Coming Soon: An Inflation Target at the Fed

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1. Introduction

Now that Ben Bernanke has become chairman, we can at least be sure that there will be an active consideration of an explicit inflation target by the FOMC. In this paper, we set out the key features of the specific proposal we expect to be under consideration, explain the nature of the debate about this proposal, assess whether moving in this direction would really matter for monetary policy and macro performance, and speculate about whether the Committee will move in this direction and, if so, how soon. The specific proposal is likely to be a numerical definition of the Fed's price stability objective, consistent with its dual mandate. This might appear to be a compromise that falls short of the full-fledged inflation-targeting (IT) regime that has come to be regarded as best practice. We argue, however, that the direction the Fed is expected to take will, in fact, define a new standard of best practice for central banks.

2. The Bernanke Proposal

"I generally support the idea of a Committee objective and range. I say generally because I think it is not particularly useful to offer a blank endorsement for a proposal that is not yet on the table." (Pianalto 2005)

It was clear, even before Bernanke was nominated as chairman, that any move in the direction of an explicit inflation target by the FOMC would be along the general lines that Bernanke had recommended. This, by the way, is basically the same proposal offered by Meyer (2001) while he was still on the Board. But, OK, we will call it the Bernanke proposal!

The essential feature of this proposal is that it calls for the FOMC to announce a numerical definition of the Fed's price stability objective within the context of the dual mandate that Congress has set for the Fed and that the FOMC is committed to. The intention of and motivation for the proposal are very important as well: It is intended to promote continuity with the flexible and pragmatic course of monetary policy during the Greenspan years, not as an instrument for a

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change in the way monetary policy has been conducted. It is, nevertheless, proposed as a further incremental step towards enhanced transparency, consistent with the direction in the Greenspan era, and is expected to have a payoff, at the margin, in improved macroeconomic performance.

The details of the Bernanke proposal are less important than the broad direction, but are well known. Bernanke has said that he prefers a single number for the definition of price stability or "at least a number with a surrounding tolerance range that is as narrow as the Committee can live with." (SLF, p. 167) In practice, he has consistently defined price stability in terms of a 1 per cent to 2 per cent comfort zone for the core measure of PCE inflation. The reference index, the level, and whether and how wide the range should be will certainly be topics for further discussion by the Committee, but the debate will principally be about this broad proposal.

3. What's the Debate Really About?

3.1 An inflation-targeting regime or a definition of price stability?

Bernanke has written extensively about the experience of inflation-targeting regimes abroad and clearly sees his own proposal as modelled after this approach. Many members of the Committee, on the other hand, do not look as favourably on these regimes as models for the Federal Reserve. It would be a mistake, therefore, to frame the debate in terms of whether we should move in the direction of inflation-targeting regimes abroad and, indeed, consensus within the Committee and the concurrence of Congress would be facilitated by differentiating the approach being debated in the United States from typical regimes abroad.

IT regimes abroad generally have two properties of particular relevance to the debate about inflation targets in the United States. They feature an explicit numerical target for inflation, but also typically a hierarchical mandate that gives a priority to achieving price stability and downgrades the commitment to other objectives, including full employment. Thus, IT regimes fall in the upper right-hand cell of the matrix. Congress has given the Fed a dual mandate that calls on the Fed to promote full employment, as well as price stability, and has not assigned any relative weighting for the two objectives. Neither Congress nor the FOMC would accept a fundamental change in the FOMC mandate.

Bernanke argues that inflation-targeting regimes abroad generally practice "flexible" inflation targeting, meaning that they seek to stabilize output and employment in the short run, while maintaining a strong commitment to keep inflation under control. Flexible inflation targeters are, in this view, cousins of dual-mandate central banks. We believe it is true that many inflation-targeting central banks have evolved into a more flexible approach to monetary policy. But most of these central banks operate under mandates that seem clearly intended to downplay the role of such stabilization policy.

Some members of the Committee—including Don Kohn and Janet Yellen—are very skeptical of importing a typical IT regime. Don Kohn noted that moves in this direction may very well have been a major step towards attaining price stability in these countries. But in many cases, these regimes signalled a fundamental change in policy after a period of very unsatisfactory economic performance. In the United States, on the other hand, the initial conditions are a period of very

successful monetary policy, including achieving the same level and stability of inflation as typical IT countries.

