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The 50 Year History of the SOMC and the Evolution of Monetary Policy[*]

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The Shadow Open Market Policy (SOMC), a small committee of academic and business economists was formed in 1973 in the United States by the leading monetarist economists: Karl Brunner, Allan Meltzer and Anna J Schwartz to promote the argument that inflation was a monetary phenomenon. It fashioned itself as an "outside watchdog" of the Federal Reserve's monetary policy setting. In the 1970s it successfully promoted the importance of sound money and influenced the debate in the U.S. Congress and the Federal Reserve about how to reduce inflation. Since the 1970s the SOMC's policy recommendations have evolved from its strict monetarist foundations, formed by its core beliefs in sound monetary policy guided by systematic rules whose primary objective is stable and low inflation as the best foundation for healthy economic performance, transparency and accountability, and systematic and rational approaches to financial regulations. The SOMC presciently warned the Fed before two recent major policy errors: the GFC and the post pandemic inflation but its advice was unheeded. This paper surveys the contributions of the SOMC over the past 50 years to the analysis of Fed monetary policy within the context of the evolution of theories of monetary policy and the changing historical background.

Keywords: monetary policy, open market committee
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The 50-Year History of the SOMC and the Evolution of Monetary Policy

Michael D. Bordo and Mickey D. Levy[1]

I. Introduction and summary

The Shadow Open Market Committee (SOMC), a small committee of academic and business economists, was established in the early 1970s by leading monetarist economists Allan Meltzer, Karl Brunner and Anna Schwartz to promote the argument that inflation was a monetary phenomenon. They emphasized that reducing the rate of growth of the money stock was necessary to lower inflation. This monetarist argument was initiated and championed by Milton Friedman, who had battled since the 1950s with the mainstream Keynesian economists who posited that monetary policy was far less effective than fiscal policy.

The SOMC fashioned itself as an "outside watchdog" of the Federal Reserve's monetary policy setting conducted by its Federal Open Market Committee (FOMC).[2] In the 1970s, it successfully promoted the importance of money and influenced the debate in Congress and at the Fed about how to reduce inflation. Along with other monetarists, the SOMC likely influenced Fed Chairman Paul Volcker to shift gears in 1979 toward its successful disinflation based on reducing growth of a monetary aggregate—non borrowed reserves--and allowing short-term interest rates to fluctuate widely.

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[2] Meltzer fashioned the SOMC after the British "shadow cabinet".

Overtime, two themes have influenced the Fed's monetary policy and the debate about how to conduct it: the evolution of the Fed's interpretation of its dual mandate and the evolution of what "rules" mean in the ongoing debate about the benefits of rules versus discretion. The SOMC s history, which has had distinct phases, reflects these evolving themes.

During the Great Moderation of the 1980s and 1990s, the SOMC continued with its strictly monetarist monetary policy recommendations of targeting money growth without factoring in fluctuations in money demand. It became outdated and fell out of favor as the Fed and the economics profession shifted back toward the targeting of interest rates. The SOMC provided sound advice on other policies. It properly cautioned the Fed against using monetary policy to stabilize the US dollar while advocating flexible exchange rates and frre international trade . It promoted sound fiscal policy and argued in favor of rules that would constrain government spending and deficits.

Founding member Allan Meltzer retired from the SOMC in the late 1990s, and SOMC members Charles Plosser and Anna Schwartz became co-chairs. Former SOMC members Jerry Jordan and Bill Poole had become influential Fed members, while former Fed member Lee Hoskins joined the SOMC, and continued his promotion of price stability, transparency and accountability.

The SOMC provided wise counsel during the early 2000s, but its following had diminished, and the Fed did not listen to it. Ben McCallum joined the SOMC in 2000 and incorporated the theoretical advances in monetary economics of the 1980s-90s into the Committee's research and underlined its promotion of inflation targeting and rules-based monetary policy. The SOMC's Policy Statements evolved toward interest rate recommendations while keeping an eye on the monetary aggregates. In 2002, the SOMC argued strenuously that the U.S. would not fall into a Japanese-style deflation as the Fed feared, and urged it to maintain a symmetrical assessment of inflation and raise

interest rates. It also warned of the risks to financial stability posed by the housing agencies Fannie Mae and Freddie Mac.
The modern SOMC began to form prior to the Great Financial Crisis by attracting new members with strong academic backgrounds and a broad diversity of monetary and financial research interests. New members included Marvin Goodfriend, Michael Bordo and Charles Calomiris. Subsequently, the SOMC expanded to include Peter Ireland and Athanasios Orphanides, Plosser (who rejoined after his tenure at the Fed), along with Andrew Levin and Deborah Lucas. The SOMC's newest members are former FOMC members Jeff Lacker and Jim Bullard. The current dominant profile of SOMC members is academic with significant Fed experience.

The SOMC research policy recommendations have evolved and broadened from its strict monetarist foundations, formed by the following core beliefs: sound monetary policy that is guided by systematic rules whose primary objective is stable and low inflation as the best foundation for healthy economic performance; transparency and accountability; and systematic and economically rational approaches to financial regulations.

Looking back on the past half century, the Fed has made three major costly monetary policy errors: the high inflation of the 1970s;its extended low interest rates of the early 2000s that facilitated the debt-financed housing bubble that evolved into severe financial stresses;and the high inflation of the 2020s. Prior to and during each episode, the SOMC provided warnings and sound policy advice. The SOMC's early 2020-2021 warnings about the inflationary impact of unprecedented deficit spending and money growth were prescient. Unfortunately, the Fed did not heed the SOMC's warnings and recommendations on the last two events.

The SOMC continues to thrive and contribute important research and insights on the Fed's monetary policy, its internal governance, financial regulatory policies, and other

economic policies that support sound economic and financial market performance. In an era in when the Fed is most comfortable listening to friendly voices, the SOMC's role as an outside watchdog is critical.

Section II of this paper discusses the origins of the SOMC and the 1970s. Section III covers the SOMC during the Great Moderation of the 1980s-1990s. Section IV describes the SOMC's contributions in the early-2000s. Section V discusses the modern era SOMC and its diverse research and policy recommendation contributions. Section VI provides concluding remarks. The appendicies provide lists of all SOMC members over its history and guest speakers at SOMC meetings and archives of SOMC papers.

I. The First Phase of the SOMC: Origins and the 1970s

The SOMC was a direct extension of the monetarist campaign in the Keynes-Monetarist debate of the 1950s to 1970s. Leading monetarist Milton Friedman (1956) was joined by Homer Jones at the St.Louis Fed, Karl Brunner, Allan Meltzer and Anna Schwartz, and economists and policy makers in Europe and elsewhere. The monetarist approach to macroeconomics derived from the Chicago tradition going back to the 1920s and before (Tavlas 2023). Its critique of the Keynesian approach, which emphasized the impotence of monetary policy to stabilize aggregate demand and the economy, dominated the macroeconomic and monetary policy debate in the post WWII era.

Friedman and his principal coauthor Anna Schwartz (and several other prominent coauthors and students) forcefully argued that "money matters", and changes in the quantity of money interacting with a stable money demand function were the key drivers of nominal income, with its effects first impacting real activity and then the price level (Nelson 2020). This contrasted with the Keynesian view which emphasized the importance of other sources of aggregate demand, particularly fiscal policies--spending and taxes. A key tenet of Friedman's view was that "inflation is everywhere and always a monetary phenomenon."

In the 1960s, Keynesian and Monetarist models and their policy applications developed further and their contrasts were clarified. Keynesian thinking evolved based on the Samuelson-Solow interpretation of the Phillips Curve that provided policymakers a menu of options in the tradeoff between inflation and unemployment (Samuelson and Solow 1960). Several commonly accepted beliefs were that activist policies could achieve a measureable improvement in outcomes based on the tradeoff, and the costs of achieving low inflation were outweighed by the benefits of high employment. Another common belief was that inflation was largely caused by a wide array of non monetary factors, especially the monopoly power of strong labor unions and large firms as well as commodity price shocks.

Monetarists Karl Brunner and Allan Meltzer worked tirelessly to promote monetarism. Brunner, who popularized the term "monetarism" in a lecture published in the Federal Reserve Bank of St Louis Review in 1968 and later in 1970 in Review of World Economics (Weltwirtschaftliches Archiv; Brunner 1968 and 1970), posited six principles of monetarism (also see Laidler 1991).

1. The real economy is essentially stable, relative prices are determined by the operation of free market forces. This view was in sharp contrast to the dominant Keynesian view in the post war that the basic instability of the real economy had to be offset by activist fiscal policy.
2. The key source of shocks to the economy were monetary, induced by central bank errors, in turn based on flawed economic doctrine.
3. Monetary shocks, i.e. changes in the money stock, impacted the real economy in the short run and the price level in the long run. The adjustment mechanism between the short and long runs was determined by the costs of obtaining information.
4. Changes in the money stock largely reflected changes in the monetary base as a consequence of monetary policy actions. The changes in the monetary base interacted with a stable money multiplier, which reflected the portfolio choices of

the banking system and the non-bank private sector.

5. The transmission mechanism of monetary policy worked through a portfolio balance mechanism involving changes in the relative prices of financial and non-financial assets which ultimately affected the real price of capital and impacted investment and income.

6. Monetary policy clearly dominated fiscal policy as a tool for economic stabilization.

In Brunner's principles of monetarism, a targeted money growth rate was the policy rule, to be followed and discretionary policies did not play a part.

Brunner and Meltzer prepared a lengthy four-part pamphlet on the conduct of monetary policy for the Congressional House Committee on Banking and Currency. They clearly laid out a monetarist framework for economic policy, discussed past mistakes and promoted the importance of money (Brunner and Meltzer 1964; see Bordo 2022). A conference organized by Karl Brunner sponsored by UCLA's Institute for Government and Policy developed and refined many aspects of monetarism (Brunner 1969).

The Federal Reserve Bank of St Louis Review published a debate on the efficacy of monetarist and Keynesian approaches to macroeconomic stability (Anderson 1971 and Hetzel 2013). Friedman's 1968 AEA Presidential Address "The Role of Monetary Policy" introduced "unanticipated" versus "anticipated" inflation and argued for the long-run neutrality of money—that the Fed's monetary policy may have a transitory impact on real variables but in the long run only affected inflation (Friedman 1968). This notion greatly narrowed room for effective countercyclical policies.

Perfect timing, right model. The Great Inflation and the disarray of economic policymaking of the 1970s provided the ideal context for the establishment of the SOMC. Inflation ratcheted up beginning in the mid-1960s, driven by expansive government spending and monetary accommodation through an "even keel" policy

when Fed Chair William McChestney Martin was pressured by President Lyndon Baines Johnson not to lift rates (Meltzer 2005). Inflation rose from 1.5% in 1965 to 6% in 1969, dipped to 3.5% and then reaccelerated in 1971. Higher inflationary expectations pushed up bond yields.

Arthur Burns became Fed Chairman in February 1970. An empirical economist and pioneer with Wesley Claire Mitchell in developing the NBER's business cycle tradition, Burns believed that inflation was driven by an eclectic array of primarily non-monetary sources. He did not believe in the effectiveness of monetary policy and favored incomes polices. Burns worked closely with President Nixon to impose wage and price controls in August 1971, and then led the Fed to increase money growth in 1972 to help in Nixon's re-election campaign. In 1973, the resulting acceleration in aggregate demand pushed up inflation despite the difficult-to-administer wage and price controls.

The SOMC held its first meeting in September 1973. It was organized by Meltzer, along with Brunner and Schwartz. The committee also included business economists who were well connected in financial and media circles and frequently testified before Congress on economic and policy issues. The SOMC's simple monetarist proposal to gradually slow money growth to reduce inflation provided a striking alternative to mainstream economics and the wage and price controls that were a policy failure on every dimension.

Several components contributed to its 1970s success. Its simple money growth target proposals were easy to understand and could be tracked and monitored. The Committee's communications were well organized and its policy recommendations attracted attention. Meltzer had obtained ample financing from non-profit foundations to finance its operations.

