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The Emergence of Forward Guidance As a Monetary Policy Tool

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Abstract

Forward guidance—the issuance by a central bank of public statements concerning the likely future settings of its policy instruments—is widely regarded as a new tool of monetary policy. The analysis in this paper shows that Federal Reserve policymakers from the 1950s onward actually accepted the premises of forward guidance: the notion that longer-term interest rates are key yields in aggregate spending decisions; and the proposition that indications of intentions regarding future short-term interest rate policy can affect longer-term rates. Over the same period, they were nevertheless wary about providing forward guidance regarding short-term interest rates, fearing that this could generate untoward market reactions or lock the Federal Open Market Committee into inappropriate rate settings. They concentrated on describing future policy in terms of achievement of economic objectives, with their commentary on interest-rate prospects usually confined to consideration of the longer-term factors affecting rates. Even in these years, however, there were infrequent occasions—notably in 1974 and 1982—when policymakers provided more explicit guidance regarding the path of short-term rates. In the 1990s, a consensus developed in U.S. policy circles that was more receptive toward the notion of guiding longer-term interest rates by providing indications of future FOMC actions. This consensus developed even before concerns about the lower bound on short-term rates became prevalent in U.S. policymaking. The new mindset, which stressed the stabilizing effects on the economy of communication of policy intentions, set the stage for the emergence of forward guidance as a monetary policy tool.

Key Words: Forward guidance, monetary policy tools, monetary policy strategy, interest-rate forecasts, interest-rate lower bound, Federal Open Market Committee, Federal Reserve.
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1. Introduction

"[*I*]*t is true there are no adjectives, no judgments and no explanations of present actions or inaction in these* [*Federal Reserve*] *statements and reports; nor are there tips, predictions, threats or promises of future action. Nor, given our present state of knowledge, does it seem desirable or appropriate that there should be.*"—George W. Mitchell, Federal Reserve Board governor, October 1966[1]

"[*I*]*nfluencing the public's expectations about future policy actions became a critical tool…*"—Ben S. Bernanke, Federal Reserve chair, October 2011[2]

Forward guidance—the issuance by a central bank of public statements concerning the likely future settings of its policy instruments—is now a key aspect of monetary policy in the United States. The study of the properties and implications of forward guidance has also developed into a vibrant part of the research literature on monetary policy and its effects. Even before forward guidance became an entrenched component of U.S. monetary policy announcements, Eggertsson and Woodford (2003) had provided a formal analysis showing that public undertakings to adhere to an expansionary stance for a stretch of time might serve as a means by which the monetary authorities could stimulate aggregate demand when their short-term nominal interest-rate instrument was currently at its zero or effective lower bound (ELB).[3] In the realm of monetary policy practice, limited moves toward the inclusion of forward guidance in the Federal Open Market Committee's (FOMC) postmeeting policy statements occurred in 2003 and 2004. The regular incorporation of forward guidance into FOMC postmeeting statements began in 2008, when the federal funds rate moved to its ELB. The FOMC's deployment of forward guidance regarding the federal funds rate has continued—with many variations being made in the specific form of guidance provided—in the years since 2008, both in and outside ELB conditions.[4]

The practical experience established through the employment of forward guidance by monetary policy committees in the United States and other countries has, in turn, had a major influence on

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[1] Mitchell (1966a, p. 3; p. 398 of 1971 printed version). See also Mitchell (1966b, p. 8).
[2] Bernanke (2011, p. 4).
[3] Prior to this, Tobin (1981, pp. 206–207) and Krugman (1998, esp. pp. 162, 179−180), among others, had pointed toward a policymaker commitment to generating, or validating, inflation in future periods as a method by which a central bank could stimulate aggregate demand in ELB conditions. In contrast, however, to Eggertsson and Woodford (as well as Woodford, 1999), and also unlike much of the twenty-first-century literature on forward guidance, Tobin and Krugman did not consider in detail what such an articulation of desired outcomes might imply for the formulation of the central bank's reaction function.
[4] See, for example, Clarida (2020).

the analytical work that has been done on this policy measure. The research in question has included efforts to develop classification schemes regarding different types of forward guidance (for example, Campbell, Evans, Fisher, and Justiniano, 2012); to ascertain the empirical effect of forward guidance on U.S. longer-term interest rates (for example, Swanson and Williams, 2014); to bring out cases, in quantitative forward-looking models, in which forward guidance might either generate outsized effects on economic activity (for example, Del Negro, Giannoni, and Patterson, 2015, and McKay, Nakamura, and Steinsson, 2016) or have notable limitations in its ability to stimulate aggregate demand (for example, Levin, López-Salido, Nelson, and Yun, 2010; Campbell, Ferroni, Fisher, and Melosi, 2019; García-Schmidt and Woodford, 2019; Cole, 2020); and to analyze how forward guidance fits alongside other policy tools—including, most notably, central-bank purchases of longer-term government securities—into the formulation of a cohesive monetary policy strategy, especially in a situation in which the policy rate is at the ELB (for example, Engen, Laubach, and Reifschneider, 2015; Svensson, 2015; Bernanke, 2020; Eberly, Stock, and Wright, 2020).

A perspective on forward guidance that is largely common to these research contributions is encapsulated in Bernanke's (2020) grouping of forward guidance among the "new tools of monetary policy."

The analysis in the present paper departs from the existing literature in focusing on U.S. monetary policy in the *pre-2003 period* from the perspective of forward guidance. In doing so, this paper fleshes out the grounds on which forward guidance should be considered a new tool. At the same time, however, the analysis in this paper offers evidence that, in key respects, this perception warrants considerable reevaluation. The essential concept of forward guidance is, as documented below, of long standing and was familiar to the policymakers of past eras. This fact is brought out in this paper via an analytical account covering the relevant developments in U.S. monetary policy discourse over the five decades to 2003. The examination concerns Federal Reserve policymaker statements, actions, and discussions that anticipated and prefigured—as well as those that criticized and rejected—the option of employing the monetary policy tool that would become known as forward guidance.[5]

[5] Because the paper is concerned with public communications, the documentary material examined in this paper consists primarily of Federal Reserve officials' on-the-record statements (such as those given in speeches and congressional testimony) rather than material (like FOMC meeting transcripts) that was disclosed only after a multi-year lag. Some internal material is considered, in order to provide a check on the reliability (as an authentic account of the views held by those in policy circles) of what was relayed in the public statements.

In particular, this paper traces the emergence of forward guidance as a policy tool in the United States by highlighting the evolving perspectives, expressed by successive Federal Reserve policymakers, toward presenting formal or informal public projections of interest rates (especially of short-term market interest rates closely related to Federal Reserve policy actions).

What emerges from the analysis can be stated briefly. Over these decades, the FOMC evolved from adhering to what one prominent policymaker called a "you see it as we do it" approach, in which the Federal Reserve tended not to make statements about the FOMC's policy stance other than those pertaining to its immediate policy decision, toward a very different posture—one of being congenial to the deliberate exercise of a policymaker influence on longer-term interest rates, through the provision of explicit information about the likely course of the short-term policy rate. Therefore, the status of forward guidance as a new tool stems from the fact that pre-2003 policymakers contemplated, but largely rejected, its use as a tool. Even before 2003, however, there were occasional deviations from this posture. Notably, in 1974, Federal Reserve chair Arthur Burns felt it necessary to make clear that high nominal interest rates would need to continue "for a time" as an anti-inflation measure; and a later chair, Paul Volcker, having presided over a period of very restrictive monetary policy, chose in March 1982 to make an explicit indication that nominal interest rates would and should fall in the period ahead.

In more detailed terms, the examination in this paper indicates that two key analytical premises underlying forward guidance—the notion that expectations of short-term interest rates matter for longer-term rates; and the conviction that longer-term rates figure importantly into private-sector spending decisions—were well understood and accepted in U.S. policy circles by the mid-1950s.[6] However, for many years the granting of these premises did not translate into a policymaker acceptance of the desirability of forward guidance. This was despite the fact that there were multiple occasions on which the provision of such guidance was explicitly aired by Federal Reserve officials when they contemplated their policy options, including in discussions given in public. Multiple factors underlay policymakers' aversion, prior to the 1990s, to forward guidance. These included a view that policymakers' intentional influence on financial market prices should be confined to formal FOMC decisions about the immediate policy action and should not include indications by the Committee (or the Federal Reserve chair) of the future

[6] For the first of these premises to have a considerable bearing on thinking about monetary policy, it is also required that expectations of future interest rates are endogenous and are responsive to current central bank policy. This condition has, very typically, been satisfied, over successive decades, in the economic framework underlying both practical policy discussions and in formal economic models. Important but infrequent exceptions, noted below, occurred when prominent economists (like John Maynard Keynes in 1936) or policymakers (like Federal Reserve Chairman Arthur Burns in 1975) denied a policy-relevant connection between short- and long-term rates.

course of the policy rate. Concern was repeatedly voiced that indications of this kind would prove unintentionally destabilizing for economic activity. Policymakers also feared that an articulation of the likely path of short-term rates might limit their prerogatives in future periods.[7]

Against the backdrop of these concerns, policymakers in the 1960s through the 1980s concentrated on the Fisher relationship—which links expected inflation and the nominal interest rate—as a means of outlining the likely values to which nominal interest rates would converge under maintenance of the current policy strategy. Taking this tack allowed Federal Reserve officials to provide a valid description of monetary policy's influence on the longer-term average values of interest rates. This approach nevertheless sidestepped the reality that, over the short and medium run, monetary policy bears heavily on how short-term nominal interest rates behave *in relation to* expected inflation—and it is this horizon to which forward guidance, of the modern type, pertains.[8] Policymakers in this earlier era refrained from comment about how interest rates would behave over this horizon, and so they rarely gave *bona fide* forward guidance.

The analysis in this paper also shows that, from the late 1970s onward, although numerous improvements occurred in policymaker communications about future monetary policy, these innovations largely fell into the category of providing greater clarity about the horizon over which policymakers hoped to reach their longer-term economic objectives—and did not involve overt indications about future values of the policy rate. By the early 1990s, however, Federal Reserve officials had become more comfortable with giving their public descriptions of monetary policy decisions and strategy in terms of the setting of short-term interest rates.[9] Furthermore—and well before the range of variation of short-term rates was very close to the ELB—their accounts now came to acknowledge explicitly the benefits of a situation in which policymakers influenced longer-term interest rates by shaping market expectations of future short-term interest rates. Even in this period, however, Federal Reserve officialdom largely continued to imply that it was the responsibility of outside commentators, and not of policymakers, to give public predictions concerning short-term interest rates. In this situation, the onus was placed on the private sector to make inferences regarding the FOMC's reaction

[7] This concern included a wish to avoid the possibility that the provision of guidance might be perceived as amounting to a reversion to a policy (similar to that seen through 1951) of rigid pegging of interest rates—and so as constituting a move away from adjusting the policy rate in response to the economic outlook.
[8] Because so much medium-term variation in short-term nominal interest rates has to do with factors other than expected inflation, many practical discussions of the Fisher relationship have treated that relationship as relevant primarily for the analysis of the behavior of longer-term interest rates. Over long periods, however, even short-term nominal interest rates should be closely related to expected inflation, as already indicated.
[9] This shift culminated in the FOMC's well-known move, in 1994, to making same-day announcements of its decisions concerning the target federal funds rate.

function, in the absence of explicit official guidance on the matter. Nevertheless, and especially at the end of the 1990s, the FOMC did on occasion provide very short-term forward guidance by including, in its postmeeting statement, indications of its likely next-meeting policy decision.[10] It is in the wake of this increased receptiveness on the part of policymakers toward discussion by themselves of the likely values of future policy rates that forward guidance emerged as a policy tool in the early years of the twenty-first century.

This paper's analysis of the emergence of forward guidance as a policy tool will concentrate on guidance concerning the federal funds rate.[11] Otherwise, no attempt will be made to distinguish (along the lines of Campbell, Evans, Fisher, and Justiniano, 2012) between different possible types of forward guidance. In particular, something not explored below is whether, in articulating and clarifying the likely future policy rate path, forward guidance is meant to reshape expectations regarding how near Federal Reserve will get to its goals in the medium term.

The rest of this paper provides details and documentation concerning the findings just described. Section 2 discusses the building blocks of forward guidance—the two analytical premises, mentioned above, regarding longer-term interest rates—and the fact that they were widely accepted in U.S. policy analysis by the 1950s. With regard to forward guidance-type policies, Sections 3, 4, and 5 discuss the attitude taken during the tenures (as head of the Federal Reserve Board and FOMC) of William McChesney Martin Jr. (Section 3), Arthur Burns (Section 4), and William Miller and Paul Volcker (Section 5). Section 6 discusses the gradual shift to an embrace of forward guidance that occurred during the tenure of Alan Greenspan as Federal Reserve chair. Section 7 offers some concluding observations.

