

NOMINAL GDP TARGETING: A SIMPLE RULE TO IMPROVE FED PERFORMANCE

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The history of central banking is a story of one failure after another. This record does not mean that our actual monetary regimes have been the worst of all possible regimes—far from it. But it does mean that we can improve policy by learning from experience. Every proposed reform is a response to a previous failure, an implicit display of lessons learned.

A big part of this story has been the search for a robust monetary system that could produce good outcomes under a wide variety of conditions, without having to rely on a central bank run by a benevolent and omniscient philosopher king. It is a search for a monetary rule that can provide the appropriate amount of liquidity to the economy, under widely differing conditions. In this article, I argue that the optimal monetary rule is a nominal GDP (NGDP) target, or something closely related. To understand the advantages of this approach, it helps to see how the theory and practice of central banking have changed over time—that is, to see what went wrong with some previous monetary regimes, and how past reformers responded to those failures.

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The Gold Standard

It is not hard to see why gold and silver were used as money for much of human history. They are scarce, easy to make into coins, and hold their value over time. Even today one finds many advocates of returning to the gold standard, especially among libertarians. At the same time most academic economists, both Keynesian and monetarist, have insisted we can do better by reforming existing fiat standards.

It is easy to understand this debate if we start with the identity that the (real) value of money is the inverse of the price level. Of course, in nominal terms a dollar is always worth a dollar, but in real terms the value or purchasing power of a dollar falls in half each time the cost of living doubles. During the period since we left the gold standard in 1933 the price level has gone up nearly 18-fold; a dollar today has less purchasing power than six cents back in 1933. That sort of currency depreciation is almost impossible under a gold standard regime; indeed the cost of living in 1933 wasn't much different from what it was in the late 1700s. This long-run stability of the price level is the most powerful argument in favor of the gold standard.

The argument against gold is also based on changes in the value of money, albeit in this case short-term changes. Since the price level is inversely related to the value of money, changes in the supply or demand for gold caused the price level to fluctuate in the short run when gold was used as money. Although the long-run trend in prices under a gold standard is roughly flat, the historical gold standard was marred by periods of inflation and deflation.¹

Most people agree on that basic set of facts, but then things get more contentious. Critics of the gold standard like Ben Bernanke point to periods of deflation such as 1893–96, 1920–21, and 1929–33, which were associated with falling output and rising unemployment. This is partly because wages are sticky in the short run (see Bernanke and Carey 1996; Christiano, Eichenbaum, and Evans 2005). Supporters point out that the U.S. economy grew robustly

¹The price level effects of changes in stock supply or stock demand for (monetary or nonmonetary) gold are mostly reversed in the long run, as changes in the relative price of gold lead miners to increase or decrease the flow supply of gold. Although changes in the flow supply or flow demand for gold can have a lasting effect on the price level (and purchasing power of gold), Lawrence H. White (1999a) showed that the net effects of such changes were quite small historically.

during the last third of the 19th century, despite frequent deflation and a flawed banking system that was susceptible to periodic crises. They note wages and prices adjusted swiftly to the 1921 deflation, allowing a quick recovery. Countries with more stable banking systems, such as Canada, did even better. The big bone of contention is whether the Great Depression should be blamed on the gold standard or meddling government policies (see Cole and Ohanian 2004). My own research suggests the answer is “both” (see Silver and Sumner 1995).

I do see some weaknesses in the arguments put forth by advocates of the gold standard. It is true that some of the worst outcomes were accompanied by unfortunate government intervention, particularly during the 1930s (see Cassel 1936 and Hawtrey 1947). However it is worth pointing out that governments also intervened during the classical gold standard in the period before World War I.

Advocates of gold often base their arguments for gold on the assumption that it’s dangerous to give the government control over money. They claim it is much easier and more tempting for governments to debase fiat money, as compared to gold coins. That’s true, but it doesn’t mean that a gold standard prevents meddling governments from creating instability in the short run, as in the 1930s. For instance, during the interwar years major countries such as the United States and France often failed to adjust their money supplies to reflect changes in the monetary gold stock.

