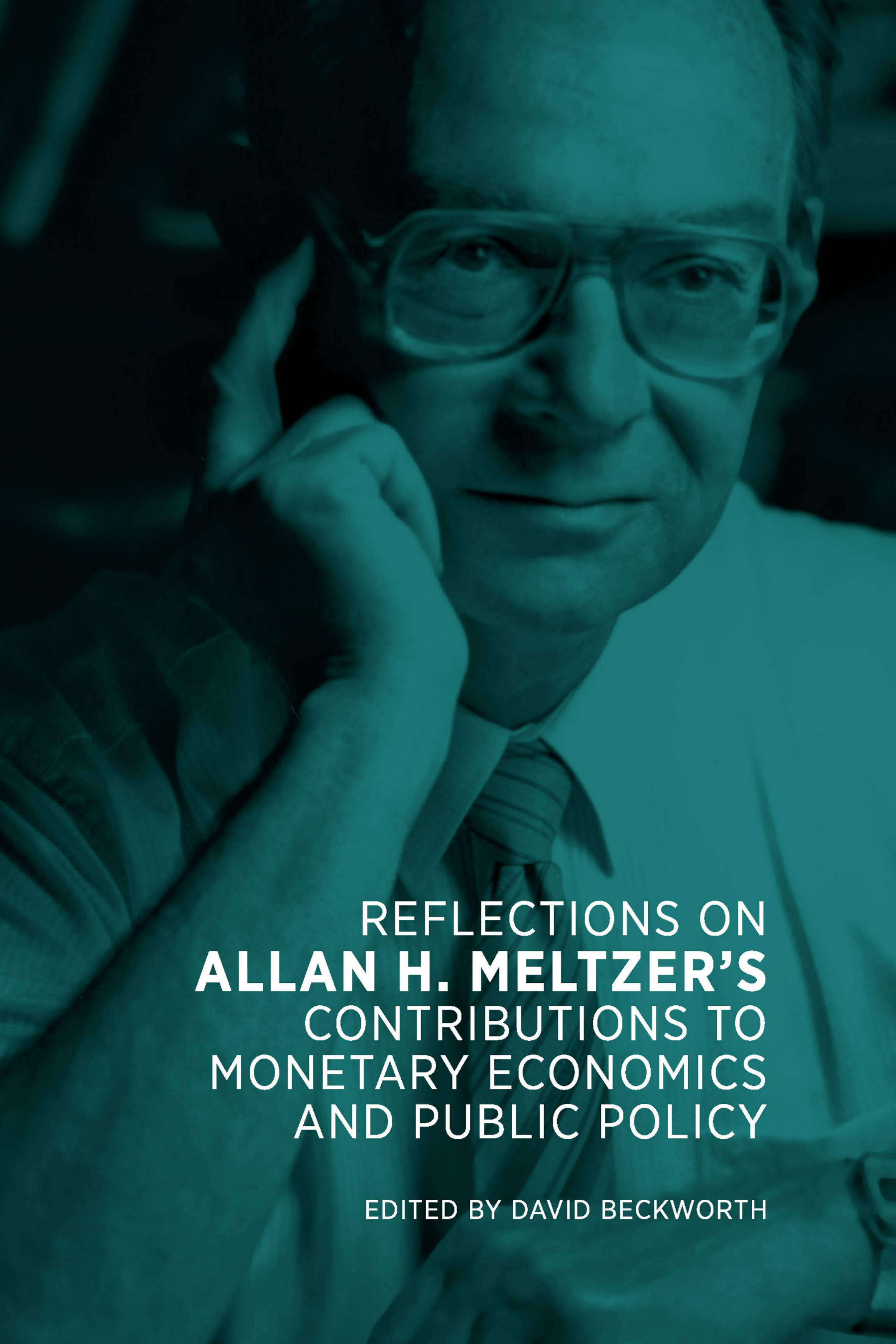

REFLECTIONS ON **ALLAN H. MELTZER'S** CONTRIBUTIONS TO MONETARY ECONOMICS AND PUBLIC POLICY

EDITED BY DAVID BECKWORTH

ADVANCE PRAISE FOR

Reflections on Allan H. Meltzer's Contributions to Monetary Economics and Public Policy

"A nice overview of the important lifework of Allan Meltzer, one of the great monetary economists of the twentieth century."

