

## The Time is Right for Nominal GDP Level Targeting

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June 2020

*Beth: I've got a little tip for you, Skip. ... The time to do something is when the time is right.*

Andrew Lane and Wayne Crawford, *Valley Girl* (1983) screenplay

### **2020: The Monetarist View**

Federal Reserve actions since March 2020 have been directed primarily at maintaining or subsidizing flows of funds from savers to targeted groups of borrowers. They implement credit policy, not monetary policy.

By lowering its federal funds rate target to zero and resuming its large-scale purchases of US Treasury and government agency mortgage-backed securities, however, the Federal Open Market Committee has sent a strong signal that it will *not* allow temporary disruptions from the Covid-19 pandemic to trigger a sustained deflation that would delay or weaken unnecessarily the expected economic recovery. Comparisons between the recession of 2020 and the Great Depression of 1929-33 ignore important facts about the nature and causes of the latter.

After the economy reopens and the recovery begins, the FOMC will face another challenge: to make equally clear that monetary policy will not generate a sustained, longer-term

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\* Prepared for the June 2020 meeting of the Shadow Open Market Committee, organized by Chapman University. I would like to thank Michael Belongia and Robert Hetzel for extremely helpful discussions of issues covered here, while retaining full responsibility for all errors, omissions, and misstatements that remain.

rise in inflation. To meet this challenge, the Committee must brace itself against temptations to maintain an overly accommodative monetary policy stance for too long and political pressures to relieve fiscal stress through inflationary finance.

Ironically, the FOMC's failure to renew its two-percent inflation target in January 2020 and to summarize the conclusions of its 2018-9 strategic review now gives the Committee a chance to introduce a new, improved monetary policy framework designed to minimize the risks of sustained deflation *and* inflation. In particular, by announcing a multi-year target path for the level of nominal GDP and describing their future policy actions with consistent reference to that target path, Committee members can insulate themselves from heightened political pressures and reassure consumers, businesses, and investors that the Fed remains committed to maintaining the environment of long-run monetary stability most conducive to robust growth in real income and employment as well.

The time to do something is when the time is right. The time is right for nominal GDP level targeting.

### **The Monetarist Distinction Between Credit and Money**

This monetarist analysis of recent Federal Reserve policy actions takes as its starting point the critical distinctions between credit and money and, by extension, credit policy and monetary policy. The ideas are basic but, as Currie (1933) and Brunner and Meltzer (1964, pp.31-5) document, often get confused, leading to mistakes in both theory and practice. Therefore, they are worth reviewing now.

Ordinarily, in our capitalist economy, commercial banks and other private financial intermediaries coordinate the flow of credit from savers, who wish to earn a return on income

that they do not spend, to borrowers, including consumers who wish to purchase homes, automobiles, and other durable goods beyond what their current income allows and businesses that, likewise, wish to finance new investments in productive capital. Economic theory, developed originally by Fisher (1930) and restated in its most refined form by Debreu (1959), emphasizes that activity in credit markets involves the exchange of “goods today for goods tomorrow” in a way that is analytically equivalent to the way that any ordinary consumer trades “apples for oranges” in the produce aisle of the local grocery store.

In every market for every good, “Marshallian demands are homogeneous of degree zero in income and prices.” That is, only relative prices matter. These observations apply in credit markets, too. Just as a loan of 100 cents is no different from a loan of one dollar, a loan of 100 dollars when the aggregate nominal price level equals 100 is no different from a loan of one dollar when the price level equals one.

These observations also reveal that, in our capitalist system, it remains up to the *central* bank – the Federal Reserve – to pin down the absolute level of nominal prices. The Fed does this by exploiting its role as monopoly supplier of base money: bank reserves plus currency. When the Fed creates a new dollar of base money, that is called “conducting monetary policy.” When any other economic agent attempts to do the same, that is called “counterfeiting.”

In our market economy, therefore, the aggregate nominal price level adjusts so as to equilibrate the Fed’s supply of nominal base money to the public’s demand for real base money. Equivalently, the inverse of the aggregate nominal price level – the “goods price of money” – adjusts to clear markets where goods are exchanged for money.

This distinction between credit – again, involving the exchange of goods today for goods tomorrow – and money – involving the exchange of goods today for dollars today – leads

naturally to the further distinction between credit policy and monetary policy. With this distinction in mind, it is easy to see that virtually all of the policy actions taken by the Federal Reserve since March 2020 are designed to allow the Fed to maintain or subsidize flows of credit between savers and borrowers, not to bring about changes in the aggregate nominal price level through the interaction between the supply of and demand for base money.