The earliest SOMC meetings featured discussions that centered on a Policy Statement written by Meltzer along with Anna Schwartz, an assessment of current inflation and economic conditions and written contributions by SOMC members. Papers by SOMC members addressed different aspects of Fed policy and made recommendations on an array of economic, fiscal and financial issues. An archive of SOMC Policy Statements and papers by members beginning with the first meeting in September 1973 is in Appendix I.

Many of the papers set out the basis for targeting money growth and identified past consequences of money growth deviations. They highlighted the mistakes of discretionary ("fine-tuning") policies and wage and price controls (for example, see Brunner 1974). Beryl Sprinkel put forth a proposal for a Federal Reserve annual plan including money growth targets (Sprinkel 1975). Thomas Mayer argued that the Fed should lobby against pending Congressional legislation that would impose credit allocations on commerical banks (Mayer 1975). Wilson Schmidt provided an international overview and comments on foreign exchange intervention (Schmidt 1975). Jerry Jordan joined the SOMC in 1976 and provided a series of reports on monetary policy and the economic and inflation outlooks, displaying the growth rates of the monetary base and the broader monetary aggregates (Jordan 1978). Bob Rasche provided ongoing analysis of the money multipliers, relating the broad monetary aggregates to the monetary base, and money velocity, relating nominal GDP to money (Rasche 1979). Eric Heinemann kept tabs on Federal Reserve policies and current economic conditions (Heinemann 1977). Meltzer assessed the sources of bank failures and policy remedies (Meltzer 1974). The SOMC Policy Statements and members' position papers critiqued government fiscal policies, tracking spending, taxes and deficits, and urged fiscal austerity. Rudy Penner joined the SOMC in 1977 and analyzed fiscal policies.

These early meetings established the format of the SOMC's semi-annual meetings. The SOMC's policy statement and papers by members were presented and debated at Sunday afternoon meetings attended by a dozen or so outside economists. The Policy

Statement and Press Release were reviewed over dinner. At a press conference held on Monday, SOMC members would provide brief comments on their position papers and release the SOMC's Policy Statement and press release. By Tuesday morning, the SOMC's comments appeared in hundreds of news outlets. Hard copies of the Policy Statements and SOMC member reports were mailed to a distribution list. This format was followed through the early 2000s.

SOMC communications. The SOMC's marketing campaign was directed at the media, Congress and the Fed and other global central banks. Friendly media, particularly Lindley Clark of the Wall Street Journal, promoted the SOMC's ideas. John Berry of the Washington Post reported on every SOMC meeting, as did the Associated Press, with its wide correspondent network. Foreign corresponsents also covered the SOMC and publicized its ideas and proposals. This helped export the SOMC's platform and proposals to global central banks and policymakers.

SOMC members Allan Meltzer, Jim Meigs, Beryl Sprinkel and Jerry Jordan highlighted the benefits of the SOMC's money target proposals when they testified before Congress, and spoke with the media. Key Congressional staff who advocated monetarism, particularly Bob Weintraub of the House Committee on Finance and Currency, incorporated the SOMC ideas and proposals into Congressional documents and legislation.

During the decade, there were major theoretical advances in economics, including rational expectations and the Lucas critique that called into question the efficacy of countercyclical policies and fine tuning and the tradeoff between inflation and uneployment in the Phillips Curve. The SOMC's proposals and Committee philosophies were largely consistent with these theoretical advances, although it operated on a less technical level, relying on strict monetarist principles that assumed a simplistic model with stable demand for money. It promoted principles of sound central banking that

was based on a simple money-based rule that was transparent and eschewed discretionary fine-tuning. This policy would build credibility. Complementing this money-based rule, the SOMC favored floating exchange rates—and arguing against interventions that attempted to manage currencies—and also advocated free trade and fiscal austerity.

The SOMC's successful influences. From its modest but ambitious origins the SOMC garnered much attention for stressing the important role of expansionary money in determining inflation. Basically, the SOMC offered a solution that filled an important gap in the policy space at a time when the persistence of inflation was the biggest economic and social issue. Fed Chairman Burns, was unswayed by the SOMC's monetarist prescriptions and Milton Friedman's ever expanding presence, and the Fed came under heightened criticism through the decade (Nelson 2023). As inflation ratcheted up, the SOMC's efforts with the media gained significant coverage.

Elsewhere, weekly money supply data, first initiated by the St.Louis Fed, reported by the Fed became a key focal point for financial markets and the economic media. Announcements of short-term shifts in the money supply moved financial markets. However misinterpreted, the media and financial coverage brought constant public attention to money. In financial markets struggling with high interest rates and weak stock market performance, attention was drawn to money, high inflation and the Fed's ineffectiveness.

The SOMC also made important inroads with Congress. Congressional hearings of the finance and banking committees focused on money growth alongside other important issues. Thanks to well-placed advocates, excerpts of the 1964 Brunner-Meltzer pamphlets on monetarism appeared in select Congressional documents. In February 1975, House Concurrent Resolution 124 directed the Fed to "increase the money supply…and maintain growth of the money supply commensurate with production, in order to maximize employment and stabilize prices, and require the Federal Reserve to consult

with Congress at semiannual hearings before the Committees on Banking concerning its money supply growth targets and other monetary policy actions required in the upcoming six months." (U.S. Congress 1975).

The requirement for the Fed to report to Congress semiannually and to provide money growth targets was incorporated into the Federal Reserve Act of 1977 and the Full Employment and Balanced Growth Act of 1978, which established the Fed's dual mandate of low inflation and maximum employment. The Fed complied with the Congressional resolution and provided money growth ranges to Congress. However, it did not change its operating procedures to reduce money growth within submitted ranges. In Congressional testimony, Burns testified to Congress that the dual mandate established by the Humphrey-Hawkins legislation would constrain the independence of the Fed. Following enactment in the late 1970s, the Fed's new dual mandate was not a key focal point for its policy actions—it was overwhelmed by rising inflation, unemployment and the US dollar crisis—and Burns and his successors G. William Miller and Paul Volcker rarely mentioned it.

Burns and the Fed were an easy target for the SOMC. The wage and price controls he had promoted had been a disaster and inflation rose above 8% even before the first oil shock in October 1973 and surged to 12% when they were lifted. The 1973-1975 recession was deep and resulted in high unemployment. The stock market was reeling from high inflation and interest rates. Inflation receded to 5% by year-end 1976 and provided a respite, but beginning in 1977, the Fed's ongoing accommodative monetary policy resulted in higher inflation and inflationary expectations.

Monetary policy was in disarray when Burns was replaced by G. William Miller as Fed Chair in early 1978. The Fed faced a severe US Dollar crisis in 1978 and the second oil shock in 1979. Meltzer blamed the falling US dollar on the Fed's inflationary monetary policies, the disarray of the Carter Administration's economic policies and the deterioration in credibility as the crisis unfolded in Spring 1978: "The financial markets see that there is no policy. The stock market, the bond market and the foreign exchange

market shout their disbelief...They sense that the lack of policy, the drift to controls, and the reliance on stop gaps will continue" (Meltzer 1978). This constrasted sharply with the Carter Administration, which blamed the weaker US dollar on higher oil prices.

Inflation was an international phenomenon, and the SOMC made specific recommendations to other central banks to target money growth. However, these recommendations carried little weight, as central bank monetary policies in Austria and Germany and elsewhere were already dominated by stability cultures that resulted from their historical painful bouts of hyper-inflation. In the United Kingdom, a small group of monetarists led by Alan Walters, David Laidler and Michael Parkin and others urged SOMC-type prescriptions, but their impacts were limited.[3] However the SOMC's principles may have influenced in subsequent years some small open economies as well as some emerging market economies to prioritize low inflation and pursue rule-like monetary policy.

SOMC influences on the Volcker-led Fed. Paul Volcker, President of the Federal Reserve Bank of New York and FOMC Vice Chair, in the 1970s was very concerned about the high inflation and a falling US dollar and the disarray of failing policies, which he worried had resulted in a loss of credibility. As such, he was an inflation hawk and frequently dissented on the FOMC's monetary decisions. While Volcker agreed that in the long run, inflation was a monetary phenomenon and that money growth needed to be slowed, he argued that the volatility of money velocity made money targeting an unreliable policy approach for conducting monetary policy and forecasting near-term inflation and economic activity. However, in public speeches Volcker was relatively sympathetic to the role of money. He made clear that his primary concern was breaking inflationary expectations and regaining credibility (Volcker 1976 and 1977).

3 Karl Brunner established the Konstanz economics conference in 1970 to provide an alternative to Keynesian thinking. It had a tight-knit European monetarist following that later had a significant impact on European central banking and especially the founding principles of the ECB.

President Carter nominated Volcker to become Fed Chair to replace G. William Miller in mid-1979, and in his confirmation hearings, Volcker made clear that the Fed would need to aggressively tighten monetary policy. This differed from the SOMC's prescription of a gradual slowdown in money growth. Brunner, in Congressional testimony on the Full Employment Act of 1978, fully recognized the importance of the Fed reducing inflationary expectations and regaining credibility, but argued that the Fed's erratic and unreliable path of monetary policy had created a "murky fog", such that abrupt, aggressive tightening with a sharp slowdown in the monetary base would not be credible and would very likely result in recession (Brunner 1979). As a result, Brunner favored a gradual approach to lowering inflation.

The broader debate among economists and policymakers centered on the economic costs of reducing inflation. This involved assessments of what it would take to break inflationary expectations and the shape of the short-run Phillips Curve. Volcker rejected the gradualist approach as not being up to the task presented by the dire circumstances, and believed that aggressive monetary tightening would be required to restore credibility and reduce inflationary expectations.

In October 1979, the Fed dramatically shifted its operating procedures from its long-standing targeting of interest rates to targeting nonborrowed reserves, acknowledging that the new procedure would involve high and volatile short-term interest rates. One interpretation is that this was a major step by the Fed toward acknowledging the importance of controlling money growth as critical to reducing inflation. But it was not the "monetarism" of Friedman, Brunner and Meltzer that involved targeting the monetary base or a broader monetary aggregate. Rather, the Fed's policy targeted nonborrowed bank reserves, not the monetary base or a broader monetary aggregate, and it did so temporarily to address the emergency situation, not permanently. At the time, Milton Friedman and Brunner and Meltzer were quite critical of the Volcker strategy (Lindsey, Orphanides and Rasche 2005 and Nelson 2023). It remains uncertain whether Volcker went part way toward controlling money growth on an emergency

basis, or whether he was using money targeting as a foil for his aggressive rate increases.

President Carter initially supported Volcker. However, when the Fed raised rates to 17.6% in Spring of 1980, the Carter Administration becme very concerned about credit markets, believing banks were too lax in supplying credit and consumer demand for credit was too strong. Carter's hurriedly announced credit controls that would be imposed by the Fed, despite the Fed's objections. This policy backfired and combined with the soaring interest rates led to a temporary but severe credit crunch and a one-quarter very sharp economic recession. In response, the Volcker-led Fed reversed course on interest rates, immediately lowering them to 9%. When the economy quickly rebounded, the Fed raised rates dramatically to 19% by year-end 1980.

President Reagan supported Paul Volcker's aggressive disinflationary monetary policy, acknowledging it as necessary medicine to reduce inflation, even though it resulted in recession. The Fed began easing interest rates in summer 1982 based on evidence that inflation had slowed markedly and banking stresses mounted. The recession continued until 1982Q4 and the unemployment rate peaked at 10.8%. While iInflation receded, inflationary expectations and bond yields took much longer to recede, frustrating Volcker. In subsequent years the economy recovered robustly from the back-to-back recessions of 1980-1982, the US dollar continued to recover and financial markets improved. While Volcker's disinflationary policies imposed high short-run costs, the rise in the unemployment rate was less than had been predicted by standard Phillips Curve models that had not appropriately incorporated adjustments of inflationary expectations (Hornstein 2008). Meltzer's and Brunner's early criticism of Volcker's aggressive monetary tightening strategy gradually eased over the 1980s, and they came around to admire Volcker's efforts.

In summary, in the 1970s the SOMC was an important component of a network of monetarist economists that actively advocated for monetary control to reduce inflation. Whether Volcker really believed in the monetarist medicine or used it as a communications camoflage to raise rates dramatically is uncertain. But the SOMC had accomplished most of what it had set out to do, and received substantial credit.