—**Alan Greenspan**, chairman of the US Federal Reserve Board, 1987–2006

"This book succeeds in highlighting the extraordinary contributions of Allan Meltzer, sometimes with Karl Brunner, to the analysis of monetary economics, history, and policy. Anyone interested in monetary institutions should read it."

—**Paul Tucker**, Harvard Research Fellow, former central banker, and author of *Unelected Power: The Quest for Legitimacy in Central Banking and the Regulatory State*

"Allan Meltzer was a towering figure in economics who left an indelible mark on our understanding of the theory and practice of monetary policy. The concise and eloquent essays in this book describe clearly the monumental contributions he made to monetary theory, monetary history, and the economics of central banking, and why they remain vitally important today. Well worth reading for anyone with an interest in monetary matters."

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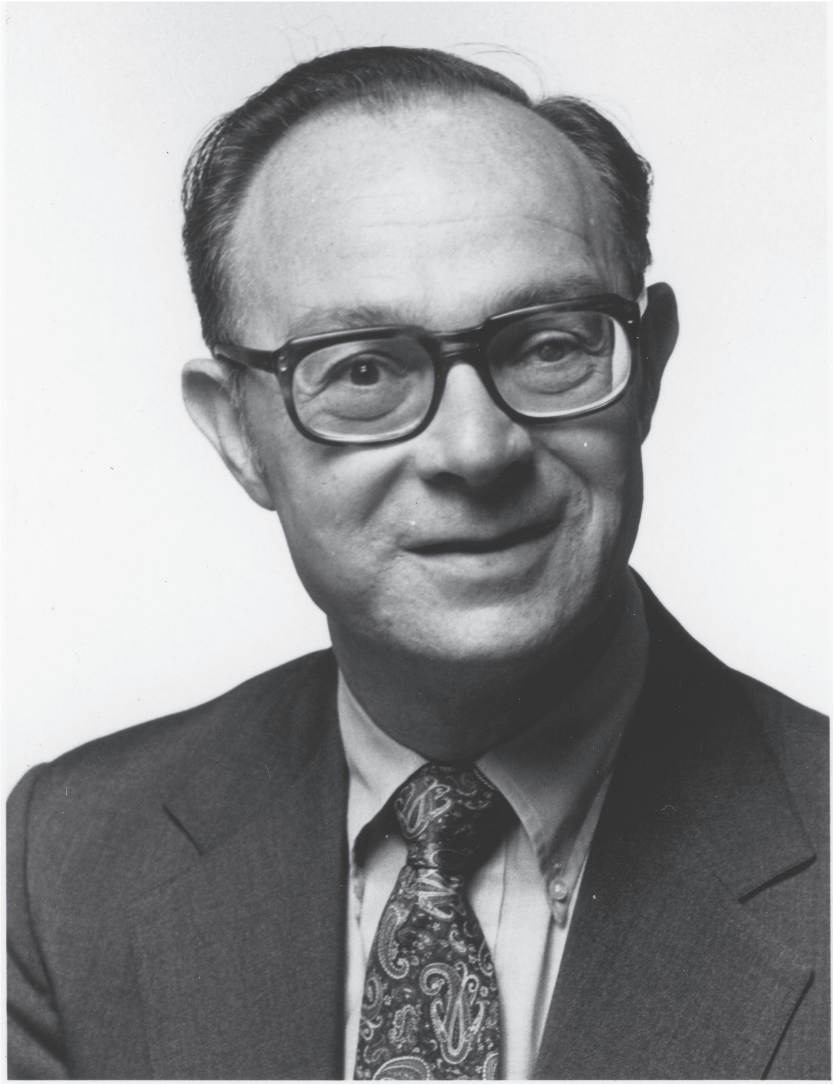

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Contents

About Allan H. Meltzer

Allan Meltzer (1928–2017) was one of the greatest monetary economists of his generation. During his career, he authored many books and papers that help shape the modern consensus on monetary policy and the art of central banking. His work also contributed to a wider debate on the role of public policy in a capitalist system.

