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THE FIFTIETH ANNIVERSARY OF FRIEDMAN AND SCHWARTZ'S A MONETARY HISTORY OF THE UNITED STATES[‡]

Not Just the Great Contraction: Friedman and Schwartz's *A Monetary History of the United States 1867 to 1960*[†]

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Milton Friedman and Anna J. Schwartz—henceforth, FS—published *A Monetary History of the United States 1867 to 1960*—henceforth, *AMH*—in 1963 to widespread critical acclaim. Many leading economists including Sir Roy Harrod, James Tobin, Robert Clower, Karl Brunner, and Allan Meltzer wrote glowing reviews, but of course, all had criticisms. After 25 years it was assessed in a National Bureau of Economic Research (NBER) conference in honor of Anna Schwartz (Bordo 1989) and after 30 years in a symposium of the *Journal of Monetary Economics* (1994). The book has been heavily cited by economists, economic historians, journalists, and policymakers. Indeed, Ben Bernanke, then a Governor of the Fed, told Milton Friedman at his ninetieth birthday party "I would like to say to Milton and Anna: Regarding the Great Depression. You're right. We did it. We're very sorry. But thanks to you, we won't do it again" (Bernanke 2002). He was referring to the indictment in chapter 7 of *AMH* of the Fed for causing the Great Contraction of 1929 to 1933 by not offsetting the effects of four devastating banking panics from 1930 to 1933. The book is clearly one of the most influential volumes in economics in the twentieth century.

AMH was part of the NBER's project on Money and Business Cycles started in the 1950s. This project resulted in two more books: *Monetary Statistics of the United States* (1970) and *Monetary Trends in the United States and United Kingdom* (1982), several articles including "Money and Business Cycles" (1963a) and Philip Cagan's *Determinants and Effects of Changes in the Stock of Money* (1965). This project fit solidly in the NBER tradition which emphasized gathering new data, particularly monthly data. Indeed, one of the project's most enduring products was FS's new estimates, monthly beginning in 1907, of the stock of money. The NBER tradition, reflecting the views of its founder Wesley Clair Mitchell, moreover, stressed that the business cycle was a complex product of numerous factors that had to be investigated one by one by a collective of scholars: FS's assignment was to tease out the effects of money on the business cycle (Rockoff 2010).

The theoretical framework was Friedman's "The Quantity Theory of Money—A Restatement" (1956) which was intended to be a counterfoil to the prevailing Keynesian paradigm. A common view among Keynesian economists was that monetary policy had little influence on the economy. *AMH*, however, changed that presumption. What came to be called the New-Keynesian consensus put considerable weight on monetary policy. The key propositions of the modern quantity theory were that: based on the interaction between a stable long-run demand for money and an independently determined money supply, a change in the rate of growth in the money supply would produce a corresponding but lagged change in

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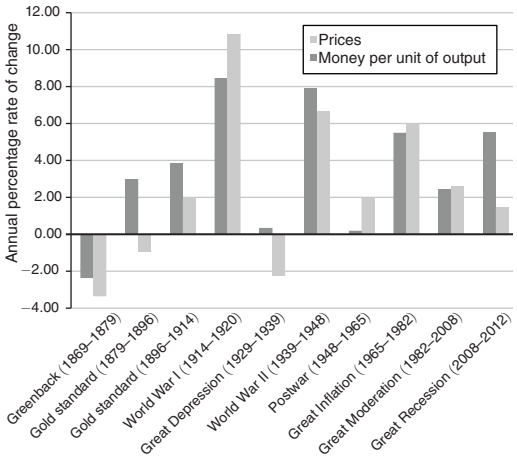

FIGURE 1.

Sources: Money (M2), 1869–1975, FS (1982), Table 4.8, column 1; 1965–1980, Carter et al. (2006), series Cj88; 1981–2012, Federal Reserve Bank of St. Louis, FRED, accessed December 2012. Output: 1869–1965, real national income, FS (1982), Table 4.8, column 3; 1965–2012, real GDP, billions of chained 2005 dollars, FRED, December 2012. Prices: 1869–1965: national income implicit price deflator, 1929 = 100, FS (1982), Table 4.8, column 4; 1965–2012, GDP implicit price deflator, 2005 = 100, FRED, December 2012

the growth of nominal income. In the short run there would be changes in real output as well as prices; but in the long run changes in money would be fully reflected in the price level. *AMH* was designed to provide long-run historical evidence (with the underlying statistics presented in *Monetary Statistics*), *Money and Business Cycles* was to provide short-run cycle evidence, and *Monetary Trends* was to provide long–run econometric evidence.