2. The building blocks of forward guidance

Two analytical premises form key building blocks for a policy of forward guidance. These premises are (i) that longer-term interest rates importantly influence private-sector spending

[10] The analysis is therefore basically consistent with a remark by Steinsson (2019) that in a "broader sense, forward guidance has been a critical part of virtually every FOMC statement since 1999." See also Lunsford (2020), who focuses on forms of forward guidance provided by the FOMC in the period since early 2000. As these authors classify descriptions of the economic outlook—not accompanied by an articulation of the likely accompanying monetary policy settings—as forward guidance, they have a broader conception of guidance than that used below.
[11] Concentrating on forward guidance regarding the federal funds rate is not very restrictive, in view of this paper's concentration on the period before 2003. When the Federal Reserve in this era did devote considerable attention to quantitative tools (such as during its Operation Twist policy of the early 1960s and the period, from 1979 to 1982, of operating procedures centered on the setting of nonborrowed reserves), these tools were varied primarily with a view to altering near-term monetary and financial conditions, rather than (as occurs under forward guidance) affecting expectations of conditions prevailing in the medium term.

decisions, and (ii) that expectations regarding the path of short-term interest rates are a key factor driving longer-term interest rates. The objective of this section is simply to make clear that, however new forward guidance may be as a policy tool, the acceptance of these two premises is of many decades' standing in monetary policy discussions.[12]

Laidler (1989, p. 35) specifically identified with the advent of Keynesian economics the position that long-term interest rates are key rates driving spending behavior. Consistent with Laidler's attribution, that position was strongly advocated by John Maynard Keynes in the 1930s, especially in Keynes (1930).[13] However, an emphasis on the link between long-term rates and private-sector spending decisions predated the 1930s. For example, Alfred Marshall (1923, p. 78), in commenting on how matters stood in the United Kingdom, observed that major firms' source of long-term financing came not from commercial banks but from the issuance of corporate bonds.[14] Over the century since Marshall wrote, it has remained a mainstay of monetary policy discussions that—of the various open-market and administered interest rates seen in the economy—those pertaining to longer-term loans are certainly important for private-sector spending decisions.[15] This is the case especially in the case of the United States, which traditionally has had household and corporate borrowing rates that are quite closely keyed to the yields prevailing in longer-term securities markets.[16] One reflection of this situation was a 1979 statement by Paul Volcker, in remarks made in his confirmation hearings, that "the basic point [is] that the most important interest rates in this context are probably longer-term interest rates."[17]

The second building block of forward guidance is the premise that longer-term rates are partly composed of the expected path of short-term rates and that, furthermore, this expected path is not exogenously fixed: instead, the expected path responds endogenously to information provided in the current period about the likely course of short-term rates. This premise is, of course,

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[12] See also Levin, López-Salido, Nelson, and Yun (2010, p. 148).

[13] The notion could also be found in the business press of the time. For example, in 1931 a U.K. newspaper reported on a commentary by the Federation of British Industries that had stated that an "acceleration in the fall of the long-term rate of interest… could do much to smooth the way of revival by encouraging the flow of funds into productive investment" (*Yorkshire Post*, 1931).

[14] Then, as now, corporate bond rates were accepted as being linked to rates on longer-term government securities.

[15] This is true, to some extent, even in the 1930s and 1940s—decades in which doubts were widely expressed about the effectiveness of monetary policy. Many of those who, in this period, cast doubt on the strength of the interest elasticity of aggregate demand tended to accept that longer-term interest rates might have at least some importance for investment spending. For a brief discussion of this point, see Friedman and Schwartz (1963, p. 700).

[16] Rates facing both households and businesses matter, of course, as interest rates bear not only on firms' investment expenditures but also on households' decisions concerning consumption.

[17] From Volcker's testimony of July 30, 1979, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1979, p. 19).

basically a corollary of the expectations theory of the term structure of interest rates. That theory would be formalized by Hicks (1946, pp. 142–150) and others. Even before this formalization, however, a rudimentary version of the expectations theory was widely used in economic discussions.[18] Indeed, the expectations theory underlay Keynes' (1930) recommendation of managing longer-term interest rates through short-term interest rate (Bank rate) policy.[19] In his observation that varying Bank rate and giving related disclosures about monetary policy provided value in "throwing new light, for example, on the policy and intentions of the currency authority," and in advocating these steps as a means of steering longer-term interest rates, Keynes was essentially making a recommendation of a policy of forward guidance.[20]

Subsequently, Keynes (1936) would become disillusioned with forward guidance, contending instead that the expected path of short-term rates might become inert and, therefore, both that path and the long-term rate itself would be rendered unresponsive to the authorities' policies regarding short-term interest rates.[21] Indeed, that pessimism about the capacity of short-term interest rate policy to affect longer-term rates helped underpin a policy that Keynes (1936, p. 206) recommended—one that was, during the 1940s, followed by many central banks (including the Federal Reserve, as discussed in the next section)—of managing long-term rates via central-bank operations in longer-maturity government debt markets.[22]

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[18] More generally, that the long-term rate responded to short-term rate movements was a commonplace observation in financial discussions. For example, a U.K. newspaper report in May 1931 (*Daily Mail*, 1931) opened by remarking "The Bank Rate was today reduced from 3 to 2½ percent by the directors of the Bank of England. As a result[,] gilt-edged securities showed a rise in prices." The response of bond rates was clearly indicated as partly involving an expectations channel: "If the present Bank Rate is maintained for any length of time, however, a further general rise may be anticipated in the prices of government stocks." ("Government stocks" and "gilt-edged securities" were both U.K. nomenclature at the time for long-term government bonds.)

[19] Note that this recommendation was made before effective lower bound (ELB) conditions on the short-term interest rate became pressing in the United Kingdom. This fact illustrates the point that, while forward guidance is often specifically associated with the ELB and seen as a tool to be deployed in ELB conditions (see English, López-Salido, and Tetlow, 2015, Boneva, Harrison, and Waldron, 2018, and many of the references cited in Section I above), the expectations channel on which it rests is not exclusive to ELB conditions, and forward guidance could contribute to stabilization policy when the short-term rate is well away from the ELB.

[20] See Keynes (1930, Volume 1, p. 202). One commentary that stressed this aspect of Keynes' (1930) suggestions was Meltzer (1983, p. 9; p. 144 of 1989 version). Meltzer noted that, in Keynes (1930), "the relevant rate for investment [spending] is the long-term rate [which] responds very little to changes in Bank rate that are perceived to be transitory"—a property that implies that a sizable response of the long-term rate requires an indication by the authorities that a change in Bank rate will be persistent.

[21] See, for example, Keynes (1936, pp. 202–203, 207–208). Culbertson (1957, p. 486) provided a particularly clear-cut statement of the fact that, in Keynes (1936), Keynes abandoned the expectations theory of the term structure as a basis both for understanding longer-term interest-rate behavior and for making monetary policy prescriptions.

[22] Keynes (1930, Volume 2, p. 371) had already recommended this policy to back up forward guidance in conditions of deep economic downturns. He appeared to favor forward guidance as the sole means of managing long-term rates outside these conditions. (On this point, see especially the 1931 Keynes statement quoted in Tily, 2007, p. 57.)

However, not only did the U.S. authorities become disillusioned with this policy of administering the long-term bond rate, but, also, the negative judgment by Keynes (1936)—that the market's determination of long-term rates was prone to be disconnected from the authorities' policy regarding the short-term interest rate—became viewed as not very widely applicable.[23] Instead, the expectations theory was accepted in the postwar period as an important element in understanding how longer-term interest rates were determined when those rates were allowed to be driven by market forces. Along these lines, in a 1957 Congressional hearing, Senator Paul Douglas remarked to Federal Reserve Chairman Martin and to Martin's aide, Winfield Riefler, that Riefler's (1930) vintage study of U.S. financial markets had found that "changes in the short-time [sic] rate had an effect on the long-time rate."[24] Douglas implied, and his interlocutors appeared to assent, that this state of affairs remained true in the 1950s.[25]

The building blocks of forward guidance therefore acquired wide acceptance in monetary policy circles. From an early stage after the end of World War II, the two key premises that would provide the rationale for guidance had been embraced. Why, then, was forward guidance not adopted as a monetary policy tool in the United States until the 2000s? The rest of this paper explores this question. It will do so by documenting how, from the 1950s and into the 1990s, Federal Reserve policymakers resisted the usage of forward guidance as a policy tool, and by examining the reasons for this opposition.

3. The Martin Federal Reserve, 1951–1970—"You See It As We Do It"

During the period from 1942 to 1951, the Federal Reserve enforced a peg (upper limit) on the market rate prevailing on longer-term U.S. government securities. In particular, the Federal Reserve authorities explicitly indicated that they aimed to secure a peg of 2.5 percent on long-term Treasury securities.[26] In addition, until the late 1940s certain shorter-maturity rates were

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[23] That is, this notion did not gain lasting acceptance in U.S. policy circles, even though other Keynesian ideas were integrated into policymakers' thinking.

[24] From a hearing held on March 19, 1957, in Committee on Banking and Currency, U.S. Senate (1957, p. 274).

[25] Along the same lines, in economic research that appeared during this period, Duesenberry (1958, p. 317) affirmed the expectations channel. Specifically, Duesenberry noted that the scenario sketched in Keynes (1936) involved the expected path of interest rates, and hence longer-term interest rates, being invariant, on net, to measures that altered the short-term interest rate today, and he observed that this adverse result would not occur in an environment in which "a rise in rates led to an expectation of a further rise" and if (contrary to Keynes, 1936) a reduction in the rate today similarly led, on net, to a shift down in the path of current and expected short-term rates.

[26] Chaurushiya and Kuttner (2003, p. 9) stated that "the caps on long-term interest rates were never formally announced." This statement was incorrect. Indeed, one of the references that Chaurushiya and Kuttner (2003) cited—Friedman and Schwartz (1963)—relied almost completely on public sources in its account of postwar Federal Reserve policy yet was able to point to official Federal Reserve publications (such as Board of Governors of the Federal Reserve System, 1946, p. 7) that were numerically explicit with regard to the peg of the long-term

likewise subject to officially enforced pegs. Although the policy of fixing longer-term interest rates was introduced during wartime, Federal Reserve officials in the mid-1940s stated that it was also a desirable arrangement for postwar conditions—including for the period beyond the transition from a war-mobilized economy.[27] Consistent with this posture, the Federal Reserve's public and open-ended commitment to a peg continued beyond the end of World War II.

It was nevertheless the case, even in the early postwar years, that there was little of what today would be called "forward guidance" on the part of senior figures at the Federal Reserve, beyond public affirmations of the pegged security prices and of the ongoing nature of the pegging policy. Federal Reserve officials were hesitant to engage in public discussion of likely future policy actions—a hesitancy brought out in the May 1946 remark by Allen Sproul, president of the Federal Reserve Bank of New York (and vice chair of the FOMC): "And now I have driven myself into a corner where I must say something about restraint on further credit expansion, which is the area in which I have some direct responsibility and, therefore, the area where it is most difficult to make public pronouncements."[28]

Of course, during the era of the peg, discussion of future policy could be considered redundant—as the Federal Reserve's public commitment to an indefinite peg of longer-term securities rates amounted to a central commitment regarding future policy—as well as being potentially counterproductive—as expanding on the subject of future monetary policy might be perceived as encouraging doubt about the durability of the pegging arrangements. It is likely, however, that there were further factors that made policymakers hesitant between 1945 and 1951 (when the pegging policy was terminated) to elaborate on the setting of future policy. Most notably, they clearly wanted to maintain areas of flexibility in the settings of Federal Reserve policy other than those specifically concerning the long-term rate. In particular, they likely wished to keep their options open with regard to the permanence of other aspects of the pegging arrangements (such as the pegs for shorter maturities) as well as not to send signals about the setting of policy tools, such as reserve requirements, that could be varied in the context of the ongoing interest-rate

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government bond rate (see Friedman and Schwartz, 1963, p. 578). Another instance in which the Federal Reserve made an official statement of the pegged rates consisted of the following numerically specific remarks that Federal Reserve Chairman Marriner Eccles gave in Congressional testimony in early 1947: "To maintain a stable market for government securities, the Federal Reserve System adopted a policy of maintaining the level of interest rates. The supported rates ranged from 2½ percent on long-term securities… down to ⅞ percent on one-year certificates. In addition, [rates on] 90-day Treasury bills… were kept at ⅜ percent." (Testimony of March 4, 1947, in Committee on Banking and Currency, House of Representatives, 1947, p. 20.)

[27] For such statements by officials, see, for example, Goldenweiser (1945, p. 14).

[28] Sproul (1946, p. 2948).

peg.[29] These aspects of the monetary policy setup did indeed prove subject to alteration during the period in which the peg of the long-term rate remained in force: the ceilings on shorter-term rates were dropped, and reserve requirements were increased, in the years prior to 1951.

The subject of future monetary policy acquired more content once the Federal Reserve/Treasury Accord of 1951 formally ended the commitment by monetary policy to a bond-rate peg. In the course of congressional testimony given in mid-1953, William McChesney Martin Jr. (Federal Reserve Chairman from 1951 to 1970) noted the fact that, consistent with the new policy environment, the Federal Reserve had recently discontinued its regular interventions in longer-term securities markets. In these comments, Martin implied not only that the long-term rate was no longer a policy rate, but that he would also not make predictions regarding that rate: "I simply would not comment on [bond] prices…. I will not make any comment on prices."[30]

From the perspective of forward guidance, what is notable is that Martin was also reluctant, not only in 1953 but also throughout his many further years as Federal Reserve chair, to comment on future *short-term* interest rates.