As Hetzel (2020) explains in detail, these policy actions were taken in response to policymakers' perceptions that free markets and private enterprises could no longer efficiently manage trades of goods today for goods tomorrow in the face of broader economic disruptions caused by the Covid-19 pandemic. Hetzel (2020) notes, as well: only time – and the extensive and careful research that time affords – will tell if these initial perceptions were on or off the mark.

Also, as Lucas (2019) makes clear, a potential danger of credit policies like those used after the 2007-8 financial crisis and again in response to Covid-19 today is that their economic costs are not accurately reflected in standard fiscal accounting measures. Hopefully, most if not all of the funds lent out under the many new programs that the Federal Reserve has rolled out since March will be recovered with interest, just as most of the emergency loans made during the earlier financial crisis were eventually repaid. But the possibility that many of these risky loans are being made at below-market interest rates means that their costs to American taxpayers are difficult to fully discern.

Nevertheless, Congress on behalf of all Americans authorized these credit programs through Public Law 116-136, the Coronavirus Aid, Relief, and Economic Security (“CARES”) Act, implying that their costs and risks have been carefully considered. The position maintained here is that laws passed according to the Constitutional process for fiscal appropriations and

supported by the collective wisdom of the American people deserve respect – or at least must be taken as given. The point emphasized, instead, is simply that, from the perspective of economic theory, these credit programs have no necessary implications for either the supply of or demand for base money and therefore no immediate implications for the behavior of the aggregate nominal price level or inflation as its rate of change.

But while most of the Federal Reserve's most recent dramatic actions implement credit policy, it would be wrong to say that the Federal Open Market Committee has neglected its monetary policy duties. To the contrary, immediately following its emergency meeting held on March 15, 2020, the FOMC lowered its target for the federal funds rate to a range near zero and announced that it would recommence its programs of quantitative easing through large-scale purchases of US Treasury and government agency mortgage-backed securities. Both of these actions relate directly to the Fed's management of the supply of bank reserves and therefore constitute monetary policy. To appreciate the rationale for them, it is helpful to consider the likely differences between the current recession of 2020 and the Great Depression of 1929-33.

### **The Nature and Causes of the Great Depression**

The extraordinary disruptions resulting from the Covid-19 pandemic, as reflected in the latest data on income, spending, and employment, naturally invite comparisons to the Great Depression. As devastating as the pandemic has been and is likely to be in the short run, however, its economic consequences will almost surely be quite different from those of the Great Depression. The Federal Reserve's monetary policy responses, today versus the during the 1930s, account for these likely differences.

To repeat for the sake of full clarity: none of this is to minimize or downplay the costs that the Covid-19 pandemic has imposed on American households and businesses. Rather, it is to emphasize that basic facts about the nature and causes of the Great Depression mean that the recession of 2020 will almost surely be far shorter and much less severe than the Depression. The Federal Reserve deserves some credit for this. Thankfully, there has been some learning from the past. There is such a thing as progress.

To help explain, the three panels of figure 1 plot data, drawn from Balke and Gordon (1986), on nominal GNP, real GNP, and the GNP deflator over the period from 1929 through 1939. These graphs standardize the level of each variable to equal 100 in the third quarter of 1929, so as to highlight most clearly the dramatic declines in income, spending, and prices that were experienced during the worst years of the Great Depression: 1929-33.

Milton Friedman and Anna Schwartz (1963, 1965) analyze these declines, and isolate the reasons for them, in the chapter on “The Great Contraction, 1929-33” from their *Monetary History of the United States*. This chapter was also published separately in the form of a shorter volume that is available, free of charge, through the website of the National Bureau of Economic Research. Recent events, and the tone of popular commentary on them, suggest strongly that it would be worthwhile adding the short book back to reading lists for introductory college courses.

Indeed, it helps greatly to read Friedman and Schwartz’s (1965, p.3) own words

The contraction from 1929 to 1933 was by far the most severe business cycle contraction during the near-century of U.S. history we cover and it may well have been the most severe in the whole of U.S. history. . . . U.S. net national product in current prices fell by more than one-half from 1929 to 1933; net national product in constant prices, by more than one-third; implicit prices, by more than one-quarter; and monthly wholesale prices, by more than one-third.

before confirming, in figure 1, that by the first quarter of 1933, nominal GNP also stood at less than 50 percent, real GNP at less than 66 percent, and the GNP deflator at less than 75 percent of

their levels from the third quarter of 1929. In comparing these numbers to those associated with the Covid-19 disruptions, it is important to note that quarterly rates of real GDP growth are reported in annualized terms. If, for example, the most fearful forecasts are realized and second quarter 2020 real GDP growth is reported in the headlines as “minus 40 percent,” that would reflect a 10 percent decline in the level of real GDP from quarter one to quarter two. Yes, yes: the number remains shocking, even when it is translated back into levels. But there will likely be at least some bounce-back in the level of real GDP later this year and there will almost surely *not* be the additional 20 to 25 percent decline that would be required to match what was experienced during the Great Depression.