Meltzer's academic work on monetary policy demonstrated how central banks can sway the business cycle and why it is important to discipline this influence over economic activity. His efforts continue to inform policy making today, including his landmark books *A History of the Federal Reserve*, volumes 1 and 2 (University of Chicago Press, 2002 and 2010), and the still-ongoing and influential Carnegie-Rochester Conference Series on Public Policy that he founded along with Karl Brunner. His book *Why Capitalism?* (Oxford University Press, 2012) gives an impassioned defense of the market economy in a time when many have blamed capitalism for economic disaster, inequality, and other social ills.

Meltzer joined the faculty at Carnegie Mellon Graduate School of Industrial Administration, later named the Tepper School, in 1957 and would go on to hold a professorship in political economy there until his death. He was also a distinguished visiting fellow at the Hoover Institution as well as a visiting professor at numerous universities, including Harvard University and the University of Chicago.

Meltzer also threw his hat into the policy world by serving as a consultant for several congressional committees, the president's Council of Economic Advisers, the US Treasury Department, the Board of Governors of the Federal Reserve System, foreign governments, and various central banks. He was also a member of the President's Economic Policy Advisory Board from 1988 to 1990.

From 1986 to 2002, he was an honorary adviser to the Institute for Monetary and Economic Studies of the Bank of Japan. In 1999–2000, he served as chair of the International Financial Institution Advisory Commission, known as the Meltzer Commission, which proposed major reforms of the International Monetary Fund and the development banks.

Over the course of his career, Meltzer won many awards, including the 2003 Irving Kristol Award from the American Enterprise Institute and the 2009 Distinguished Teaching Award from the International Mensa Foundation. In 2011, he won the Bradley Award, the Harry Truman Medal for Public Policy, and the Truman Medal for Economic Policy.

Meltzer received his BA in economics from Duke University and his MA and PhD in economics from UCLA under the direction of Karl Brunner. He is survived by his wife of sixty-six years, Marilyn, as well as by three children and eight grandchildren.

Allan Meltzer had a long and productive career and the world is a better place because of it.

Introduction

DAVID BECKWORTH

Allan Meltzer was one of the leading monetary economists of the twentieth century, authoring more than a dozen books and 300 papers during his distinguished career. His work changed the fields of economics, central banking, and public policy.

Meltzer's academic work was seminal in both the theoretical and practical applications of monetary economics. He carefully showed how central banks affect broad economic activity and how that influence could, and sometimes did, end in economic disaster. His work on monetary policy, including his magisterial two-volume *A History of the Federal Reserve* and the public policy conference series he founded with Karl Brunner, is still important and relevant today.

Meltzer participated in the policy world by serving as a consultant for several congressional committees, the president's Council of Economic Advisers, the US Treasury Department, the Board of Governors of the Federal Reserve System, foreign governments, and various central banks. He also served as chair of the International Financial Institution Advisory Commission, known as the Meltzer Commission, which proposed major reforms of the International Monetary Fund and development banks in the late 1990s.

Meltzer passed away in May 2017. To commemorate his career, a conference was held on January 4, 2018, in Philadelphia, Pennsylvania. The conference, titled Meltzer's Contributions to Monetary Economics and Public Policy, was organized by the Program on Monetary Policy at the Mercatus Center at George Mason University and by the Institute for Humane Studies.

Participants at the conference spoke of three areas in which Meltzer made important contributions: the history of the Federal Reserve, the monetary transmission mechanism, and public policy more generally. Their presentations make up most of the chapters in this book. Owing to the extemporaneous nature of conference proceedings, some of the chapters in this volume have been transcribed.

Chapter 1 starts the book with an essay by John Taylor. He takes a broad look at Meltzer's career and notes that it was characterized by a desire to be holistic. This is why Meltzer spent many years developing a theory of the monetary policy transmission mechanism only to follow that with many more years working on the history and political economy of the Federal Reserve. These various endeavors complemented each other and provided a well-rounded understanding of US monetary policy. Taylor also notes that one of the inescapable lessons Meltzer drew from this work was the need for rules. That is why Meltzer became a long-time advocate for monetary policy rules.

