: 1867-1960. However Friedman and Schwartz organized their analysis of history in terms of the

[6] Other propositions are: the distinction between nominal and real interest rates; the absence of a long-run Phillips curve trade off; and preference for monetary rules over discretion.

categories of the equation of exchange. And they decomposed the money supply into its proximate determinants to isolate the different forces affecting money supply. Their narrative was written to provide historical evidence for the MQT, to show that regardless of institutional arrangements the money income relationship held up. To do this, Friedman and Schwartz developed what later Romer and Romer (1989) and Lucas (1993) and Miron (1993) called the narrative approach - - to isolate historical episodes when changes in money could be identified as exogenous and hence have a causal influence on spending, output and prices.

Meltzer takes this framework as given. Like Friedman and Schwartz he does not write down an explicit model. However he does amplify their framework in some very important ways. Rather than focusing on the proximate determinants of the money supply, (for which he criticized them in his review of their book (1964)) he emphasizes the relationship between the real monetary base and the behavior of real output. In a number of business cycle episodes he compares the growth rate of the real base to subsequent changes in real output. He then compares movements in real base growth to movements in the ex post short-term real interest rate - - to capture the effects of the policy variable (the short-term nominal interest rate) that non monetarists of various stripes and Fed officials have always focused on.

Meltzer also continuously distinguished between nominal and real interest rates, which, as he points out in Volume I, Fed officials never were aware of. Finally he frequently spells out the transmission mechanism from Brunner and Meltzer (1993), whereby changes in money supply impinge on a portfolio of assets ranging from money to government and corporate bonds to equity. Using this analysis he shows quite convincingly that, in virtually every significant recession and recovery episode in the four decades covered in Volume I, movements in the real base dominate movements in real interest rates in the relationship with real growth. This he argues reflects the operation of the real balance effect. On only one occasion, 1931-33 do real interest rates outperform the real base and that is because in that episode the base fell faster than prices. Moreover he also demonstrates that, in two deflationary recession episodes in which nominal interest rates were very close to the zero nominal bound (1937-38 and 1948-49), declining prices, by inducing a positive real balance effect led to recovery - - evidence against the existence of a liquidity trap.

3. Critique

I have some differences with Meltzer on a number of issues raised by vol. I.

My main concern is with chapter 2 on the history of doctrine. Although it is an extremely tight exegesis on the origins of classical monetary doctrine in the tradition of Jacob Viner's Studies in the Theory of International Trade (1937), chapter 2 doesn't quite fit with the rest of the volume. Its location at the beginning of the book sets the stage for Meltzer's key theme in the following historical narrative chapters namely, that the Fed followed the wrong model from the beginning and that the right model had been worked out a century earlier by Henry Thornton. The chapter doesn't really tell us why the Fed did worse than other central banks - - all of whom had forgotten Thornton by 1914.

I would have preferred if chapter 2 primarily covered the history of the U.S. experience in the century preceding the establishment of the Fed, with and without central banks, beginning with the First Bank of the United States founded in 1791. Had Allan Meltzer done that, he would have had better insights as to why the Fed had such a flat (and tortured) learning curve. My thesis (expressed earlier by Redlich (1957), Hammond (1958), and Timberlake (1978)) is that populism in the U.S., and the fear of concentration of economic power in anything like the Bank of England (dating from 1694), made U.S. monetary history very different from that of the other advanced countries. Both the First and later the Second Bank of the United States, designed by Alexander Hamilton, were brilliant models for their time of proto-central banks. Their charters were terminated because of populism and the fear of concentrated economic power. The Second Bank of the United States under Nicholas Biddle was developed into a first rate central bank. According to Redlich (1957), Biddle had read his Thornton and was concerned with exactly the macro relationships (between money, interest rate, prices, exchange rates and the balance of payments) that Meltzer accuses Fed officials of having forgotten. Biddle had a remarkably clear understanding of the role of the Bank in stabilizing foreign exchange rates, smoothing seasonal and cyclical shocks, and acting as a lender of last resort. In many respects he was ahead of his contemporaries at the Bank of England.

Indeed, had the Second Bank not been destroyed by Andrew Jackson, U.S. monetary history would have been very different (also see Hammond (1958)). The Second Bank would have evolved like the major European central banks of the nineteenth century which all followed the rules of the gold standard, learned Bagehot's rule and believed in real bills.

My counterfactual hypothesis of what the world would have been like had Jackson not destroyed the Second Bank plays out like this. Had the Second Bank survived, Free Banking would not have been a problem (it would have probably appeared because something like it (the country banks) developed in England). The Civil War would have been financed in a more efficient way (probably just by the issue of greenbacks plus Federal bond issues and tax increases but not by the issue of national bank notes), indeed the National Banking system would likely not have been created because the Second Bank would have learned to deal with the problem of banking panics and the seasonal patterns of short term interest rates. Moreover a unified money market that Biddle helped create (Knodell 2001) would have developed more rapidly than it did, allowing better regional risk diversification. Possibly (interregional) branch banking would have developed under a strong Bank. Had the financial crisis problem been dealt with, as was the case in England in 1866, the U.S. central bank would likely not have behaved as it did in 1930-1933.

Moreover, the Second Bank would have learned to play by 'the rules of the gold standard game' as most European central banks had done. It still would have followed the real bills doctrine, which was the prevailing theory of banking in all countries in the late nineteenth century. World War I would have been financed in the way it was and the gold standard would have been suspended by the U.S., as was the case in the Civil War. An embargo on gold exports would have been imposed. The postwar instability in Europe would not have been much different, nor would be the real exchange rate misalignment. Had the U.S. central bank incorporated monetary orthodoxy in the nineteenth century, as the European central banks had done, it also may have not sterilized gold inflows in the 1920's. But given these external parameters, a long-established U.S. central bank, similar to the Bank of England, the Reichsbank or the Banque de France would likely have learned to deal with its counterparts as equals without raising suspicions in Washington as Strong did (although one could argue as did Chandler (1958) that one couldn't improve much on Benjamin Strong's leadership).