Subsequently, Bill Poole, Bob Rasche and David Wheelock at an NBER conference provided a favorable view of the SOMC's monetary policy recommendations. They used simulations of a new Keynesian economic model to show that the gradual stabilization of money growth favored by the SOMC would have outperformed the policies actually implemented by the Fed during the Great Inflation era (Poole, Rashe and Wheelock 2013). Their discussant, Christina Romer, was critical of the SOMC and the Poole-Rasche-Wheelock study (Romer 2013). She noted that money velocity was volatile and showed that over the extended period 1973-1999, the SOMC's proposed money growth targets would have resulted in more erratic economic output and would not have been effective in reducing inflation. Her assessment of the SOMC was more charitable in the 1970s but quite critical in the 1980s-1990s.

III. The Second Phase of the SOMC's history: The Great Moderation

The dramatic Volcker disinflation ushered in the Great Moderation, the period of the 1980s and 1990s characterized by generally moderate inflation and healthy economic growth. The crisis environment of the high-inflation 1970s dissipated and confidence returned. The focus of monetary and economic policies were to maintain the lower inflation that Volcker had achieved and reverse the damages of the 1970s. Tax cuts and indexing taxes to inflation were the centerpiece of tax reform. The Fed committed policy to low inflation and credibility for low inflation . The Volcker Fed and more so the Fed under his successor, Alan Greenspan, began to emphasize the importance of preemptive monetary tightening when higher inflation was anticipated. The Fed also began conducting research on the benefits of targeting low inflation.

During the lengthy span of Volcker's (1979-1986) and Greenspan's (1986-2005) Chairmanships of the Fed, both successfully focused monetary policy on keeping inflation and the unemployment rate moderately low, but neither made the dual mandate the Fed's focal point or referred much to it. Both believed that stable low inflation and inflation expectations was the optimal foundation for achieving sustained healthy growth, and that the Fed's best contribution to achieving the dual mandate was maintaining low inflation. Preemptive tightening was a critical element of their strategy and essential to maintaining credibility. The Fed's aggressive preemptive tightening in 1994 that lowered inflationary expectations and orchestrated an economic soft-landing highlighted the Fed's interpretation of how to best achieve its dual mandate during the Great Moderation.

This period was one of transition for the SOMC. Under Meltzer's direction, the SOMC continued its rigid monetarist legacy based on Friedman's notion of a stable money demand function. After the economy recovered from back-to-back recessions, the SOMC projected that the high inflation of the 1970s would be repeated if the Fed did not slow money growth. The SOMC's short-run forecasts proved incorrect, as inflation remained moderate and inflationary expectations continued to recede (Romer 2013).

As inflation stayed moderate and economic performance remained healthy, the SOMC fell out of favor at the Fed and in the economics community and the media.[4] The SOMC continued to have close followers, and its research on an array of monetary and economic issues provided important insights, but its audience slowly diminished.

Money demand and velocity. During the Great Inflation of 1965-1982, the velocity of money had fluctuated, reflecting changes in the demand for money that were largely inversely related to inflation and bond yields. Bond yields and money velocity rose

4 Milton Friedman also faced the same issues when he used quarterly M1 money growth to make predictions about the near-term future (Nelson 2023).

markedly during the severe rise in inflation in 1977-1980, and then fell sharply during the 1981-1982 recession. This defied the monetarist's presumed stability of velocity. In addition, the money multipliers (the broader monetary aggregates divided by the monetary base) also fluctuated. These fluctuations in the monetary transmission channels were reflected in fluctuations of nominal GDP relative to the SOMC's monetary base growth targets. Despite the SOMC's incorrect short-term projections, the SOMC's 1970s message on the importance of money targeting stood out amid the uncontrolled inflation and the disarray of economic policymaking. However, at the same time, the eclectic array of policies--including inflation, including wage and price controls, on-and-off increases and reductions in interest rates, WIN buttons and complaints of price gouging, failed to reduce inflation and interest rates. This made the SOMC's proposed slowing of money growth timely and plausible.

In the 1980s, money velocity and the money multipliers continued to fluctuate, reflecting in part financial innovations that had stemmed from the high inflation and interest rates and the binding of financial regulations (like Reg Q) of the late-1970s. The SOMC's initial response was that the decline in velocity in the early 1980s was a one-time shift rather than the beginning of a structural decline (Meltzer 1983 and Johannes and Rasche 1983). It subsequently tracked the changes in velocity and the money multipliers, but the SOMC continued to prescribe targets for monetary base growth (for example, see Rasche 1988). Jordan compared money growth and economic activity to the Fed's semi-annual forecasts provided in its Monetary Policy Reports (MPRs) to Congress and cautioned about the importance of considering the lags between money, interest rates and velocity (for example, Jordan 1985).

The reduced reliability of money growth targeting as a short-term predictive tool drew criticisms from the Fed, and in late 1982, with inflation receding, it reverted to targeting interest rates. It continued to provide projections of money growth to Congress in its semiannual MPRs, as required by the Full Employment Act of 1978, but referred less and

less to money supply. The economics profession had come around to agree with long-run money neutrality--that persistent inflation in the long run is a monetary phenomenon--but the moderation of inflation reinforced challenges to Friedman's notion that inflation is everywhere and always a monetary phenomenon.

The Fed and the media were paying more attention to other factors that affected near-term economic and inflation conditions, including labor markets, global oil prices (which collapsed in 1986) and changes in fiscal policies (including the Deficit Reduction Act of 1984 and the Tax Reform Act of 1986). While the SOMC provided sound advise on many policies issues, such as urging the Fed and other central banks not to manage exchange rates during 1986-1988, monetarism lost its allure and the SOMC seemed out-of-step.

The SOMC overplayed its monetarist hand that had been so influential in the 1970s. It did not modify its model or policy recommendations to incorporate fluctuations in velocity stemming from changes in interest rates and financial innovation and regulation. It overstated the predictive power of short-run fluctuations in money growth. While SOMC members produced important position papers on leading-edge monetary policy topics of inflation targeting and the important role of managing inflationary expectations and credibility, the Committee's message of targeting money growth fell behind theoretical advances and the primary focuses of the Fed.

It is somewhat of a conundrum that the SOMC's monetary policy recommendations continued to rely on a strict monetarist rule of base money growth targets. This is particularly since money velocity was clearly exhibiting short-run volatility and Meltzer and Brunner were involved in sheparding some of the important theoretical advances through the journals they edited, the JME and JMCB, and the Carnegie-Rochester Conference on Public Policy. Moreover, Ben McCallum and Marvin Goodfriend, who were close with Meltzer and Brunner and would become SOMC members and heavily

influence the Committee, contributed significantly to the advances in macroeconomics and monetary policy thinking during the 1980s-90s.[5]

Just as the Fed's thnking on the best way to achieve its dual mandate evolved during the Volcker-Greensapn era, the thinking about rules were also evolving. A key focus was the effort to develop a monetary policy framework that could systematically achieve a low inflation target while allowing countercyclical responses. In this effort, SOMC members developed different measures of money to facilitate shifts in velocity and financial innovations. Poole promoted MZM, zero maturity money (Poole 1991) as an alternative

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[5] Theoretical advances during this period included the development of the neoKeynesian and neoClassical models. Both models incorporated rational expectations into their frameworks and evolved toward using interest rates as the monetary policy variable rather than money supply, but allowed different degrees of countercyclical responses to shortfalls in aggregate demand. One innovation was the introduction of staggered wage and price contracts that allowed for both price and output adjustment (Taylor 1980). McCallum along with Stanley Fischer developed rules-based models that provided countercyclical policy responses to deviations or shortfalls of real economic conditions from desired levels, as well as deviations from desired price levels (inflation) (McCallum 1981 and Fischer 1980). McCallum along with Michael Parkin showed how interest rates could be used in place of money supply in a neoclassical model with rational expectations if the interest rate instrument was part of a policy package with a well-specified nominal anchor (McCallum 1981 and Michael Parkin 1978). Marvin Goodfriend developed a simple rational expectations model in which the central bank chose the joint behavior of a monetary aggregate, the price level and the nominal interest rate (Goodfriend 1991). But the models differed philosophically. The neoKeynesian modeling assumed market inefficiencies in response to changes in supply and demand, such as sticky wages and price adjustments, and also assumed monopolistically competitive firms with pricing power (Clarida, Gali and Gertler 1999). The evolution of the neoclassical model assumed that markets naturally clear and restore themselves, and more quickly adjust, and that businsses are competititve but are price-takers (Goodfriend and King 1999). As a result of these differences, the neoKeynesian models allow for a short-run downward sloping Phillips Curve that support the efficacy of countercyclical policy and the advocacy of discretionary policymaking. The market efficiencies of the neoclassical model provided a much smaller window for effective countercyclical policies and generated empirical results that reveal the costs of government intervention.

money measure.[6] Ben McCallum developed the McCallum Rule that was based on the growth of the monetary base adjusted for a 4-year moving average of base velocity (McCallum 1988). Meltzer and others considered removing foreign currency from money measures (Meltzer 1993). But the Fed clearly favored interest rates as the instrument for conducting monetary policy, and remained skeptical about money and the reliability of monetary transmission channels. The economics profession was focusing on interest rates.

Efforts to develop a framework that involved rule-like behavior with a low inflation target that allowed countercyclical policy responses and was based on interest rates were achieved by John Taylor's innovative Taylor Rule (Taylor 1993). The subsequent Taylor Principal that posited that the Fed should respond to rising inflation by increasing interest rates by more than the rise in inflation implied a rise in real rates.

The Taylor Rule and Taylor Principle quickly gained popularity and traction and proved to be transformative in the monetary policy debate. The Fed became receptive to a guideline that targeted interest rates and allowed for a rational, easy to understand approach to countercyclical monetary responses. Fed staff began preparing assessments of the Taylor Rule for presentation at every FOMC meeting. Although Greenspan believed strongly in maintaining the Fed's discretion, the Fed publicly discussed its policies in terms of the Taylor Rule. This marked a watershed in the evolution of rules in the conduct of monetary policy. From the earlier fixed price of gold rule of the classical gold standard to Friedman's k-percent rule, the Taylor Rule provided a systematic way for the Fed to react to deviations of both inflation and output from desired objectives and could be used to achieve the Fed's dual mandate. Of course, it transformed but did not resolve the rules versus discretion debate.

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6 Earlier, William Barnett had developed the divisia index of money that weighted the growth of each component of money supply based on a weighted index of the liquidity services provided (Barnett 1980).]

The evolving conduct of monetary policy and the SOMC. Beginning in the early 1990s, leading foreign central banks led by New Zealand, Australia, the UK, Sweden, and Canada adopted numeric inflation targets. Central bank inflation targeting became a critical focus of monetary policy and was used strategically for managing inflationary expctations and achieving a low inflation goal (Bernanke, et al 1999). Managing expectations and central bank credibility were infused into macro models and redefined key aspects of the influences of monetary policy.

In the early 1990s, the Fed modified its conduct of monetary policy and communications and became more transparent, although the process proceded haltingly since Fed Chair Greenspan pushed back on full Fed transparency. The SOMC joined many others in emphasizing the benefits of the Fed establishing an inflation target, and becoming more transparent and accountable (Hoskins 1993). Beginning in 1994, the Fed began announcing policy changes at FOMC meetings, a marked shift from its earlier opaque procedure of changing policy through unannounced technical changes conducted by the FOMC's operating desk with private sector primary dealers in U.S. debt securities. It also introduced announcements at the conclusion of its FOMC meetings of policy "bias", which were intended as forward guidance during the period until the next meeting. These efforts confused rather than clarified.

The SOMC complimented Alan Greenspan for directing the Fed to achieve moderate inflation and its successful preemptive tightening in 1994, but disagreed with his failure to adopt an inflation target that would institutionalize the priority of achieving low inflation and the Fed lack of transparency. Hoskins and Goodfriend characterized Greenspan's practice as "implicit inflation targeting" (Hoskins 1993 and Goodfriend 2004).