As a result, the potential benefits of moving in this direction have to be quite small. He is concerned that moving to an IT regime would "result in less-than-optimal attention being paid to stabilizing the economy and financial markets…. It puts a higher priority on hitting a particular inflation objective over the intermediate run than the Federal Reserve has done." IT central banks also base their communications and accountability on inflation forecasts and outcomes.

Kohn also considers as an "alternative" to an IT regime simply "defining price stability," that is, "publishing a number of a reference range that makes more concrete our long-term inflation objective, without making a commitment to achieve that objective in any given time frame." This might allow the United States to "realize some of the benefits of inflation targeting without some of the costs." He says, "I am still trying to make up my mind on the balance of costs and benefits of taking this step." The costs would arise from "any tendency for this definition to morph into a target that unnecessarily constrains actions."

Janet Yellen takes a similar position:

"I, for one, am not a strict inflation targeter…and—as far as policy-makers go—I do not think I am in a minority. A natural next step for the FOMC is to announce an explicit numerical long-run inflation objective."

Here again, the distinction is drawn between "inflation targeting" and announcing a definition of price stability. The first is a definite no go, while the second is an advance in the practice of monetary policy making.

It is therefore not surprising that the FOMC, in the minutes of the July 2005 FOMC meeting, describes the debate as being about whether or not to provide an explicit "numerical definition for the price stability objective." The minutes never mention the words "inflation targets" or "inflation targeting." The bottom line is that if Bernanke is to move the Committee towards an explicit numerical definition of inflation, he will have to differentiate it from the IT regimes abroad that many members find unacceptable. He seems to be moving in this direction.

There will, of course, be a debate about the details—what inflation rate should the "definition" refer to, what should be the level of the inflation "objective," and should there be a range and, if so, how wide should it be. But the details will not be difficult to agree upon once the consensus is built to announce a numerical definition. On the other hand, the development of a more detailed proposal could facilitate the building of that consensus, as the proposal would make clear the commitment to the dual mandate and policy continuity.

3.2 A cost-benefit analysis of moving to an explicit definition of price stability

Once it is agreed that the debate is about a move to a numerical definition of price stability within the context of a dual mandate, we can take the debate to its next level, specifically,

whether a move in this direction would inevitably change the conduct of monetary policy, notwithstanding the intention not to do so. This is the position of Don Kohn.

Perhaps the most important issue in the debate can be clarified in terms of a Taylor rule—shown in equation (1)—a simple way of describing the conduct of monetary policy in the United States. According to the Taylor rule, the FOMC varies the nominal funds rate (r) relative to its neutral level (given by the sum of the neutral real funds rate (i^*) and prevailing inflation (B)) in response to deviations of output (or the unemployment rate (u)) and inflation from their respective targets—the NAIRU (u^*) for the unemployment rate and the implicit or explicit inflation target (B*) in the case of inflation. The parameters " and $ describe the aggressiveness of response to deviations of the unemployment rate and inflation from their respective targets.

$$r = i^* + B + "\,(u^* - u) + \$\,(B - B^*) \qquad (1)$$

The debate can be usefully simplified to two interrelated questions: Is it possible to make the inflation target explicit while leaving the response parameters " and $ unchanged? And, would moving in this direction lead unambiguously to more favourable macroeconomic performance, or would there be trade-offs that have to be weighed?

The key concern among those skeptical or opposed to the move is that by identifying a precise and explicit target for inflation, monetary policy would at least indirectly become more focused on the price stability objective relative to the full employment objective, implying an increase in $ relative to " . If $ rose relative to " , there would be a trade-off associated with introducing an explicit inflation target—tighter control over inflation would come at the expense of more real-side volatility. If you believe that monetary policy has been conducted in a flexible and pragmatic fashion during the Greenspan years and has gotten the trade-off between volatility of inflation and output about right, you might be reluctant to upset this record by moving to an explicit inflation target. This is also the “if it ain’t broke, don’t fix it” school.

This is not the only trade-off that could be affected. Another would be the freedom of policy-makers to respond to incidents of extreme financial instability. But we will focus here on the real-side instability question.

What is missing in the above analysis is the possibility that moving to an inflation target could also affect the dynamics of the economy itself, in addition to the policy response function. A move to an inflation target could better anchor inflation expectations and thereby reduce the persistence of inflation shocks. This, in turn, could improve the stability of the real side of the economy. So the counter-argument is that moving to an explicit inflation target might actually reduce real sector volatility rather than increase it.