Chapter 2 begins the section of the book that takes a closer look at Meltzer's contribution to the history of the Federal Reserve. Authoring this chapter is Michael Bordo, who reviews the broad themes in Meltzer's *History of the Federal Reserve, 1913–1986* (*HFR*). He notes that, unlike Milton Friedman and Anna Schwartz's *A Monetary History of the United States, 1867–1960*, *HFR* is not a monetary history per se but more of a biography of the institution, its leaders, and their decision-making process. A key argument of *HFR* is that had the Fed followed the quantity-theory-based classical monetary theory—as espoused by Henry Thornton, Walter Bagehot, and Irving Fisher—the Fed could have easily avoided its biggest failures: the Great Contraction of 1929–1933 and the Great Inflation of 1965–1982. Conversely, its biggest successes, the Volcker Disinflation of 1979–1982 and the Great Moderation of 1985–2001, occurred because the Fed did follow classical monetary theory.

Robert Hetzel, however, pushes back in chapter 3 against Meltzer's claims in *HFR* and elsewhere that Fed officials were capable of following the "self-evident" quantity theoretic truths from classical monetary theory and, thereby, could have avoided the Great Depression. Hetzel notes that these claims trivialize the role played by Meltzer and the other monetarists in the monetarist counterrevolution. Their efforts over many years are what led to the modern understanding of monetary policy and the role of a central bank. To believe Fed officials in the 1930s could have acted differently is to assume they had access to the body of knowledge Meltzer and the other monetarists spent a lifetime establishing.

In chapter 4, George Selgin closes out the historical portion of the book by looking at one of the fascinating stories in *HFR* and using it to shed light on current development. Specifically, he looks at the Fed's raising reserve requirements between 1936 and 1937 and compares it to the Fed introducing interest on excess reserves (IOER) at a rate higher than comparable short-term interest rates starting in late 2008. In both cases, concerns about excess reserves stoking inflation were a motivating factor, and in both cases the policy actions served to sterilize the excess reserves by increasing banks' demand for reserves. Arguably, in both cases, these actions contributed to a subsequent downturn and slow recovery. Some history lessons get repeated.

Chapter 5 starts the portion of the book that looks at Meltzer's contributions to the monetary transmission mechanism. Peter Ireland, the author of this chapter, begins by observing that Meltzer worked closely with Karl Brunner over several decades to create what became known as the Brunner-Meltzer model. This model is similar in some ways to modern macroeconomic models but differs in other ways. One key difference is that the Brunner-Meltzer model sees monetary policy working through a wide spectrum of assets prices and yields rather than through just the expected path of the short-term interest rate target. As Ireland notes, this understanding implies that the effective lower bound on short-term interest rates should not be a binding constraint on monetary policy, for other asset yields can be affected through open market operations. The Brunner-Meltzer model, therefore, can be used to justify some form of quantitative easing. More generally, as Ireland shows, the model can be used to motivate the use of monetary aggregates in modern monetary policy.

Edward Nelson notes in chapter 6 that Meltzer saw the monetary base as central to understanding the monetary transmission mechanism. Meltzer believed the growth of the monetary base helped shape the growth of broader monetary aggregates and nominal income more generally. He also believed the real monetary base could be used as a summary indicator, or index of changes, across the many asset prices that mattered for aggregate demand. Nelson explores the implications of these beliefs and resolves some seeming paradoxes they create. For example, he shows how Meltzer's focus on the liability side of the Fed's balance sheet can be reconciled with monetary policy working through changes in the mix on its asset side. Nelson shows how this understanding makes sense in light of the Fed's large-scale asset purchases and interest rate targets.

In chapter 7, Joshua Hendrickson considers what the Brunner-Meltzer model implies for US monetary policy in light of the Fed's floor system. As noted, in late 2008 the Fed introduced IOER at a level higher than comparable short-term interest rates as it vastly expanded its balance sheet. These actions turned the Fed's operating system from a corridor system to a floor system. In this new operating system, the Fed uses an administered interest rate, the IOER, to set monetary policy. Hendrickson notes, however, that the Brunner-Meltzer model implies that monetary policy works through many asset prices and yields, not just a single target interest rate like the IOER. Moreover, the floor system has intentionally divorced money from monetary policy—by raising demand for bank reserves to the perfectly elastic portion of the demand curve—and so real money balances are no longer informative about the stance of monetary policy. The Fed, therefore, may find managing monetary policy more challenging in the floor system.