The SOMC's domestic policy research and recommendations in the 1980s-1990s. The SOMC continued its 1970s practice of closely following fiscal policy. Its concerns about

persistent deficits and rising debt led it to propose rules-based fiscal policies that would constrain government spending. Mickey Levy, who replaced Rudy Penner on the SOMC in 1983 when Penner became Director of the Congressional Budget Office, provided detained reports on the government's fiscal policies and urged the adoption of fiscal guidelines that limited spending and deficits to achieve longer-run responsible budgeting (1985).

In the 1990s, a number of SOMC members contributed papers on fiscal policy with a particular focus on the growing entitlement programs. Levy emphasized that while the government's cash flow deficit was shrinking, reflecting the post-Cold War reduction in defense spending and the surge in tax revenues generated by the productivity boom and stock market bubble, unfunded liabilities of entitlement programs were raising future debt (Levy 1999).

The SOMC did not have a member dedicated to financial regulations and banks, but in 1986, Meltzer helped to set up the Shadow Financial Regulatory Committee (SFRC) that dedicated an entire team of experts to regulatory issues.[7] In response to the collapse in the savings and loan industry, Jordan (1990) and Schwartz (1991) provided recommendations on banking and financial structural reform.

In March 1992, Jerry Jordan left the SOMC to become President of the Federal Reserve Bank of Cleveland, where he continued to promote money rules that would achieve price stability, and pushed back on discretionary fine-tuning policies. Jordan's presence on the Fed was a feather in the cap of the SOMC. He was replaced on the SOMC by Lee Hoskins, former President of the Federal Reserve Bank of Cleveland. Hoskins brought Fed experience and his strong advocacy of rules-based monetary policy and zero

7 The SFRC was composed primarily of academic economists and lawyers who favored a systematic and economically efficient approach to financial regulation. The committee successfully presented its recommendations to policymakers and at academic and business association meetings and influenced regulatory policy.

inflation to the SOMC. Charles Plosser, who contributed heavily to the development of the field of real business cycles, also joined the SOMC. Greg Hess, with substantial experience as a Fed researcher, joined the SOMC in 1998.

Evolving toward interest rate recommendations. The SOMC's evolution toward focusing on interest rate policy recommendations began in the 1990s before Meltzer retired as Chairman. Throughout the 1980s and until 1993, the Fed reported on money growth targets in its Monetary Policy Reports to Congress and in the Chairman's closely-followed Humphrey-Hawkins testimonies. In his testimony to Congress on the Fed's MPR in July 1993, Greenspan explained that the Fed had officially downgraded money as a policy instrument and indicator of economic activity and the Fed would focus on interest rates: "At least for the time being…M2 has been downgraded as a reliable indicator of financial conditions in the economy, and no single variable has yet been identified to take its place"…One important guidepost is real interest rates, which have a key bearing on longer-run spending decisions and inflation prospects. In assessing real rates, the central issue is their relationship to an equilibrium interest rate, specifically the real rate level that, if maintained, would keep the economy at its production level overtime." (Greenspan 1993).

Bill Poole was critical of the Fed's shift to focusing on rates and downgrading M2 targeting, but while he emphasized the importance of money, he also acknowledged its weakness and the dilemma that faced the SOMC (Poole 1993). He identified many of the difficulties in targeting real rates, but concluded that if the Fed had conducting policy by closely adhering to M2 monetary aggregates, "the outcome may not have been satisfactory". He emphasized that despite short-term volitility of money demand, the Fed and other central banks should be aware of the monetary aggregates and be prepared to respond to sizable deviations of money growth from the recent experience.

The SOMC continued to recommend money growth targets through the 1990s, although it blended in interest rate assessments. In March 1994, while it urged the Fed to slow money growth, the SOMC Policy Statement read: "The Federal Reserve continues to suppress the rise in short-term rates. Last month the Federal Reserve responded belatedly to the recent increase in the growth of spending with a modest (25 basis point) increase in short-term interest rates and suggested possible further increases in the future. This is not enough." In addition, SOMC members increasingly described policy recommendations in terms of interest rates in their postion papers. In "A Note on Stable Velocity", Meltzer explained that while the close correlation between monetary base velocity and 10-year Treasury yields persisted in the 1990s, "There is sufficient variability, however, to preclude the use of the relation for forecasting quarterly movements…The same statement is true more generally; no economic relation, or set of relations, permits accurate or reliable quarterly forecasting." (Meltzer 1998).

SOMC international policy recommendations during the Great Moderation. The SOMC argued strenuously for free trade, cautioned against the Fed's and other central banks' efforts to manage currencies and was critical of the IMF's role in international finance. It also disspelled the then-popular notion of the "twin deficits" and the misguided policy recommendations stemming from it. Jan Tumlir, a senior economist at GATT and SOMC member during 1980-1985, described the economic benefits of free trade and warned about the costs of protectionism (Tumlir 1984). Later, Jagdish Bhagwati, very briefly a SOMC member, analyzed regional free trade agreements and the economic costs of regulations on international trade (Bhagwati 1993).

Anna Schwartz (1986) along with Brunner (1987) and Poole (1988) cautioned against central banks adjusting monetary policy to manage the US dollar exchange rate, and warned about the downside of international policy coordination. Schwartz criticized the U.S.'s foreign exchange interventions to weaken the US dollar, arguing that unsterilized exchange market intervention was both ineffective and costly (Schwartz 1989 and

1992), and also analyzed and uncovered the Fed's improper role in warehousing Treasury holdings of foreign exchange (1990 and 1992). Her findings in an article with Michael Bordo (1990) along with research by others likely led to a shift in Fed practices (Bordo, Humpage and Schwartz 2015).

Schwartz was critical of the U.S.'s haphazard approach to its Mexican Rescue Plan in 1994 and questioned whether the U.S. should be providing financial support that would likely perpetuate a continuation of misguided monetary and fiscal policies in Mexico (Schwartz 1995 and 1996). She questioned the IMF's role and practices as a global lender of last resort without the ability to issue high powered money (Schwartz 1998). Schwartz also did considerable research with Michael Bordo that was highly critical of the IMF rescues during the Asian crisis of 1997-98 that were viewed as bailouts (Bordo and Schwartz 1999 and2000).

Well-timed policy recommendations. The SOMC recommended in September 1993 that the Fed tighten monetary policy to slow growth of money and aggregate demand. The Fed's aggressive monetary tightening beginning in February 1994 successfully reduced inflation and inflationary expectations in a rare mid-cycle economic soft-landing. The SOMC applauded the Fed's successful policy.

In 1998 a wave of concerns emerged in financial markets and the media that there would be deflation stemming from a supply glut generated by the productivity boom and from turmoil in Asia. Charles Plosser pushed back on this assessment in "Exaggerated Risks of Deflation", arguing that persistent inflation was a monetary phenomenon and other sources of excess demand, whereas the higher productivity in select sectors would be associated with a change in relative prices and not deflation (Plosser 1998). Concerns about inflation would re-emerge in the early 2000s.

In 1999, in an environment of strong economic growth, inflation pressures and a frothy stock market, the SOMC criticized the Fed for delaying tightening monetary policy based on its fears that a liquidity shortage would occur in anticipation of Y2K (that is, the Fed worried that there would be a sharp rise in the demand for currency in anticipation of computer adjustments around the millennium). The Fed delayed its first rate increase until early 2000, and then tightened too much and generated the mild 2001 recession. At its September 1998 meeting, the SOMC proudly announced its 25th anniversary. It reviewed its purpose, identified some of the Fed's policy errors over the quarter-century and concluded: "To avoid a return to these mistaken policies, we will continue to urge the Federal Reserve to develop and adopt systematic rules for monetary policy. These rules should aim at a long-term goal of zero inflation. Several other countries have moved decisively in that direction with good results. It is past time for the Federal Reserve to do the same." (SOMC 1998).

IV. Third Phase of the SOMC: The Early 2000s

Allan Meltzer retired from the SOMC in 1999, following a period of productivity-driven economic strength and moderate inflation. Under his leadership, the SOMC's monetarism had made its mark. With inflation low, Meltzer turned his attention to writing his momumental three volume book on the history of the Federal Reserve (Meltzer 2005, 2010). A year before, Bill Poole had left the SOMC to become President of the Federal Reserve Bank of St Louis, continuing its strong tradition in monetary research. Charles Plosser and Anna Schwartz became co-Chairs of the SOMC, and the SOMC welcomed two new members, Ben McCallum and Alan Stockman.

These changes in membership initiated several new directions for the SOMC. First, McCallum brought to the SOMC his sizable research contributions to monetary theory and policy, including the development of rational expectations and refinements of the neoclassical model, and rigorous support of policy rules and explicit inflation targeting. This consolidated and reinforced the SOMC's long-standing beliefs, and refined the

SOMC's perception of the meaning of rules. Alan Stockman added to Anna Schwartz's ongoing rigorous analyses of international trade and addressed issues of corporate governance and tax and fiscal policies.

Second, the SOMC's policy recommendations evolved from money targets to interest rates. While the SOMC continued to keep a close eye on the monetary aggregates, its policy recommendations on interest rates were more closely aligned with the current debate about monetary policy.

Third, the SOMC's research and policy recommendations focused on several critically important issues that heavily influenced the conduct of monetary policy and economic and financial conditions: the Fed's fear of a Japanese-style deflation hitting the U.S. (along with reaching the zero lower bound, ZLB, on short-term policy rates); and the excessive risks of Fannie Mae and Freddie Mac for overall financial stability. These concerns proved to be prescient.

Consolidating and expanding the SOMC's fundamentals. Based on his experiences at the Fed, Lee Hoskins highlighted the failures of discretionary policy and fine-tuning. He argued that the dynamic nature of the economy and constant adjustments of expectations about future policies made it virtually impossible for the Fed to accurately predict economic performance and the impacts of monetary policy (Hoskins 2000). Hoskins criticized the Fed's new practice of signaling if it had a"bias" in its policy stance following FOMC meetings: "it deflects attention away from more serious and far-reaching changes that would bring real clarity to Fed policymaking such as setting multi-year inflation targets and making predictable responses to deviations from them. The FOMC should build in its hard-earning credibility by improving the predictability of its policy actions rather than attempting to signal its intentions on a selective basis." (Hoskins 1999).

McCallum's focus on rules and inflation targeting. Even though Greenspan pushed back on both a numeric inflation target and full transparency, and coveted the Fed's discretion, the Fed monitored interest rates estimated with the Taylor Rule at its FOMC meetings, and Fed members referred to it frequently in speeches. McCallum was a strong advocate of inflation targeting, systematic rules, explicit inflation targeting and transparency. In his first SOMC paper, "The U.S. Deserves a Monetary Standard", McCallum described the benefits of a low inflation target in an international and historical contest (McCallum 2000). On rules, the SOMC's Policy Statement in November 2002 was clear: "We strongly urge the Fed to adopt more systematic guidelines and explain their decisions in light of the guidelines. The FOMC should be more explicit as to why it believes deviating from the rules is warranted." The SOMC's reference to rules were no longer a rigid monerarist rule, rather they represented a systematic and predictable Fed monetary policy reaction function grounded in the dual mnandate that would achieve an inflation target.

At the same time, McCallum understood the nuances and misperceptions about monetary policy rules, and was circumspect on the role that rules could play in the conduct of monetary policy. He acknowledged that the Fed and central banks would not be strictly rules-driven, rather that a rule or formula "can systematically and compactly summarize much of the relevant information in a manner that potentially provides a good starting place or "benchmark" for consideration of policy settings." (McCallum 2002a and 2002b).

In his papers, McCallum analyzed and tracked estimates of the Taylor Rule and McCallum Rule as a framework for assessing the Fed's monetary policy. The SOMC's Policy Statements described its recommendations in terms of deviations of actual policies from these rules. These empirical comparisons were updated and posted in semiannual reports of the SOMC proceedings published by the University of Rochester

under the direction of Charles Plosser. Beginning in March 2003, they were posted on the SOMC's original (and now defunct) website, www.somc.rochester.edu.