There are two reasons why anchoring inflation expectations could reduce real-side volatility. First, inflation shocks (such as increases in the level of oil prices) would have a smaller effect on inflation if inflation expectations were better anchored, specifically with less pass-through from energy shocks to core inflation and less persistence of any increase in overall inflation. In this case, the anchoring of inflation expectations would do part of the work that otherwise would

have to be done by monetary policy, allowing a less aggressive response to contain inflation in response to such supply shocks and therefore less real-side instability.

Second, when inflation expectations are better anchored, policy-makers might be willing to be more aggressive in responding to demand shocks, knowing that such an aggressive response would be less likely to un-anchor inflation expectations. This suggests that an explicit inflation target could actually allow an increase in " relative to $!

The debate about the effect of an inflation target on output volatility is virtually identical to the debate about the contribution of monetary policy to the "great moderation," the decline in both the level and volatility of inflation and in real-side volatility since the early 1980s. What has been the contribution of monetary policy to the great moderation? Monetary policy deservedly and obviously is given credit for the improved inflation performance. But one might have expected any improvement in inflation performance as a result of better monetary policy to have an offset in more real-side volatility—as might be expected in the context of the Taylor rule. But the fact is the real-side volatility fell as well. There is a debate in the academic community about the source for the decline in real-side volatility: good luck (fewer shocks), structural changes, and better policy. Bernanke has suggested that monetary policy might have a role in both the lower volatility of output, as well as inflation, based on the very same arguments developed above.

4. Is the Devil in the Details?

The devil is often in the details, and that could be the case here, but we doubt it, provided the proposal is for a numerical definition of price stability in the context of a dual mandate.

The details include the inflation rate, the target references, the level (or midpoint of the range) for the target, and whether and how wide a range to specify.

The baseline proposal incorporates the details that Bernanke has emphasized: using the core PCE, centred on a 1½ per cent midpoint, with a range from 1 per cent to 2 per cent, the so-called comfort zone.

We believe it is a given that the inflation rate would be the core PCE, as the FOMC has consistently emphasized this measure in its communications. That does not imply that there are not interesting and potentially important issues here, given that the FOMC today assesses the inflation picture by looking at a wider range of inflation rates. A recent working paper by Whitesell (2005) considers some options to a simple inflation target referencing one inflation rate, but we expect the decision would be to reference the core PCE inflation rate.

The level of the inflation target, in terms of the core PCE, is also likely to be a given—a midpoint of 1½ per cent. This is the midpoint that most members use when they talk about the Fed's implicit target or about a proposed explicit target, it is (implicitly) the consensus of the Committee for the meaning of price stability during the wide-ranging discussion at the July 1996 meeting. The level in this case reflects the judgment that the inflation target should incorporate measurement error and a cushion to reduce the risk of reaching the zero nominal bound during serious downturns. A few members nevertheless prefer zero true inflation, or a target that only

incorporates measurement error, for example, 1 per cent for the core PCE. A few may prefer a slightly higher target, 2 per cent, further reducing the risk of hitting the zero nominal bound and reducing the need for policy to be asymmetric in its response to movements below and above the inflation target.

We expect there will be most disagreement about the range—whether to have a range and how wide it should be. Bernanke's proposal incorporates a narrow range. Some committee members will prefer a range of 1 percentage point on either side of the target or 2 percentage points overall, more typical in IT countries today. The debate about the range will also have to include a discussion of what the range is intended to convey. Whitesell also offers an excellent discussion of alternative interpretations for the range, with potentially different widths.

Ranges in some IT countries identify points which, if breached, require special communication. Ranges could also indicate a range of tolerance, perhaps reflecting the typical cyclical variation in inflation. Ranges could also indicate something about a change in the response of monetary policy to movements within and outside the range. For example, if there was a range of tolerance inside, the funds rate might move percentage point for percentage point with movements of inflation inside the range, just preserving the real funds rate. Outside the range, on the other hand, the FOMC would lean against the rise or decline in inflation by ensuring that real rates rose, for example, in response to movements in inflation to a level above the upper end of the range.