According to Friedman and Schwartz (1963, 1965), the initial economic downturn triggered by the stock market crash of 1929 would have been severe in any case. But nothing resembling the catastrophic declines in nominal and real incomes and in aggregate prices seen in figure 1 would have been possible without years of relentlessly tight monetary policy, implemented by the Federal Reserve and reflected in the prolonged decline in the M2 money supply shown in the top left-hand panel of figure 2. Again, it is most helpful to review Friedman and Schwartz’s (1965, pp.3-5) own words:

Monetary behavior during the contraction itself is even more striking. From the cyclical peak in August 1929 to the cyclical trough in March 1933, the stock of money fell by over a third. This is more than triple the largest preceding declines recorded in our series. ...

... The monetary collapse was not the inescapable consequence of other forces, but rather a largely independent factor which exerted a powerful influence on the course of events. The failure of the Federal Reserve System to prevent the collapse reflected not the impotence of monetary policy but rather the particular policies followed by the monetary authorities ....

The contraction is in fact a tragic testimonial to the importance of monetary forces. ... For it is true also ... that different and feasible actions by the monetary authorities could have prevented the decline in the stock of money – indeed, could

have produced almost any desired increase in the money stock. ... Prevention or moderation of the decline in the stock of money, let alone the substitution of monetary expansion, would have reduced the contraction's severity and almost as certainly its duration. The contraction might still have been relatively severe. But it is hardly conceivable that money income could have declined by over one-half and prices by over one-third in the course of four years if there had been no decline in the stock of money.

Throughout the remainder of their account, Friedman and Schwartz describe how, again and again, members of the Open Market Policy Conference – the predecessor to today's FOMC – failed to take decisive action to offset the relentless deflationary forces set off, first, by the stock market crash itself, and then, more significantly, by three rounds of banking panics in 1931, 1932, and 1933. Only for only a brief period, beginning in April 1932, did the Federal Reserve conduct significant open market purchases of US Treasury securities to increase the supply of base money and help accommodate the public's heightened demand for currency and the banking system's elevated demand for reserves.

Mitchener and Richardson (2020) analyze detailed, archival data to confirm Friedman and Schwartz's hypothesis that bank panics greatly expanded the demand for base money during the early 1930s. Bordo and Sinha (2020), meanwhile, combine state-of-the-art macroeconomic theory with historical data to support Friedman and Schwartz's conjecture that, had the Fed's tentative 1932 program of "quantitative easing" been sustained, the Depression would have ended much sooner.

Instead, the Fed's policymaking committee, lacking intellectual leadership following the death of New York Federal Reserve Bank President Benjamin Strong in 1928, let their asset purchase program expire in August 1932. The persistent decline in the M2 money stock highlights that, throughout the Depression, the Federal Reserve allowed, through a strategy of near-consistent inaction, its monetary policy to remain relentlessly contractionary. Tragically,

Fed policy reinforced, rather than ameliorated, the severe deflationary pressures generated by the stock market crash and banking panics and thereby inhibited, rather than fostered, the market forces that naturally push the economy towards its long-run equilibrium.

The FOMC's recent monetary policy actions now become easy to understand, in light of Friedman and Schwartz's account of the Great Depression. Lowering the federal funds rate target to zero and restarting programs of quantitative easing are unlikely to have any direct effects on consumer and business spending while the economy remains shut down to stop the spread of Covid-19. But these policy actions do send a clear signal: that the Committee does *not* intend to allow the temporary disruptions to economic activity caused by the pandemic itself to translate into *anything* like the persistent declines in M2 and nominal income that unnecessarily amplified and prolonged the Great Depression.

Indeed, the top-right-hand panel of figure 2 shows that M2 increased by more than 15 percent during March, April, and May 2020. Like the headline figures for real GDP, this number – especially when expressed as a 60 percent annualized rate of growth – can easily raise alarms. To be sure, 60 percent annual money growth *would* become a worrying sign *if* it continues, unabated, even after the economic recovery gets underway. For now, however, it communicates a reassuring message that the FOMC is firmly committed to a monetary policy strategy that avoids the most serious mistakes that account for the astounding severity and length of the Great Depression.

The two bottom panels of figure 2, showing the growth rate of the monetary base during the Depression and the most recent weeks of 2020, reinforce Friedman and Schwartz's (1963, 1965) message in another way. During the Great Depression, as Friedman and Schwartz make clear, the problem was not that the Fed took deliberate action to contract the monetary base.