In chapter 8, St. Louis Federal Reserve president James Bullard reviews Meltzer's work on the Federal Reserve's search for a nominal anchor coming out of the Great Inflation of the 1970s and early 1980s. Bullard notes that much progress has been made with the Fed's adoption of an inflation target, first de facto in the mid-1990s and then explicitly in 2012. Bullard goes on to consider whether this progress has meant the Fed is conducting something close to optimal monetary policy. He does so by looking at the disappearing Phillips curve and deviations from the price-level growth path.

Chapter 9 starts the section that looks at Meltzer's contribution to public policy thought. The author of this chapter, Gerald O'Driscoll, shares his experience working with Meltzer on the International Financial Institution Advisory Commission, known as the Meltzer Commission, which sought to reform the International Monetary Fund and development banks in light of the emerging market crises of the mid-to-late 1990s. Meltzer was the chair of the commission, and O'Driscoll was his chief-of-staff. Meltzer had six months to navigate a commission divided among Republicans and Democrats and was able to produce a bipartisan report.

In chapter 10, Robert Lucas reflects on his time working with Meltzer at Carnegie Mellon University and recalls a debate Meltzer had with Noam Chomsky. Lucas also points to the seminal work Meltzer did on theoretical money demands models, starting with his influential 1963 *Journal of Political Economy* article. Lucas notes that Meltzer's work complemented that of Friedman and Schwartz, who focused more on pure monetary history. Lucas also shows that Meltzer's early money demand work still holds up if updated to the present.

Chapter 11 closes this section with Charles Plosser recognizing the many public policy contributions made by Meltzer. They include his co-creating the Shadow Open Market Committee and the Carnegie-Rochester Conference Series on Public Policy in the 1970s. These programs continue to this day and have made many important contributions to monetary policy, including John Taylor's 1993 Carnegie-Rochester Conference paper that coined his now-famous Taylor rule. Plosser suggests that Meltzer's biggest public policy contribution was his enduring support for monetary policy rules. Plosser agrees with Meltzer's assessment that the Fed's biggest policy failures occurred in periods of excessive discretion, the Great Depression and the Great Inflation. Conversely, in periods of more rule-like behavior, such as the Great Moderation, the Fed performed the best.

The final chapter of this book is a transcript of a live interview Meltzer did for the podcast *Macro Musings*. The interview took place in November 2016, just six months before he died. It is Meltzer in his own words, one last time before he passed. I was the host of the show and was impressed with his sharp-witted insights during our conversation. We talked about how he got into economics, the monetarist counterrevolution, his work with Brunner, his reinterpretation of Keynes's work, the role of money in monetary policy analysis, and his thoughts on the Great Recession, quantitative easing, and inflation targets.

CHAPTER 1
Making the Rules and Breaking the Mold: Allan Meltzer, 1928–2017

JOHN B. TAYLOR

Allan Meltzer, who died in May 2017 at the age of eighty-nine, had a long and productive career, fundamentally affecting the fields of economics, central banking, and, more broadly, economic policy. An extraordinary scholar, he immersed himself in the practical world of policy making in many ways. He had a unique ability to understand, explain, and improve the interface between the fields of economics and economic policy.

For Meltzer, it was not enough to develop a novel theory of the economic impact of monetary policy, which he did in his research on the financial system starting with Swiss economist Karl Brunner. He also examined the institutions responsible for policy through his landmark two-volume work *A History of the Federal Reserve* (*HFR*) and the Carnegie-Rochester Conference Series on Public Policy, which he cofounded with Brunner.

For Meltzer, it was not sufficient to show empirically that policy mistakes caused poor economic performance. He also researched why the mistakes were made, including by developing, with Scott Richard and Alex Cukierman, theories of political economy and decision-making. It was not enough for him to conduct research and teach at Carnegie Mellon University, where he was a professor. He also threw his hat into the ring of real-world policy making, serving on the US president's Council of Economic Advisers (CEA), chairing the Meltzer Commission on international monetary reform, writing reports for Congress, and often testifying in congressional committees on monetary policy.