It is the latter interpretation that could be the source of the greatest debate about the size of the range. Some will view a range of one percentage point as too narrow to justify a more aggressive response to movements in inflation.

5. A New Standard for Best Practice?

The direction we expect the FOMC to take—a numerical definition of price stability within the context of its dual mandate—might be interpreted as a compromise of two principled positions that falls short of the standard for best-practice central banking set by inflation-targeting central banks around the world. However, we would like to make the case that this direction will, in fact, set the new standard for best practice and that there will be convergence over time of inflation-targeting central banks towards the U.S. model.

It is true that the direction we expect is a compromise of two principled positions—the early view of Ben Bernanke in favour of a full-fledged inflation-targeting regime and the view of Don Kohn in favour of the status quo. It should be noted that Bernanke interprets inflation-targeting regimes today as practising flexible inflation targeting and views that regime as a close cousin of dual-mandate central banks. He has also favoured a relatively short horizon and publication of Inflation Reports, additional hallmarks of inflation-targeting regimes.

Bernanke has moved in the direction of proposing a numerical definition of the FOMC's price-stability objective, we expect, out of appreciation that this is as far as he could get and command the overwhelming consensus of the FOMC. In any case, it is tempting to see this compromise as IT-"lite" or a "soft" version of IT, and, as a result, perhaps falling short of best practice abroad, and it will be so interpreted by many central banks around the world.

The FOMC, however, should not apologize for or sell short the direction in which it is headed. Indeed, we are prepared to argue that it will, in fact, establish a new standard for best-practice central banking and, as such, the convergence among central banks over time will be in the direction of the U.S. approach.

To make our point, we offer another perspective on the differences in monetary policy frameworks between the Fed and inflation-targeting regimes. As in the framework we introduced earlier, we distinguish between central banks with implicit and explicit inflation targets. However, in this matrix, we defer to Lars Svensson and do not make a distinction between central banks with dual and hierarchical mandates. Flexible inflation-targeting central banks in this matrix are interpreted as operating like dual-mandate central banks. Instead, we now make a distinction between central banks with explicit and implicit dual mandates.

The United States clearly has an explicit dual mandate. Many inflation-targeting central banks clearly have hierarchical "official" mandates, even if they act as if they operate under a dual mandate.

We have heard many times that inflation-targeting central banks have set the standard for transparency and that the Fed is lagging. This is, of course, true in our view with respect to defining the inflation target. But the opposite may be the case with respect to the clarity of their overall objectives and, specifically, whether or not they really operate like dual-mandate central banks.

The United States has an explicit dual mandate but an implicit inflation objective. It could take a step towards best practice by moving to an explicit inflation objective. Most inflation-targeting central banks—those with hierarchical official mandates—combine an explicit inflation target with an implicit dual mandate. They could take a step towards increased transparency and best practice by moving officially to a dual mandate.

We would argue further that the Fed today may already be closer to best practice than many inflation-targeting central banks. The Fed, after all, has the most explicit implicit inflation target in the history of central banking. By contrast, many inflation-targeting central banks, notwithstanding their practice, continue to talk about monetary policy in terms of hierarchical mandates and thus hide their true objectives.

Let us take the argument a couple of steps further. Other reasons why some IT central banks will view the Fed as falling short if the FOMC moves in the direction, we expect, is that the Fed will likely not identify a specific horizon over which it intends to return inflation to its target following departures and because the Fed will still not have a so-called Inflation Report.

However, the very existence of a "horizon" in our view is a sign of tension and problems in a monetary policy framework. Horizons were invented to ensure that central banks operating under hierarchical mandates did not in fact entirely ignore output volatility, but instead took an appropriate amount of time to return to the target after departures. A dual-mandate central bank

does not need a horizon and, in fact, announcing a specific horizon will not be consistent with optimal policy.

To reinforce this point, we ask if there is a fixed horizon implicit in the Taylor rule or if a fixed horizon is an implication of optimal monetary policy simulations. The answer is, of course, "No!" To be sure, for any disturbance we can always calculate the horizon over which inflation is returned to its target under the Taylor rule or under an optimal monetary policy path. But the horizon in this case is endogenous, not imposed from the outside, and is variable, not fixed.

Horizons may have been important in situations in which the central bank did not have credibility (as was the case at the time most inflation-targeting regimes adopted this framework) and therefore had to show the public in a more immediate way that it plans to return inflation to the target range. But horizons are not needed for central banks that already have credibility.