I. The Narrative Approach

Milton Friedman outlined the methodology that he and Anna Schwartz would employ in *AMH*—what has come to be called "the narrative approach"—in his classic paper "The Methodology of Positive Economics" (1953). To illustrate the importance of natural experiments Friedman (1953, p. 11) turned to monetary history: "Occasionally, experience casts up evidence that is about as direct, dramatic, and convincing as any that could be provided by controlled experiments. Perhaps the most obviously important example is the evidence from inflations…"

An overview of some of the evidence examined in *AMH* can be had from Figure 1, which compares the rate of change of money per unit of output with the rate of change of prices in 11 monetary regimes from the end of the Civil War to 2012.

During the greenback era the United States was on a floating exchange rate. The growth of high-powered money was determined internally, and the rate was low because the government followed a policy of letting the economy "grow up to the currency." The resulting deflation allowed the United States to rejoin the gold standard at the prewar parity. Once the United States returned to gold the stock of high-powered money was determined by net international transactions and domestic mining. From 1879 until 1896 the money supply grew relatively slowly producing a mild deflation. Then the supply of gold increased due to discoveries in a number of countries, most importantly South Africa, and the development of the cyanide process for extracting gold from ore: exogenous shocks that the narrative approach identified. The acceleration in the growth of money was not dramatic, but was sufficient to turn a secular decline in prices into a secular advance.

With the founding of the Fed in 1913, the monetary system changed again. Now, the amount of high-powered money was effectively controlled by the Fed. During World War I, the Fed was subservient to the Treasury, buying debt in order to keep nominal interest rates low and stable. The same was true in World War II, and the two wars together became further grist for the mill (*AMH* 1963b). In the last period examined in *AMH*, which we have designated Postwar in Figure 1, the United States returned to a regime of slow growth in money per unit of output and inflation.

We have added three regimes that were not covered in *AMH*: the Great Inflation (1965–1982), the Great Moderation (1982–2008), and the Great Recession (2008–2012). The Great Inflation was the product of a number of factors; an important part of the story was a change in policy objectives at the Fed that made achieving and maintaining low unemployment the top priority. This policy was reversed under Paul Volcker. Slower monetary growth per unit of output appears to have contributed to the slowing of inflation from about 6 percent per year

from 1965 to 1982 to about 2.5 percent per year from 1982 to 2008. The main reason for the change in policy was that the public was frightened by inflation and demanded action to stop it. But some of the credit must go to the monetarists and to *AMH*.

Figure 1 includes the Great Recession to contrast it with the Great Depression. One can see immediately that money per unit of output grew at a very low rate during the Great Depression and that prices declined. During the Great Recession money per unit of output has grown far more rapidly, and inflation has continued. Most likely the greater increase in the stock of money relative to output helps account for the relative mildness of the Great Recession. Again the improvement in policy rests in part on the lessons taught by *AMH*.

AMH discusses many natural experiments that occurred over shorter intervals than a "monetary regime." The sharp increases in the Fed's discount rate in 1920, when the Fed tried to end inflation; in 1928, when the Fed tried to discourage stock market speculation; and in 1931, when the Fed acted to protect its gold reserves while ignoring a banking panic—in each case undermining the economy—are important examples. Another example that has garnered considerable attention recently was the Fed's decision to double required reserves in 1936–37 in order to lock up potentially inflationary excess reserves (*AMH* 1963b). *AMH* (1963b, p. 544) concluded that the decline in the stock of money that resulted—and the "equally important" Treasury gold-sterilization program—"significantly intensified the severity of the decline [in economic activity] and also probably caused it to occur earlier than otherwise."

AMH is usually remembered today because of chapter 7, "The Great Contraction," in which the authors show how the Fed, although designed to prevent a repeat of the panics of the National Banking era, failed to prevent four major banking panics from producing a monetary collapse. This led to the worst recession in US history. Some readers of chapter 7 have been frustrated by what seemed to them to be an attempt by FS to assume the relationship between monetary events and the Depression rather than to prove it. But a causal relationship between money and income cannot be established in one chapter about one period in monetary history. The proof that money matters comes from the weight of all the evidence. That evidence includes some natural experiments that fell within the period 1929–1939, but many more that fell outside it. *AMH*, we should add, did not espouse a monocausal explanation of the business cycle. In the course of their narrative FS drew attention to many nonmonetary factors that they believed had influenced the business cycle. Examples include the stock market crash of 1929 and the effects of the increased regulation of business and anti-business rhetoric from the Roosevelt administration in weakening investment and, hence, the recovery in the 1930s.

The key finding of *AMH*, to sum up, is that the money-income relationship is invariant to changing monetary arrangements and banking structures. Although FS identify an influence from income to money over the business cycle, they argue that the main influence both cyclically and secularly runs from money to nominal income. Of special importance is the evidence they give on monetary disturbances: sharp declines in output were precipitated by sharp reductions in money supply, while episodes of sustained inflation were invariably produced by the growth of money in excess of the growth of real income. Thus, the Great Contraction of 1929–1933 was a consequence of an unprecedented collapse in the stock of money that the Fed could have prevented, while the inflations during the World Wars were products of wartime issues of fiat money.