It was not even enough for him to have had a profound impact on central banking; he also delved into the operations of the whole market system, asking the key question in the title of his book *Why Capitalism?* and answering that capitalism is "the only system that the world has ever known that produces both growth and freedom."

CRITICISM WAS NEVER PERSONAL

In engaging with actual policy, Meltzer never held back criticism of policy decisions and policy-making institutions when he felt strong criticism was warranted. But he avoided personal attacks or impugning people's motives. Regarding US Federal Reserve Board decisions, for example, he wrote in *HFR* that, "although I find many reasons to criticize decisions, I praise the standards and integrity of the principals" (Meltzer 2010, x).

Meltzer's views on monetary policy began to take form in his research with Brunner, whom Meltzer noted was his "teacher, dissertation supervisor, later my co-author and lifelong friend." They wrote twenty-five papers together on policy, many focused on a model of the monetary transmission process. The modeling research began in the 1960s, and the key framework was later called the Brunner-Meltzer model. Meltzer went on to develop this framework further and apply it in practice.

The model was unique in the way it incorporated the determinants of both the supply of money and the demand for money, going behind the scenes of the quantity equation of money employed by Irving Fisher and Milton Friedman. The model showed how the economic effects of changes in the money supply involved a complex channel with credit flows, wealth effects, interest rates, and asset prices. Today, many macroeconomic researchers are trying to incorporate credit into popular macro models because changes in credit flows had such a noticeable and devastating impact during the global financial crisis. Meltzer had incorporated these features into his thinking fifty years ago.

Based on this theoretical and empirical research, Meltzer came to a particular view of how to evaluate monetary policy that gave clear advantages of predictable rule-like decisions for the policy instruments, whether the interest rate or the monetary base. He then applied this framework consistently over time to actual policy, uncovering policy mistakes in the midst of policy successes. More than any other monetary economist, he looked for and examined the reasons for the mistakes, and he focused on two basic reasons: political interference with policy and mistaken beliefs about policy. This led to his recommendations about how central banks should be governed and how monetary policy should be conducted, which have had an important impact.

THE FED'S MISTAKES IN THE 1930s AND 1970s

Meltzer argued that the Great Depression of the 1930s was largely caused by a mistake made by Fed officials who allowed the money supply—currency and deposits—to fall by 28 percent. He looked for the reasons for that mistake and concluded the problem was mainly a faulty belief at the Fed about how monetary policy works. He found evidence in the Fed's own records that it had used misleading indicators, such as nominal interest rates or bank borrowings, as measures of monetary tightness, when economic theory pointed to the real interest rate and broader monetary aggregates, such as currency and deposits. For this reason, the Fed decided that open market purchases were not necessary because low member bank borrowings and low interest rates were a sign of monetary ease. Meltzer showed that the alternative, correct, view, that the central bank should control deposits and currency, was known outside the Federal Reserve system at the time but was not reflected in the Fed's decisions.

"So certain was the System about the correctness of its actions and its lack of responsibility for the collapse that I have found no evidence the Board undertook an official study of the reasons for the policy failure," he wrote in *HFR* (Meltzer 2002, 413). Meltzer also argued that the Great Inflation of the late 1960s and 1970s was due to a policy mistake—this time a large increase in money growth and a corresponding effort to keep interest rates too low. Again, Meltzer looked for the reasons for the policy mistake. One reason was the Fed's mistaken belief in the Phillips curve, which said that higher inflation would reduce unemployment permanently.

But a second reason was political. The Fed agreed to coordinate its actions with the US administration's fiscal policy, a practice that meant the Fed would try to keep interest rates low. A third reason was also political. As the 1972 election approached, Fed chair Arthur Burns became convinced that the unemployment rate required to reduce inflation would be politically unacceptable. He became the leading proponent of wage and price controls, and let money growth increase. So, both Meltzer's categories of reasons for mistakes were to blame.