We conclude that best-practice central banks have an explicit dual mandate, an explicit inflation objective, but no explicit horizon.

What about Inflation Reports? It is simply inappropriate for a dual-mandate central bank to report its forecasts and discuss monetary policy decisions and prospects in a report bearing the title "Inflation Report." Such a label is fine for inflation-targeting regimes that are truly operating under hierarchical mandates. In that case, it fits. But such a title is inconsistent with a dual mandate. Dual-mandate central banks should instead report their forecasts and discuss monetary policy prospects in Monetary Policy Reports.

Of course, we do not want to make too big a deal out of the name of central bank reports. The fact is that the Fed's Monetary Policy Report today does fall short of best practice in a number of respects, and we expect to see this report evolve and improve over time.

6. Would IT Really Matter?

Moving to an explicit numerical definition of price stability would of course affect the process of monetary policy making. It would make policy more transparent and would make monetary policy makers more accountable. We view these effects as unambiguously good.

A sometimes overlooked, but potentially important, contribution from a move to an explicit numerical definition of price stability is its potential for enhancing the coherence of the internal policy deliberations. Today, in principle, members can be pulling in different directions because of differences in their preferred inflation objective. Does this make sense? In addition, the average inflation objective of the Committee could change slightly over time as the makeup of the Committee evolves. Does that make sense?

But the debate is more about performance than process—about whether, how, and how much moving to an inflation target would matter for macroeconomic performance. As such, the debate will be informed by an assessment of how the moves to inflation-targeting regimes abroad affected macroeconomic performance in those countries. Such an assessment requires a comparison assessment of the macro performance in IT and non-IT countries following the introduction of IT regimes. This comparison has important limitations, however, given that IT

regimes abroad involve both different mandates as well as explicit inflation targets. But the experience of IT countries relative to non-IT countries is what we have to work with.

There are several key dimensions of the possible effect of an explicit IT on macro performance. It could lower the level and volatility of inflation. It could better anchor inflation expectations. And it could affect the volatility of output, in either direction.

The empirical studies of the effect of IT regimes yield disappointingly mixed results. Some researchers conclude that the movement to inflation targets has not been associated with any improvement in macro performance. Ball and Sheridan (2003), for example, rule out effects on average inflation, inflation persistence, average growth in output, output variability, average long-term interest rates, and the variability of short-term and long-term interest rates. Their basic point is that while inflation fell and became less volatile in IT countries after the adoption of explicit targets, the same trend was evident in non-IT countries. Specifically with respect to the United States, they find we have done just as well as IT countries in achieving low and stable inflation.

Others have found significant favourable effects on macro performance from the move to explicit inflation targets. For example, Levin, Natalucci, and Piger (2004) find that IT countries have better-anchored inflation expectations and exhibit less persistence of inflation in response to shocks.

Both papers agree that moving to an inflation target does not affect output volatility one way or another. From the Ball and Sheridan perspective, this means that, while IT regimes don't improve macro performance, they don't harm macro performance either. From the Levin, Natalucci, and Piger perspective, it means that there is no trade-off in the form of greater output variability associated with the improvement in the anchoring of inflation expectations in IT countries.

Gürkaynak, Sack, and Swanson (2005) find that the long-run inflation expectations implicit in the pricing of inflation-indexed securities vary significantly over time, suggesting some uncertainty about the Fed's long-run inflation target.

It is worth noting that the papers produced by Fed staff have been the ones that have found unambiguously favourable effects on macro performance from moving to an implicit IT.

If we look at the 5-year moving average for the core CPI, for example, it is clear that the FOMC has consistently been within the so-called comfort zone for this measure and, indeed, very close to the midpoint for some time. How much better could performance have been with an explicit inflation target? On the other hand, survey and market-based measures of long-term inflation expectations reveal that those expectations have not converged to the FOMC's implicit target, perhaps indicating the potential for some further convergence from the move to an explicit target.

7. What Goes with IT?

Bernanke has emphasized that inflation-targeting regimes included both an explicit inflation target and a communication strategy. He has said that his proposal involves both quantifying "what the Federal Open Market Committee means by 'price stability'" and publishing "regular medium-term projections or forecasts of the economic outlook, analogous to the *Inflation Reports* published by… inflation-targeting central banks."