Here is how I see the debate today. Advocates of gold correctly claim that a gold standard will tend to preserve the value of money over long periods of time, and will sharply reduce the ability of governments to extract wealth from savers. Critics are right that a real-world gold standard is likely to deliver unacceptably large short-term fluctuations in the price level. I think they are also correct in assuming that wages are much stickier than they were during the gold standard’s heyday, and that the sort of deflation that led to just a brief surge in unemployment during 1921 (when wages quickly adjusted downwards) might now lead to unacceptably high and persistent unemployment rates.² A classical gold standard could probably do considerably better than the sort of regime we had between the world wars. However, if we could count on the authorities to accept

²In contrast to 1920–21 when wages fell sharply, the severe recession of 2007–09 merely led to a slowdown in the rate of growth in nominal wages.

the discipline of such a standard, why not make them adhere to a monetary rule to stabilize inflation or the growth of NGDP?

Obviously this debate could go on to look at all sorts of political models of policymaking. Instead, I will focus on purely technical issues and sketch out what I think are the pros and cons of various fiat money regimes, and leave for others the public choice issues of whether such regimes are politically feasible. However, I will return to politics at the end, when I argue that NGDP targeting would help avoid many extremely counterproductive government interventions in nonmonetary aspects of the economy. There are good reasons why many economists with libertarian leanings, including Friedrich Hayek, have embraced some version of this policy target (see Selgin 1995 and White 2008).³

Money Supply Targeting and the Taylor Rule

In the United States, gold was phased out in two steps: (1) domestically we left the gold standard in 1933, and (2) internationally the last links were broken in the late 1960s and early 1970s. What followed was a period of very high inflation, which led to renewed interest in finding some sort of anchor for the price level. Between 1979 and 1982, Paul Volcker was seen as leading a “monetarist experiment” trying to control inflation by reining in the money stock.

Contrary to the belief of many economists, the Fed never really adopted the sort of rigorous money supply rule that had been advocated by Milton Friedman (1968) and other monetarists. Even during the early 1980s there was significant variation in the money supply growth rate. The problem is that monetary velocity—that is, the ratio of nominal GDP to the money stock—also seemed volatile, especially in the wake of the so-called monetarist experiment. That is not to say that Volcker’s experiment was a complete failure; he did break the back of double-digit inflation, and by doing so proved that monetary policy rather than fiscal policy (which was expansionary under President Reagan) was the key determinant of inflation.

Like central bankers everywhere, Fed policymakers greatly prefer to target interest rates, not the money supply. So once inflation

³The late William Niskanen, former chairman of the Cato Institute, was a strong proponent of a final demand rule. His preferred target was domestic final sales (see Niskanen 2001).

was brought down to relatively low levels, they went back to targeting the federal funds rate. But memories of the Great Inflation of 1966–81 led many economists to look for a policy rule that would prevent a recurrence of high inflation. John Taylor proposed a rule for adjusting the fed funds target in such a way as to keep inflation near 2 percent and output as close to potential as possible, reflecting the Fed's dual mandate. The key insight was that as inflation rose above target, nominal interest rates had to be raised by more than one for one with inflation, assuring that even real interest rates were higher than before.

It is hard to overstate the importance of the Taylor Rule. In America, Paul Volcker and Alan Greenspan were feted as heroes who had adeptly steered the economy into the Great Moderation, the period of relative stability between 1983 and 2007. In fact, there was no miracle. All of the foreign central banks that operated under something like the Taylor Rule also achieved success in bringing inflation down to low and stable levels. It may be politically difficult to bring down the rate of inflation, especially when contracts have been negotiated on the assumption that high inflation would continue. But once this is done, it turns out to be very easy to prevent a recurrence of high inflation. Just promise to raise nominal interest rates by more than any increase in the inflation rate, until you are back on target.

Obviously something went wrong after 2007 (or maybe even before).⁴ If the Great Moderation had continued, there would be little reason to abandon the Taylor Rule. But before we consider alternatives, let's discuss what did *not* go wrong with that rule; high inflation did not return. Over the past five years the CPI (even including food and energy prices) has risen at the slowest rates since the mid-1950s, barely over 1 percent per annum.⁵ Instead, the problem since 2007 has been a severe recession and accompanying financial distress.