This official reticence about referring to the future course of short-term rates occurred despite the fact that short-term rates remained, in essence, determined by the Federal Reserve in the post-Accord period. Although the Federal Reserve had withdrawn from direct management of longer-term rates, it continued to follow open-market and discount-rate policies that were consciously intended to set short-term rates. As Meltzer (2009, p. 6**)** observed, however, in public the Federal Reserve in the early post-Accord years was not transparent about the fact that it was continuing to determine short-term market interest rates.

To understand the reason for this oblique approach, it is worthwhile going back to the aforementioned 1946 speech by Sproul and 1953 testimony by Martin. In particular, Sproul (1946, p. 2949) observed that Federal Reserve decisions should be guided by the need "to discharge our responsibility for promoting economic stability," while Martin similarly testified that part of the purpose of the Federal Reserve Act was to create an agency that minimized

[29] Conversely, when Federal Reserve officials *did* make public indications or prescriptions regarding future policy, it was predominantly against the backdrop of an assumed maintenance of the pegging policy. For example, Sproul (1946, p. 2949) urged that the rate of commercial bank credit growth be reduced in future periods through encouragement of the banks to exercise voluntary restraint and through Federal Reserve actions to prevent declines in market interest rates (that is, to keep those rates closer to the ceilings implied by the pegs).
[30] From Martin's testimony of May 5, 1953, in Committee on Banking and Currency, House of Representatives (1953, p. 11). (Essentially all of the hearings volumes cited in this paper are available on the internet in digitized form, with many of them downloadable at the Federal Reserve Bank of St. Louis' FRASER site.)

booms and busts (Committee on Banking and Currency, House of Representatives, 1953, p. 12). The macroeconomic-stability goal assigned to the Federal Reserve by statute in turn guided policymakers' attitude during the 1950s toward their setting of short-term rates, as well as their public discussions of those settings. In contrast to some of the thinking that had underpinned the pegging policy, Martin was of the view that aggregate demand was notably interest-elastic and that the level of interest rates consistent with delivering economic stability varied over time.[31] Against this backdrop, a distinction between two interest-rate policies acquired particular prominence: that between the pre-1951 policy of pegging (that is, making constant or imposing an upper bound on) certain interest rates, and the post-Accord policy of varying the short-term rate in a manner designed to stabilize economic activity. The latter policy amounted to a reaction function involving temporarily fixed interest rates, with the numerical targets for short-term interest rates being adjusted in response to economic developments. As stressed by Ahearn (1963, pp. 37−38), Federal Reserve officials believed that being forthcoming about monetary policy's aims for short-term interest rates at any particular point in time risked being put under pressure not to alter the targeted rate—and so having the policy degenerate into one of pegging short-term interest rates. The Federal Reserve under Chairman Martin evidently had limited confidence in the chances of successfully communicating the distinction between a short-term interest-rate peg and a reaction function regarding the rate, and so they refrained from being up-front about the fact that they managed short-term interest rates.

Nonetheless, in the course of his tenure, Martin made many statements that were tantamount to acknowledging that short-term market interest rates were determined by the Federal Reserve. For example, in testimony of March 19, 1957, he remarked that the FOMC had been "letting the forces of supply and demand operate" on interest rates.[32] Martin went on to acknowledge that these forces included a Federal Reserve decision not to let the supply of savings be augmented by the creation of additional credit.[33] And when asked, "We have a managed money market, do we not?," Martin replied, "We do."[34] Similarly, in testimony given the following August, Martin observed that the FOMC had permitted upward pressures on interest rates arising from market forces to make themselves felt on rates.[35] By acknowledging that alternative Federal Reserve policies could have prevented short-term interest rates from rising and that the Federal Reserve

[31] For example, Martin affirmed the interest elasticity of aggregate demand in his testimony of August 16, 1957, in Committee on Finance, U.S. Senate (1957, pp. 1425, 1427).
[32] In Committee on Banking and Currency, U.S. Senate (1957, p. 274).
[33] In Committee on Banking and Currency, U.S. Senate (1957, p. 275).
[34] In Committee on Banking and Currency, U.S. Senate (1957, p. 275). Martin's questioner, Senator Joseph Clark (Pennsylvania), immediately replied, "And you are the manager."
[35] August 16, 1957, testimony, in Committee on Finance, U.S. Senate (1957, pp. 1426–1427).

had permitted and managed the rise that had occurred during 1957, Martin was, in these discussions, in effect granting the fact of the FOMC's usage of an interest-rate instrument.

In contrast to his acknowledgment (albeit in an indirect way) that the Federal Reserve set short-term interest rates, Martin was opposed to giving indications of the likely path of short-term rates. Indeed, when he began to do this in his August 1957 congressional testimony, Martin corrected himself: "I am inclined to think that we may have a leveling-out process here, and we may find that interest rates will stabilize and may even decline. But if that is a forecast—I do not want to make a forecast."[36] Martin was strongly opposed to making macroeconomic forecasts in general and predictions about short-term interest rates in particular—a posture summarized in a remark he made in September 1967: "I try to keep away from this prediction thing."[37] Likewise, when opening a speech in 1961, Martin observed: "At the outset I want to make clear that I am not making any business predictions nor even forecasting what the level of interest rates may be a year from now."[38] And in a 1967 hearing Martin told a questioner: "I can't make any predictions about interest rates, obviously."[39]

Martin outlined the reasons for his aversion to giving interest-rate predictions in remarks he made in December 1965. "I have learned that a person in the position that I presently occupy can't make predictions about interest rates without tending to change the given monetary operational situation merely by the statement. It is one of the difficulties that a person holding this position has. I have, on a number of occasions, tried to discuss in a perfectly open and general way what was going to happen, and the result was I changed the whole course of the market. And I don't think I ought to be making predictions."[40] Another remark that was revealing about Martin's position on this matter was one he relayed in early 1968. When asked about prospects for short-term interest rates, he gave a reply that encompassed yields at both short and longer maturities: "The precise levels of these interest rates you cannot make an

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[36] August 16, 1957, testimony, in Committee on Finance, U.S. Senate (1957, p. 1430).
[37] September 14, 1967, testimony, in Committee on Ways and Means, House of Representatives (1967a, p. 705).
[38] Martin (1961, p. 1747).
[39] From Martin's testimony of November 29, 1967, in Committee on Ways and Means, House of Representatives (1967b, p. 46). (Here and in what follows, punctuation has been added to quotations when the original published transcripts of the hearings were clearly missing punctuation.)
[40] From Martin's testimony of December 13, 1965, in Joint Economic Committee, U.S. Congress (1966, p. 65). In addition to declining to discuss future monetary policy moves, Martin was reluctant to indicate likely Federal Reserve policy responses to hypothetical situations. For example, when asked if the Federal Reserve Board would raise the discount rate in the event of a pronounced movement of funds from the United States to Europe, Martin replied, "I wouldn't make any prediction of what we would do." (Testimony of July 21, 1965, in Committee on Banking and Currency, U.S. Senate, 1965, p. 59.)

accurate forecast on, because here you have demand and supply pressures that are imponderable."[41]

Taken together, these 1965 and 1968 statements indicate that Martin's aversion to making interest-rate forecasts reflected both the fear that markets would overreact to announcements and the fragility of the interest rate forecasts given in those announcements. Martin was highly aware that public discussion on his part of the interest-rate outlook would alter U.S. financial conditions. In principle, in light of the emphasis placed, even in the 1960s, by policymakers on the long-term interest rate as a driver of aggregate demand, the ability to reinforce actual policy moves through a process of foreshadowing likely future moves might have been perceived as advantageous. But Martin believed that doing this was likely in practice to be counterproductive, as he thought that the market reaction to such discussion was prone to be excessive ("I changed the whole course of the market"). This basis for refraining from providing forward guidance was reinforced by Martin's conviction that policymakers' assessments of the appropriate level of future short-term interest rates were, in any event, necessarily tentative and highly uncertain—a state of affairs that implied that an articulation of these assessments was of questionable value.

These reservations about adopting forward guidance were also voiced by Governor Mitchell, Martin's FOMC and Federal Reserve Board colleague, in a 1966 speech. On that occasion, Mitchell made the statement—quoted in the introduction above—that monetary policy decisions were announced without accompanying signals of future policy moves. It was desirable that this was the case, Mitchell suggested, as the "appropriate course for monetary policy" was too hard to predict.[42] Therefore, he explained, the Federal Reserve covered only its individual period-by-period decisions in its monetary policy announcements: "Over the years the System has developed a method of communicating with the market which is as straightforward, accurate and objective as quantitative relationships can make it. It is a 'you see it as we do it' policy."[43]

Guided by thinking along these lines, Chairman Martin limited his description of the likely course of interest rates to longer-term influences. For one thing, he was willing to cite fiscal policy as an influence on short- and long-term interest rates on the ground that, by putting upward pressure on the demand for funds and on aggregate demand, budget deficits made the interest-rate values consistent with full employment and price stability higher than otherwise.

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[41] From Martin's testimony of January 22, 1968, in Committee on Ways and Means, House of Representatives (1968, p. 77).
[42] Mitchell (1966a, p. 3; p. 398 of 1971 printed version). See also Mitchell (1966b, p. 8).
[43] Mitchell (1966a, p. 2; p. 398 of 1971 printed version). See also Mitchell (1966b, p. 7).

For example, in 1968 congressional testimony, Martin remarked: "can I make one further comment on interest rates?… I may not have given you much hope that interest rates are going to come down. I cannot be sure of that. I have given you my conviction that there is a likelihood of it, a possibility of it, if we reduce this budget deficit to more manageable proportions."[44]

The second longer-term influence was one Martin referenced repeatedly in the late 1960s, after inflation had picked up in the United States. This influence involved the Fisher relationship between expected inflation and interest rates. In a formulation that would be repeated by his successors, Martin emphasized that the overall increase in nominal interest rates in the United States in the course of the 1960s reflected in large part the fact that monetary policy had, on average, been too loose.[45] The tight monetary policy in which the Federal Reserve engaged, starting in late 1968 and maintained in 1969, was associated with higher interest rates. Martin, however, justified the tightening in part on the basis that it would lead ultimately to lower interest rates: "it is clear what we need to do to get interest rates back down to more sensible levels. We must follow economic stabilization policies that bring inflation under control."[46]

Acknowledgment of these longer-term drivers of interest rates did not really constitute forward guidance, as they constituted (i) a nonmonetary factor—fiscal policy—affecting the general level of interest rates and (ii) a monetary policy influence on the *longer-term average* of nominal interest rates. In contrast, forward guidance of the modern type refers to the short- and medium-term influence of monetary policy on the course of real and nominal short-term interest rates.

In 1969, however, Martin did modify his communications practices somewhat by providing a degree of guidance: an indication that the existing stance of monetary policy would continue. The background for this change was that, as he noted in February 1969, "we have had quite a credibility gap as to whether we meant business at the Federal Reserve"—that is, whether the Federal Reserve would maintain a restrictive monetary policy long enough to end inflation.[47]

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[44] From Martin's testimony of January 22, 1968, in Committee on Ways and Means, House of Representatives (1968, p. 83). Martin indicated that the budget deficit's effect that he was describing referred to a situation different from one in which the Federal Reserve "totally ignore[d] its responsibility for fighting inflation [by] … just add[ing] *ad infinitum* to the money supply." He was therefore premising his comments on non-accommodation, by the Federal Reserve, of the deficit—and so was referring to the upward pressure on equilibrium real interest rates arising from the additional issuance of U.S. Treasury debt to the private sector.
[45] See, especially, Martin's testimony of March 25, 1969, in Joint Economic Committee (1969, pp. 8–10). See also the discussion of this testimony in Meltzer (2009, p. 565).
[46] From Martin's testimony of March 25, 1969, in Committee on Banking and Currency, U.S. Senate (1969, p. 10).
[47] From Martin's testimony of February 26, 1969, in Joint Economic Committee (1969, p. 685).

In light of this situation, Martin wanted to convey the notion that the existing tight posture would be continued long enough to secure conditions of price stability. He therefore took a different approach from that he had followed during a previous tightening phase in 1957. On that occasion, Martin had been noncommittal about the likely length of the period of restriction, stating that he "would not want to forecast at all" whether tight money would continue.[48] In 1969, Martin modified his approach. When asked to comment on forecasts for inflation and unemployment made by academic economists, Martin reaffirmed that he "avoided making any forecasts *per se*," but he added: "I think that if we move intelligently and persistently along the course we are pursuing, we can—to use the phrase I have repeated over and over here—disinflate without deflating."[49] So it remained the case that Martin was reluctant to make numerical predictions concerning economic outcomes or to talk specifically about the medium-term implications for interest rates likely associated with monetary policy decisions. But it was also the case that concerns about the FOMC's credibility had made him more amenable to being overt in expressing the point that the existing stance of monetary policy would be continued until it was clear that the Federal Reserve's macroeconomic objectives were being met.[50]

4. The Burns Federal Reserve, 1970–1978

Arthur Burns (Federal Reserve chair from 1970 to 1978) was consistently opposed to forward guidance. Although, as shown below, he was willing to talk in general terms about the Federal Open Market Committee's strategy for achieving its macroeconomic objectives, Burns was, like his predecessor, averse to describing the likely implications of this strategy for the course of interest rates, other than the longer-term implications associated with the Fisher effect. He took policy choices regarding short-term interest rates at Federal Reserve policy meetings as pertaining to the immediate policy action and not to future policy.[51] Burns saw public commentary on his part regarding future short-term rates as being undesirable because he believed that this would preempt forthcoming FOMC decisions. In addition, even though he saw longer-term interest rates as key for aggregate demand, Burns was against moving financial markets by remarking on prospective FOMC decisions.