The Fed already publishes a range and central tendency of its projections for nominal GDP growth, real GDP growth, core PCE inflation, and the unemployment rate twice a year and publishes them as part of the Monetary Policy Report to Congress. Whereas Greenspan seemed to dislike this process and never participated in it himself, Bernanke has said he finds the process "quite interesting." He notes two drawbacks: the FOMC forecasts are not released for a number of weeks (the time between the FOMC meeting at which they are assembled and the Chairman's semi-annual testimony to Congress); and the January forecast covers only the remainder of that year (whereas the July forecast covers the remainder of that year and all of the subsequent year). He proposed to detach the projections from the Monetary Policy Report and instead release them shortly after the meetings (in January and July) at which they are compiled. He also wanted to add a year to the January forecast, but this has already been done.

We doubt, however, that the Committee is as committed to further increases in transparency to complement a numerical definition of the Committee's price stability objective. The FOMC has recently extended the horizon for the February FOMC forecast, so that both semi-annual forecasts now go out about two years. It might be helpful to add at least an additional year, but this seems like a marginal step. The introduction of an "Inflation Report" for a central bank with a dual mandate also seems questionable, unless it was also prepared to issue an "Employment Report" to discuss how well it has achieved its full employment target. Given the dual mandate, the natural approach would be a "Monetary Policy" report, as the FOMC issues semi-annually. Nevertheless, that report could be refined to feature a more disciplined and focused discussion of the success in meeting both its objectives.

8. Will IT Happen?

The first question to confront in assessing the prospects for a move in this direction is how and why the nomination of Ben Bernanke changes the dynamics of the decision-making process with respect to the adoption of a numerical definition of price stability.

It is obvious that a chairman can put proposals on the table and even prevent proposals from being on the table. Greenspan sought to keep this proposal off the table during most of his term. Bernanke will certainly keep it on the table. That is a start.

The chairman will also control the form of the proposal that is put on the table. The proposal he will put on the table is the one that has the highest probability of being accepted by the Committee.

The chairman's political skills will also be an important consideration in his success in achieving both consensus inside the Committee and concurrence with Congress.

But the chairman cannot dictate a move in this direction. Indeed, for significant changes in the process of monetary policy making, such as this, the tradition at the Fed is that any change requires overwhelming buy-in by the Committee, not a simple majority vote. So the question is to what degree a chairman's recommendation is sufficient to produce such a consensus.

Chairmen do exert disproportionate influence on policy decisions. This partly reflects a tendency for at least some members to defer to the chairman on key monetary policy decisions.

But there is another dynamic that may be at work inside the Committee today. Some members who may have opposed this direction might now be inclined to go along simply to be sure that Bernanke is viewed as an effective and strong chairman. These members would still have a very important input into the details of the proposal, but would signal their willingness to be part of the consensus in favour of this general direction.

But the movement to an inflation target also requires the concurrence of Congress. It could be argued that the Fed does not technically need Congressional approval to announce a numerical definition of price stability. Congress sets the mandate, including a price stability objective, and this move by the Committee would simply make explicit how it has been interpreting the objective.

However, Congress established the Federal Reserve System, is responsible for legislative protections to its independence, and has oversight of the conduct of monetary policy. Understandably, the members of the oversight committees expect to be a party to the discussions about any move to a numerical definition of price stability, and the Fed will likely want their concurrence to move in this direction. The preference at the Fed would undoubtedly be for Congress to allow the Fed to move in this direction without re-opening the FRA and hard coding an inflation target into the legislation.

Hard coding the inflation target into the FRA would reduce the flexibility of the Fed to adjust the target if new research altered the estimate of inflation bias or provided evidence that the cushion required to mitigate the risk of hitting the zero nominal bound was higher or lower than now believed. But, perhaps most importantly, if Congress were to open the FRA, other possible changes might emerge, and the Fed would see much more danger than opportunity in this direction.

The major concern at the Fed would be that Congress would insist on an explicit target for full employment, to balance an explicit target for inflation. The Fed will explain, as Bernanke has already tried to do, that inflation is a choice variable for the Fed, but the level of full employment is dictated by the structure of the economy and can change over time as that structure evolves. A requirement to have two explicit targets or none would leave the Fed back where it started, with only an implicit target for inflation.

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