McCallum acknowledged that Greenspan had contributed to the favorable, moderate inflation environment, but he criticized Greenspan for pushing back on explicit inflation targeting. In contrast to Greenspan's "implicit inflation targeting" that did not involve a numeric target and relied on his strong advocacy of policy discretion, McCallum identified as best practice the Bank of England 's performance under Governor Mervyn King which relied on inflation targeting that allowed for flexibility to respond to real fluctuations (McCallum 2003).

International issues. Alan Stockman provided a clear assessment of the factors underlying the rising current account deficit and the US dollar (Stockman 2004). Anna Schwartz remained highly critical of the IMF rescues viewed as bailouts during the Asian crisis of 1997-98 (Schwartz 2000 and 2001) and later of the Fund's policies in crises in Argentina and Brazil (Schwartz 2002).

Fears of a Japan-style deflation and the Fed's asymmetric stance. Following the burst of the dot.com bubble and collapse of the stock market, and the mild recession of 2001 and 9/11, inflation fell below 2%. Although the Fed did not have an official inflation target, it became uncomfortable "looking" up at 2% rather than "looking down" at 2%, the condition that had prevailed since the late 1960s. Greenspan feared deflation, referring to the low-risk, high costs outcomes of even mild deflation (Greenspan 2002). He overstated Japan's deflation and understated the sizable structural differences between the U.S. and Japanese economies. Fed Governor Bernanke sounded the same alarm about deflation, and provided a blueprint of the Fed's ability to ease monetary policy when faced with the zero lower bound (Bernanke 2002). These concerns led the Fed to adopt an asymmetric interpretation of its dual mandate, tilting its priorities away from low inflation and toward higher inflation, which it argued would be easier and less

costly to address. This effective reinterpretation of the Fed's dual mandate would resurface following the Great Financial Crisis.

The SOMC argued strenuously against the Fed's growing concern that the U.S. would fall into a Japan-style deflation (Plosser 2002), and urged it to maintain a symmetrical stance around its low inflation objective (McCallum 2001a). Alan Stockman emphasized that Japan's deflation was a local issue and the U.S. economy was structurally far different than Japan's (Stockman 2002). McCallum's analysis used the Taylor Rule and McCallum Rule to explain that the Bank of Japan had kept monetary policy inadvertently too tight in the 1990s (McCallum 2001b). Faced with the zero lower bound, he recommended that the BoJ purchase foreign exchange to lower the yen and increase the monetary base.

The Fed brushed aside the SOMC's assessments. The U.S. economy recovered from the mild recession of 2001 and trauma of 9/11, stimulated by monetary ease and fiscal stimulus. At the April SOMC meeting, the SOMC's press release and policy statement urged the Fed to raise rates, stating: "The negative real federal funds rate and excess liquidity are incompatible with stable, low inflation and a sustained healthy economic expansion…As real rates rise with an improving economy, increasing the federal funds rate would not adversely affect the economy." (SOMC 2002b). This proved to be wise advice.

Reflecting its asymmetric assessment of inflation risks, the Fed kept the fed funds rate at 1% through mid-2004, even as the economy reaccelerated and inflation rose above 2%. The negative real rates combined with excessive liquidity and lax risk management by Fannie and Freddie and commercial banks led to a boom in housing activity and prices, excessive debt financing and a proliferation of financial derivatives based on mortgage-backed securities, MBS (Taylor 2007).

Fannie and Freddie, excessive risk-taking and Fed policy. Greg Hess, in "Is It Time for Fannie Mae and Freddie Mac to Cut the Cord?" and subsequent articles, emphasized that the mounting resource misallocations and excessive risks that were building through these government-sponsored enterprises could ultimately threaten financial stability, and that these institutions needed to be reformed (Hess 2002). Within the Fed, former SOMC member Bill Poole described the flaws and risks in Fannie and Freddie and was successful in drawing their attention to Fed Chairman Greenspan and Fed Governor Gramlich (Poole 2001).

The SOMC, along with other concerned parties, continued to express concerns about the excessive risks and leverage of the GSEs and provided pointed recommendations: "Given the interest rate risk exposure on their portfolios, the intermediate legislative solution to avert a potential crisis in the mortgage market is to move the supervision and regulation of these GSE's to the Treasury, to explicitly remove the implicit and explicit benefits that they receive and to significantly raise their capital requirements. Ultimately, however, these institutions should be privatized so that the mortgage market reaps the full rewards of a competitive market environment." (SOMC 2004). Hess wondered whether a financial crisis could be avoided (Hess 2004).

The Fed tightened monetary policy between mid-2004 and mid-2006, raising rates from 1% to 5.25%, well above PCE inflation, and slowing money growth. The rise in mortgage rates, particularly adjustable rate mortgages that were the basis for so much housing speculation, generated a reversal in home prices and sales that led to a collapse in the complex derivatives in the MBS market. Certainly, the Fed was not responsible for either the complexities that enveloped the MBS market or supervision of the GSEs, but the combination of low interest rates and forward guidance of very gradual rate increases that kept mortgage rates low , fueled the debt-financed housing boom. Following the Financial Crisis, Bernanke refuted Taylor's finding that the Fed kept rates

too-low-for-too-long, arguing that the Fed's extended monetary ease played at most a minor role in contributing tho the housing bubble (Bernanke 2010).

In 2006, Plosser left the SOMC to become President of the Federal Reserve Bank of Philadelphia. At the Fed, Plosser was a key architect of the Fed's formal 2012 Strategic Plan that established an inflation target, and he expressed concerns that the broadened scope of monetary policy and the Fed's expanded balance sheet posed threats to the Fed's independence. Of note, as a pioneer of the real business cycle, Plosser stood out as the only FOMC member to follow and refer to money growth. In 2006, Hoskins retired from the SOMC and Stockman also retired from the Committee for health reasons. The SOMC took a pause and did not hold meetings during 2007-08 as it regrouped and sought new members.

V. The Modern Era of the SOMC

The modern SOMC began to jell prior to the Financial Crisis with the addition of three new members, Marvin Goodfriend, Michael Bordo and Charles Calomiris. Each added academic rigor and a new dimension of expertise to the SOMC. Goodfriend had contributed significantly to the evolution of economic and monetary policy theory (Goodfriend and King 1999) and championed explicit inflation targeting and full transparency to maintain credibility (Goodfriend 2004). These themes tied together the work of McCallum, Hoskins and Plosser. Bordo was an economic and monetary historian who had worked closely with Anna Schwartz and numerous senior Fed staffers on an array of research projects on the Fed and global central bank policies. He was well-versed in Friedman's economics, the monetarist-Keynesian debate and the development of the SOMC. Calomiris was a noted expert in banking with a focus on finance and regulation and knowledge of the Fed's historical regulatory policies. While the new members pursued different research agendas, all favored rules-based policies over discretion, inflation targeting and central bank transparency, and advocated a

limited scope of monetary policy, and were anxious to contribute to the SOMC's efforts to advocate sound monetary policy.

Beginning in 2009, the SOMC modified its routine in several ways. First, it invited guest speakers to make presentations at its semi-annual meetings. The majority of the guest speakers have been current Fed members, but they have also included fiscal and regulatory policymakers, leading academics and global central bankers. Appendix II provides a list of guest speakers. The guest speakers were also invited to the SOMC's private pre-meeting dinners. Their addition to the meetings proved very successful, and enhanced the SOMC's access and communications with the Fed and improved its understanding of the policymaking process. Second, the SOMC's consensus on its core beliefs remained, but based on the diversity of members' research interests, the committee ceased preparing a Policy Statement for each meeting. Also, beginning in 2018, the SOMC augmented its semi-annual meeting with a third annual meeting sponsored by Chapman University.

The Great Financial Crisis and Its aftermath. The immediate issue facing the SOMC was the Great Financial Crisis (GFC), its shock to financial markets and the economy and the Fed's immediate responses to it. The SOMC had issued warnings of the potential risks of the Fed's low interest rate policies of the early 2000s and the excessive leverage and resource misallocations of Fannie and Freddie. The magnitude of the crisis and the scope of the Fed's responses elicited important SOMC policy recommendations.

In response to the unraveling of the MBS market, freezing of financial markets and sharp economic contraction, the Fed reduced rates to zero and engaged in sizable open market purchases of MBS (Large-scale asset purchases, LSAPs, or Quantitative Easing, QEI). Fed Chairman Bernanke emphasized that this was credit easing, not quantitiatve easing, because it involved purchases of MBS and not Treasuries, and pledged that the Fed would unwind these assets on a timely basis in order to avoid inflation (Bernanke

2008). In addition, the Fed's Troubled Asset Relief Program (TARP) infused capital into large systematic important banks and the Fed directly extended over $1 trillion of credit lending—loans to banks and other financial institutions and special purpose entities to purchase commercial paper and asset-backed securities. In Spring 2009 the Fed initiated QEII, which involved outright purchases of treasuries in addition to MBS, while the FDIC extended guarantees on deposits up to $250,000.

Goodfriend's first SOMC paper "We Need an 'Accord' for Federal Reserve Credit Policy" was a critically important contribution (Goodfriend 2009). It expressed concerns that the Fed's massive extension of credit stepped across the boundary into fiscal policy, since providing credit is an activity that historically had been conducted by the Congress and the President and has direct implications on the government's budget. Moreover, providing credit involves picking winners and losers, which is a political decision and not the province of an independent central bank. He urged the establishment of an agreement analogous to the Treasury Accord of 1951: "A credit accord should set guidelines for Fed credit policy so that pressure to misuse Fed credit policy for fiscal purposes does not undermine the Fed's independence and impair the central bank's power to stabilize financial markets, inflation, and macroeconomic activity." Goodfriend echoed the concerns expressed by Fed members Charles Plosser (2009) and Jeff Lacker (2009), and urged the Fed to return to a "treasuries only" balance sheet as soon as reasonably possible. These positions would be repeated in subsequent SOMC papers. Eventually the Fed took policy steps to unwind its direct lending programs, passively reduce its holdings of MBS and advocate the gradual movement toward an all-treasuries portfolio.

Bordo argued that most of the Fed's asset purchases in 2008 had been automatically sterilized, such that they did not increase money growth, suggesting that the Fed had been inadvertently restrictive (Bordo 2009). Bordo drew analogies to the Great Depression, and urged the Fed to ease aggressively to stimulate recovery but then

withdraw it soon after the crisis ended, and identifiy and close insolvent financial institutions.

Calomiris emphasized the need to reform the array of housing subsidies, place limits on the Fed's practice of supporting too-big-to-fail financial institutions, and improving the management of macroprudential risks (Calomiris 2009a). He followed with a position paper on recommendations on minimum bank capital ratio requirements, an issue that was central to the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Calomiris 2009b).

Goodfriend and McCallum teamed up in "Exiting Credit Policy to Preserve Sound Monetary Policy" and urged the Fed to exit credit policy as soon as the recovery allows and to be absolutely transparent in its policies. They addressed a flaw in the newly established floor system of conducting monetary policy in which the effective federal funds rate remained below the floor established by the Fed's designated interest rate on reserves. This resulted from the inability of Fannie Mae and Freddie Mac and the Federal Home Loan Bank to collect interest on reserves left at the Fed, which created a supply-demand disequilibrium in short-term funding markets. To reinforce the interest rate floor, they recommended that the Fed coordinate with the Treasury and Congress to extend payment of interest on reserves to the GSE's, despite their status as government enterprises (Goodfriend and McCallum 2009). Goodfriend addressed this issue in detail in subsequent papers.

Bill Poole, who rejoined the SOMC following his 1998-2008 tenure as President of the St Louis Fed, focused on the unintended consequences of the Fed's too-big-to-fail practices, the failures of bank and Federal supervisors and the regulatory agencies, and the problems when capital requirements are too low and not properly structured. He recommended higher capital requirements and credible supervision (Poole 2009).

The Fed's QEIII and expanded balance sheet. After the crisis eased, the Fed's focus and concerns evolved toward the slow recovery and lingering weakness in labor markets. The Fed had projected that its zero interest rates and quantitative easing along with fiscal stimulus would generate a strong economic recovery and a rise in inflaton. Outside the Fed, based on Milton Friedman's plucking model, Bordo with Joseph Haubrich had shown that deep recessions accompanied by financial crises should have fast recoveries (Bordo 2012). That's not what happened. The recovery in aggregate demand was weak, resulting in a slow recovery of the labor force participation rate and low inflation.