Instead of this scenario, what the U.S. wrought before the Civil war was Free Banking, frequent financial crises, and an inefficient payments system. Then the National Banking System was established with a uniform national convertible currency but frequent crises and no effective lender of last resort. That environment led to the creation of the Fed primarily to deal with the inelasticity of high-powered money (Friedman and Schwartz 1963) and financial crises and also to observe the rules of the gold standard. The Fed was backward looking. It was set up in the twentieth century to deal with nineteenth century problems that the European central banks had long worked out.

Moreover, as Meltzer makes very clear, Wilson's compromise in 1913 insured that the System wouldn't work because the regional Reserve banks were designed to deal with nineteenth century problems using nineteenth century tools, and the Board was not given the power to conduct real monetary policy. It was a pleasant accident of history that Benjamin Strong became the governor of the New York Fed and was able to temporarily set up a real central bank. Unfortunately he died too soon.

My main point is that an understanding of the path dependency of history would have been useful to help us understand how the structural flaws of the early Fed came about and how structure interacted with the real bills doctrine to produce the big mistakes of the early decades and also the Fed's tardiness in learning from them. Other central banks did not mess up in the way the Fed did in the 1920s and 1930s (except maybe the Banque de France) and they were hit by equally big shocks.

Counter to my Second Bank counterfactual, one could argue that deep-seated American populism and distrust of economic power would have eventually terminated the Second Bank even if the Bank War between Andrew Jackson and Nicholas Biddle had not happened. A possible response to this objection is that, as was the case with the Bank of England in the eighteenth and nineteenth centuries, and the Federal Reserve in the twentieth century, the U.S. central bank would have learned some self protective skills to create a constituency in the nation and especially in the Congress, to ward off incipient threats to its charter. This would suggest that the Biddle /Jackson war was sui generis, reflecting a head on collision of two egomaniacs, and that it would not necessarily have repeated itself.

Regardless of the outcome, the point of my exercise is to demonstrate the importance of path dependency. The legacy of the destruction of the Second Bank and the victory of populism in the nineteenth century, led to eight decades of monetary disarray. This was the background to Wilson's compromise and the slow and painful learning process for the Federal Reserve which followed.

Meltzer critiques Fed officials for failing to remember Thornton, Bagehot and Fisher. Which central bank in the pre 1950 period did remember their doctrine? The Bank of England and the other central banks knew Bagehot, although the other countries usually solved banking crises with government bailouts and didn't worry about the liquidity/solvency distinction. They also observed the rules of the game (again the Bank of England much more than others). But few central banks had the open economy quantity framework embedded in Thornton in their psyche. Moreover the economics profession in the interwar also wasn't completely clear on how monetary policy should be conducted. Thus although Thornton may have had the right model in 1802, most economists in the U.S. and abroad (with some exceptions like Fisher, Hawtrey and Keynes) had forgotten it or never learned it. This then leaves us with the question, suppose the Fed officials had the Thornton model in mind but the structure established in 1913, and the legacy of nineteenth century monetary disarray been the same, would the Fed have avoided its big mistakes? I am skeptical.

My last comment is a minor quibble. The book is a very dense read. It meticulously documents every detail of the record. It contains many useful figures and tables to help the reader and a detailed analysis of who said what is then usefully summarized by the author. What the book lacks is a detailed table of contents at the beginning and a list of figures and tables (only chapter titles are listed in the contents). These items would have made it much easier for the reader to zero in on episodes of particular interest.

4. Conclusion

Allan Meltzer's A History of the Federal Reserve Volume I is a major addition to the literatures on monetary history and monetary policy. It is on par with the classic histories of the Bank of England by Clapham (1945) and Sayers (1976). Any serious scholar of the Federal Reserve will have to have this book in his collection. We eagerly await the publication of Volume II.

Appendix I. A Reader's Guide to the Historical Narrative

In this Appendix, I develop in more detail the narratives in the five central chapters of the book. My discussion follows chronologically the treatment in Volume I.

3.1 Doctrinal Antecedents

Chapter 2 in A History develops the doctrinal antecedents to the Federal Reserve Act in the British literature on monetary theory and policy in the nineteenth century. Meltzer argues that the basic theoretical precepts behind the Act - - the gold standard and the real bills doctrine - - were also those that guided the Bank of England in the nineteenth century.

He begins with Henry Thornton's An Inquiry into the Nature and Effect of the Paper Credit of Great Britain (1802) written during the Napoleonic war suspension period (1797-1821), when the Bank of England suspended gold convertibility and aided the government war finance efforts by freely discounting short-term government securities and commercial bills and issuing inconvertible bank notes. The resulting inflation led to the famous Bullionist debate between those who attributed the inflation to the Bank of England's note issue (the Bullionists) and those who attributed it to real forces such as harvest failures and remittances to the continent (the Anti Bullionists).

Thornton is generally acknowledged to have had the clearest vision of the relationship between Bank of England policies, the price level, real output, interest rates (nominal versus real), exchange rates and the balance of payments (Fetter (1963), Viner (1937), Wood (1939)). According to Meltzer p. 20, Thornton combined the theory of central bank policy actions with the operation of the open economy quantity theory of money. He distinguished between the effects of policy actions under fixed and flexible exchange rates. Under the fixed exchange rate gold standard, the Bank of England's note issue was determined by its gold reserve, which in turn depended on the balance of payments, which in turn depended on the relationship between the price level in England and the rest of the world.

Thornton understood that an issue of Bank of England notes would ultimately be displaced by a decline in gold reserves but that in the short run, the increase in the money supply would temporarily reduce short-term (real) interest rates, stimulate output, lead to a rise in the price level, an improvement in the terms of trade, a balance of trade deficit, a gold outflow, and then a decline in the Bank's gold reserves. Under an inconvertible paper money regime, Bank of England note issue would lead to rising prices, a depreciating exchange rate and, once inflation was anticipated, to a departure of nominal from real interest rates, presaging Fisher's (1896) famous distinction between real and nominal interest rates. According to Meltzer, Thornton also distinguished between money and credit, had a theory of velocity but above all, understood the distinction between long-run equilibrium and the short-run transmission mechanism. Moreover, Thornton disputed many of the propositions of the anti-Bullionists (later the real bills proponents) that money was passively determined by aggregate demand. Finally he had a good understanding of the basic rule to be followed by a central bank acting as a lender of last resort -- to lend freely to the money market (Humphrey 1975).