The narrative approach of *AMH* was employed by later macroeconomists to solve the identification problem in macroeconomic models. In his remarks on Milton Friedman's ninetieth birthday Ben Bernanke (2002) explained how FS use natural experiments to solve the identification problem in monetary economics, and how after reading *AMH* as a graduate student at Massachusetts Institute of Technology he became hooked on monetary history. Romer and Romer (1989), however, are critical of FS for not clearly demarcating their identification strategy and for picking dates which may have been tainted by endogenous feedback from the real economy. They extend the FS strategy to the post–World War II era using Federal Open Market Committee minutes to identify episodes of deliberate Fed tightening to offset inflation. Miron (1994) and Lucas (1994) both praise FS for using the narrative approach to breathe new life into macroeconomics.

II. The Continuing Influence of *AMH* on the Monetary Policy Debate

AMH has inspired generations of macroeconomists and economic historians. Its discussions of the determinants of the exchange rate under the greenback standard, the possible effects of switching to a bimetallic regime in the 1890s, the effects of the issue of the Aldrich-Vreeland emergency currency in 1914, the decision not to bail out the Bank of United States when it failed in 1930, the experiences of countries that departed sooner from the gold standard during the 1930s compared with countries that adhered longer, and the impact of New Deal financial reforms on the stability of the banking system, to name only a few, have spawned substantial literatures.

AMH, moreover, continues to play an important role in recent debates over monetary policy issues. Examples include: (i) **The Great Depression versus the Great Recession**. Many argued that the virulent nature of the collapse in real economic activity and its global reach had considerable resonance with the Great Contraction (e.g., Eichengreen and O'Rourke 2009), and the global liquidity panic of 2008 evoked memories of 1931 (e.g., Bordo and James 2010). Yet the Great Recession did not become a Great Contraction because the Fed and other central banks learned the lessons of *AMH* and flooded financial markets with liquidity (Bordo and Landon-Lane 2010). (ii) **Banking Panics versus Bank Insolvency**. A number of scholars have argued that the events of 1930–1933 identified by FS as liquidity driven panics were really mass insolvencies induced by the collapse of real economic activity (Temin 1976, Calomiris and Mason 2003), while others reconfirm the *AMH* story (Richardson and Troost 2009, Bordo and Landon-Lane 2010). (iii) **Good versus Bad Deflation**. The Fed's pursuit of expansionary monetary policy in 2002–2005, which some view as contributing to the recent housing boom and bust (Taylor 2007), was justified by a fear of 1930s type debt deflation. Recent research based on *AMH* suggests that a more appropriate analogy than the 1930s of bad deflation reflecting a collapse of aggregate demand would be the good deflation of 1879 to 1896 driven by rapid productivity growth (Bordo and Filardo 2005). (iv) **The Zero Lower Bound**. By 2008 the zero lower bound constraint on the use of conventional monetary policy was reached. The Bernanke Fed, taking a page from *AMH*'s discussion of the expansionary gold and silver purchase programs of the US Treasury in 1933–1934, where FS argued that the Fed itself should have conducted expansionary open market purchases, engaged in massive open market purchases of long-term government bonds and mortgage backed securities in December 2009. (v) **Fiscal Dominance**. In the recent financial crisis the Fed engaged in discount window policies referred to by Goodfriend (2012) as credit policies. It also worked closely with the Treasury in the bailouts of both financial and nonfinancial firms. These are examples of fiscal rather than monetary policy. FS in *AMH* chapters 9 and 10 analyze the experience of the 1930s and 1940s when the Fed followed a low interest rate policy at the Treasury's behest and became "an engine of inflation" until its independence was restored by the 1951 Fed-Treasury Accord. There is concern that this scenario may be repeated.

III. Conclusion

AMH is a classic whose reputation has grown with time. It was written as part of a research program which involved several other major books and journal articles, but these have been forgotten. Why has *AMH* endured? We think the answer is that *AMH* is based on a narrative and not an explicit model. It was designed to provide evidence for the modern quantity theory of money. The principle lessons of the modern quantity theory of the long-run neutrality of money, the transitory effects of monetary policy on real activity, and the importance of stable money and of monetary rules have all been absorbed in modern macro models. Indeed, the narrative methodology pioneered by FS and the beautifully written story still capture the imaginations of new generations of economists. Its lessons, especially in chapter 7, have also influenced modern central bankers. As Lucas (1994, p. 8) said, "If I ever go to Washington for some other reason than viewing cherry blossoms, I will pack my copy of *AMH* and leave the rest of my library—well most of it—at home." In the recent crisis it seems that many of our policymakers followed his advice, but not fully.

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