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[48] From testimony of March 19, 1957, in Committee on Banking and Currency, U.S. Senate (1957, p. 274).

[49] From Martin's testimony of February 26, 1969, in Joint Economic Committee (1969, p. 685).

[50] In testimony a month later, Martin reaffirmed this point, stressing that restrictive monetary policy needed to "continue… long enough to be sure that a resurgence of excess demand and strong cost and price pressures does not occur." (Testimony of March 25, 1969, in Committee on Banking and Currency, U.S. Senate, 1969, p. 10.)

[51] As will be seen, he regarded this as the case for both Federal Reserve Board decisions regarding the discount rate and FOMC decisions regarding the federal funds rate. At the time, discount rate adjustments were made at meetings of the Board governors—and so were on a different schedule from federal funds rate decisions at FOMC meetings.

Burns' attitude regarding this matter was evident in testimony he gave less than a week after becoming chair. Speaking at a hearing of the House of Representative's Committee on Banking and Currency, Burns remarked that he hoped "I might be wise enough, prudent enough, not to make any such premature announcement to the marketplace. If and when the Board decides to act, it should act, and I think it would be wrong, even immoral, for the Chairman or other members of the Board to give any clues to the market about prospective action."[52]

A couple of weeks later, at a Joint Economic Committee hearing, asked what evidence he needed to see "before you begin to ease up on credit," Burns replied: "Senator, you are putting a very difficult question to me. I am now in the central banking business. And by tradition—and I think the tradition has arisen out of necessity—there are some questions on which central bankers cannot speak with great freedom. And the reason is that if they do, they may have a very unhappy effect on markets. The capital market may swing, and money will be made and money will be lost. There is a great moral responsibility here."[53] In response to a question later in the hearing, "Are we likely to see a quick decrease in the interest rate level in this country?," Burns replied: "I do not think I should try to predict that."[54]

In addition to eschewing the articulation of a prediction of the path of the interest rates, Burns also indicated an unwillingness to forecast the associated path of monetary growth, and for similar reasons: "any projections we make about monetary aggregates will go on the [news] wire, all over the world. And they may rock, one way or another, the financial market[s]. And money may be made by the millions by people who have no right to make it. And—what worries me more—innocent people may lose."[55]

A year later, Burns displayed a continuing unwillingness to comment on likely Federal Reserve policy responses, whether these were cast in in terms of interest rates or in terms of the money stock. Asked if, in the event of a large fiscal expansion, one "might well expect to find a counter-reaction in the Federal Reserve Board with respect to the money supply and interest rates," Burns replied: "The question is much too hypothetical, Senator… There are so many developments that one can't foresee that I think it would be entirely unwise for me to try to project what we might do in the kind of circumstances which you envisage."[56]

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[52] From Burns' testimony of February 6, 1970, in Committee on Banking and Currency, House of Representatives (1970, p. 266).
[53] From Burns' testimony of February 18, 1970, in Joint Economic Committee (1970, p. 152).
[54] From Burns' testimony of February 18, 1970, in Joint Economic Committee (1970, p. 171).
[55] From Burns' testimony of February 18, 1970, in Joint Economic Committee (1970, p. 183).
[56] From Burns' testimony of February 19, 1971, testimony, in Joint Economic Committee (1971, p. 264).

In 1970, the FOMC allowed interest rates to decline. At the time, it believed that this was an adjustment consistent with continued moderate restraint of aggregate demand: Burns expressed confidence in April "that we making progress in the fight against inflation in the United States, and that interest rates have already passed their peak."[57] In retrospect, however, the FOMC is believed to have eased excessively in the course of 1970, helping create the conditions that generated the mid-decade breakout of inflation (see especially Orphanides, 2003, pp. 657–658).

The expansionary direction that the FOMC took in 1970 was bolstered by further easing of monetary policy during 1971—a year in which Burns was also an enthusiastic supporter of the Nixon Administration's imposition of national wage and price controls. Retrospective judgments are predominantly that, in the years from 1970 to 1972, the FOMC's posture was excessively loose. For the purposes of this paper, however, it is important to keep in mind that throughout 1971 and 1972, as in 1970, Burns *thought* that he was pursuing a policy consistent with ongoing disinflation and the avoidance of economic overheating.[58] This fact provides an understanding of what he said over this period about the interest-rate path. Continuing his previous practice, he refrained from indicating the likely near-term course of monetary policy, but, like Chairman Martin before him, he was willing to say that, over a longer horizon, nominal interest rates would follow inflation—which Burns erroneously believed was, under current policy settings, on course to converge to a low rate.

When, therefore, at a November 1971 hearing, the question was asked, "Do you feel that the trend in interest rates will be downward, or stabilized, or upward, Dr. Burns, in the future, foreseeable future?," Burns replied: "I feel, as I have tried to make clear…, that if the present anti-inflation policy succeeds, the trend of interest rates will probably be downward." He added: "I would like to see them be a good deal lower, provided supply and demand conditions justified lower interest rates."[59]

After inflation broke out in 1973 and remained high, the FOMC, which had already begun raising the federal funds rate in 1972, engaged in a prolonged tightening of monetary policy. During this tightening phase, Burns found it beneficial, as Martin had in 1969, to make clear that the firmness of monetary policy would not be ended precipitously. In relaying this position, Burns, unusually, engaged in a modest amount of forward guidance regarding interest rates. "As

[57] Burns (1970, pp. 4–5). This was really an account of the FOMC's policy stance, rather than forward guidance.
[58] See Romer and Romer (2002) and Nelson (2005) for detailed discussions of the conceptual framework to which Burns subscribed during this period.
[59] From Burns' testimony of November 1, 1971, in Committee on Banking and Currency, House of Representatives (1971, p. 461).

this year's experience has again indicated, a serious effort to moderate the growth of money and credit during a period of burgeoning credit demand results in higher interest rates—particularly on short-term loans," Burns remarked in a May 1974 speech. "Troublesome though this rise in interest rates may be, it must for a time be tolerated." He indicated that attempts by the FOMC, instead, to lower interest rates immediately would ultimately generate higher rates via the operation of the Fisher relationship.[60]

Burns had therefore shown himself to be amenable to providing some guidance concerning the FOMC's settings of monetary policy. He objected strongly, however, in early 1975 when Congress was poised to pass a resolution that would require the FOMC to enumerate targets for monetary growth and report on its progress in achieving them. Notably, Burns was also critical of an additional clause in the resolution—not necessarily tied to monetary targeting—mandating that the Federal Reserve lay out publicly its plans for monetary policy. He remarked: "Finally, the Board objects to the last paragraph of Resolution 18, which calls for semiannual reports to the Congress by the Federal Reserve of its plans for future monetary policy. Such a requirement could limit the flexibility of monetary policy in responding to unexpected developments, and it could undermine the capacity of the Federal Reserve to exercise its best judgment… [It] would also provide opportunities for sophisticated market participants to gain at the expense of others by using the information they would receive on the anticipated course of monetary policy."[61]

Burns therefore opposed disclosure of monetary policy plans both because he viewed such communication as preventing flexibility in future FOMC deliberations, and because he continued to believe that the information provided publicly about monetary policy should be limited to actual decisions.

Over Burns' objections, however, targets for monetary growth—which the FOMC had been following in some form since his tenure began—became something on which he regularly reported to Congress. From the perspective of forward guidance, however, the resolution was not particularly onerous in its requirement for disclosures of plans regarding monetary policy. The monetary-growth target requirement formally did not require the Federal Reserve to be very precise about future monetary policy. Under Burns, monetary targets were set for a year ahead, but the FOMC voted on this target at every FOMC meeting within that year. This meant that, in

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[60] Burns (1974a, p. 9).

[61] Testimony of February 25, 1975, to Committee on Banking, Housing and Urban Affairs, U.S. Senate (Burns, 1975, p. 154). Burns was commenting on a Senate draft of the resolution, designated Resolution 18. In the event, the resolution in revised form was passed by both houses of Congress as Concurrent Resolution 133.

the course of the year to which the monetary target applied, it had the option of altering its target growth rate for M1, for M2, or for both aggregates, at any FOMC meeting.

In practice, however, the Federal Reserve provided somewhat more concrete information regarding its plans for coming years' monetary policy than these limited formalities required. First, the FOMC was inclined to avoid exercising its option of making changes to the monetary growth target during the year. Second, Burns also elaborated on the FOMC's projection of the current year's monetary growth rates by sketching the likely evolution of monetary targets beyond that year. For example, in July 1977, Burns noted that the announced target pertained to the year to mid-1978 but indicated that the FOMC aimed at "bringing the long-run growth of the monetary aggregates down to rates compatible with general price stability."[62] Burns added that if the step-down in announced monetary targets continued at its existing pace, the target path for monetary growth rates would continue to decline and reach rates consistent with price stability in around the mid-1980s.[63] The 1975 formalization of monetary targeting had therefore made the FOMC more forthcoming about its intended rates of monetary growth.

In this new environment, however, Burns remained resolute in rejecting the notion of policymaker-provided *interest-rate projections* to accompany the monetary targets. Consequently, although the formal introduction of monetary targets in 1975 was followed by the provision by the FOMC of its intentions concerning monetary growth over the medium term, the Committee gave no corresponding guidance concerning interest rates.

Of particular note in this connection is a written answer by Burns, in early 1976, to a congressional question. In this reply, Burns indicated his continuing rejection of the suggestion that policymakers should provide forecasts of interest rates. He had become reconciled to giving regular testimony on monetary-growth targets but was poorly disposed to the idea of extending reporting requirements to include policymaker projections of interest rates. "I believe it would be both inappropriate and misleading for the Federal Reserve to express a view at these hearings about the likely future course of interest rates. An announcement by the nation's central bank of its intentions or expectations about interest rates would be subject to misinterpretation, could

[62] Burns had already made statements along these lines even before monetary targeting had become a Congressionally-mandated policy. For example, he stated in mid-1974 (Burns, 1974b, p. 559): "We are determined to reduce, over time, the rate of monetary and credit expansion to a pace consistent with a stable price level."
[63] Testimony by Arthur Burns of July 29, 1977, in Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives (Burns, 1977a, p. 727). This indication on Burns' part was consistent with the 1975 resolution's requirement that the rate of long-run monetary growth should be that compatible with price stability. It was also consistent with the Federal Reserve's existing legislated mandate, which Burns took as entailing a price-stability goal as well as an employment goal (see Burns, 1975, p. 153).

impair the effectiveness of monetary policy, and could have harmful consequences for the economy and the nation."

As one danger associated with such a practice, Burns cited the loss of prerogatives in future decision periods that might be entailed if a projection was seen as a commitment: "Any announcement of interest rate intentions or expectations by the Federal Reserve may lead many borrowers and lenders to believe that the System could and in practice would guarantee particular interest rate levels."[64] This was undesirable, he contended, as the interest rates appropriate for economic stabilization could not be predicted ahead of time: "efforts by the Federal Reserve to sustain particular interest rates could result in inappropriate rates of growth in bank reserves and money." In this connection, Burns cited dangers in both directions: inappropriately low interest rates, which would foster monetary and economic overheating, and unduly high interest rates, which would instill an excessively tight policy stance.[65]

This reservation—that a central bank might feel obliged to validate interest-rate forecasts, in the face of those interest rates proving to be inappropriate for the achievement of macroeconomic goals—was a recurring one in Federal Reserve officials' statements through the 1990s. As will be shown below, after Burns' departure, it was a sentiment that continued to emanate from the Federal Reserve under chairs Miller, Volcker, and Greenspan.

That posture contrasts with the attitude to forward guidance prevalent in the modern era. Two aspects of the modern perspective on forward guidance are especially notable, because of their divergence from the attitudes prevalent in prior decades. First, policymakers who have used forward guidance have been comfortable in stating a point that previous eras' policymakers had suggested might be too difficult to relay in policy communications: that the forecast interest rate path may well *not* be realized. For example, in testimony on February 29, 2012, Federal Reserve chair Ben Bernanke stated that forward guidance "is a conditional policy. It says: 'Based on what we know now, this is where we think we are going to be.' But, of course, if there is a substantial change in the [economic] outlook, we would have to adjust [the funds rate path] accordingly."[66] Second, the result that financial markets might align asset prices with policymakers' forecast interest-rate path has been seen as a *desirable* outcome, rather than an eventuality to be avoided. For example, Svensson (2015, p. 26) cited the requirement that

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[64] Burns (1976, p. 377). (The rendition of the quotation given here corrects a typographical error in the original printed version, whose text gave the word "Revenue" instead of "Reserve.")

[65] Burns (1976, p. 377).

[66] In Committee on Financial Services, House of Representatives (2012, p. 26).

"market expectations adjust to the policy rate path when it is published" as one criterion on which to judge the credibility and success of forward guidance. In contrast, policymakers in the pre-forward guidance era saw such a movement of asset prices as disorderly. This negative attitude toward providing information that might move asset prices before a rate decision had been formally made was, as noted above, voiced by Chairman Martin, but it was reiterated during Burns' tenure and by Burns' successors.