Instead, the Fed failed to take actions that would have expanded the supply of base money sufficiently to accommodate the massive increase in demand triggered by depositors' loss of confidence in the banking system. As a result, the broader M2 measure of money declined, and so did nominal spending and the price level.

Similarly, over the past three months, the monetary base has expanded by approximately 50 percent. That's a 200 percent growth rate, when annualized! Today, however, the Fed is paying interest on reserves, implying that any increase in the monetary base translates into a much smaller increase in broad money growth. Now, as during the Depression, growth in the supply of nominal base money must be compared to growth in the demand for real base money to gauge accurately the impact that monetary policy will have on the price level. Trends in the broader monetary aggregates, like M2, send stronger signals about the true stance of monetary policy: appropriately accommodative today, but disastrously restrictive during the Depression.

Finally, the monetarist view, supported by Friedman and Schwartz's (1963, 1965) account of the Depression, that the aggregate nominal price level gets determined through the interaction between the Federal Reserve's supply of nominal base money *and* the public's demand for real base money, serves to highlight that the Fed is in no way "out of ammunition" in its efforts to counteract deflationary forces that may continue to prevail if consumer and business confidence remains subdued even as the Covid-19 shutdowns end and the economy begins to recover. In that case, the FOMC can issue additional forward guidance, to lengthen the period over which short-term interest rates can be expected to remain near zero. The Committee can also continue and even expand its programs of quantitative easing. Both sets of policy maneuvers work to increase the supply of base money and thereby stimulate growth of M2, nominal income, and the aggregate nominal price level.

And if none of those actions proves sufficient, the Fed can always scale back or eliminate entirely its post-2008 policy of paying interest on bank reserves. As emphasized by Dutkowsky and VanHoose (2018) and Ireland (2019*b*), abandoning interest on reserves would reduce greatly banks' demand for excess reserves that, so far, has allowed the Fed to expand the supply of reserves enormously – as shown in the bottom right-hand panel of figure 2 – without fueling a commensurate inflation. Simply by announcing and committing to a policy of *not* paying interest on reserves, the Fed could use its existing policy tools to snap banks' demand curve back towards where it was before the financial crisis of 2008-9, easing monetary conditions enormously to offset any and all deflationary pressures, no matter how severe.

As Ireland (2019*c*) notes, the “out of ammunition” analogy makes sense only if one insists on clinging to the extreme view that monetary policy impacts on the economy *exclusively* through the effects it has on money market interest rates first. Meltzer (2001, p.115) credits his longtime collaborator with the common-sense observations that help us evaluate and dismiss this view:

As my old friend Karl Brunner once said: we know this is false. Monetary policy actions are effective and powerful in the less developed countries of Africa, Latin America, or Asia where there is no money market. Relative prices respond to monetary impulses in countries without central banks, and without money markets. There is more to the transmission mechanism than the models recognize.

### **Preserving Monetary Stability During the Recovery**

Although, over the coming weeks, FOMC members will probably have to continue applying the lessons of Friedman and Schwartz (1963, 1965), by emphasizing their willingness and ability to offset deflationary impulses in the immediate aftermath of the Covid-19 pandemic, their biggest challenge over the intermediate and longer terms may involve resisting pressures that, if

unchecked, could lead instead to significantly *higher* rates of inflation. As noted above, the FOMC's existing strategies of forward guidance and quantitative easing, reinforced if needed by adjustments to its policies for paying interest on reserves, can be used to generate as much inflation as desired – or more. Despite all of today's concerns about deflation – or perhaps precisely because of them – it is not inconceivable that monetary policy will become and remain too accommodative for too long, fueling an unwanted rise in inflation.

In addition, as Hetzel (2020) observes, the broader and longer-term economic and social challenges faced by the United States today resemble, in many ways, those that were fundamentally responsible for generating the damaging phase of high inflation experienced during the late 1960s and 1970s. For perspective, it is useful, again, to revisit past experience, described in this case by former Federal Reserve Chair Arthur Burns (1979, pp.12-3) in a speech recounting his “anguish” as a central banker:

The interplay of governmental action and private demands had an internal dynamic that led to their concurrent escalation. ... Once it was established that the key function of government was to solve problems and relieve hardships – not only for society at large but also for troubled industries, regions, occupations, or social groups – a great and growing body of problems and hardships became candidates for governmental solution. New techniques for bringing pressure on Congress – and also on the state legislatures and other elected officials – were developed, refined, and exploited. ...