⁴David Beckworth (2012) argues that excessive NGDP growth contributed to the housing bubble of 2003–06.

⁵Some skeptics argue that the CPI understates the true rate of inflation. In fact, there is no possibility of objectively measuring the rate of inflation when (highly subjective) estimates of the quality of goods are changing at a rapid pace. It should be noted, however, that even purely private attempts at estimating inflation (such as the MIT "billon prices project") show very low rates over the past four years.

Robert Hetzel (2009, 2012) makes a distinction between the “market disorder view” and the “monetary disorder view.” Although the market disorder view is the conventional wisdom, the fact that NGDP fell during 2009 at the fastest rate since the 1930s suggests that monetary policy failure was at the center of the crisis. Like Hetzel, I do not believe that financial distress alone can explain the crisis of 2008 and its aftermath (Sumner 2011). Instead, I see an almost perfect storm of bad luck and bad policy. Interestingly, some of the most popular culprits do not seem to be the real problem. For instance, many critics think that the Fed’s dual mandate (price stability and high employment) is itself a problem. In the past I shared this view, believing like others that the mandate was hopelessly vague, and that the Fed could hit only one policy target at a time. Indeed the failures of the 1970s might themselves have been partly due to the Fed trying to hit an employment target that had become unachievable due to growing structural problems with the economy.

Yet, it is hard to see how the dual mandate can be to blame for our recent difficulties. Yes, it would have been better had Congress instead insisted on an explicit NGDP growth target, with level targeting. Under level targeting the central bank promises to make up for any near-term overshoots or shortfalls of the policy target. But it is not realistic to expect mere politicians to be able to devise a sophisticated monetary policy rule. It makes more sense to view the mandate as Congress simply asking the Fed to do the best it can at producing good outcomes in those two areas, while leaving the Fed to figure out how. If it seems I am being too generous to Congress, keep in mind that this interpretation is clearly consistent with the Taylor Rule, a policy that seemed pretty successful for roughly a quarter century.⁶

Others might argue that this approach is too generous to the Fed, implicitly assuming that they will adopt the optimal policy rule. I’d make a slightly more modest claim: the Fed will adopt the sort of policy that the consensus of the macroeconomists view as best practices. If you follow Fed policy over time, including those that failed, they almost invariably reflected the consensus views of mainstream academic macroeconomists. Change that thinking, and you can impact Fed monetary policy. For instance, on September 12th, 2012, the

⁶Admittedly, it was an unconscious decision by the Fed in the early part of that period, as the Taylor Rule was not discussed until the 1990s.

Fed undertook some policy initiatives that were influenced by Michael Woodford (2003), probably the most important and influential contemporary monetary economist.⁷

In truth, I think the Taylor Rule is flawed, but I do not see the dual mandate as being the heart of the problem. It is important to distinguish between policy *goals* and a policy *target*. There is no reason why the Fed cannot have multiple policy goals. Indeed, since nominal shocks can have real effects in the short run, it makes sense to have goals related to both inflation and some measure of real economic activity. At the same time, the Fed can target only one variable at a time. The Taylor Rule took a weighted average of inflation and output gaps (deviations from estimates of the natural rate of output), and formed a single target from that composite. NGDP is a single target that can also satisfy the dual mandate, since NGDP growth is the sum of inflation and real growth, where growth obviously depends on the state of employment. In most theoretical models, a target linked to a weighted average of inflation and employment will better address the Fed's dual mandate. In practice, however, it would be far easier to get widespread agreement on an NGDP target, which does not require the Fed to estimate "economic slack" or the "natural rate of unemployment."

If the dual mandate itself hasn't been a problem, then why did monetary policy seem to fail so dramatically after 2007? I see three intertwined problems that together pushed monetary policy far off course. First, the Fed failed to "target the forecast"—that is, policymakers relied too much on past trends rather than forecasts of where the economy was headed. Second, the Fed depended too heavily on interest rate targeting as the instrument of monetary policy. Finally, the Fed failed to engage in level targeting—that is, it did not make up for under- or overshooting of the target path. Instead, the Fed let bygones be bygones and set a new and lower growth target after it severely undershot its inflation and employment objectives in 2009.