During 1977, which proved to be his final full year as chair, Burns remained unconvinced of the merits of forward guidance regarding interest rates. In March 1977, when asked by a legislator whether he expected rates to rise over the next year and a half, Burns replied simply: "That is a very difficult question to put to a central banker. Central bankers do not talk about things like that."[67] The following July, Burns gave a negative verdict on draft legislation that included a requirement that Federal Reserve policymakers provide forecasts of the path of interest rates over the coming year. "The provision calling for projections of interest rate levels for twelve months ahead is particularly ill advised. Neither the Board nor the FOMC makes such estimates. To be sure, some, if not all, members have more or less well-defined expectations about the likely course of rates in coming months, but members of the Board and of the FOMC do not discuss such expectations in public. Federal Reserve officials are extremely careful to avoid any public comment that might suggest or imply some particular outlook for interest rates."[68]

Burns ended acerbically by remarking that the "capacity for mischief inherent in the interest-rate provision is so apparent that I find its inclusion in the bill inexplicable." This reproachful tone was also evident when the subject of mandated interest-rate forecasts came up in the question-and-answer portion of this testimony. In answer to a query, Burns indicated it was open to "very extensive discussions about past interest rates, very extensive discussions about current interest rates" and that he was particularly interested in talking about how the Fisher effect had led to great differences in nominal interest rates across countries. However, he maintained that "you will never get a forecast concerning interest rates out of me, under any circumstances, unless you require it by law." Indeed, Burns implied that, in the event that such a requirement *did* become law (which it did not), he might step down as chair.[69]

[67] From Burns' testimony of March 22, 1977, in Committee on the Budget, U.S. Senate (1977, p. 203).
[68] Testimony of July 26, 1977, in Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives (1977, p. 58). Also in Burns (1977b, p. 717).
[69] Testimony of July 26, 1977, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1977, p. 68).

This negativity regarding forward guidance that Burns expressed throughout his tenure existed despite his belief that longer-term interest rates were the key interest rates for spending. Why did he resist forward guidance, which might reinforce the effect of monetary policy on longer-term interest rates? One point worth noting is that Burns on occasion downplayed the effect of monetary policy on longer-term rates. He stressed the impact of other influences—and, for a while in 1975, when the term structure was particularly steep, he suggested that the effect of changes in the federal funds rate on longer-term rates was negligible (see Nelson, 2005).

For the most part, however, Burns did grant that the Federal Reserve could affect longer-term rates through an expectations channel, as well as by affecting current short-term rates. However, his default position was to eschew trying to affect longer-term rates by foreshadowing future FOMC interest-rate settings. As indicated above, he regarded making rate forecasts as trespassing on the prerogatives of future policymakers. But, like Martin before him, he did not think that the information, if conveyed, would prompt orderly and desirable market reactions. On the contrary, Burns' July 1977 testimony argued that FOMC announcements of interest-rate forecasts would "rock financial markets."[70]

Burns also believed that the tentative character of Federal Reserve policymaker projections made it undesirable to articulate them publicly: policymakers' interest-rate expectations "might change [after] a week or a month… and in any event might be mistaken." "If we made specific pronouncements about the future of interest rates," Burns argued, "…[i]nappropriate and violent changes of interest rates could take place and the economy suffer from the financial stability so generated."[71] Finally, as he contended that announcing forecasts of interest rates tended to commit policymakers to those rates, Burns feared that forward guidance might push longer-term interest rates away from policymakers' hoped-for values over a longer period of time. In particular, locking policymakers into what turned out to be an inappropriate short-term rate path could lead to unintended shifts in the longer-term inflation rate, and the Fisher effect would drive longer-term rates to ranges different from those envisioned by policymakers.

5. The Miller and Volcker Federal Reserve, 1978–1987

Under the tenure of Federal Reserve Chairman Miller (1978 to 1979), it continued to be the case

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[70] From Burns' testimony of July 26, 1977, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1977, p. 59). Also in Burns (1977b, p. 718).
[71] Again, this appeared in Committee on Banking, Finance and Urban Affairs, House of Representatives (1977, p. 59) and was also printed in Burns (1977b, p. 718).

that the Federal Reserve outlined its medium-term plans for monetary growth, but not for interest rates. Legislation passed in 1977 and 1978 saw further formalization of the requirement that the Federal Reserve set monetary-growth targets. Taking these mandates into account, Federal Reserve Board Governor Charles Partee noted in early 1979 that—again, in conformity with what the law required—the FOMC had announced monetary growth targets for the year ahead only. He added, however, that the law also clearly carried the implication that in the years from 1980 to 1983 the FOMC would further adjust its target rate downward to bring monetary growth toward the value that was believed consistent with long-run price stability.[72]

On an earlier occasion, Partee made clear that he did not believe that the projections that the Federal Reserve provided should be broadened to include interest rates. On May 9, 1978, he had testified: "But, as far as interest rates are concerned, I don't like to be in the position of having the central bank predict interest rates. I think that is a poor policy procedure, because financial market participants may act on the basis of those predictions—and may themselves fulfill the prophecy. And I might say that having coped [in] this area for many years, we are no better at predicting interest rates than anybody else, so we shouldn't be giv[ing] that kind of emphasis."[73] As Partee's comments indicated, the Miller tenure was characterized by continuing reluctance on the part of Federal Reserve policymakers to articulate their interest-rate forecasts. And the reasons cited for this reluctance were the same as those given before: that the forecasts would be unreliable and that preparing and disclosing them would introduce an undesirable new factor in the pricing of assets in financial markets.

Miller's period as Federal Reserve chair was, nevertheless, one in which considerable momentum developed for the FOMC to provide economic forecasts. In the face of this pressure, Miller voiced his judgment that the notion of a single set of FOMC-produced forecasts—a joint Committee product—was impractical: "the Federal Open Market Committee is a collegial body [but] believe me, to get twelve people to ever adopt or agree on the precise numbers for a forecast of the economy is unlikely," he testified on February 21, 1979.[74]

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[72] Testimony by J. Charles Partee on March 13, 1979, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1979a, pp. 6–7). Similarly, Chairman Miller himself had testified on April 25, 1978, that "the FOMC… remains firmly committed to a gradual reduction in monetary growth over time to rates more nearly consistent with reasonable price stability" (Miller, 1978, p. 376).

[73] From Partee's testimony in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1978, pp. 217–218).

[74] In Committee on Banking, Finance and Urban Affairs, House of Representatives (1979b, p. 104).

The following July, Paul Volcker, then vice chair of the FOMC, was nominated for the chair position, Miller having announced he was stepping down. In his confirmation hearing, Volcker articulated aspects of his position on interest-rate projections that he would repeat throughout his eight-year tenure as chair. These were, first, an aversion to forecasting rates and, in particular, to the proffering of numerical details concerning the short- to medium-run prospects for nominal short-term interest rates. Second, a willingness in general terms to acknowledge that disinflation required a prolonged period in which nominal interest rates were high. Third, a tendency to invoke the Fisher relationship, when pressed about the trajectory of interest rates. These facets of Volcker's position echoed points his predecessors had articulated. But they became especially important in Volcker's period because he presided over a large decline in inflation, with the disinflation process involving two recessions during the early 1980s.

When asked at the confirmation hearing if he felt "that interest rates should be higher?," Volcker declined to be drawn on the matter. "I don't think I want to begin my career as chairman by projecting just where interest rates might be or where they should be. I guess that's something we continue to look at as time passes [but] it depends on too many crosscurrents in the economy for it to be sensible for me to try to make a prediction at this point."[75]

Elsewhere in the testimony, Volcker relied on the Fisher relationship to point to the lower interest rates that would eventually stem from tight monetary policy: without tight policy against inflation, he said, one could not sustain "interest rates as low as they used to be."[76] This meant, he explained, that over longer periods it was not axiomatic that "restrictive policies mean high interest rates" and also that it was possible that monetary restraint would reduce nominal longer-term rates promptly.[77] Volcker further implied, however, that general interest-rate declines would likely not occur until inflation declined.[78]

In written remarks submitted for inclusion in the record of these hearings, Volcker indicated that he was comfortable with the FOMC's laying out of targets for the year's monetary growth as a means of expressing "communication and policy intentions," and that although "further

[75] From Volcker's testimony of July 30, 1979, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1979, p. 20).
[76] From Volcker's testimony of July 30, 1979, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1979, p. 5).
[77] From Volcker's testimony of July 30, 1979, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1979, p. 19).
[78] See Volcker's testimony of July 30, 1979, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1979, p. 38).

improvement" in policy communications was likely, "I have no specific suggestions for improving the flow of information on monetary policy at this time."[79]

By this stage, however, a notable innovation in communication about the economic outlook had occurred. This had been in the pages of the Federal Reserve Board's semiannual *Monetary Policy Report*, released on July 17, 1979, shortly before Chairman Miller announced his departure. In keeping with the requirement of the Full Employment and Balanced Growth Act of 1978 that the Federal Reserve report policymaker forecasts, this report included a table of projection ranges for the fourth-quarter values of 1979 and 1980 of the unemployment rate, four-quarter inflation, and the four-quarter growth rates of aggregate nominal and real income. Offered "in order to improve understanding of the monetary objectives," the table was identified as a distillation of policymaker forecasts—specifically "an economic projection representing the consensus of the Board members at this time" (Federal Reserve Board, 1979, p. 601). Because this table was derived from individuals' forecast submissions, it did not represent a single collective forecast: As already noted, Volcker's predecessor had expressed doubt about the feasibility of agreement on such a single forecast. Analogous tables throughout Volcker's tenure appeared in subsequent *Monetary Policy Reports*, with Reserve Bank presidents' projections soon being included along with governors' projections in the generation of the forecast ranges (see Romer, 2010).[80]

Despite their regularity, these forecasts usually did not figure prominently in policy communications under Volcker, in part because he did not particularly emphasize them in his public pronouncements.[81] Most importantly for our purposes, these public FOMC forecasts did not include explicit interest-rate forecasts of any kind.

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[79] In Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1979, p. 57).

[80] Romer (2010, p. 951) gave the "published forecasts… [as] reflect[ing] the views of the members of the Federal Open Market Committee" (by which, as he noted, he included presidents not currently voting in FOMC meetings). This was not a correct description of the forecasts in the July 1979 and February 1980 *Monetary Policy Report*s (see Federal Reserve Board, 1979, p. 601; 1980a, p. 179), which were based on forecasts of the Board governors only, with no presidents included. However, it accurately described the *Monetary Policy Report* forecasts starting in the report for July 1980 (see Federal Reserve Board, 1980b, p. 532). The change between the practices in the February and July 1980 *Monetary Policy Report*s was the outcome of an exchange Volcker had when presenting the former report in Congressional testimony. Volcker agreed with a questioner that it was more informative to present forecast information that arose from input provided by all the FOMC policymakers, as opposed to drawing on the Board members alone. Volcker indicated that the latter practice had originally been judged as closer to what was legally required of the Federal Reserve but that FOMC forecast information would be given in the *Monetary Policy Report* from now on. (See the exchange of February 25, 1980, in Committee on Banking, Housing, and Urban Affairs, 1980, p. 44.) The Volcker period therefore saw the forecasts of the whole of the FOMC (broadly defined to include all bank presidents) being brought into the construction of the tabulated forecast ranges.

[81] Volcker did, however, draw attention to the forecasts on occasion. For example, he highlighted them in his opening testimony of April 12, 1983, in connection with the Federal Reserve's semiannual report on monetary

At a meeting with members of the media on August 23, 1979, Volcker did make the minor concession of indicating that interest rates were unlikely to fall in the near future: "I know of no way to get these interest rates down in the present environment."[82] The Associated Press report on Volcker's remarks (Nokes, 1979) noted his emphasis on the Fisher effect: "The view that interest rates rise like the tide with inflation was also held by Volcker's two immediate predecessors as board chairman, G. William Miller and Arthur Burns."[83]

A turning point in Volcker's period as chair occurred in October 1979 when the FOMC switched from targeting monetary growth using the federal funds rate as an instrument to making nonborrowed reserves the key instrument in monetary targeting. Numerous retrospectives have interpreted this arrangement, which continued into 1982, as a covert means by which the FOMC continued to manage the federal funds rate while moving it to high levels.[84] Volcker, however, would consistently reject interpretations of this kind (see, for example, the discussion in Taylor, 1995, p. 780).[85] Irrespective of one's view about the materiality of the change in operating procedures that occurred in October 1979, it is not in doubt that the FOMC shifted at that point to a posture in which it was willing to countenance greater short-run variation in the federal funds rate than previously, in the hope of securing desired outcomes for monetary growth. This

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policy (see Volcker, 1983, p. 339). Among outside observers who pointed to the forecasts, James Tobin was especially notable. In 1985, he argued that "the regular summary of the GNP, price and unemployment 'projections' of the seven Federal Reserve [Board] governors and twelve Federal Reserve Bank presidents assume major importance" because they revealed forecasts of the FOMC's ultimate goal variables (Tobin, 1985, p. 25; p. 183 of 1987 reprint). The Tobin article was reprinted in a book of readings, edited by Ben Bernanke, that appeared in 1987. Twenty years later, Bernanke would bring the policymaker forecasts into far greater prominence by overseeing a comprehensive overhaul—when the presentation of the forecasts, in more frequent and extensive form, became the basis for the Summary of Economic Projections (SEP) of FOMC participants. Starting in 2012, the SEP included statistics on individual policymakers' policy-rate projections.