Many results of this interaction of government and citizen activism proved wholesome. Their cumulative effect, however, was to impart a strong inflationary bias to the American economy. The proliferation of government programs led to progressively higher tax burdens on both individuals and corporations. Even so, the willingness of government to levy taxes fell distinctly short of its propensity to spend. ... Budget deficits have thus become a chronic condition of federal finance; they have been incurred when business conditions were poor and also when business was booming. ... That is the way the inflation that has been raging since the mid-1960s first got started and later kept being nourished.

While it is striking how well Burns' account of events back then work to describe events today, the point of reviewing his history is the same as the point of rereading Friedman and Schwartz:

not to lead us into despair that we are doomed to repeat the past but to help us see clearly that there are relatively simple and straightforward steps that the Fed *can take now*, precisely to avoid mistakes made in the past and to set the stage for a much better future.

The FOMC's failure, in early 2020 before the severity of the Covid-19 pandemic and its economic consequences were fully appreciated, to renew its annual commitment to the two-percent inflation target first announced in 2012, and to summarize the results and conclusions from its highly-publicized 2018-9 strategic review, now leave the Committee with neither a well-defined goal nor a clearly articulated plan for achieving that goal with its future monetary policy actions. Ironically, however, the pre-crisis failure presents the Committee with a post-crisis opportunity: to come out strongly by announcing a new and improved framework for monetary policy that guards with equal effectiveness against the threats of both sustained deflation and inflation. Adapting suggestions first made by Hetzel (2017), the FOMC could do this by appending to its quarterly summaries of economic projections a graph that presents an official, multi-year target path for four percent annual growth in the level of nominal GDP. Committee members could then describe their meeting-by-meeting monetary policy actions with repeated and consistent reference to that target path.

Figure 3 shows what that target path looks like, against the backdrop of actual nominal GDP growth since 2000 using the level of nominal GDP in the fourth quarter of 2019 as the base from which to compute the future targets. The graph thereby describes succinctly what should become the FOMC's official position of record: that the 3.5 percent annualized decline in nominal income actually experienced in the first quarter of 2020 and the much larger decline (shown in the graph for illustrative purposes as a hypothetical 40 percent annualized decline) expected for the second quarter of 2020 represent an unwanted, but transitory, departure from the

long run path that will be supported through appropriate monetary policy from this moment forward, extending into the infinite future.

Thus, with consistent reference to this new strategy, the FOMC would use its monetary policies, first, to bring the nominal spending up from wherever it falls in mid-2020 back to the level that had been expected as of the beginning of the year. Then, over the longer term, the FOMC would use its monetary policies to make the nominal spending adhere as closely as possible to the target path, seeking to avoid persistent and significant deviations both above and below.

Many arguments, theoretical and empirical, to support to usefulness of nominal GDP level targeting have been made before. Beckworth (2019) outlines them all, with extensive discussion of the relevant literature and special attention to responding to concerns raised therein. Ireland (2019a) describes how nominal GDP targeting embodies the basic principles of monetarist economics. Binder (2020) argues that nominal GDP targeting would be easier than inflation targeting for the public to understand, providing the Fed with more credibility and political support. Hendrickson (2012) shows that forward-looking efforts to stabilize nominal income represent the singular distinction explaining the Federal Reserve's success in conducting monetary policy during the 1980s and 1990s, compared to its failures during the 1970s. And Belongia and Ireland (2015, 2017) describe how the Fed can use its control over the supply of base money and its influence over broader monetary aggregates like M2 to effectively implement a nominal GDP targeting strategy even when conventional interest rate policy is constrained by the zero lower bound. But while these previous studies – and many others like them – provide abundant reason to look favorably on nominal GDP level targeting as a framework for successful monetary policymaking, four interrelated sets of considerations show that the strategy offers

special and unique appeal *now*, in this precise moment as the economy and the Fed emerge from the Covid-19 emergency.

First, as emphasized by Ireland (2019*a*) and Binder (2020), because nominal GDP equals the product of real GDP and the aggregate nominal price level, describing monetary policy decisions with reference to a target path for nominal GDP remains fully consistent with the Federal Reserve's existing, statutory mandate. By explaining how their meeting-by-meeting policy actions are directed, consistently, at maintaining stability in nominal GDP, FOMC members can reassure members of Congress and the general public that they remain committed to a monetary policy strategy that preserves the environment of price stability most conducive to long-run growth while, at the same time, aims at modest – and therefore achievable – stabilization objectives as well. Perhaps even more effectively than inflation targeting, nominal GDP targeting provides for central bank independence *and* accountability as described by Ireland (2020*b*): this strategy insulates the FOMC from short-run political pressures while, at the same time, holding the Committee to a standard that it can and should be able to achieve.