SOMC members identified several sources of the economic weakness. While the Fed's QEs dramatically increased bank reserves and the monetary base, Plosser (2010) and Ireland (2016) argued that the monetary transmission channels had been adversely affected by the Fed's shift to paying interest on excess reserves, the tighter capital requirements it imposed on banks, and more stringent supervison of banks that deterred lending. These factors constrained growth of money and aggregate demand. Levy attributed the weak recovery to the shock to net wealth associated with the collapse in housing values and the stock market that forced higher saving, resulting in weak consumer spending and a non-acceleration of nominal GDP (Levy 2012).

Sluggish economic growth continued in 2012, and the Fed ramped up purchases of treasuries and MBS with QEIII. The Fed made it clear that with inflation low, the express purpose of QEIII was to increase employment (Bernanke 2012). Thus, rather than unwinding its crisis management asset purchases, the Fed extended its unconventional monetary policy to pursue its dual mandate. This represented a clear tilt in the Fed's interpretation of its dual mandate and how monetary policy would achieve it.

The SOMC expressed concerns with the expanded scope of the Fed's balance sheet and responsibilities. Goodfriend addressed the relevance of the Fed's large balance sheet for the conduct of monetary policy and assessed the risks involved in the Fed's practice

of effectively borrowing short duration securities to finance holding longer-term debt securities, including the possible erosion of the Fed's independence (Goodfriend 2014a and 2014b). Of note, Goodfriend echoed some of the concerns expressed by Charles Plosser, President of the Federal Reserve Bank of Philadelphia and Jeff Lacker, President of the Federal Reserve Bank of Richmond.[8]

During the recovery from the GFC, the SOMC was fortunate to attract two new members, Peter Ireland in 2011 and Athanasios Orphanides in 2014. Ireland was a leading expert in monetary policy and the Chicago school of economics who earlier had worked at the Federal Reserve Bank of Richmond with Marvin Goodfriend, Jeff Lacker and Ben McCallum (a consultant)._Orphanides was a former member of the European Central Bank as President of the Central Bank of Cyprus and before then a noted senior researcher at the Federal Reserve Board. He had published frequently cited papers (for example, Orphanides 2003) that attributed part of the Fed's policy errors in the Great Inflation to a mismeasured potential output, and had developed the first difference rule, a variation on the Taylor Rule that the Fed closely monitored.

Their contributions quickly made a mark. Ireland urged the Fed to pursue its low inflation objective as the best foundation for achieving its dual mandate, and cautioned that too much is asked of the Fed, and the Fed would best achieve its objectives through a commitment to stabilize nominal variables rather that efforts to fine-tune real variables (Ireland 2011). Orphanides first delved into Europe's struggles to emerge from its financial crisis and compared the ECB's monetary policy around the zero lower bound with the Fed (Orphanides 2014). He then argued that the Fed was too tentative in exiting its zero interest rate policy (Orphanides 2015). Many of his subsequent SOMC

[8] Lacker dissented from the Fed's adoption of QEIII in September 2012, arguing that efforts to increase employment were problematic for several reasons: the concept of maximum employment is beyond the scope of monetary policy; trying to maximize employment would risk higher inflation; and purchases of MBS involved credit allocation and is properly the role of fiscal policy (Lacker 2012).

position papers addressed and tested different aspects of systematic rules for monetary policy.

The SOMC's Core Beliefs. The scope and research interests of the SOMC widened to reflect the expanded scope of the Fed's policies: zero interest rates and an enlarged balance sheet; the sharp decline in oil prices and inflation; the Fed's evolving interpretation of its dual mandate and new Fed Chair Yellen's discretionary prioritization of employment; the Fed's operational conduct of monetary policy; and its role in bank regulation and supervision. The newly enlarged SOMC decided it was an appropriate time to step back and conduct a self-asssessment. In 2015, the SOMC held an offsite meeting to discuss the role of the SOMC and what it stood for. The meeting resulted in a statement of the **SOMC's Core Beliefs**:

*The SOMC takes for granted that U.S. monetary policy will be conducted by the Fed over the foreseeable future.

*It is essential that the central bank be independent from the fiscal authorities and accountable to the legislature. In particular, the central bank should eschew policies that allocate credit.

*Price stability is the best contribution that monetary policy can make to overall macroeconomic performance and for this reason should be the primary objective of the central bank. "Price stability" should be defined to insure that the inflation rate, on average, is not above 2 percent per year.

*Monetary policy should be conducted in a rule-like manner and be somewhat countercyclical with respect to output and employment, as long as price stability of the long run is not compromised. We expect the central bank to announce the policy rule that it follows so that it can be monitored and held accountable.

*To provide financial stability, the central bank should promote strong capital buffers.

*The SOMC expects the central bank will serve as a lender of last resort. In this role:

a) The central bank should state its lender of last resort rules clearly in advance; b) Such activities should be limited to occasional, tempopary well-collateralized lending to solvent, supervised depository institutions at an appropriate interest rate premium; and c) More expansive lending should be agreed and indemfiled in advance by the fiscal authorities.

*The SOMC believes that, by following these basic principles, the Fed would create the monetary and financial framework that best facilitates the efficient functioning of free-market, prosperity-creating, institutions in the U.S. economy.

While the SOMC had evolved and included members with different research interests, its Core Beliefs were strikingly similar with many of the basic tenets of the original SOMC and principals espoused by Karl Brunner close to 50 years earlier in his principles of monetarism.

Following its meeting that reaffirmed its Core Beliefs, the SOMC stepped up its efforts to address a number of broad issues: 1) the Fed's balance sheet, the scope of monetary policy and Fed independence; 2) the evolving interpretation of the Fed's dual mandate; 3) rules vs discretion; 4) the Fed's operational conduct of monetary policy; 4) the SOMC and the pandemic inflation, 5) issues in regulatory policies; and 6) governance of the Federal Reserve.

New SOMC Members. Charles Plosser rejoined the SOMC in 2015 after fininshing his 2006-2015 tenure as President of the Federal Reserve Bank of Philadelphia. Since establishing the SOMC's Core Beliefs, five new members have joined the Committee. Deborah Lucus, a noted scholar in finance, joined in 2017 and added important understanding of cost-benefit analysis of government and Fed credit policies and debt forgiveness. Andrew Levin joined in 2019, bringing decades of experience as a research and policy advisor at the Fed, and an interest in improving the Fed's risk management, governance and accountability. In 2022, Jeff Lacker joined the SOMC following his

Presidency of the Federal Reserve of Richmond during 2004-2017. He had frequently dissented on Fed policy decisions that conflicted with his basic principles of sound monetary policy. In 2024, Jim Bullard joined after being President of the Federal Reserve Bank of St Louis during 2008-2024. He had brought to the Fed rigorous economic analysis supporting more systematic policies, and led the Fed in its aggressive monetary tightening in 2022-2023. Like Plosser, Lacker and Bullard place a primary focus on achieving low inflation, following rules and being transparent in the conduct of monetary policy. They quickly began to make constructive recommendations to their former employer.

Ongoing concerns about the Fed's balance sheet and scope. Goodfriend followed up on his earlier concerns about the Fed's expanded balance sheet with two provocative position papers "The Relevance of the Fed's Surplus Account for Current Policy (Goodfriend 2014a) and "Monetary Policy as a Carry Trade (Goodfriend 2014b). He described the mechanics and financial and fiscal issues involved in the Fed's conduct of quantitative monetary policy at the zero bond and urged the Fed to suspend transfers of net profits to the Treasury and build surplus capital in anticipation of the cash flow losses that would occur when it raised rates and normalized policies. The subsequent rise in rates has justified his concerns and recommendations.

After rejoining the SOMC, Plosser participated in various panels at SOMC meetings and testified before Congress. He urged the Fed to address tensions placed on it by simplifying its objectives, adhering to systematic rules and constraining its monetary policy tools (Plosser 2016). He worried that there had been "mission creep" in the Fed's interpretation of its mandate, which expanded its scope of discretion. Second, Plosser urged that the Fed to return to an all-Treasuries portfolio and avoid purchases of MBS and other forms of credit allocation that "opened the door to political and fiscal abuse of the central bank's portfolio" and underminded the Fed's independence (Plosser

2017). He expanded on these themes and proposed limitations on emergency lending in "Is It Time for a New Treasury-Fed Accord?" (Plosser 2019 and 2022).

Following the Fed's massive asset purchases in response to the pandemic, Andy Levin addressed the budgetary costs and risks of the Fed's expanded balance sheet. In a thorough analysis of when the Fed purchased the assets and their yield, Levin estimated the costs to taxpayers exceeded over $1 trillion (Levin and Nelson 2023). His empirical findings validated Goodfriend's earlier concerns. Levin argued that Congress should more rigorously supervise the Fed, and advocated that the Fed be subject to audits by the Government Accounting Office. While some SOMC members do not support GAO auditing of the Fed, all agreed that the Fed should move toward reducing its balance sheet and unwinding non-treasury securities, and be more accountable.

Lucas provided a detailed financial assessment of the Fed's asset purchases and enlarged balance sheet and concluded that the Fed's "remittances have created hundreds of billions of dollars of budget capacity…the budgetary treatment obfuscates the true financial position of the government and the risks born to taxpayers." (Lucas 2017a). She proposed a switch to accrual accounting for the Federal Reserve in the federal budget (Lucas 2018).

Lucas took a broader view of the costs of the government's interventions during the Great Financial Crisis (GFC) in two separate studies. She estimated that on fair value accounting basis, the costs to taxpayers of the government's bailouts of Fannie and Freddie and the Federal Home Loan Bank were $498 billion (Lucas 2017b). She concluded that privatizing the GSEs would provide enormous indirect benefits (including improving fiscal transparency and reduced taxpayer costs even if the costs to the Federal Budget were high). In a broader study, Lucas quantified the magnitude of the total government credit policies and debt forgiveness in the U.S. and other advanced economies, concluding that the total government financial subsidies of the U.S. and

advanced nations were 22% of GDP and deserved more attention (Lucas and Hong 2023).

The Fed's evolving interpretation of its dual mandate. As described earlier, under Fed Chairs Volcker and Greenspan, the Fed emphasized that its best contribution toward achieving stable low inflation and sustained healthy growth in the eoncomy and employment was to keep inflation and inflationary expectations low. Although the Fed did not have an official inflation target, its objective was to reduce inflation to 2%, generally based on the formal targets established by other leading global central banks. They rarely referred to the dual mandate.

The Fed's first major tilt in its interpretation of its dual mandate occurred when inflation dipped below 2% following the collapse of the dot-com bubble, the mild recession of 2001 and the trauma of 9/11, inflation dipped below 2% and the Fed feared a Japanese-style deflation. The Fed said the risks of deflation far outweighed the risks of higher inflation. As a result, the Fed kept rates at 1% even as the economy recovered and inflation rose back to 2%, and raised its rates at a measured pace, which fueled the debt-financed housing bubble and contributed to mounting inflation pressures and subsequent severe financial stresses. This marked the end of the Great Moderation.

Unlike his predecessors, Ben Bernanke frequently referred to the Fed's dual mandate when he became Fed Chairman in 2005. Following the GFC, the slow recovery of labor markets and low inflation led the Fed to shift its priorites toward employment. The SOMC pushed back on these asymmetric interpretations of the dual mandate and their implications for monetary policy. Amid this tilt toward labor market concerns, in January 2012, the Fed formally adopted a Longer-Run Strategic Plan. This "consensus statement" for the first time established a 2% inflation target and set a goal of maximum employment, but without a numeric target, acknowledging that employment was heavily influenced by non-monetary factors.

The SOMC supported the Fed's adoption of an inflation target, but worried whether the Fed would stick to it. Ireland highlighted the benefits of establishing a numeric inflation target, but noted the contradiction imposed by the Fed's maximum employment objective that was beyond the control of the Fed (Ireland 2012b). Goodfriend urged the Fed to take advantage of its 2% inflation target, but pointed out that soon after this hallmark step, the Fed approved QEIII and agreed to keep rates low for several more years: "The key question is how the FOMC proposes to deal with the fluctuations of inflation and employment?" (Goodfriend emphasis; Goodfriend 2012). He continued: "Lack of clarity on inflation in the [FOMC's] September 13 [2012] policy statement suggests that the Fed is willing to pursue highly accommodative monetary policy to bring unemployment down until inflation becomes the public's concern." These concerns proved prescient.