[82] Quoted in Nokes (1979). Of course, as the option was available to reduce short-term interest rates by easing monetary policy on the margin, Volcker's statement was not wholly valid. He was likely referring to an interest-rate reduction that could be sustained and that could be counted on to be registered across the maturity spectrum.

[83] As discussed above, this position had been taken by Chairman Martin, too.

[84] See, for example, Mishkin (1987, p. 46). Many studies, including the celebrated work of Judd and Rudebusch (1998) and Clarida, Galí, and Gertler (2000), have underlined the importance of the October 1979 policy change by showing how the Federal Reserve's reaction function, as represented by an estimated federal funds rate rule, shifted between the pre- and post-1979 periods. Findings of this kind are not necessarily inconsistent with the notion that the FOMC withdrew from targeting the federal funds rate during the period from 1979 to 1982. One could take the FOMC's announced shift to a nonborrowed-reserves regime at face value, while regarding equations for the federal funds rate estimated over 1979 to 1982 as a valid means of representing monetary policy developments, because those equations quantify what the nonborrowed-reserves regime implied for the relationship between movements in the funds rate and in the state of the economy. See also the discussion in Clarida, Galí, and Gertler (2000, p. 163).

[85] At an early stage, Volcker placed on the record his rejection of these interpretations of the 1979−1982 regime. For example, in the course of Congressional testimony on April 12, 1983, he remarked: "I'm perfectly willing to say that… we recognize[d] that it might come about that interest rates [would] go higher and be maintained at a higher level for a considerable amount of time. But I think it is just wrong to suggest that we sat there [at FOMC meetings] and said: 'We think, right now, a 16 or 18 percent interest rate is what is called for, in terms of the inflationary situation.'" (In Committee on Banking, Finance and Urban Affairs, House of Representatives, 1983, p. 45.)

new environment lent itself to the repetition by Volcker, when talking about interest rates, of the themes that he and his predecessors had already emphasized, even when they explicitly set interest rates: that it was hazardous to forecast interest rates because the interest-rate values consistent with policymakers' stabilization goals were hard to know ahead of time; and that inflation outcomes dominated the longer-term behavior of nominal interest rates.

Against this backdrop, the new regime was not characterized by forward guidance on interest rates. Volcker did indicate in his public statements that he and his colleagues had opted for a regime change that was designed to produce conditions of price stability.[86] But Volcker largely abstained from commenting on what this new regime likely implied for short-term interest rates over the period ahead, other than over the far horizon associated with the dominance of the Fisher effect on those rates.[87]

Along these lines, in testimony given in the second full week of the new regime, Volcker remarked: "I am very reluctant to give you—and I'm just not going to give you—a precise estimate of interest rates in the period ahead, or how long the adjustment [of] levels of interest rates might last." He elaborated that "interest rate forecasts… are perhaps even more uncertain than general economic forecasts—and I don't think it's wise for me to imply a degree of certainty that doesn't exist in this world by making such estimates." Once again, he fell back on the Fisher relationship to permit a broad-brush description of the interest-rate outlook: "by acting forcibly now, we bring the day of lower interest rates… sooner rather than later."[88] When, however, in a round of questioning later in the hearing, he was asked how soon interest rates might start coming down, Volcker replied: "I refused to give a quantitative estimate to Senator Javits, and I can't give you any special privileges."[89]

In testimony the following March, Volcker observed: "In my present position, Senator Bellmon, I carefully refrain from making predictions about interest rates. I have found that a very wise decision so far, because I probably would have made some wrong ones if I had been inveigled

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[86] See, for example, the Volcker observations quoted in Lindsey, Orphanides, and Rasche (2005, p. 207).
[87] He would later contend that the FOMC had, in effect, implied interest rates would be high for a prolonged period. "I think we said explicitly, when we made the [October 1979] announcement, that we would expect a lot more fluctuations in interest rates, and [we] implied in that statement that the possibility that they would be higher for a while," Volcker testified on April 12, 1983, while adding, "I didn't expect interest rates to be as high for as long as they were" (in Committee on Banking, Finance and Urban Affairs, House of Representatives, 1983, p. 41).
[88] From Volcker's testimony of October 17, 1979, in Joint Economic Committee (1980, p. 21).
[89] From Volcker's testimony of October 17, 1979, in Joint Economic Committee (1980, p. 26). In a television appearance (on ABC's *Issues and Answers*: see Associated Press, 1979) eleven days later, Volcker did venture to say: "I have no hesitation in saying that the kinds of policies we are following will bring interest rates down quicker and lower than if we took any other approach."

into making any public or private predictions. I am not about to suggest just what the level of interest rates might be." Along with inflation, Volcker pointed to federal government borrowing as another factor that was holding up nominal interest rates—a consideration that led him to conclude that tight monetary policy becomes "more compatible with declines in interest rates as you make progress on the budget."[90] He further noted that trying to reduce interest rates without evidence of progress on the disinflation front would "put the cart before the horse" and would produce both higher inflation and higher interest rates in the future.[91]

In an appearance on the U.S. public television news program *The MacNeil/Lehrer Report* on April 21, 1980, Volcker stated that he was willing to assume (accurately) "that the economy is softening, that we are in a recession." In those circumstances, policies that delivered restrained growth in monetary aggregates would be consistent with declining interest rates, as "you would normally expect the demand for credit to subside in a recession." Volcker noted that interest rates were already showing some "tentative signs, anyway, of a subsiding."[92] However, he then reproached himself for being about to add that interest rates were beginning to go down. The reason for his reluctance to make such a prediction, Volcker remarked, was that "I like to leave

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[90] Testimony of March 24, 1980, in Committee on the Budget, U.S. Senate (1980, p. 263).

[91] In Committee on the Budget, U.S. Senate (1980, p. 266). This statement puts in perspective the construction on historical U.S. monetary policy implicitly placed by Uribe (2020). That study sees a central bank as capable of reducing nominal interest rates and inflation in tandem and in a single step by shifting to a new low-inflation monetary policy. Consideration of this "neo-Fisherian" position concerning the transmission mechanism is beyond the scope of the present paper, but what does bear on the discussion here is that Uribe (2020) also implicitly hypothesizes about the views held by policymakers during the Volcker disinflation, by suggesting that Volcker may well have himself believed that interest rates and inflation were capable of being reduced simultaneously. In contrast, the record clearly implies, instead, that Volcker saw the central bank's means of permanently reducing short-term interest rates, when starting from a situation of high inflation, as comprising a (more conventional) *two-step* process: rates would need to rise initially as part of the process of a monetary policy tightening, and they later could permanently fall to a lower rate when the disinflation took hold. More Volcker statements to this effect are given below.

[92] See PBS (1980). In the 1980s, research on monetary policy in the March-July 1980 period widely agreed it to have been restrictive, indeed very restrictive, as the combination of the FOMC's new policy regime and the credit controls imposed by the Federal Reserve Board (at President Jimmy Carter's request) led to a severe monetary squeeze and output contraction—the latter forming the 1980 recession (see, for example, Blanchard and Watson, 1986, p. 135). These accounts acknowledged that short-term interest rates fell steeply in this period but emphasized the extent to which this was a reflection of weak demand for loans rather than connoting monetary policy ease (see especially Bernanke, 1988, p. 10). In contrast, some later accounts have taken the sharp decline in the federal funds rate over this period as implying that the FOMC went through a phase during 1980 in which it greatly eased policy, abandoning the policy of disinflation announced in 1979 (see Goodfriend and King, 2005, pp. 986, 999–1000; Nakamura and Steinsson, 2018, p. 72). It may be that these retrospectives are correct in contending that (whether the FOMC intended this or not) actual monetary conditions became loose for a time in 1980 (although some of the evidence cited for the looseness of monetary policy in this period—such as the fact that the inflation rate was high during 1980—rests on an assumed instantaneous reaction of inflation to FOMC policy settings). But the position that there was a *deliberate* abandonment of the disinflation program on the part of Volcker's FOMC seems inconsistent with a good deal of the contemporaneous record—most notably that contributed by Volcker himself. See the next footnote.

forecasts of interest rates to the people paid for forecasting interest rates." He reaffirmed, however, that an interest-rate decline "would be a normal thing to happen in a recessionary period."[93]

At a hearing in September 1980, Volcker was asked: "What can we expect to happen to interest rates in the near future?" He replied: "I wish I knew. I don't generally put myself in a position of forecasting interest rates, and I won't do so this morning."[94] This mixture of shunning disclosure of his personal interest-rate outlook and expressing little confidence in it was repeated during a public appearance Volcker made in Chicago the following month. Volcker told his audience: "I cannot promise you that I know which way interest rates will go or promise you stability." In this appearance, Volcker also gave a lighthearted version of his mantra about the undesirability and difficulty of predicting interest rates: "I religiously refrain from giving any interest rate forecasts. I do it partly as a matter of self-defense: I don't want [by giving poor predictions] to shatter your opinion of my competence." He also returned to the Fisher effect, this time applying it to the whole maturity structure of interest rates: "I don't see any way of moving the interest rate curve down in any sustained way, unless there is some sustained progress on the inflation front."[95]

With predictions of interest rates anathema to him, Volcker provided clarity during this period about future monetary policy by confirming that the FOMC intended to continue disinflation plans by lowering its monetary-growth targets in the years ahead. In September 1980, for example, he noted that, in the previous July, the FOMC had reaffirmed its monetary-growth target for 1980 and had tentatively set a lower target rate for 1981, in line with the need to reduce

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[93] Again, see PBS (1980). Early in the new regime, Volcker had noted (October 17, 1979, testimony, in Joint Economic Committee, 1980, p. 22) that interest rates would behave cyclically in that regime, so if they declined during a recession, "that should not be taken as a shift in our basic policy." And as just indicated in the text, in March 1980 he foreshadowed the decline in short-term interest rates in spring-summer 1980 in just such a light. Taking stock the following September, Volcker likewise attributed the "enormously rapid decline" in short-term rates during the year to the steep fall in aggregate output (September 10, 1980, testimony, in Committee on the Budget, House of Representatives, 1980, p. 161). (These interpretations were also made by policymakers in their internal deliberations. For example, Federal Reserve Board Governor Henry Wallich noted in a mid-1982 FOMC meeting that it was part of the logic of the new procedures that interest rates would decline automatically in recessions, and he observed that they had indeed done so during the 1980 recession. See Federal Open Market Committee, 1982a, p. 7.)

[94] Testimony of September 10, 1980, in Committee on the Budget, House of Representatives (1980, p. 160).

[95] Quoted in Barnhart (1980). The last remark was one of many occasions in the 1970s and 1980s when Volcker publicly stressed the influence of inflation expectations on longer-term interest rates. Contrary to the implication of Goodfriend and King (2005, p. 981), his belief in this influence was not a new piece of information disclosed for the first time publicly by the release, in 2004, of the 1979 and 1980 FOMC meeting transcripts.

monetary growth over time.[96] In keeping with this observation, Volcker testified early the following year that protracted restraint was a "posture [that] should be reflected in further deceleration in the monetary aggregates in the years ahead. That seems to us an essential ingredient in any effective policy to restore price stability."[97]

By this stage (late February 1981), the declines in interest rates seen around the middle of the previous year had essentially been fully reversed. Consequently, notwithstanding Volcker's efforts to center monetary policy discussions on monetary growth, public discourse was highly focused on interest rates and the Federal Reserve's role in generating them. Though the nonborrowed-reserves procedure meant that Volcker did not present the federal funds rate as chosen by the FOMC, he did not deny that the FOMC's actions inevitably had a bearing on that rate.[98] In addition, as the discount rate remained an administered rate and was not fixed by formula to market rates, its movement—a steep increase, from 10 percent in July 1980 to 13 percent in December 1980—had stemmed directly from Federal Reserve Board decisions.[99]

Against this backdrop, Volcker voiced hope that short-term rates would fall, but he relied on the Fisher relationship as the basis for this expectation. "The impact of the discount rate on the money market in the short run, which may be present in many circumstances," Volcker testified in February 1981," is quite a different thing from the impact of that discount rate change over a period of time, which may be precisely the reverse of the short-run influence…"[100] In other testimony given in the same month, he declared that lowering the inflation rate and inflation expectations amounted to the "one way of getting interest rates down."[101] Volcker elaborated that "in a sense, the whole purpose and thrust of our policies, ironic as it may sound, is to bring

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[96] Testimony of September 10, 1980, in Committee on the Budget, House of Representatives (1980), p. 156). Likewise, during an answer in a hearing on February 5, 1981, Volcker stated that "the general outline of our intention… is to work toward lower rates of monetary growth" (in Joint Economic Committee, 1981, p. 8).
[97] Testimony of February 26, 1981, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1981, p. 12). For a similar Volcker remark, given in testimony in another hearing during the same period, see Broaddus and Goodfriend (1984, p. 3).
[98] For example, in a television interview on August 30, 1981, Volcker stated (ABC, 1981, p. 2): "We are restraining the supply of money and credit [when] there's a lot of demand for money and credit. At the moment, that means high interest rates." Another example was Volcker's testimony of February 10, 1982, in which he noted that a "short-run influence" on interest rates of the restrictive monetary policy currently in force was that it was "tending to keep short-term rates [up] in particular" (in Committee on Banking, Finance and Urban Affairs, House of Representatives, 1982, p. 67).
[99] The Board had raised the discount rate in three steps over this period. See *https://fred.stlouisfed.org/series/DISCOUNT*.
[100] Testimony of February 26, 1981, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1981a, p. 139).
[101] February 5, 1981, testimony, in Joint Economic Committee (1981, p. 12).