In Meltzer's view (page 63), the state of British monetary thinking deteriorated after Thornton. Ricardo and his followers, focused on long-run equilibrium and comparative statics ignoring the transmission mechanism, a development which gave only limited guidance to the Bank directors concerned with short-run disturbances to the money market. The subsequent

Currency school / Banking school debate in the 1820's/1830's led to the development of the currency principle under which the Bank would vary its note issue directly with its gold reserves. The Banking school criticized the currency principle for neglecting the fact that bank deposits were also part of the money supply and for not accounting for movements in velocity (Viner 1937). The Currency school also advocated the case for rules over the discretion of even well meaning and knowledgeable Bank directors.

Meltzer (pp.37-39) follows Viner (1937) and others in discussing the problems of the implementation of the currency principle embodied in Palmer's Rule (1827), under which the Bank would keep a fixed percentage of its portfolio in gold and then allow the note issue to vary with gold flows. The resulting financial turbulence of the 1830's and 1840's (panics in 1837 and 1847), which reflected the neglect by the rule of the shocks emanating from and impacting on the commercial banking system, and of shifts in velocity, led to a compromise between the two schools and a mix between rules and discretion manifest in the Bank Charter Act of 1844. The Act divided the Bank into the Issue Department based on the currency principle and the Banking Department under which the Bank of England followed normal banking business (taking deposits, portfolio management) and developed its discount rate policy.

In the rest of the nineteenth century, the Banking school became the key influence over the Bank's policy view. The Bank's directors focused on changes in the discount rate (Bank rate) to influence short-term interest rates, short-term capital flows and its gold reserve. The real bills doctrine came from this tradition (Meltzer p. 43). According to it, as long as the Bank only discounted real commercial bills and satisfied the 'needs of trade', there would never be an over issue of money and credit.

Financial crises (aka banking panics), which were a perennial problem in England before 1866 (see Schwartz 1986) were believed to be caused by real shocks. The solution to them, worked out by Walter Bagehot in Lombard Street (1870) was for the Bank to accept responsibility for the stability of the financial system (the Responsibility Doctrine) and to "lend freely but at a penalty rate."

The key theme in chapter 2 is that by the end of the nineteenth century, Banking school ideas motivated the Bank to focus on the state of the short-term money market and its gold reserves. The long-run influence of the effects of Bank rate policy on money supply, the real economy and the price level and the feedback to the Bank's portfolio by the price-specie flow mechanism posited by Henry Thornton was ignored. The framers of the Federal Reserve System inherited this state of beliefs and embedded it in the 1913 Act. They did not adopt the quantity theoretic perspective and the adjustment mechanism worked out by Thornton or even the long-run equilibrium perspective of Ricardo. These beliefs, according to Meltzer, lay at the heart of the system's policy errors in its first four decades of existence. This theme runs through the remainder of the narrative.

The Early Years

The Federal Reserve Act of 1913 was a compromise between proponents of a European central bank and those who feared the financial power of New York. According to Meltzer (p. 67) President Wilson's compromise led to 12 regional Reserve banks controlled by local bankers and the Federal Reserve Board approved by the government, with no clear division of power - - a portent of future problems.

The Fed's basic functions were to adhere to the gold standard and to provide an elastic currency. This would be achieved by discounting real commercial bills issued for the needs of trade (lending against the security of speculative projects or government securities was prohibited). The Fed was also supposed to serve as a lender of last resort, smooth the seasonal in interest rates, facilitate par value check clearing, manage the payments system and other tasks.

Lending on real bills under the gold standard, the Fed was designed to be a passive institution. As events turned out, it learned to be more active (Meltzer p. 73). World War I permanently changed the environment facing the nascent institution. In the three years before the U.S. entered the war the Fed monetized gold inflows from the belligerent nations and thereby fueled inflation. Benjamin Strong of the New York Fed quickly became the leading force in the system and played a key role in galvanizing it into action. Although there were frequent territorial skirmishes between the Board and the Reserve bank, they were minor compared to those that followed later in the 1920's and 1930's and Strong often diffused them. He was instrumental in centralizing open market operations (p.77) and pooling the system's gold reserves. His intentions were to run the Fed like the Bank of England and to keep the discount rate above market rates as a penalty rate (p. 78). Once the U.S. entered the war the Fed quickly became subservient to the Treasury, abandoned the penalty rate, and began indirectly supporting Treasury finance by setting a preferential discount rate on U.S. Treasury certificates below market interest rates. This fueled inflation in a manner similar to the absolute interest rate pegs used in World War II (Meltzer p. 86).

After hostilities ceased in November 1918 the Fed followed the Treasury's lead in keeping interest rates low to preserve member banks' balance sheets. This policy further fueled inflation. Beginning in the summer of 1919, after the Treasury in June lifted the embargo on gold exports, Fed officials, became concerned over a decline in the gold reserve ratio and began to discuss raising rates according to classical doctrine, However, no action was taken until after the Fed was released from Treasury control in December 1919, and in January 1920 the Fed began a series of hikes in the discount rate within a few months from below 5% to 7%.

Like Friedman and Schwartz, Meltzer criticizes the Fed for waiting too long to raise rates. Shortly after the rise in rates, the economy went into a severe recession and soon the gold reserve ratio began to decline, but Strong and other important Fed officials opposed cutting rates, because high member bank borrowing was perceived as a sign of ease (p.130). This decision revealed an ongoing conflict between the Fed's external and internal goals. In Strong's view the Fed had to roll back the inflation generated after 1917 by its bond-support policy. On real bills lines the financing of bank government bond purchases was deemed to be speculation. Strong believed the Treasury and not the Fed to be responsible for the inflation and the necessary deflation and recession that followed (p.128). His goal on gold standard lines was to restore the price level to its 1917 level (p. 111).