The collapse in oil prices that began mid-2014 generated a sharp transitory reduction of inflation toward zero and led many economic commentators and media to express worries about deflation. Calomiris, in a position paper entitled "Phony Deflation Worries", noted that nominal GDP had continued to grow faster than estimates of potential, suggesting the remote probability of deflation, and that inflationary expectations had remained fairly closely anchored to 2% (Calomiris 2014). Bordo argued that inflation had receded temporarily in response to the positive supply shock provided by the surge in oil drilling and that inflation would soon rise, suggesting that the Fed should not delay monetary policy normalization (Bordo 2015).

Soon after Janet Yellen became Fed Chair in August 2014, the homepage of the Fed's official website added a new feature, a "Labor Market Dashboard" that tracked a dozen labor market measures. There was no analogous "inflation dashboard". This clearly revealed Yellen's priority of maximizing employment and underlined the Fed's evolving interpretation of its dual mandate. Following the transitory decline in inflation caused

by the collapse in oil prices in 2014-15, inflation rose back toward the Fed's target and economic performance picked up. During 2016-2019 CPI inflation averaged 2% and PCE inflation averaged modestly lower at 1.6%. During this period, real GDP grew persistently exceeded the Fed's estimates of longer-run potential, and the unemployment rate fell ot a 50-year low. Market and survey-based measures of inflationary expectation remained fairly well anchored to 2%, and Fed continued to project that inflation would rise to 2%. Nevertheless, the Fed's concerns mounted that if PCE inflation remained below 2%, the risks would grow that inflationary expectations would collapse. Such a decline in inflationary expectations combined with a low natural real rate of interest would confront the Fed with the effective lower bound (ELB), which would constrain its ability to respond to an economic downturn. These worries and presumptions skewed the Fed's interpretation of its dual mandate.

Goodfriend addressed policy concerns in "The Case (In Brief) for Unencumbering Interest Rate Policy at the Zero Bound" (Goodfriend 2016). He argued (provocatively) that negative nominal policy rates during extreme conditions would enhance the efficiency of monetary policy and support the Fed's attainment of its dual mandate. At a subsequent SOMC meeting, Levin argued, based on earlier research with Bordo (Bordo and Levin 2017), that the Fed's toolbox for providing monetary stimulus at the ELB was inadequate and proposed cental back digital currency (CBDC) that could facilitate the provision of digital cash at the ELB (Levin 2019).

The Fed's mounting worries about too-low inflation and the ELB led it to undertake its first-ever strategic review in 2019-20 that culminated in its new strategic plan announced in August 2020. The Fed's strategic plan formally established an asymmetric interpretation of its dual mandate and changed how it would respond to deviations. Most importantly, the Fed favored above 2% average inflation, prioritized maximum inclusive employment and formally deemphasized preemptive monetary tightening in response to anticipated higher inflation. A month following the Fed's announced new

strategy, Mickey Levy and Charles Plosser identified many flaws in the review process and plan. They were particularly critical of its flexible average inflation targeting proposal, and noted that it was only a matter of time before these flaws would be revealed (Levy and Plosser 2020). In sequels, they highlighted how the Fed's new strategy had led to misguided monetary policy (Levy and Plosser 2022 and 2024).

The SOMC on rules-based policies vs discretion. Rules-based policies rather than discretion and avoidance of fine-tuning had long been one of the SOMC's Core Believes. SOMC members led by McCallum investigated different rules and issues in rules-based policies, often used the Taylor Rule as a benchmark for assessing monetary policy. After the GFC, McCallum assessed the targeting of nominal GDP as a rule (McCallum 2011 and 2013). Bordo reiterated the benefits of rules-based policies relative to the pitfalls of international central bank coordination (Bordo 2016).

Peter Ireland and Athanasios Orphanides built on the SOMC's long-standing support of a systemic approach to monetary policy, prepared numerous papers that advocated rules and criticized the Fed's forward guidance policies. Ireland, in "Refocusing the Fed" criticized the Fed's interest rate polices (including maturity extension), forward guidance and enlarged balance sheet, and urged the Fed to be guided by simplier rules (Ireland 2012a): "The Fed could either augment or abandon altogether the forward guidance it has offered regarding the future path of the funds rate by emphasizing instead, the commitment that the FOMC has already made to its 2 percent inflation target. After all, unlike a path for the funds rate, which will necessarily adjust as changes in macroeconomic conditions warrant, the 2 percent inflation target represents an unconditional promise (Ireland 2012). Ireland emphasized that the Fed could achieve its objective "by conducting the appropriate set of open market operations to stabilize the growth of nominal variables." He detailed the benefits of nominal GDP targeting in subsequent articles.

In October 2015, in “Short-Sighted Monetary Policy and Fear of Liftoff”, Orphanides criticized the Fed’s “short-termism”, stating “the need for a somewhat accommodative policy cannot be used to defend the current non-systematic policy and excessive emphasis on short-term employment gains (Orphanides 2015). In “The Case Against the Case Against Monetary Rules”, he carefully described the arguments forwarded by advocates of discretionary policy over rules, and refuted each of them (Orphanides 2017). He emphasized that amid an incomplete understanding of the economy and how its structure is evolving, along with a high degree of uncertainty and potentially destabilizing shocks, systematic rules are more reliable than discretionary policy based on judgment. As part of a rules-based system, he recommended that the Fed should publish annually its evaluations of the performace of rules.

While Orphanides and Ireland concurred in the benefits of systematic rules, they propose different rules. Ireland favors nominal GDP targeting. In “The Continuing Case for Nominal GDP Targeting”, he noted that by tracking deviations of nominal GDP from its target, the Fed could diagnose troublesome trends in monetary policy and misdiagnoses of economic and inflation conditons (Ireland 2022). Ireland believes that achieving a nominal GDP target is best achieved through targeting money instruments.

Orphanides’s proposes a forecast-based rule based on interest rates, a modification of the Taylor Rule. In “Enhancing Resilience with Natural Growth Targeting”, he recommends the Fed adjust monetary policy to deviations its projections of nominal GDP and longer-run potential growth consistent with its 2% inflation target (Orphanides 2024). The projections would be based on the Fed’s Summary of Economic Projections (SEPs) that are published quarterly. This first difference model would be forward-looking and easy to track while steering the Fed toward its inflation target and avoiding the mistakes of discretionary policy.

These two approaches to rules-based policy reflect the evolution of the meaning of rules since the earlier SOMC. They reflect the SOMC's long-standing goals of stable low inflation while acknowledging the downside risks of the Fed's discretionary policies and judgments and the complexities of the monetary transmission channels. Both are systematic approaches that provide valuable guidelines to the Fed and are easy to track.

Fed Communications and Forecasts. The SOMC has persistently clear and transparent communications. The issue of transparency has become more pressing since the Fed started providing quarterly projections in its SEPs in 2007, and particularly since 2012, when it augmented the SEPs with the FOMC member estimates of the federal funds rate they believe would achieve their forecasts of the economy and inflation. Levy described how the Fed's SEPs were an unreliable and a problematic basis for providing forward guidance of policy (Levy 2013). Loretta Mester, then President of the Federal Reserve Bank of Cleveland, presented a paper to the SOMC entitled "Acknowledging Uncertainty", arguing that in order to improve communications and policy deliberations, the Fed needs to come to grips with the reality that forecasting is difficult (Mester 2016). Levy, in "The Fed's Communications: Suggestions for Improvement", recommended that the Fed incorporate alternative projections into its quarterly SEPs, and estimates by FOMC members of how they would adjust to the different scenarios (Levy 2018). Orphanides and other SOMC members called on the Fed to include information on its balance sheet in its quarterly SEPs (Hess and Orphanides 2018). Ireland underlined this point. He emphasized that the Fed's practice of focusing entirely on interest rate policy while eschewing any mention of money draws an inappropriate distinction between monetary policy and the Fed's balance sheet, and that "all monetary policy actions have a direct impact for the size and compositon of the Fed's balance sheet" (Ireland 2019). He believes articulating these points would improve the Fed's communications.

Lacker teamed up with Plosser in "The Fed Should Talk About the Prescriptions of Systematic Policy Rules", arguing that a rules-based policy would improve the public's understanding of the Fed's reaction function, enhance the Fed's communications and increase its transparency (Lacker and Plosser 2022). They posited that the Fed's inexplicable policies in 2021-2021 heighten the importance of a more systematic, rules-based monetary policy, and continues to be a focus of the SOMC.

The SOMC and the Pandemic Inflation. SOMC members were among the earliest to accurately predict the soaring inflation that would unfold in 2021 and were prominent in signaling warnings to the Fed that high inflation would persist and be severe. Bordo and Levy based their predictions on their research of historical episodes in deficit spending and extreme monetary accommodation that generated excess demand (Bordo and Levy 2021). This stemmed from earlier research by Levy (2020) on the confluence of fiscal and monetary policies that generated the surge in money supply, and research by Bordo and Levy on the history of fiscal deficits, central bank accommodation and inflation during wartimes (Bordo and Levy 2020).

At the onset of Covid-19 in March 2020, Levin presented a position paper "Hope for the Best, Prepare for the Worst: The Federal Reserve's Monetary Toolbox for Mitigating Severe Adverse Shocks" expressing worries that the Fed was not adequately prepared for dealing with the affects of the pandemic (Levin 2020). Bordo, Levin and Levy emphasized the need for the Fed to improve its risk management by introducing scenario analysis into its quarterly projections to consider how it would respond to alternative outcomes (Bordo, Levin and Levy 2020).

Ireland also warned that the rise in inflation would persist based on the unprecedented surge in M2 money growth. He contrasted this with the post-GFC period when the Fed's zero interest rates and QEs boosted bank reserves and the monetary base but not M2 (Ireland 2021). In response to the Fed's insistence in mid-2021 that the inflation was due

to transitory supply shocks that involved large price increases of a small number of goods, Levy disaggregated the PCE inflation data to show that inflation had become pervasive among most goods and services (Levy 2021).

In his initial SOMC presentation as the Committee's newest member, Jim Bullard emphasized that the Fed should focus on its inflation target as the best foundation for achieving economic performance. He called for a national commission to study different measures of inflation. His proposal was striking in that the gap between PCE inflation and CPI inflation has widened and created thorny issues in measurement and Fed policy and communications.

Issues in Financial Regulations. Calomiris and Lucas have enhanced the SOMC's focus on finance and financial regulations. Importantly, both advocate a more systematic approach to regulations with a focus on economic efficiency and relying on cost-benefit analysis, and criticize discretionary regulations that are imposed on an ad hoc basis. Calomiris, in "What is A Bank? What is A Government", argues that bank regulations and supervision have historically resulted from political maneuvering rather than clear economic reasoning (Calomiris 2023). This has resulted in economically inefficient policies that impose social costs. He recommends the establishment of rules-based regulations that reduce the unaccountable discretion of regulators and supervisors. He also advocates more accurately based capital ratios for banks and the establishment of bottom-line supervisory measures of bank weakness.

Lucas assessed the Basel III endgame proposals for bank capital and found that they are not supported by cost-benefit analysis, and that requiring banks to evaluate their risks based on a new Fed "Enhanced Risk Based Approach" rather that their own models would be a mistake (Lucas 2024). She emphasizes that the Fed should agree to conduct cost-benefit analysis of its proposed regulations, even though it is not designated as an independent government agency and required to do so. Regarding interest rate risks of

financial institutions, Lucas proposes that medium and large-sized banks regularly report on their duration gaps (Lucas 2023). Requiring them to report on the measured gap between the duration of their liabilities and the duration of their assets and their sensitivity to interest rates would would improve banks' risk management and provide important information to regulators.