Second, while nominal GDP targeting accounts for and thereby attempts to smooth out fluctuations in real economic activity, it is a *nominal* variable, measured in dollars, our economy's unit of account. In adopting a nominal GDP level target, FOMC members should make clear that their ability to use monetary policy to hit, precisely, a target for nominal GDP growth over any single quarter or even over the course of a year may be limited, there is absolutely no question that monetary policy can be used to stabilize average nominal GDP growth – of the kind emphasized most clearly with reference to a multi-year level target – over the intermediate and longer terms. The FOMC can thereby offer its preannounced nominal GDP

level target path as an ironclad commitment that the Fed will *never* again allow the US economy to experience the devastation either of 1930s-style deflation or 1970s-style inflation.

Third, even before the Covid-19 pandemic, FOMC members struggled to communicate the logic behind their policy framework because of instability in the hypothesized Phillips curve relationship between unemployment and inflation. With the Phillips curve as an organizing principle, it was very hard to explain why inflation remained subdued even as the unemployment rate fell to 3.5 percent. Post-crisis, however, changes to unemployment insurance programs, designed to help those who lost their jobs because of the economy-wide shut down, will begin to complicate incentives, potentially making movements in the measured rate of unemployment even more difficult to interpret. Unevenness in the recovery across industries and geographic regions will also mean that shortages of labor in some areas are accompanied by shortages of jobs in others. These complex labor market dynamics have nothing to do with monetary policy and will not send useful signals about the future direction of inflation.

Nominal GDP targeting sidesteps completely problems associated with an unstable Phillips curve. Instead of describing monetary policy actions as affecting unemployment first in order to influence inflation second, nominal GDP targeting describes monetary policy as working through the supply of and demand for base money to influence broad measures of money growth first and nominal spending second. It enables FOMC members to give a coherent and consistent explanation for their policy actions that works, irrespective of the proportions or the speed with which changes in nominal spending break themselves down into underlying changes in real GDP and the nominal price level. It invites the use of trends in broad measures of money, like M2, which the Fed can reliably influence, in efforts to gauge the stance of monetary policy. And it eschews the use of the unemployment rate – a real variable influenced

by a myriad of factors extending well beyond the scope of monetary policy – for that same purpose.

Fourth and finally, just as the measured rate of unemployment is likely to exhibit unprecedented month-to-month volatility as the economy suddenly but unevenly recovers from the Covid-19 pandemic, measures of inflation will surely to the same, as shortages of some goods and surpluses of others generate large movements in relative prices that, again, have nothing to do with monetary policy. By making repeated and consistent reference, instead, to a fixed, multi-year path for the level of nominal GDP, FOMC members will help themselves see through this short run noise and maintain a steadier focus on intermediate-term trends.

Related, consumers, businesses, and financial market participants will understand that the kind of stability that the FOMC is aiming for has very little to do with whether nominal GDP growth in any given quarter comes in at an annual rate of 3.8 or 4.2 percent; one-time misses in either direction will hardly show up in a graph like figure 3 and will tend to be offset, in any case, by subsequent misses in the opposite direction. Monetary policy *would* adjust vigorously, however, to modest shortfalls or overshoots in quarterly nominal GDP growth that begin to cumulate into larger departures from the long-run level target path. FOMC actions will become easier to predict as well as to explain, minimizing the risk that monetary policy itself will contribute to heightened macroeconomic volatility.

On the other hand, if the recovery proceeds in fits and starts, Fed policy tools and actions may require repeated, real-time adjustments. A new monetary policy strategy based on nominal GDP level targeting would therefore be most effective if supported by preannounced rules specifying how the FOMC plans to adjust the federal funds rate – and the size and duration of its

QE programs as well – in response to shocks that threaten to push nominal GDP, significantly or persistently, above or below target.

Ireland (2020a) describes how, by referring to a variant of the Taylor (1993) rule, the FOMC might have minimized, throughout 2018 and 2019, financial market participants’ confusion regarding its strategy and objectives, as manifested in repeated bouts of asset price volatility. Likewise, with reference to a specific rule, the FOMC could clarify in the years to come that, even though its policy instruments require occasional or even frequent adjustment, those policy actions invariably reflect the Committee’s systematic efforts to achieve goals reflecting the statutory dual mandate and announced publicly, in the absolute clearest of terms, through the fixed target path for the level of nominal GDP.

With or without the addition of a specific policy rule, however, the time for nominal GDP level target surely has arrived.