interest rates down... Interest rates will come down and stay down as the inflation rates get down... I know of no other answer..."[102]

Beyond these invocations of the Fisher effect, Volcker in these February 1981 appearances would not be drawn on the outlook for interest rates: "One thing I refrain from… is from forecasting interest rates."[103] That was a posture he was continuing to take a year later, in late February 1982. By this point, inflation had fallen considerably, but nominal interest rates were still in high double digits. On February 24, 1982, to a senator's question, "Would you be willing to predict what the prime rate of interest will be at the end of 1982?," Volcker replied, "No," affirming, "I religiously refrain from such projections." Pressed by the questioner whether the prime rate "will not be much below what it is now," Volcker insisted: "You are not going to lure me into a precise prediction of that sort."[104] He did volunteer that he expected downward pressure on interest rates to be generated both by declining inflation and by a move downward in real rates from their "extraordinarily high" current levels. Consequently, Volcker expected nominal rates to "decline, and to decline even with business recovery. But just how much time that will take… I don't want to try to be precise about."[105]

As of February 1982, therefore, Volcker seemed to view interest rates as unduly high but regarded the onus as being on the private sector's expectations, rather than overt Federal Reserve actions or communications, to bring short-term interest rates down. In the hearing just quoted, he implied that if the FOMC took the initiative, it could be perceived as acting prematurely and might provoke an adverse result, such as a return to rising interest rates within a few months.[106]

Over the course of 1982, however, Volcker and his FOMC colleagues would become more comfortable with pressing market interest rates down. Indeed, they would eventually choose to carry this out through resumed Federal Reserve management of short-term rates. An early

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[102] February 5, 1981, testimony, in Joint Economic Committee (1981, p. 21). Similarly, on television a few days earlier, Volcker had stated that "the basic outlook over a period of time" for interest rates was "really dependent upon what we do about this inflation problem" (interview in ABC's *Issues and Answers*, February 1, 1981, quoted in *New York Times* News Service, 1981).

[103] From Volcker's testimony of February 5, 1981, in Joint Economic Committee (1981, p. 10). He made a similar remark in a hearing held on June 25, 1981 (Committee on Banking, Finance and Urban Affairs, House of Representatives, 1981b, p. 269).

[104] A couple of weeks earlier, Volcker had reiterated his belief in the unreliability of such predictions, including his own: "I don't have great faith in my ability to project precise levels of interest rates in the short run or in the long run… There's bound to be a lot of 'iffiness' in any interest rate projection. But I think the kinds of measures that need to be taken to maximize the chances [of] low interest rates are quite clear." (Testimony of February 10, 1982, in Committee on Banking, Finance and Urban Affairs, House of Representatives, 1982, p. 52.)

[105] In Committee on Finance, U.S. Senate (1982, p. 101).

[106] In Committee on Finance, U.S. Senate (1982, p. 116).

development in setting the stage for this shift occurred in March 1982, when Volcker partially broke his self-denying ordinance concerning interest-rate predictions. A speech Volcker gave on March 18 to a business audience led to a news report that opened: "The Federal Reserve Chairman Mr. Paul Volcker yesterday… predicted falling interest rates and a brighter economic future." It quoted Volcker telling the audience: "If I were not the chairman of the Federal Reserve Board, I will see a decade of declining interest rates. Certainly rates will start from a high enough level."[107] On the same occasion, Volcker stated that he "would love to see interest rates come down, but I want to see them stay down—I don't want a roller coaster."[108] This note of caution was consistent with Volcker's continued emphasis on the Fisher effect, rather than a concerted policy easing, as the means by which he wanted to see rates fall: the FOMC did "not mean to abandon that effort [that is, of reducing monetary growth], and we think it is central to reduced interest rates over time."[109] Provided that the fight against inflation was successful, "interest rates have nowhere to go but down," Volcker told the audience.[110]

Internal deliberations in the FOMC over the following months clearly showed that they remained reluctant to take moves designed to lower nominal interest rates for fear that this would be a precipitate easing.[111] As is well known, however, after the middle of the year the FOMC decided to take steps to lower interest rates—the federal funds fell from an average of over 14 percent in June to an average just below 9 percent in December—and to deemphasize M1, for which the FOMC permitted a substantial overshoot of the 1982 target. In effect, the FOMC in the mid- to late-1982 period returned to a permanent arrangement of managing the federal funds rate, although Volcker's FOMC was not forthright about this fact (see Thornton, 2006).

In this new environment, Volcker was not only reticent with regard to the FOMC's use of the current short-term interest rate as the focus of its period-to-period decisions, but he also remained reluctant to give FOMC projections of those or other interest rates. In August 1983,

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[107] The article (Brummer, 1982) explained the start of this quotation by noting: "Federal Reserve chairmen never forecast interest rates."
[108] Quoted in Buckhout (1982, p. A–1).
[109] Quoted in Buckhout (1982, p. A–18).
[110] Quoted in Washington Bureau (1982, p. 2).
[111] See, for example, the discussion in the FOMC meeting of March 29–30, 1982 (Federal Open Market Committee, 1982a). During this discussion, Volcker expressed reservations, similar to those he had articulated publicly, about the option of the Federal Reserve taking vigorous actions to lower interest rates (pp. 50–51). This posture was still evident in Volcker's Congressional testimony of June 15, 1982, in which he continued to indicate that he considered market interest rates to be too high, while implying that the FOMC was not prepared to take the initiative by stepping in to bring short-term interest rates down (see Joint Economic Committee, 1982, pp. 446, 454). This testimony also had Volcker repeat his maxim (p. 456): "I refrain from making precise forecasts of interest rates, and I think I'd better stick to that approach."

Volcker testified in hearings that were devoted to the question of how the Federal Reserve should communicate its plans and goals. In a written submission to this inquiry, former longtime FOMC policymaker Philip Coldwell had suggested that the published *Monetary Policy Report* table of FOMC participants' forecast ranges should be expanded to include additional information, including their projection ranges for the current and following year's average levels of the federal funds rate.[112] In his testimony, Volcker rejected this suggestion, instead maintaining: "In the case of interest rates, there would be the obvious prospect of misinterpretation and misunderstanding, were the Federal Reserve [to be] required to announce regularly [its] forecasts…. The forecast… would itself become an important market factor [and]… the result would often be to mislead market participants and provide false signals."[113]

In elaborating on this point, Volcker reiterated positions that he and other Board governors had propounded in previous years when rebutting previous calls for policymaker interest-rate forecasts. As an interest-rate forecast provided by FOMC members was likely to become a "focus of public attention," Volcker suggested, the Federal Reserve would feel obliged to take policy actions that validated the *ex post* accuracy of the forecast even if it became evident that the values of the interest rate given in the forecast were proving not to be those most consistent with the achievement of policymakers' macroeconomic goals. The associated FOMC "hesitancy in allowing interest rates to fluctuate in accordance with emerging—and possibly unanticipated—market pressures," Volcker contended, would make the announced interest-rate projections a "destabilizing force for the economy as a whole."[114]

Volcker therefore exhibited continuing negativity with regard to foreshadowing the medium-term consequences for interest rates of FOMC decisions. In line with this perspective, Volcker during the remainder of his tenure as chair (through 1987) relied on citing the longer-term, and familiar, influences on interest rates, with his discussions of interest-rate prospects stressing the Fisher effect and federal borrowing.[115] In a hearing held on February 7, 1984, for example, Volcker indicated that budget deficits were elevating the values of the real interest rate consistent with economic stabilization and that high nominal longer-term interest rates in part reflected

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[112] See the remarks in the letter (dated July 7, 1983) from P.E. Coldwell to Congressman Walter E. Fauntroy, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1983, p. 296).
[113] From Volcker's testimony of August 3, 1983, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1983, p. 181).
[114] From Volcker's testimony of August 3, 1983, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1983, p. 185).
[115] The latter factor, though it had already been frequently emphasized by Volcker and his predecessors in the years up to 1981, had become of elevated importance in public discussion in the wake of the large federal deficits that characterized the budgets of the Reagan administration.

market concerns about the possibility of an eventual monetization of Treasury debt issuance. Other than his articulation of the FOMC's monetary-growth targets, what forward guidance Volcker provided on this occasion consisted mainly of his ruling out of particular scenarios involving an untoward monetary easing. In particular, he affirmed the Federal Reserve's resolve not to accommodate the deficits or to generate interest-rate reductions that were considered inconsistent with a monetary policy strategy geared toward price stability.[116] This emphasis on what the FOMC would *not* do in the future contrasts with modern forward guidance, in which the FOMC describes the modal course of monetary policy settings in terms of the interest rate.

Likewise, in March 1985, when asked about the course of interest rates, Volcker stressed federal borrowing and inflationary expectations. Speaking when the federal funds rate was about 8.5 percent, Volcker remarked: "You can get an interest rate of 6 percent, or less, I would hope by 1990, or whatever year you projected, depending upon… the inflation rate… [and] what the balance is in the economy. If you want to get an interest rate of that kind, there is no greater contribution you [that is, members of Congress] can make than to take forceful budgetary action today."[117]

6. The Greenspan Federal Reserve and the transition to forward guidance

The era of Alan Greenspan as Federal Reserve chair (1987 to 2006) would eventually see the introduction of forward guidance into FOMC policymaking. Greenspan started out, however, voicing similar reservations about policymaker provision of interest-rate projections to those that had been expressed by Federal Reserve Board members, including chairs, in past years.

In February 1988, Greenspan remarked in testimony that "the difficulty that we would have in forecasting interest rates" lay in the fact that "because the Federal Reserve by its nature is involved [in] and has considerable influence on interest rates, it is very difficult for us to make forecasts without creating market instabilities." When a questioner then suggested that "the beauty of that [a practice of providing interest-rate projections] is you could make your assumptions come true," Greenspan disagreed: "No, I'm afraid it wouldn't [be like that,] because

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[116] See Committee on Banking, Finance and Urban Affairs House of Representatives (1984, pp. 9–10). This hearing also saw Volcker give voice once again to his now very familiar posture regarding interest-rate projections: "I haven't any particular expectations... I try to avoid making those projections at all." When this remark prompted his questioner to suggest that it would be "instructive" for the Federal Reserve chair to provide their perspective on the interest-rate outlook, Volcker replied: "It might be instructive, but I religiously refrain from trying to forecast interest rates." (Committee on Banking, Finance and Urban Affairs, House of Representatives, 1984, p. 53.)
[117] Testimony of March 6, 1985, in Committee on the Budget, House of Representatives (1985, p. 378).

the irony of this exercise is that, if we were to forecast interest rates, the chances are [that] the markets would create an environment which would probably make our forecast wrong."[118] Evidently, Greenspan believed that announced policymaker forecasts of future short-term rates would immediately affect long-term rates. But, like his predecessors, he seemed to believe that this reaction might well generate a degree of monetary accommodation or tightness that would ultimately mean that the values of the short-term rate given in the policymaker projection corresponded to an inappropriate stance for monetary policy. In the early Greenspan years, therefore what would come to be seen as benefits of guidance—that short-term interest-rate guidance could *both* be validated by later rate decisions (the forecast could prove correct) *and* steer current longer-term rates in a stabilizing manner (the guidance could reinforce monetary policy strategy)—were viewed as involving a balancing act that was in practice out of policymakers' reach.

Greenspan reiterated this attitude at another hearing held about a week later. Greenspan affirmed that "they don't let me forecast interest rates in this job... In fact, there will probably be a hook which will come down from the ceiling and drag me away if I tried." He proceeded to give the "more fundamental reason" for not doing so: "Because we on the Federal Open Market Committee can affect the movements of interest rates, if I or any of my colleagues publicly forecast rates, the immediate effect would be a market adjustment reflecting beliefs that, in effect, we were going to take actions to create [that is, validate] that particular forecast. The trouble, unfortunately, is that the adjustment occurs far faster than any of us would like to imagine, and you create instabilities as a consequence of that. In other words, the mere fact of the markets adjusting to a prospective change in monetary policy… can actually undercut the purposes of that policy by inducing much more rapid change—more instability." He concluded that he did not "think it would serve the purposes of the country" to have FOMC-provided interest-rate forecasts.[119]

This wary attitude was echoed in Greenspan's statements over the following decade. For example, in appearances made during March 1989, he observed, "I hopefully have been very cautious not to forecast interest rates," while maintaining that "we are not in the business of forecasting interest

[118] From the exchanges in the hearing of February 24, 1988, in Committee on Banking, Housing, and Urban Affairs, U.S. Senate (1988, p. 68).
[119] From Greenspan's testimony of March 3, 1988, in Committee on the Budget, House of Representatives (1988, p. 26). The rendering of the quotation given here has corrected a "perspective" in the original document to "prospective."

rates and really cannot."[120] Consistent with this attitude, the 1990s would see the FOMC, in 1994, move to a practice of same-day announcements of its changes in the federal funds rate, but for most of the decade the FOMC's communications about *future* monetary policy focused on its macroeconomic objectives rather than its likely settings of the funds rate.[121] Against this backdrop, in October 1997 Greenspan replied to a Congressional question concerning whether "the Fed would look in the future to lowering interest rates" or whether there remained "a need to raise interest rates," by observing, "Senator, I don't know of any way I can answer that question without getting myself in[to] trouble."[122]

Nevertheless, the course of Greenspan's first decade as Federal Reserve chair saw a distinct shift on the part of Federal Reserve officials. They became more receptive to the idea of consciously influencing longer-term interest rates by providing signals concerning future short-term interest rate policy.