VOLCKER RECAPTURES LOST FED INDEPENDENCE

The end of the Great Inflation and the start of the Great Moderation of price and output stability was a different story. There was an absence of the big mistakes and a corresponding emphasis on more predictable rule-like behavior. Meltzer stressed Fed chair Paul Volcker's reliance on a framework in which inflation is a monetary phenomenon with no long-run Phillips curve trade-off. He emphasized how Volcker recaptured much of the independence the Fed had lost during the Great Inflation and was, thereby, able to resist political interference and take the necessary steps required to restore stability.

Going deeper, Meltzer wrote how Volcker was ideally suited for preventing the mistakes. Volcker had "the background and experience to be a successful chairman. . . . Foreign central bankers and New York bankers knew him and had confidence in him. He was knowledgeable and strong-willed, and determined and committed to the task" (Meltzer 2010, 1012).

During the Great Moderation, which continued under Volcker and much of Alan Greenspan's term as chair, the Fed did not succumb to political pressures or faulty theories. Meltzer was again critical of monetary policy for its role in the global financial crisis.

He argued that it was a mistake for the Fed to depart from a rule-like policy and keep rates unusually low in the years before the crisis. The explanation for these policy mistakes appeared to be in the "mistaken beliefs" category: a mistaken view that rule-like policy was not necessary and that a return to discretion was OK. Meltzer was also critical of quantitative easing after the crisis and said that the Fed's lender-of-last-resort actions during the crisis had no clear strategy. On the political side, he argued that the Fed seemed willing to sacrifice much of the independence Volcker had restored in the 1980s.

In sum, Meltzer concluded that the Great Depression was mainly due to bad economics: mistaken beliefs about interest rates and bank borrowings; that the Great Inflation was a combination of both factors, with political pressures dominating near the end as beliefs changed but policies did not; that the Disinflation avoided big mistakes of either type as the Fed regained independence and restored basic monetary fundamentals, which continued into the Great Moderation, a period of more rule-based policy; and that the global financial crisis and its aftermath was a return to a combination of both kinds of errors. Meltzer's research, thus, led him to a clear policy conclusion, as he wrote in the second volume of *HFR*, published in 2010: "Discretionary policy failed in 1929–33, in 1965–80 and now." And it is equally clear and convincing that "the lesson should be less discretion and more rule-like behavior"

(Meltzer 2010, 1255). This considered assessment, based on years of research and study, is, perhaps, his most fundamental contribution to central banking.

HFR was itself a "monumental accomplishment," to use the words of economic historian Michael Bordo (2006, 613). Meltzer examined transcripts of meetings of the Federal Open Market Committee; notes and interviews with Fed officials; records at the New York Fed and other regional banks; papers from presidents of the United States and their assistants; and the records of Congress, the Treasury, the CEA, foreign monetary officials, academics, and journalists. He insisted that policy makers express their views and explain their decisions in their own words and, thus, frequent quotes of policy makers are found throughout *HFR*. He connected complex series of events, transforming his painstaking research into "an exceptionally clear story," as economist David Laidler described it (2003, 1256). By making so much information accessible in a readable and manageable form, he contributed greatly to economics and central banking.

CONGRESSIONAL HEARINGS

Meltzer's work over the years advising Congress and many administrations is another part of his impact on policy. There is no better way to understand this influence than to have watched him in action. I recall a 2015 hearing at the Senate Committee on Banking, Housing, and Urban Affairs about monetary reform, where he was a witness (Meltzer 2015). I sat next to him at the witness table, listening carefully. Meltzer was remarkably clear, articulate, and convincing, directly addressing senators on the committee, both Democrats and Republicans. Indeed, both sides seemed to be listening carefully, in part because he was so obviously nonpartisan. In answering a question about a lender-of-last-resort proposal by Senator Elizabeth Warren, he said, "I congratulate you, Senator Warren, for keeping this issue alive."

Meltzer spent a lot of time at this hearing explaining the merits of a bill that would require the Fed to describe its rules or strategy for monetary policy. In his opening, Meltzer said,

> We need change to improve the oversight that this committee and the House Committee exercises over the Fed. You have the responsibility. Article I, Section 8 gives that to you. But you do not have the ability to exercise authority.
>
> You are busy people. You are involved in many issues. The chairperson of the Fed is a person who has devoted his