Like Friedman and Schwartz, Meltzer regards this episode as the Fed's first policy failure. Indeed he demonstrates that the recovery started a few months before the Fed reversed its tight money policy in June 1921. The recovery resulted from deflation that raised real cash balances and stimulated gold inflows. In this episode rising real balances outweighed the negative effects of extraordinarily high real interest rates (p. 118). The Fed reversed policy only under the lash of political pressure from Congress. The criticism made Strong and others gun-shy of the British penalty rate model and led him (but not most other Fed officials) to abandon the simple precepts of the real bills doctrine and to develop a new policy framework (pp. 132-135).

The 1920's

After the debacle of 1920-21, the Fed gave up use of the discount rate as a penalty rate and the gold reserve ratio as a policy indicator. Meltzer carefully analyzes the evolution of Federal Reserve procedures developed in the Tenth Annual Report in 1923 that altered its stance from a passive institution to an activist one.

Meltzer in earlier work with Brunner (1968) treated the Burgess-Riefler doctrine developed in the report and in key books by Riefler and Burgess as the theoretical rationale for this shift to an activist policy from the passive real bills approach underlying the Federal Act. It was also a rationale for the use of open market operations as the key policy tool. The Burgess-Riefler doctrine argued that member banks were reluctant to borrow and would turn to the discount window only in time of need (i.e., when their reserves were deficient), and they would repay loans promptly. They would not borrow for profit. Hence open market operations could affect their decision to borrow or repay loans: purchases would lead to a lower discount rate and induce them to borrow and expand their credit; sales would lead to a high discount rate and induce banks to repay.

This doctrine was compatible with real bills but it allowed the Fed to conduct an activist policy. According to this doctrine, two indicators were crucial to determine whether policy should be eased or tightened: the level of member banks indebtedness in the New York and Chicago Federal Reserve Districts (above $500 million defined high indebtedness; below $500 million low indebtedness and the need for ease); and the level of short-term nominal interest rates (Meltzer p. 161).

Although adherence to this rule of thumb led in part by chance to good outcomes in the recessions of 1923-24 and 1926-27, it led to disaster in 1929-1933 and 1937-38. Meltzer throughout the rest of the narrative in Chapters 4, 5 and 6 criticizes the approach for its basic premise that member banks do not borrow for profit, for its assumption that the level of member bank borrowing is a good indicator of the state of the economy, for focusing on nominal and not real interest rates, because it was still embedded in real bills and its emphasis on the discounting of self-liquidating commercial bills only.

A related development in the early and mid 1920 was the shift of power from the Board in Washington to Reserve banks and especially to the New York Fed under Benjamin Strong in the setting of Reserve bank's policy by the Open Market Investment Committee. Strong was able to count on the support of the other Reserve Banks in part because he offered the Banks in the rural regions some assistance in meeting their required dividends payable to their member bank shareholders, by pooling the returns on the open market portfolio (Meltzer pp. 214-215).

Strong and the OMIC were proponents of the Burgess-Riefler doctrine and activist national open market policy to stabilize the business cycle. The Board, whose chief spokesman was Adolph Miller (the only Ph.D. economist on the Board), continued to be staunch advocates of the original real bills view. In a fascinating discussion in chapter 4, Meltzer narrates the ongoing tennis match between Strong and Miller. The Reserve banks didn't always win every match in the 1920s. One of the interesting episodes in which the Board successfully exerted its power was the 'Chicago Rate Controversy' in September 1927, when the Chicago Fed was forced by the Board to reduce its discount rate in line with reductions by the other Reserve banks (Meltzer pp. 221-224). This episode illustrates an important theme in the book - - that in the 1920's and 1930's ambiguous division of authority in the system weakened monetary control.

The third development in the twenties was the restoration of the gold standard. Benjamin Strong played a key role along with Montagu Norman in the international cooperation that allowed the major belligerents and many other countries to return to gold convertibility. Meltzer is highly complementary of Strong's role in both aiding sterling's return to the fold in 1925 and keeping it there in 1927. The famous meeting in Long Island in July 1927 between, Strong, Norman, Moreau and Schacht in which the Fed (along with the others) agreed to ease policy to offset pressure on sterling, Meltzer views as a unique event of cooperation which worked only because the interest of all parties concerned coincided (p. 177).

The 1927 meeting was successful in dealing with the immediate pressure on the pound but ignored the basic long-term problems of the restored gold exchange standard: the misaligned real exchange rates and the fact that each country's long-run objectives were incompatible with the basic framework of the international monetary system. For the U.S. the problem was that the Fed was unwilling to let the gold standard adjustment mechanism work and allow gold inflows to raise the price level and thereby lead to adjustment via the price specie flow mechanism. Fed officials feared that inflation would inevitably lead to deflation so the system continuously sterilized gold inflows, thereby putting deflationary pressure on the rest of the world. As discussed in section 2 above, France followed a similar deflationary policy. Meltzer clearly points out the irony in the Fed's policy. Because of fear of deflation they sterilized gold inflows (and ended the Wall Street boom), thereby producing the deflationary outcome they wished to prevent.

The final theme in the 1920's was the denouement of the struggle for power in the debate over the Wall Street boom. In 1927-28 the struggle between Miller and Strong (later Harrison, after Strong died) was over the use of the discount rate (Strong) and qualitative controls on bank loans that financed the stock market (Miller). Miller, an advocate of real bills, believed that the quality of credit mattered. He also feared a repeat of 1920-21 for which the Fed was heavily criticized. For Strong, on the other hand, credit was fungible. He wanted to restrict total credit and money.

According to Meltzer (p. 265), all Fed officials because of their common belief that rising asset prices inevitably leads to inflation which inevitably leads to deflation (a view still held by the BIS), erred in believing that the Fed should deflate the stock market boom. Meltzer correctly points out that in addition to the difficulty of ascertaining whether an asset price boom reflects fundamentals or a bubble, the Fed focused (in 1929) rising interest rates on brokers loans as signaling inflationary pressure when at the same time the real monetary base, beginning in late 1927, predicted an excess demand for money and deflation.