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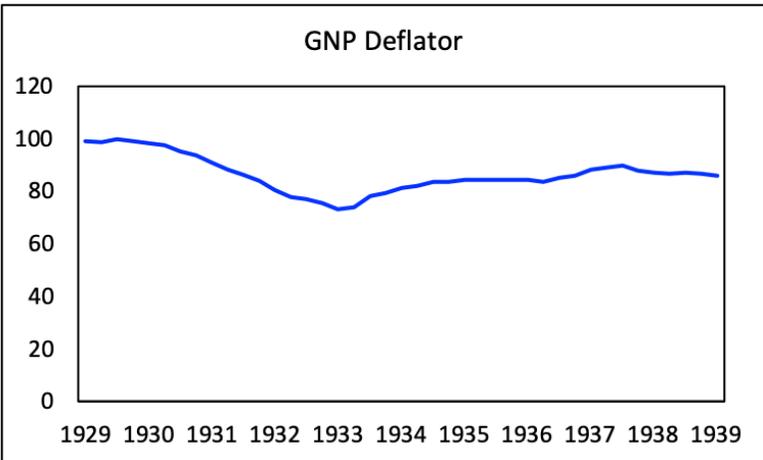
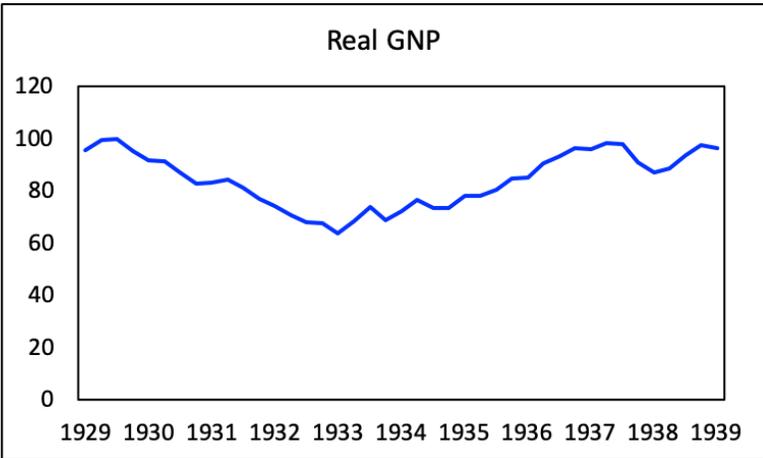
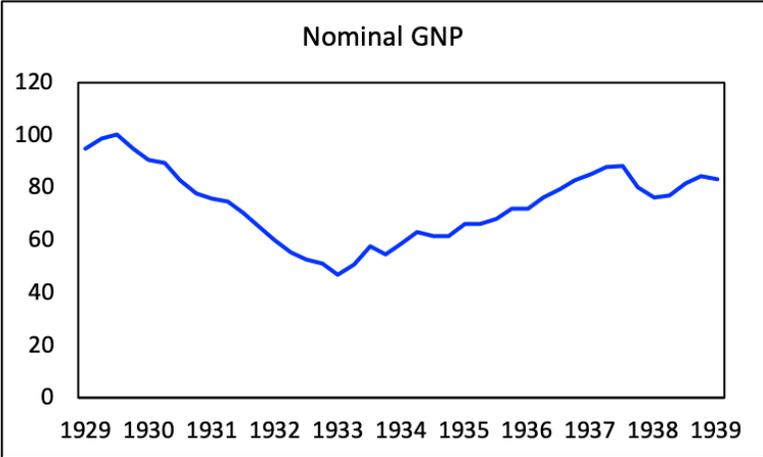


Figure 1. Nominal GNP, Real GNP, and the GNP Deflator during the Great Depression. Each quarterly series is standardized so that its level equals 100 in the third quarter of 1929. Source: Balke and Gordon (1986).