A good example of the Fed's failure to target the forecast occurred in the September 2008 FOMC meeting, which occurred right after

⁷The Fed undertook an open-ended quantitative easing program, where the amount of assets purchased depends on progress toward the policy goals. The Fed also announced that it would maintain an easy money policy for some period after the economy has recovered, which represents an incremental move toward level targeting.

Lehman Brothers failed. The Fed decided not to cut interest rates, keeping the fed funds target at 2 percent, where it had been since April. It cited equal risks of inflation and recession. It is easy to understand the recession worries because the United States had been in a recession since December 2007, but what about inflation? On the day of the meeting, the five-year TIPS spread (a market indicator of inflation forecasts) had fallen to only 1.23 percent, well below the Fed's inflation target. If those indicators called for easing, why did the Fed stand pat? It turns out that inflation over the previous 12 months had been well above the Fed's 2 percent target. The Fed was responding to past data, not forecasts. It was like trying to steer a car while looking only in the rearview mirror.

Lars Svensson (2003) has argued that central banks should target the forecast—that is, set policy such that the central bank's forecast for the economy is exactly equal to the policy goal. For instance, if a central bank has a 2 percent inflation target, it should set the fed funds rate and monetary base at a level expected to produce 2 percent inflation. This is such common sense that many noneconomists are shocked to learn that real-world central banks do not behave this way. Instead, they resemble a ship's captain who says that while he hopes to reach the port of New York, and has been heading that way, given the current setting of the helm, along with forecasted wind and currents, he expects to end up in Boston. The attitude is perhaps somewhat understandable when interest rates are stuck at zero, but the Fed wasn't even targeting the forecast in the second half of 2008, when rates were still above zero.

In mid-December 2008 the fed funds target reached a level of zero to 0.25 percent, effectively ruling out further reductions. In theory, this should not have been a problem. There's a long academic literature discussing alternative operating procedures. Indeed, Ben Bernanke (1999) wrote articles discussing what the Bank of Japan should have been doing but was failing to do, when rates in Japan hit zero in the late 1990s. In practice, however, the Fed became very timid and failed to aggressively pursue a policy of monetary stimulus. Bernanke called for help from the Treasury. Under normal circumstances that should not have been necessary, because monetary policy is usually more effective in boosting aggregate demand than fiscal policy. Also, pure monetary policy does not boost the deficit and, therefore, does not impose the burden of higher future (distortionary) taxes.

It is not clear why the Fed did not attempt its own more aggressive stimulus. Bernanke expressed vague worries about unspecified “risks and costs” of taking such an aggressive stand. But he was not burdened by similar worries when he encouraged the Bank of Japan to be more aggressive in the early 2000s (see Bernanke 2003).

At one time I believed that the first two problems mentioned earlier were the most crucial ones. Those weaknesses made the policy somewhat slow to adjust to market conditions. But I have since come to conclude that the third problem—the Fed’s failure to engage in level targeting—is actually the most important. Level targeting is a very powerful tool both for limiting central bank discretion and for establishing policy credibility. It essentially forces a central bank to do what it says it is trying to do.

Consider the case of Japan, which has experienced mild deflation since the mid-1990s. Because its deflation rate has been quite modest, often below 1 percent, the Bank of Japan can claim that it has merely fallen a bit shy of its goal of achieving price stability. The BOJ has been rather vague about what its goal of price stability actually means, but most observers have taken it to mean something close to a target of zero inflation—or just above zero. Quite recently the Japanese government expressly called upon the BOJ to aim for a rate of 2 percent. With level targeting the central bank commits itself to making up for past inflation shortfalls or overshoots. Thus, if the BOJ had been targeting Japan’s GDP deflator, which has actually fallen by more than 15 percent since the mid-1990s, it would have been forced long ago to generate enough inflation to make up for previous shortfalls, so as to have left the deflator not much different now than it was back then. With level targeting, deflation could not have gone on for very long, partly because after a short bout of deflation, expectations of future inflation would have risen enough to reduce real interest rates and boost the price level. Market expectations would thus have helped to stabilize Japan’s price level. Nominal GDP level targeting in the United States along a 5 percent trend growth rate prior to 2008 would similarly have helped to greatly reduce the severity of the Great Recession.