Meltzer also documents Miller's (1935) postmortem on the causes of the crash and the depression, reprising in testimony he had given before hearings of the Senate Banking Committee held in 1931. Miller blamed the New York Fed and Benjamin Strong in particular for adopting an expansionary policy in the summer of 1927 to save sterling. This policy (which Miller signed on to at the time), fueled the stock market boom. Then because Strong and Harrison in both 1921 and 1929 opposed Miller's qualitative approach to speculation, the boom got out of hand. The resulting crash caused the depression. The Board's role, according to Miller was secondary. Its mistake was only its delay in taking leadership. The legislation in 1933 and 1935 was evidence that Congress shared the Board's view.

In the end Meltzer (p. 265) gets back to his basic theme. Fed officials, sacrificed their longer-term aims to satisfy immediate concerns that policy was highly expansive and inflationary, when in fact it was deflation that was under way owing to restrictive actions. .

1929-1933

Much of the discussion of Meltzer's treatment of the Great Depression was covered in section 2 above. His main thesis is that the Depression came about because of a policy failure by the Federal Reserve based on its belief in the flawed Burgess-Riefler doctrine. In contrast to Friedman and Schwartz, he downplays both the importance of the structure of the system and Strong's death. The narrative in chapter 5, which is an engrossing read, is well illustrated with a series of tables showing the information available to the OMPC (successor to the OMIC) at each meeting.

According to Friedman and Schwartz and also Meltzer (p. 288), the New York Fed responded correctly to the stock market crash by expansionary open market purchases through the fall. The Board, the OMPC and the New York Fed were on the same page because the Burgess-Riefler indicators showed that member bank borrowing was high as were interest rates. The Board did differ with New York on how stimulus should be achieved. On real bills lines they preferred discounting over open market purchases. Once the pressure seemed to ease later in the fall, the case for open market purchases declined.

Meltzer, (page 288), disagrees with Friedman and Schwartz on the interpretation of the episode. They argued that Harrison of New York pushed for continued purchases but was discouraged by a negative response from the Board. According to Meltzer's reading of the Board's minutes, which Friedman and Schwartz did not have access to, the Board agreed with Harrison's case for large-scale purchases in October; their objection was New York's decision to act alone.

In the following months from November 1929 through the summer of 1930, as the U.S. economy sunk into recession, Meltzer carefully documents the system's continued unwillingness to follow expansionary policy because member bank borrowing in New York was below $500 million and market rates were low. Like Friedman and Schwartz, he argues (p. 279) that had the Fed focused on money supply, instead of interest rates, as its indicator of policy, they would not have considered that money was easy. Moreover, he points out on p. 310 that in September 1930, Miller of the Board was arguing for expansion while Harrison was opposed on the grounds that it would lead to inflation and gold outflows. Based on this evidence and also the views of Miller and others that Strong had precipitated the stock market boom by his policies to aid Britain in 1927, as well as adherence by everyone in the System to the Burgess-Riefler doctrine, he doubts that had Strong lived he would have changed the course of events.

The same theme follows in the narrative on the events of 1931, the crucial year of the contraction, with one new element - - events abroad. Like Wicker (1966), he argues (p. 330) that the Fed paid more attention to distress abroad than to the burgeoning banking crisis at home. In June 1931 Harrison arranged loans to assist Austria, Germany and Hungary. Later in August he expressed little interest in expansionary monetary policy because member banks borrowing was low and excess reserves were beginning to accumulate in the banking system - - evidence on Burgess-Riefler lines of ease.

The classic blunder of the Great Contraction then followed after Britain left the gold standard in September 1931. The Fed reacted by raising the discount rate, ignoring its effect on the weakened banking system and justifying the move by Bagehot's rule. According to Meltzer (p. 348), the Fed had forgotten the first half of the rule "to lend freely at a penalty rate". Meltzer (p. 359) does not agree with the view that the Fed's experiment with expansionary open market purchases in the spring of 1932, was largely an unwilling response to congressional pressure. According to him there was considerable support for it in the system because it was consistent with Burgess-Riefler indicators - - member bank borrowing and short-term nominal rates had not declined.

Suspension of purchases in July reflected the belief that the policy had not been successful; member bank borrowing and nominal rates had declined to the level of the previous year, and also concern over gold outflows. As discussed in section 2.5 above, Meltzer effectively disposes of Eichengreen's argument, that indeed the Fed had to stop purchases because of the free gold problem. Meltzer, like Friedman and Schwartz, and Bordo, Choudhri and Schwartz (2003) argues that expansionary policy was successful and if it had continued would have led to a much more positive outcome.

Meltzer's treatment of the final collapse in late 1932 and early 1933 (pp. 374-389) leading to the Banking holiday of March 5, 1933 closely follows that of Friedman and Schwartz. He emphasizes the structural flaws that prevented the Reserve banks from cooperating to deal with the national crisis.

In the end, he reiterates the theme developed in chapter 2. Had Fed officials read Thornton, Bagehot and Fisher, none of the awful events of 1929-1933 would have transpired. Instead by following real bills and its offshoots, they focused on the wrong indicators of policy. Once the depression began, they then failed to follow through with the well-known and appropriate policies developed by these great economists.

The 1930's

In the period following the Banking holiday of March 1933, the Federal Reserve's fortunes changed significantly. In chapter 6, Meltzer considers the changes in structure of the Fed following the Banking Acts of 1933 and 1935; the shift in control of monetary policy from the Fed to the Treasury under Secretary Henry Morgenthau; the major policy mistake in 1936-37 of doubling reserve requirements; and the major changes in international economic policy under the direction of the Treasury.

Congress blamed the financial system and the Federal Reserve for the crash and the depression. It attributed speculative excesses leading to the crash to the interconnection between commercial and investment banking. This led to separation of the two under the Glass Steagall Act of 1933. This act also created the Federal Deposit Insurance Corporation (FDIC) and converted the OMPC into the Federal Open Market Committee (FOMC) with all 12 Reserve banks as members (p. 431). As discussed in section 3.4 above, Carter Glass, Chairman of the Senate Banking Committee, based on the statements by Adolph Miller and others at the hearings held in 1931, held that the New York Fed had too much power. Miller blamed Benjamin Strong's loose monetary policy in 1927 to aid the British, for fueling the Wall St. boom. Consequently, the 1933 Act transferred the power of the Reserve Banks to conduct exchange market policy to the Board (Meltzer p. 433).