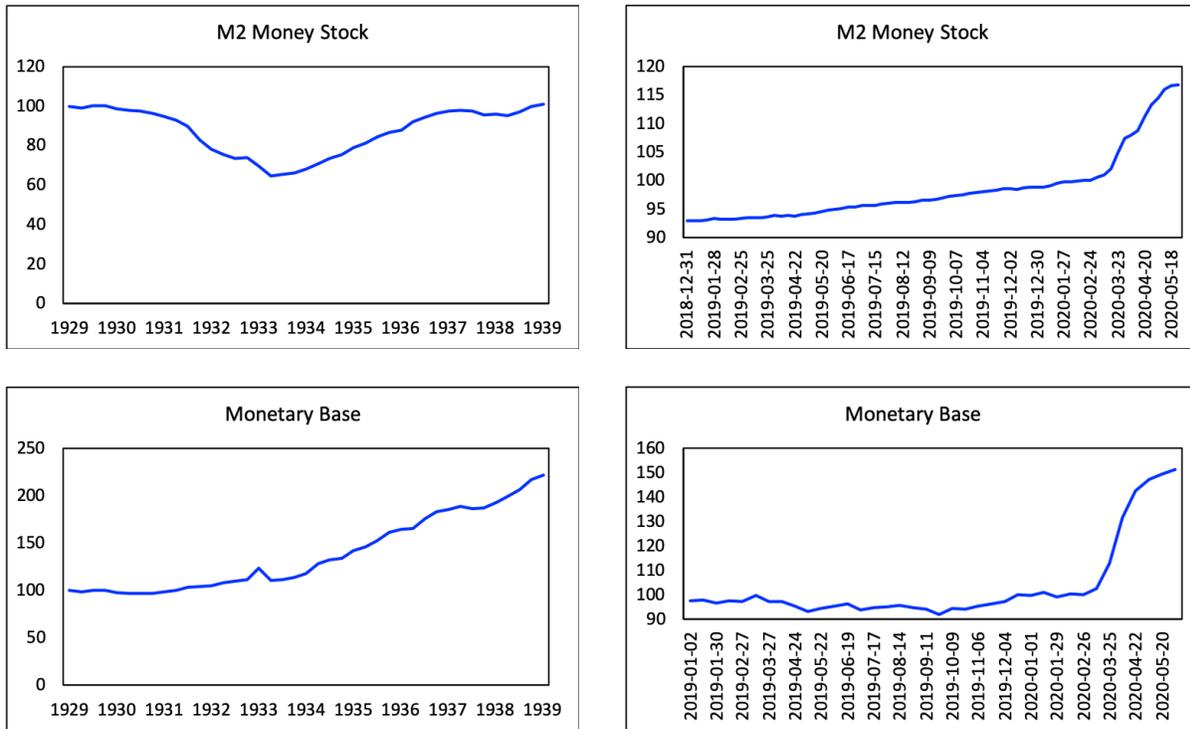


Figure 2. The M2 Money Stock and the Monetary Base during the Great Depression and Recently. The historical series are quarterly and standardized to equal 100 in the third quarter of 1929. The recent data are weekly for M2 and biweekly for the monetary base and standardized to equal 100 on the last week of February 2020. Sources: Historical data from Balke and Gordon (1986); recent data from the Federal Reserve Bank of St Louis' FRED database.

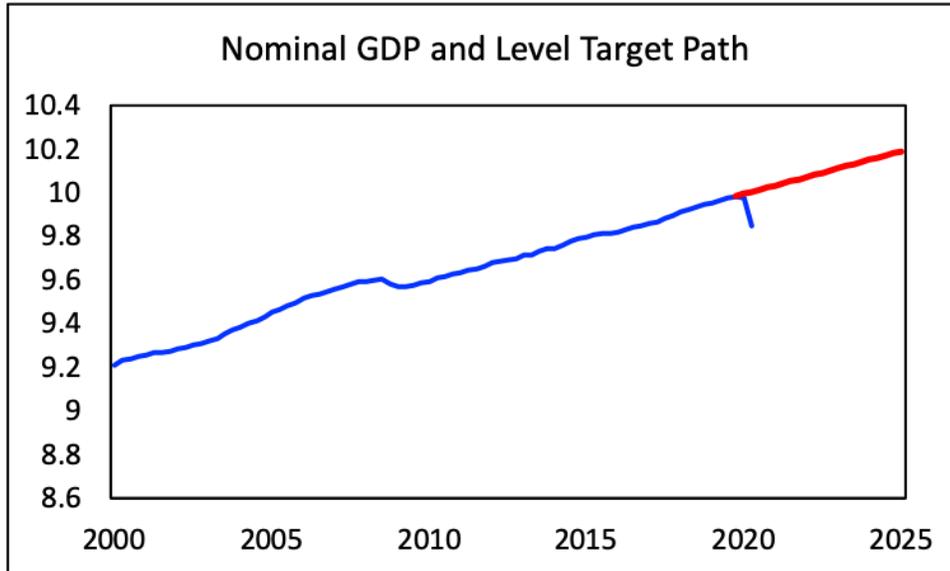


Figure 3. Nominal GDP: Actual and Level Target Path. The blue line plots quarterly data on nominal GDP from the first quarter of 2000 through the first quarter of 2020, expressed in logarithms and extended with a hypothetical annualized rate of decline in nominal GDP of 40 percent for the second quarter of 2020. The red line plots a four percent growth path for the level of nominal GDP, expressed again in logarithms and using the actual level in the fourth quarter of 2019 as a base. Data source: FRED.