The Case for Nominal GDP Targeting

All the aforementioned problems could be fixed without going to NGDP targeting. We could have the Fed target the price level, along

a level path or a slightly rising trend line. We could commit to return to the trend line if Fed policy under- or overshoot in the short run. We could target the forecast, set policy at a level expected to succeed. We could switch from an interest rate instrument to a policy instrument that is not subject to the zero rate bound—the monetary base, or the price of CPI futures contracts. So why consider NGDP targeting instead?

There are several reasons for doing so, both theoretical and practical. I shall review them in a moment. But first let's start by clearing up a couple things. First, nominal GDP targeting is not a way to boost growth in the economy, or to generate a higher inflation rate. If the long-run trend rate of growth in the economy is 3 percent, then a nominal GDP growth target of 5 percent will deliver the same long-run rates of inflation as a 2 percent inflation target. A nominal GDP target is consistent with any preferred rate of inflation or deflation. Friedrich Hayek, for instance, occasionally argued that monetary policy should aim at a stable level of nominal income (Hayek [1935] 1967), which would have meant having a rate of deflation equal to the long-term growth rate of real GDP (see White 1999b, 2008).

Second, a nominal GDP targeting regime responds to demand shocks (or changes in velocity) in exactly the same way as an inflation targeting regime. In both cases the money supply adjusts to fully offset any sudden change in velocity.

If nominal GDP targeting accommodates shifts in money demand, and produces the same long-run rate of inflation as inflation targeting, then how does it differ? It differs in how it responds to productivity (supply) shocks. Suppose that an oil embargo in the Middle East reduces our oil imports by 10 percent while boosting the price of oil by 60 percent. If the Fed targeted inflation, policymakers would have to tighten money enough to deflate all nonoil prices in order to keep the overall CPI on target. Nominal wages, however, are sticky or slow to adjust, so a sudden fall in the price of domestically produced goods would sharply increase unemployment.

Of course, the Fed might prevent particular supply shocks, like shocks to oil and food output, from having such an adverse consequence by using a “core” price level index that excludes food and energy prices. In practice, this would not be a perfect solution, because energy is a component in the production of many final goods whose prices are included in even the core CPI. But productivity

shocks can occur in any sector of an economy. For instance, the computer revolution drove productivity higher at an unusually rapid pace during the late 1990s. Because nominal wages are sticky in the short run, this initially led to much higher profits, higher levels of capital investment, and very low rates of unemployment. Of course, all these trends reversed in the early 2000s. Had the Fed had been targeting NGDP instead of inflation, policy would have been tighter during the high-tech boom, and perhaps also during the housing boom of 2004–06.⁸

One way to think about NGDP targeting and the business cycle is to consider how such targeting would affect labor markets. NGDP is the total nominal income in the economy.⁹ The ratio of nominal wages to NGDP can be thought of as the share of NGDP earned for each hour's work. Now assume that nominal hourly wages are sticky. What happens if NGDP suddenly falls? There are two possibilities: (1) employment might be unaffected, in which case nonwage income (capital income) would absorb the entire shock; and (2) with less income to go around, and the same wage per hour, there would be fewer hours worked and more unemployment.

In practice, both profits and employment tend to decline when NGDP falls, but in the short run the biggest burden falls on workers, as unemployment is highly (and negatively) correlated with NGDP relative to trend. The year 2009 saw both the biggest fall in NGDP since the 1930s and the largest increase in unemployment since the 1930s. That is not a coincidence.

Elsewhere I have argued that the optimal monetary policy would stabilize aggregate hourly nominal wage growth (Sumner 1995). This policy would help keep labor markets in equilibrium and employment close to its natural rate. But there are all sorts of practical problems in measuring aggregate wage rates, and it is unlikely that a wage target would be politically feasible. NGDP targeting can be thought of as the next best thing. A stable path of NGDP growth would tend to stabilize employment more effectively than an inflation target, because employers' ability to meet their wage bills depends more on NGDP growth than on the rate of inflation. During periods such as

⁸George Selgin (1995) and David Beckworth (2008) explain of how NGDP targeting delivers better results when there are productivity changes.