Marinner Eccles, appointed Chairman of the system in January 1934, was a strong advocate for centralized control. He and his brilliant advisor Lauchlin Currie helped draft the legislation that led to the 1935 Act. Meltzer (pp. 470-486) describes the process leading to its passage. Eccles, was an early Keynesian who believed that fiscal policy was the principal means to stabilize the macro economy. Using the traditional tools of monetary policy was like "pushing on a string. Administrative controls (margin requirements, credit controls, ceiling interest rates) should be used aggressively by the Fed to supplement fiscal policy (Meltzer pp. 467-470).

The 1935 Banking Act radically changed the Fed. The Board of Governors in Washington now had the majority of votes on the FOMC (the committee consisted of 7 governors of the Board and 5 Reserve bank Presidents). The Secretary of the Treasury and the Comptroller of the Currency were removed from the Board. The influence of real bills was diluted by adding "with regard to the general credit situation of the country" to 'accommodating commerce and business'; and the Board gained the power to change reserve requirements up to twice the prevailing ratio by majority rule (p. 488).

Meltzer (p. 575) points out the irony that once the Banking Act of 1935 made the Federal Reserve a full fledged central bank with power centralized in Washington, conferring independence within the government, the Fed lost effective control to the Treasury for the next 16 years. He describes (pp.442-463) how FDR and Morgenthau orchestrated the Treasury's policies to reflate the U.S. economy from 1933 to 1941, with the Fed playing a very subservient role. In 1933 the Fed was pressured (against Harrison's judgment because member bank borrowing was low) into expansionary monetary policy by the threat that the Congress would issue greenbacks under the Thomas Amendment to the Agricultural Adjustment Act of April 1933.

The key reflationary policy initiatives that effectively extricated the U.S. from the depression were produced by the Treasury not the Federal Reserve. After taking the U.S. off the gold standard on April 11, 1933, Morgenthau initiated a gold buying policy to raise the price of gold and, in accordance with the theories of George Warren, thereby raise commodity prices. Meltzer documents the limited impact of the policy on prices until January 31, 1934 when Roosevelt officially devalued the dollar by close to 60% thereby making a clear commitment to pursue domestic rather than international policy goals.

Most Federal Reserve officials would have preferred that the U.S. return to the gold standard and, in addition in accordance with the Europeans at the June 1933 London monetary conference, a coordinated stabilization of the dollar-sterling and dollar-franc exchange rates. Meltzer (p. 550) points out that such a solution would not have addressed the basic international monetary issue that the real exchange rates between the U.S., England and France were drastically misaligned. The new U.S. gold price of $35.00 attracted a flood of gold from the rest of the world, that was not sterilized, fueling an increase in the monetary base and rising prices.

Some of the proceeds of the devaluation were used to create the Exchange Stabilization Fund, designed to mimic the British Exchange Equalization Account of 1932, to conduct exchange market intervention. The legislation creating the ESF gave the Treasury the power to use it for domestic monetary policy purposes, thus, like the Thomas Amendment, according to Meltzer serving as a possible threat to the Federal Reserve's monetary powers.

The key event for the Federal Reserve in the second half of the decade was the decision by Eccles and the Board to double reserve requirements in three steps in 1936-37 beginning in July 1936. Meltzer (pp. 490 – 521) beautifully describes the discussion in the FOMC and with Treasury leading to these actions as motivated by the concerns that commercial bank growing excess reserves would fuel inflation, inevitably leading to deflation and recession. According to him (p. 495) the Fed never gave up the Burgess-Riefler doctrine but now began treating excess reserves as negative member borrowings. The system never explained the reason for the excess reserves but labeled them "as a redundant surplus."

The increase in reserve requirements coincided with the decision by the Treasury in December 1936, also concerned about inflationary pressure, to sterilize the massive gold inflows into the U.S. Both policies were contractionary, leading to the recession of May 1937 to April 1938, the third deepest in the twentieth century. Meltzer follows Friedman and Schwartz in attributing the policy mistake to the failure to recognize the precautionary nature of excess reserves. He documents (p. 530) the system's unwillingness to take stimulative action once the recession was underway because on Burgess-Riefler guidelines, since nominal interest rates were low, money must be easy. In the end, recovery was fueled by Treasury actions in the spring of 1938 desterilizing gold purchases (opposed by Eccles because they could be inflationary) and by stimulative fiscal policy (p. 531). Following this episode, until the outbreak of World War II, the system primarily operated a passive low interest "easy money" policy under the effective control of the Treasury.

In chapter 6 (pp. 534 – 535) Meltzer documents the Treasury's major foray into international policy coordination under the Tripartite Agreement of October 1936 with Britain and France. The agreement designed to create a smooth adjustment to the devaluation of the French franc, required the Treasuries of the three countries to coordinate daily operations in the foreign exchange market. Ultimately the agreement collapsed in 1938 because France followed expansionary fiscal and monetary policies inconsistent with the agreed upon pegs.

More fundamentally (p. 544), Meltzer criticizes Tripartite (and its modern advocates Kindleberger(1986) and Eichengreen (1992)) as based on two fundamental flaws : the failure to distinguish real from nominal exchange rate movements; and that international cooperation is not a viable substitute for adjustment of a floating exchange rate regime. Although Tripartite was a failure in economic terms, Meltzer believes was successful as a political statement in unifying the western democracies against the looming fascist threat.

3.6. The 1940's

From 1941 to 1951, the Federal Reserve was completely subservient to the debt management policies of the Treasury. In the late 1930's the Fed kept interest rates low to facilitate the funding of the Treasury's debt. In April 1942, once World War II was under way, the System adopted an explicit peg for 90 day T-Bills at 0.375% and for the 25-year bond at 2.5%. Meltzer (chapter 7) describes how the Fed became an engine of inflation, initially by lending to commercial banks on the collateral of government securities at a preferred rate below the official peg; and later by directly purchasing Treasury securities. Problems arose because rates were pegged at all maturities, leading commercial banks to sell low-interest T-bills to the Fed and then buy higher yielding long term bonds for their portfolios, with the Fed absorbing most of the short term debt (p. 596).