An early public sign of this shift was given in a talk that Donald Kohn, head of the Federal Reserve Board's Division of Monetary Affairs, gave in October 1990 titled "Making Monetary Policy: Adjusting Monetary Policy to Achieve Final Objectives."[123] Kohn outlined what he referred to as a "view of the transmission process [that] may serve as a useful organizing paradigm for the discussion of making monetary policy."[124] In the view outlined, the "instrument variable manipulated by the central bank… is taken to be the short-term interest rate," and this policy rate contrasted with a benchmark longer-term rate, whose behavior "should give some sense of where markets expect [short-term] interest rates to move."[125] FOMC decisions essentially concerned the "path" of short-term rates, Kohn suggested, and monetary policy decisions amounted to whether rates should stay along their current path or instead, "an evaluation of the outlook for prices and economic activity relative to long-run [FOMC] objectives" justified an adjustment to that interest-rate path.[126] When the FOMC did decide to

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[120] The quotations are from Greenspan's testimony of March 2, 1989, in Committee on the Budget, House of Representatives (1989, p. 449), and of March 22, 1989, in Committee on Banking, Finance and Urban Affairs, House of Representatives (1989, p. 153), respectively.

[121] Furthermore, although monetary-growth targets were regularly announced until 2000, in the period after 1992 the Federal Reserve's communication of monetary policy became focused even more than previously on the achievement of the ultimate objectives of monetary policy, including progress toward, and the maintenance of, price stability. See, for example, Lindsey (2003, pp. 134−135, 141) and Bernanke (2013).

[122] From Greenspan's testimony of October 29, 1997, in Joint Economic Committee (1997, p. 17).

[123] See Kohn (1990). The speech was for a conference held by the Reserve Bank of Australia, which published a proceedings volume for the conference. The speech was consequently part of the public record, though it was little noticed at its time of publication.

[124] Kohn (1990, p. 13).

[125] Kohn (1990, pp. 12, 18).

[126] Kohn (1990, p. 13).

change its target federal funds rate, the changes "ripple along the yield curve[,] affecting intermediate and long-term rates… The amounts by which these latter rates will change depend in part on how well the policy move had been anticipated, and whether it is seen as having implications for further policy actions."[127]

Kohn's outline cast market reevaluations of the expected policy rate path that flowed from policy actions, together with the associated instantaneous adjustment of longer-term interest rates, as an aspect of the transmission mechanism that was routine and that could complement and reinforce announced policy actions. This contrasts with the concerns so often voiced in the past by Federal Reserve officials about markets acting on anticipations of coming policy moves. In effect, Kohn was articulating a position much closer to that associated with the subsequent era of forward guidance. Compared with that later era's consensus, the main difference in Kohn's outline was that he took it as incumbent on financial markets to infer the likely course of rates from its assessment of the FOMC reaction function—and not the task of policymakers to provide explicit indications of future policy actions when they announced their current policy move.[128]

In Congressional testimony given in January 1992, Chairman Greenspan indicated that the FOMC had been consciously trying to affect the longer-term rate through its short-term interest-rate policy, and he expressed satisfaction with its success in doing so in recent months. He explained that in recent times "our major concern was to be certain that, as we moved short-term rates lower, we could move, induce, drive—whatever the appropriate term is—long-term rates to move with the short term rates."[129] In particular, Greenspan suggested that this had been an important consideration in policy moves made since summer 1991.[130] Over that period, he recounted, "we accelerated our monetary easing, because it became clear that we now had the capability of really bringing long-term rates down."[131]

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[127] Kohn (1990, p. 12).
[128] On the parallel position on this matter taken by U.K. policymakers during the 1990s and 2000s, see Fischer (2017). Central banks in some other inflation-targeting countries were, however, more willing to include their interest-rate forecasts in their public communications from the mid-1990s onward: see Svensson (2015).
[129] Testimony of January 29, 1992, in Committee on Banking, Housing, and Urban Affairs (1992, p. 36).
[130] These very explicit statements by Greenspan about the FOMC's efforts to affect longer-term rates provide a qualification to Eberly, Stock, and Wright's (2020, p. 24) statement that "the first use of slope policy [that is, of FOMC efforts to affect the term structure] in the modern era was the appearance of forward guidance in 2003." It is true, however, that the 1992 Greenspan statements given here were made before the FOMC provided postmeeting press statements and so lacked this means of sending signals about future economic and monetary conditions.
[131] Testimony of January 29, 1992, in Committee on Banking, Housing, and Urban Affairs (1992, p. 37). Greenspan was not, in fact, claiming that the FOMC's ability to affect long-term rates using short-term rate policy was a new phenomenon. But he argued that, until recently, long-term inflation expectations were not so well anchored that the FOMC could, when it acted, take for granted that nominal long-term rates would, on net, move materially and do so in the same direction as short-term rates (p. 84).

By the end of February 1992, however, the 30-year Treasury bond rate had retraced a good deal of its previous decline, and the Federal Reserve was reportedly frustrated at the inadequacy of the response of longer-term rates to the FOMC's recent easing steps.[132] A couple of years later, a tightening phase featured the opposite problem: a perceived *overreaction* of longer-term rates to the FOMC's increases in the federal funds rate. In his postmortem on the 1994 episode, Greenspan (1997) suggested that the large bond-rate rises involved markets unduly "ratcheting up their expectations [of] further rate increases when we actually tightened." These assessments of 1992−1994 developments suggested that policymakers saw market expectations of future actions as an important part of the channels through which monetary policy operated. But they also implied that the market assessments of the policy reaction function that underlay these expectations were flawed and had led to incorrect inferences regarding future policy actions.

It is in this situation that overt forward guidance provided the opportunity to clarify plans concerning future interest-rate policy. Something of a false start was made on this score when the FOMC incorporated, starting in May 1999, into its postmeeting statement an indication of the Committee's "tilt" or "bias." This information, which had previously appeared in the FOMC's directive but not in its same-day announcements of policy changes, provided guidance about very near-term monetary policy by characterizing the likely direction of the next move in the policy rate. The "tilt"—which formally only applied to any likely move of the funds rate *before* the next meeting—was poorly received. It was widely judged as liable to be misunderstood by financial markets (see Lindsey, 2003, pp. ix, 173−177), and Cecchetti (2000, pp. 33−35) contended that the tilt announcements were an instance of policy communications that actually added to overall uncertainty in the economy.

After less than a year, the tilt was dropped, in a set of changes announced in Federal Reserve (2000). This announcement implied a mix of expanded and reduced rate guidance: FOMC announcements would now immediately follow every meeting (not just meetings at which the funds rate was changed), but the item used to replace the tilt was the "balance of risks." This

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[132] See Bleakley and Wessel (1992). This news story opened with the words: "Why can't the Federal Reserve Board get long-term interest rates down?" (p. A1; p. 37 of 1993 reprint), and the continuation of the article referred in its headline to the "plans of the Federal Reserve Board" concerning monetary policy's influence on longer-term rates (p. A5). These jarring references to the Federal Reserve Board, rather than the FOMC, may reflect the fact that the FOMC was still two years away from issuing a press release when it changed its federal funds rate target. In contrast, the Federal Reserve Board's changes to the discount rate were officially announced, and so these moves sometimes had a higher profile than FOMC decisions. In addition, in December 1991 the Board's 100-basis reduction in the discount rate had been announced in a Board press release that (foreshadowing the era of FOMC postmeeting policy statements) described the connection between that rate decision and the outlook for inflation and economic activity (see Crutsinger, 1991).

new material in the FOMC statement was envisioned as referring to a longer future horizon than what the tilt had covered. Nonetheless, the change in communications also meant less explicit guidance, for it implied that the FOMC announcement would no longer focus on the prospects for the federal funds rate. Instead, the FOMC would refer to its goal variables alone, as "the [balance-of-risks] announcement will indicate how the Committee assesses the risks of heightened inflation pressures or economic weakness in the foreseeable future."
But after the federal funds rate had been brought down to 1 percent and the FOMC felt that clarification of the associated policy stance was needed, the Committee opted to institute explicit interest-rate forward guidance.[133] The FOMC inserted into its postmeeting statement of August 12, 2003, the guidance that "the Committee believes that policy accommodation can be maintained for a considerable period."[134]

7. Conclusion

This paper has traced the emergence of forward guidance as a monetary policy tool in the United States. It has done so by ascertaining the attitudes toward public guidance about future monetary policy—in particular, the future path of short-term interest rates—that prevailed among the makers of U.S. monetary policy from the 1950s to the 1990s. It emerges from the analysis that, though deployed only in recent decades, forward guidance was contemplated as a potential policy tool by policymakers in the earlier eras. The premises underlying forward guidance enjoyed wide acceptance from an early stage. It was understood that longer-term rates mattered for aggregate private-sector spending and that these rates were a function of expected future short-term rates. Nevertheless, policymakers resisted forward guidance for decades, until a change occurred: the development of a consensus more favorable to the deployment of guidance.

As the above analysis indicated, policymakers of earlier decades suggested that little was known in advance about what values of the short-term interest rate would be appropriate—and that disclosing current policymaker thinking about likely future rates would trespass on the prerogatives of future policymakers, who had the responsibility for the decisions bearing on these rates.[135] These objections to forward guidance melted away in more recent decades. Providing indications of policy intentions became regarded as useful, rather than as something

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[133] See, for example, Yellen (2013). See also Gürkaynak, Sack, and Swanson (2005) and Lunsford (2020) for estimates on the effects on the expected short-term interest rate path of this early guidance and of the prior balance-of-risks statement language.
[134] Federal Open Market Committee (2003).
[135] A further relevant factor was that—particularly during the era in which Paul Volcker was head of the Federal Reserve—the idea of providing guidance regarding short-term interest rates conflicted with policymakers' wish to discourage perceptions that they set the level of short-term rates.

that preempted future policy decisions. It came to be accepted that the future rate path was not entirely unpredictable and that policymakers consequently could provide useful information about future settings of policy instruments—in contrast to their practice of describing future monetary policy only in terms of hoped-for aggregate macroeconomic outcomes. These changes in views on forward guidance were in keeping with a greater acceptance of the notion that a policy strategy involved a path of the policy instrument over time, rather than a sequence of self-contained individual decisions about instrument settings.[136] In addition, a possible result of guidance—better alignment of market expectations of interest rates with policymakers' views—came to be seen as valuable and as likely to contribute to economic stabilization.[137]

Another key objection regarding forward guidance that policymakers voiced until the 1990s was that providing interest-rate projections would, in practice, be reminiscent of an interest-rate peg. It was suggested that such projections would lock the FOMC into particular numerical values of interest rates, even if the values given in the forward guidance turned out not to be those most consistent with macroeconomic stabilization. This perspective made itself felt in the restricted manner in which pre-1990s policymakers spoke about future interest rates: they largely confined themselves to describing the longer-run operation of the Fisher relationship—thereby excluding from consideration the additional, shorter time-frames for which monetary policy was also relevant. Even in the early 1990s—when policy officials became more comfortable with the notion of moving longer-term rates by signaling future moves—they tended to avoid mentioning specific values of future short-term rates, instead referring to the reaction function. The advent of forward guidance in the 2000s did, however, involve, in addition to official descriptions of the policymaker reaction function, specific references to the likely path of short-term interest rates.[138] In describing the rate path, policymakers forestalled perceptions that they were pegging rates by stressing that the indicated path was conditional on an assumed economic outlook.

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[136] This change in perspective was, in turn, in conformity with developments in economic research noted by Sargent (1987, p. xxi), who observed that best-practice policy analysis had moved from "attempting to analyze the effects of one-time actions that are isolated in time" to "think[ing] of policymaking as a process producing a strategy."

[137] As discussed above, the Federal Reserve leadership before the forward guidance era occasionally became unhappy with discrepancies that emerged between financial markets' expectations of short-term rates and the corresponding expectations held by policymakers. One such discrepancy evidently led Chairman Volcker to take the then-unusual step in 1982 of providing explicit rate guidance.

[138] Engen, Laubach, and Reifschneider (2015) argued that one reason for this was that some of the guidance involved, in effect, the announcement of a changed reaction function. That being the case, it was useful to give guidance that, by being explicit about the numerical values of short-term interest rates, was more likely to move private-sector expectations of the rate path away from that implied by the assumption of a continuation of the existing policymaker reaction function.

Finally, it is noteworthy that—although the advent of ELB episodes has certainly seen forward guidance come into its own as a policy tool—the shift in Federal Reserve discussions toward being more amenable to forward guidance occurred in the 1990s, before the ELB emerged as a pressing concern. This aspect of the origin of FOMC guidance is keeping with the argument made both in vintage discussions of forward guidance (such as Keynes, 1930) and in modern discussions (such as Svensson, 2015) that such guidance is a natural tool of monetary policy and should not be regarded as suitable for deployment only in ELB conditions.

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