The Fed's monetary policy operations. The Fed's post-GFC asset purchases and enlarged balance sheet added complexities to its conduct of monetary policy, requiring the Fed to manage its short-term policy through a "floor system" rather than its traditional "corridor system".[9] Goodfriend described that the inability of the government GSEs and Federal Home Loan Banks to be paid interest on their reserves at the Fed created a supply-demand imbalance in the short-term funding market, and the Fed's dominant role required in borrowing in the overnight reverse repurchase market violates a basic principle of central banking of minimizing interference in markets (Goodfriend 2015).

Governance Issues at the Federal Reserve. In recent years, several SOMC members have addressed Fed governance issues and made recommendations that would improve the functioning of the Fed. Concerns have arisen about the lack of diversity of thinking at the Fed that has adversely affected the quality of policy deliberations. One source of the reduced diversity of thinking as the Fed has stemmed from consolidation of power at the Board of Governors and with the Fed Chair, and the process of choosing new Federal Reserve Bank Presidents. One metric reflecting the lack of diversity is the lack of policy dissents of FOMC members, particularly by Fed Governors. Another is the lack of dispersion and skew of projections of FOMC members. Calomiris, in "Reforming the

[9] In the traditional corridor system, the Fed establishes an upper bound (the discount rate that the Fed offers to lend funds to banks in good standing) and a lower limit (the interest rate it pays on reserves), and manages short-term rates through open market operations that adjust the supply of reserve balances so the market rate is as close as possible to the Fed's target rate. In contrast, with an enlarged balance sheet, the Fed is incapable of managing the effective interest rate through open market operations. Instead, the floor system involves a single rate, the interest rate that the Fed sets on reserves.

Rules That Govern the Fed" (Calomiris 2017a) and "Reforming and Depoliticizing the Federal Reserve" (Calomiris 2017b), expressed the concern that the Fed has a tendency to adhere to the "latest fad in macroeconomic modeling" and recommended changing the Fed's mandate to an inflation target and achieving it through a systematic rule in order to avoid "group think". He recommended allowing all FOMC members to vote at every FOMC meeting.

Two recent contributions by SOMC members highlight the growing concern about the Fed's expanded scope of its monetary and regulatory policies, and how poor Congressional oversight has reduced the quality of the Fed's policymaking and accountability. Levin and Skinner, in "Central Bank Under-sight: Assessing the Fed's Accountability to Congress" (Levin and Skinner 2024), provide a legal and economic history of Fed governance and document how the increased scope and complexity of monetary policy and shifts in power within the Fed have undermined the balance between the Fed's independence and accountability. They point to the costs to the taxpayers of the Fed's enlarged balance sheet and call for more effective oversight of the Fed, including enhanced reporting requirements and Congressional and external reviews.

Lacker, in "Governanace and Diversity of the Federal Reserve", argues that the lack of dissents during the 2021-2022 inflaton highlights the diminished diversity of views within the FOMC since the 1960s (Lacker 2024). He focuses on the process of appointing Federal Reserve bank presidents, which he argues has shifted. The Board of Govenors used to provide final stage approval of Federal Reserve Bank presidents chosen by their respective boards of directors, but recently the Board of Governors has become a co-manager of the selection process. This has changed the profile of the regional bank presidents and constrained the diversity of thinking. Lacker also discusses the changed relationship between the Fed and Congress stemming from the Fed's involvement in credit allocation and fiscal matters.

VI. Concluding remarks

The SOMC has had a very rich history. In its beginnings, it established itself as a distinct minority outlier associated with Milton Friedman that argued that inflation was a monetary phenomenon, and that the Fed should target money growth to achieve lower inflation. Amid upward ratcheting of inflation and the loss of policymaker credibility, the SOMC successfully promoted the importance of controlling the money supply in the public debate and in Congress. Although Paul Volcker opposed Friedman's monetarism, the SOMC and other advocates of money targeting may have had some influence on the Volcker-led Fed that temporarily shifted from targeting interest rates to targeting nonborrowed bank reserves and aggressively tightened monetary policy to successfully reduce inflation.

The SOMC continued to propose money growth targets in the 1980s and 1990s even though it acknowledged that short-run money demand was volatile, and its monetary policy recommendations fell out of touch with the Fed, reducing its impact and following. It continued to promote inflation targeting, systematic rules-based policies over discretion, and central bank transparency and accountability. It also provided sound advice on other economic policies, including urging fiscal restraint, having a systematic approach to financial regulatory policy and economic policies that promoted prosperity. The SOMC evolved toward providing monetary policy recommendations in terms of interest rates rather and remained committed to sound central banking. Overtime, the Fed has modified its policy deliberations and communications in some of the ways that the SOMC has recommended. Of note, several SOMC members became Fed members and were very influential in their roles. For example, Charles Plosser played a key role in developing the Fed's original longer-run strategic plan in 2012 that established the 2% inflation target.

Over time, the SOMC has strengthened itself with new members from academia and the Fed who have strengthened the Committee's analytical capabilities and enhanced the ability to provide sound, constructive advise to the Fed. Currently, three SOMC members are former Fed members, and several others are former senior Fed staffers.

In 2015, the SOMC reassessed its role and reviewed its beliefs and produced a statement on its Core Beliefs that have many consistencies with the basic tenets of the original SOMC. The SOMC now addresses a more diverse array of issues pertaining to monetary and financial policies.

The Committee has had an excellent track record of anticipating and warning against some of the Fed's largest policy errors and undesired outcomes in modern history. Following its successes of the 1970s, the SOMC warned against the Fed's asymmetric assessment of inflation risks in the early 2000s that led it to keep interest rates too low. It identified clear flaws in the Fed's new strategic plan of 2020 soon after it was announced. And it accurately predicted the 2021-2022 surge in inflation.

Of note, some SOMC members, particularly Bordo, Ireland and Levy, continue to closely follow the monetary aggregates. Unlike the original monetarists of the SOMC, however, they acknowledge the complexities of the monetary transmission channels and the unpredictable short-run volatility of money velocity, and focus on *pronounced shifts* in money supply growth to anticipate and predict possible outcomes. Most recently, the 40% surge in M2, combined with unprecedented deficit spending, led them to predict the 2021-2022 inflation. Such an approach to assessing large outliers in money supply has been advocated by Mervyn King (2024), the ECB in its two-pillar strategy (Issing 2006) and earlier by SOMC member Bill Poole (1993).

The SOMC's current research agenda includes the Fed's upcoming strategic review, issues that would improve the Fed's governance and accountability, and continuing to advocate

systematic rules that would achieve low inflation and improvements in transparency. The SOMC looks forward to providing future constructive advice on these and other issues.

Appendix I. SOMC Committee members

The list of SOMC members and their years on the SOMC are as follows:

Allan Meltzer, 1973-1999, deceased 2017
Karl Brunner, 1973-1989, deceased 1990
Anna Schwartz, 1973-2011, deceased 2011
Jim Meigs, 1973-1977(?), deceased 2014
Bob Rasche, 1973 to 1998, deceased 2016
Wilson E. Schmidt, 1974-1980, deceased 1981
Beryl Sprinkel, 197__ to 1981(?), deceased 2009
Jerry Jordan, 1976-1991 (became Fed member)
Rudolph Penner, 1977-1983
Eric Heinemann, 1977-2001, deceased 2003
Jan Tumlir, 1980-1985, deceased 1985
Mickey Levy 1983-present
Bill Poole, 1984-1998 (became Fed member)
Lee Hoskins, 1991-2006, former Fed member
Charlie Plosser, 1991-2006 and 2015 to present; Fed member 2006-2015
Jadish Bhagwati, 1994-1995
Greg Hess, 1998 to present
Ben McCallum, 2000-2015, deceased 2022
Alan Stockman, 2000-2006, deceased 2010
Marvin Goodfriend, 2008-2016, deceased 2019
Michael Bordo, 2008 to present
Charles Calomiris, 2008 to present
Peter Ireland, 2011 to present
Athanasios Orphanides, 2014 to present
Deborah Lucas, 2017 to present
Andrew Levin, 2019 to present
Jeff Lacker 2022 to present, former Fed member
Jim Bullard, 2024 to present, former Fed member

Appendix II. The SOMC Archives and Website

https://drive.google.com/drive/folders/1nSWfrUTbKzagdGBi0kiSLMTk1RaRjVwe?usp=share_link

www.shadowfed.org

Appendix III. Guest speakers at SOMC meetings

September 2009: Don Kohn, Governor of the Board of Governors of the Federal Reserve, “Central Bank Exit Policies” and Athanasios Orphanides, Governor of Central Bank of Cyprus and Member, European Central Bank, “Central Bank Exit Policies”

March 2010: Kevin Warsh, Governor, Borad of Governors of Federal Reserve System, “An Ode to Independence”

October 2010: Axel A. Weber, President of the Deutsche Bundesbank, “Monetary Policy After the Crisis—An European Perspective”

March 2011: Charles Plosser, President Federal Reserve Bank of Philadelphia, “EXIT”

October 2011: Thomas Hoenig, Former President Federal Reserve Bank of Kansas City, “Comments on Central Banking and Financial Regulation”

April 2012: Kevin Brady, Member of Congress and Vice Chairman, Joint Economic Committee, “Remarks to the Shadow Open Market Committee”

November 2012: Jeffrey Lacker, President Federal Reserve Bank of Richmond, “Challenges to Economic Growth”

Fall 2013: Esther George, President of the Federal Reserve Bank of Kansas City, “…”

March 2014: Martin Feldstein, Harvard University, “…”

November 2014: Richard Fisher, President of the Federal Reserve Bank of Dallas, “R.I.P. QE3…Or Will It?”

March 2015: John B. Taylor, Stanford University, “Getting Monetary Policy Back to a Rules-Based Strategy”

October 2015: Jim Bullard, President of the Federal Reserve Bank of St Louis, “Three Challenges to Central Bank Orthodoxies”

April 2016: Peter R. Fisher, President of the Federal Reserve Bank of Dallas, “What’s a matter with the Fed?”

October 2016: Loretta J.Mester, Federal Reserve Bank of Clevland, “Acknowledging Uncertainty”

May 2017: John C. Williams, President of the Federal Reserve Bank of San Francisco, “Preparing for the Next Storm: Frameworks & Strategies in a Low R-Star World”

September 2017, Mervyn King, former Governor Bank of England, “Unwinding th Fed’s Balance Sheet”

March 2018: Charles L. Evans, President of the Federal Reserve Bank of Chicago, “Some Practical Considerations for Monetary Policy Frameworks”

October 2018: Rob Kaplan, President of the Federal Reserve Bank of Dallas, “Q&A session”

March 2019: Randal K. Quarles, Vice Chairman for Supervision, Board of Governors of the Federal Reserve System, “Frameworks for the Countercyclical Capital Buffers”

September 2019: Patrick Harker, President Federal Reserve Bank of Philadelphia, “An Economic Outlook”

March 2020: Jim Bullard,, Chrles Evans, Esther George, Loretta Mester, Eric Rosengren, John Williams, Al Broaddus, former President, Federal Reserve Bank of Richmond, Don Kohn, The Brookings Institution, Bill Poole, John Taylor, Robert King, Boston University,

June 2020: Jim Bullard, President of the Federal Reserve Bank of St Louis, “The Economic Crisis and Prospects”

September 2020: Kathryn Judge, “Why the Fed Should Issue a Policy Framework for Credit Policy”

April 2021: Rich Clarida, Governor, Board of Governors of Federal Reserve System, “The Federal Reserve’s New Framework and Outcome-Based Forward Guidance”

June 2022: Mary Daly, President of the Federal Reserve Bank of San Francisco, “Policy Nimbleness Through Forward Guidance”

February 2022: Christina Skinner, The Wharton School of University of Pennsylvaina, “Governing Monetary Policy”

November 2022: John Taylor, Stanford University and the Hoover Institution and Donald Kohn, The Brookings Institution, panel on “How Should the Fed Address Its Current Challenge and Risks?”

October 2023: Loretta J. Mester, President of the Federal Reserve “Monetary Policy in Word and Deed”

April 2024: Michelle W.Bowman, Governor, Board of Governors of Federal Reserve System, “Risks and Uncertainties in Monetary Policy: Current and Past Considerations”

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