Chairman Eccles was a strong advocate of the wartime bond pegging policy and was not concerned about the impotence of monetary policy, because as mentioned in section 3.5 above, he believed that monetary policy was limited anyway. He continually pushed for an extension of the Federal Reserves' mandate to control credit and expenditure to aid the war effort. Although the Fed was an engine of inflation, inflation remained relatively low during World War II compared to World War I and the Civil War experiences reflecting the greater use of bond finance and the effectiveness of price controls.

After the war ended, the interest-rate-pegging policy was retained as were many of the ponoply of controls, with the exception of price controls. Officials at the Fed acquiesced to the peg and expansionary policy because of a widespread belief, fostered by Keynesian doctrine and the experience following World War I, that postwar there would be a serious recession. Also, as after World War I, Fed and Treasury officials were concerned over capital losses to bondholders, should rates be allowed to rise. As it turned out, with the exception of a sharp recession right after the war and a milder one in 1948-49, the U.S. economy boomed. Moreover, Meltzer (pp. 629-635) points out that despite the peg, inflation, money growth and market yields remained low throughout the late 1940's. This did not reflect Fed policy, but occurred because the Treasury used its surplus to retire debt. Indeed, he argues (p. 650) that inflation expectations remained quite low throughout this period owing to these factors and continued belief in the gold standard as a nominal anchor under the 1944 Bretton Woods system.

Despite the relatively sanguine environment, some Fed officials, concerned about inflation, pressed for the institutional independence to raise rates. One of the strongest and earliest advocates was Allan Sproul, President of the New York Fed. He was initially opposed by Eccles and later by Eccles' successor Thomas McCabe, on the grounds that it would take a large increase in rates to be effective, which would not "be consistent with the maintenance of stable conditions in the government securities markets" (Eccles is quoted on p. 633). The need for flexibility in monetary policy became apparent in the recession of 1948-49. The Fed was slow to react to it. It reduced reserve requirements (the principal tool of monetary policy in use then (p. 678)) but with little impact. Recovery was largely precipitated by falling prices raising real cash balances (p. 679).

In one of the most fascinating discussions in the book, Meltzer documents in great detail the events that led to the Accord of March 1951 which ended the Treasury's control over the Federal Reserve. The key events in the saga were the Congressional hearings led by Senator Paul Douglas in the fall of 1949 (pp. 688-690). At these hearings: John Snyder, Secretary of the Treasury, made the case for interest rate stability to aid in debt management; Sproul made the case in favor of changing interest rates to influence expectations; McCabe supported the Treasury's view; Eccles changed his earlier views to favor Federal Reserve independence; Burgess of New York made the case that discount rate policy was a sufficiently powerful tool for monetary control. The subsequent report backing up the views of Sproul and Burgess was a victory for the Fed.

From then on the conflict between the Fed and the Treasury over raising rates to deal with the inflationary pressures at the start of the Korean War deepened (pp. 691-712). In January 1951 at a meeting held in the White House between key Fed and Treasury officials, the Treasury argued for bond market stability, while the Fed urged raising rates to stem inflation. After the meeting Snyder gave a speech stating that the Fed fully agreed to continue supporting bond prices. This infuriated McCabe and other Fed officials. The New York Times and the financial press supported the Fed, as did Douglas.

President Truman then invited the members of the FOMC to the White House for a meeting on January 31, 1951 where "he discussed the importance of maintaining confidence in government securities" (p. 763). Subsequently a letter from Truman indicated that the Fed would continue to support long-term rates. The FOMC disagreed. In letters on February 5 to Truman and Snyder the FOMC stated that to the contrary it favored control of rates to stem inflation. Intense negotiation between Fed officials and the Treasury under Assistant Secretary William

McChesney Martin, culminated in another meeting on February 26 at the White House which led to the famous Accord. "The Treasury and the Federal Reserve System have reached full accord with respect to debt management and monetary policy to be pursued in furthering their common purpose to assure the successful financing of the government's requirements and, at the same time, to minimize monetization of the public debt" (quoted on p. 711). According to Meltzer, the Accord gave the Federal Reserve the independence to conduct its own interest rate policy. Soon thereafter the Fed reverted to its Burgess-Reifler roots, focusing on net free reserves and short-term market rates (p. 721).

The Fed took so long to regain its independence, according to Meltzer (p. 715), because Eccles' basic belief in the ineffectiveness of monetary policy. Once he was replaced by McCabe in 1949 (who lacked Eccles leadership abilities), Sproul was able to take charge of events and lead the charge to independence.

A final theme treated in chapter 7 by Meltzer, was the Bretton Woods agreement of July 1944 that led to the creation of the IMF, the World Bank and the adjustable peg international monetary system. The U.S. and British Treasuries negotiated the Articles of Agreement at Bretton Woods.

Meltzer's contribution to the Bretton Woods story (see earlier accounts by Meltzer (1991), Bordo (1993) and James (1996)) is to document the lack of influence that the Board of Governors had in shaping the U.S. plan drafted by Henry Dexter White of the Treasury, and in the deliberations at Bretton Woods. While the Board in Washington was in agreement with the Treasury on the Articles, the New York Fed and especially John Williams were markedly opposed. Williams correctly worried that the U.S. was the only country (other than Costa Rica) under the "scarce currency clause" of the Bretton Woods Articles with a convertible hard currency. Once exchange controls were lifted, the U.S. would have to provide unlimited liquidity to the rest of the world. He also was concerned (presciently so) that Britain, the other reserve currency, was too weak to become convertible, and, once it did, would end up with a crisis and devaluation, as occurred in 1947 and 1949. Instead of the Bretton Woods adjustable peg, Williams advocated a key currency system (based on the gold standard that would operate like the Tripartite agreement of 1936). The key reserve countries, the U.S., Britain and France would adhere to gold pegs and the other countries would eventually peg to them (Bordo 1993). As it turned out, the Bretton Woods system, under which the members would peg their currencies to the dollar and the dollar was pegged to gold at $35.00 per ounce evolved, after current account convertibility was declared by the European countries in 1958, into the gold dollar standard. The gold dollar standard in many ways echoed the Williams plan.

References

Walter Bagehot (1962) [1873], Lombard Street: A Description of the Money Market. Reprint, Homewood, Ill. Richard D. Irwin.

Ben S. Bernanke (1983), "Nonmonetary Effects of the Financial Crisis in the Propagation of the Great Depression." American Economic Review 73 (June), 257-76.

Michael D. Bordo and Ronald MacDonald (2004), "Interest Rate Interaction in the Classical Gold Standard; 1880-1914: Was There Monetary Independence?" Journal of Monetary Economics Vol. 52, pp. 307-377.

Michael D. Bordo, Ehsan Choudhri and Anna Schwartz (2002), "Was Expansionary Monetary policy Feasible During the Great Depression?" Explorations in Economic History. January.

Michael D. Bordo (1993), "The Bretton Woods International Monetary System: A Historical Over view" in Michael D. Bordo and Barry Eichengreen (eds.) A Retrospective on the Bretton Woods System. Chicago, University of Chicago Press.

Karl Brunner and Allan H. Meltzer (1993), Money and the Economy: Issues in Monetary Analysis. Cambridge University Press for the Raffaele Mattioli Foundation.

Karl Brunner and Allan H. Meltzer (1968), "What did we learn from the monetary experiences of the United States in the Great Depression?" Canadian Journal of Economics 1, 334-48.

Charles Calomiris (1993), "Financial Factors in the Great Depression." Journal of Economic Perspectives 7 (spring), 61-85.

Lester Chandler (1958), Benjamin Strong Central Banker. Washington D.C., Brookings Institution.

Sir John Clapham (1944), The Bank of England: A History. Cambridge, Cambridge University Press.

Barry Eichengreen (1992), Golden Fetters: The Gold Standard and the Great Depression, 1919-1939. New York: Oxford University Press.

Frank W. Fetter (1965), The Development of British Monetary Orthodoxy 1717-1875. Cambridge, Harvard University Press.

Irving Fisher (1930), The Theory of Interest. New York, Macmillan. Reprint New York, A.M. Kelley.

Irving Fisher (1896), "Appreciation and Interest." Publications of the American Economic Association 9 (4), 331-447.

Milton Friedman (1956), Studies in the Quantity Theory of Money. Chicago, University of Chicago Press.

Milton Friedman and Anna J. Schwartz (1963), A Monetary History of the United States: 1867-1960. Princeton, Princeton University Press.

James Hamilton (1987), "Monetary Factors in the Great Depression." Journal of Monetary Economics 19, 145-69.

Bray Hammond (1957), Banks and Politics in America. Princeton. Princeton University Press.

Chang-Tao Hsieh and Christina Romer (2001), "Was the Federal Reserve Fettered?" Devaluation Expectations in the 1932 Monetary Expansion." NBER Working Paper No. 8113.

Charles Kindleberger (1986), The World in Depression, 1929-1939. Revised Berkeley, University of California Press.

Jane Knodell (2003), “Profit and Duty in the Second Bank of the United States’ Exchange Operations.” Financial History Review 10, 5-30.

Paul Krugman (1991), “Target Zone and Exchange Rate Dynamics.” Quarterly Journal of Economics CUI (3) pp. 669-682.

Robert Lucas Jr. (1994), “Review of Milton Friedman and Anna J. Schwartz’s, ‘A Monetary History of the United States: 1867-1960’” Journal of Monetary Economics Vol. 34, No. 1 (August) pp. 5-16.

Allan H. Meltzer (2003), A History of the Federal Reserve, Volume I: 1913-1951. Chicago, University of Chicago Press.

Allan Meltzer (1976), “Monetary and Other Explanations of the Start of the Great Depression.” Journal of Monetary Economics 2, 455-72.

Jeffery A. Miron (1994), “Empirical Methodology in Macroeconomics: Explaining the Success of Friedman and Schwartz’s, ‘A Monetary History of the United States: 1867-1960’” Journal of Monetary Economics Vol. 34, No. 1 (August) pp. 17-25.

Fritz Redlich (1951), The Molding of American Banking: Man and Ideas. New York: Hafner Publishers.

Christina Romer and David Romer (1989), “Does Monetary Policy Matter? A new Test in the Spirit of Friedman and Schwartz.” NBER Macroeconomic Annual, 4, 121-170.

Richard S. Sayers (1976), Bank of England Operations 1891-1944. Vol I. Cambridge: Cambridge University Press.

Anna Schwartz (1986), " Real and Pseudo Financial Crises." In Forrest Capie and Geoffrey E. Wood, Financial Crises and the World Banking System, London, Macmillan pp. 11-40.

Lars Svennson (1994), "Why Exchange Rate Bands? Journal of Monetary Economics 33, pp. 157-199.

Peter Temin (1989), Lessons from the Great Depression. Cambridge, MIT Press.

Richard Timberlake (1978), The Origin of Central Banking in the United States. Cambridge, Harvard University Press.

Henry Thornton (1962) [1802], An Inquiry into the Nature and Effects of the Paper Credit of Great Britain. Reprint, New York, Kelley.

Jacob Viner (1965) [1937], Studies in the Theory of International Trade. Chicago, University of Chicago Press. Reprint New York, Kelley.

Richard C. West (1977), Banking Reform and the Federal Reserve, 1863-1923. Ithaca, Cornell University Press.

David C. Wheelock (1991), The Strategy and Consistency of Federal Reserve Monetary Policy 1929-1933. New York, Cambridge University Press.

Elmur Wicker (1965), "Federal Reserve Monetary Policy, 1922-33: A Reinterpretation." Journal of Political Economy 73 (August), 325-43.

Elmur Wicker (1966), Federal Reserve Monetary Policy, 1917-1933. New York, Random House.

Elmer Wood (1939), English Theories of Central Banking Control, 1819-1858. Cambridge, Harvard University Press.