⁹Technically NGDP is gross income, but the rates of change in gross income are highly correlated with changes in net national income.

late 2007 and early 2008, when prices rose rapidly despite slow NGDP growth, wages also grew slowly. So NGDP targeting is the better way to keep aggregate nominal wages close to equilibrium, helping to stabilize employment.

A second advantage to NGDP targeting is that it limits asset market instability. Asset bubbles tend to form when NGDP growth is higher than average. That's not to say that NGDP targeting would entirely eliminate asset bubbles. After all, the recent tech and housing bubbles occurred during periods when NGDP growth was only modestly above its trend. The big advantage here of NGDP targeting shows up on the downside. Financial market crises are highly correlated with falling NGDP, and are almost certainly made worse by it. The most famous example of this occurred in 1929–33, when U.S. nominal income was cut in half. Some economists believe that the Great Depression was triggered by a financial crisis (e.g., Hall 2010). Yet, the first financial crisis occurred more than a year into the Depression, and was probably caused by the collapse in spending that was already in progress.

In the late 1990s and early 2000s a severe decline in NGDP caused a financial crisis in Argentina. Then, in 2008–09, falling NGDP in the United States and Europe caused a relatively modest financial crisis to become much larger. For instance, IMF estimates of the total losses to the U.S. banking system from the current crisis nearly tripled between April 2008 and April 2009, as NGDP growth expectations plunged sharply. What started as a localized subprime mortgage crisis spread to other types of mortgages in other regions of the country and also to commercial and industrial debt. In Europe sovereign debt even became engulfed in the crisis. None of this should be at all surprising. The decline in NGDP was the largest since the 1930s, and it is out of their nominal earnings that people, businesses, and governments acquire the funds for repaying their debts.

Many have argued that inflation targeting is the best way to avoid unexpected and “unfair” transfers of wealth between creditors and borrowers. However, Selgin (1997) has shown that is true only if the economy's productivity is not also changing, and that in general a nominal GDP target, or a closely related “productivity norm,” would lead to less disappointment among debtors and credits. The basic idea is that changes in productivity alter living standards, in turn changing people's willingness and ability to borrow and lend.

An expected improvement in productivity, for example, will make creditors seek higher returns on their loans, while also making it possible for borrowers to afford higher rates. However, an unexpected improvement will cause lenders to wish they had charged a higher rate. Under inflation targeting that sort of disappointment is not avoided. In contrast, under NGDP targeting the positive productivity shock is offset by an opposite—and equally unexpected—change in the inflation rate, keeping *ex post* real rates closer to where they would have been if both lenders and borrowers had been equipped with perfect foresight.

Now consider a specific case where nominal interest rates are 5 percent and people expect 5 percent nominal GDP growth composed of 2 percent inflation and 3 percent real growth, and (to give an example the opposite of the one already considered) there is an unexpected negative supply shock that boosts inflation to 5 percent while forcing real GDP growth down to 0 percent. In this case, lenders end up earning a zero real rate of return. But that only makes them suffer along with everyone else. With zero real GDP growth, there is no extra real income to share between lenders and borrowers. Under NGDP targeting, lenders know that each dollar they receive in the future will represent a given percentage of society's total nominal income, while borrowers know they can always pay what is owed. However, if inflation were being targeted at 2 percent, nominal GDP growth would shrink, making it difficult if not impossible for many borrowers to pay off their debts.

Pragmatic Arguments for Nominal GDP Targeting

As compelling as I think the theoretical advantages of nominal GDP targeting are, I have come to believe that there are even more powerful pragmatic arguments for it that mostly revolve around some overlooked practical shortcomings of inflation targeting.

Ben Bernanke has long advocated inflation targeting. But even he must be surprised and disappointed with how poorly it worked during the recent crisis. Three practical issues contributed to this poor outcome. First, real-world measures of inflation are highly subjective and sometimes very inaccurate (see Alchian and Klein 1973). Second, it is difficult to target inflation in a symmetrical fashion, partly because the public does not understand inflation targeting. Finally, inflation targeting encourages policymakers to think in terms of monetary

policy affecting inflation and fiscal policy affecting real growth—a perception that is both inaccurate and potentially counterproductive.

Recall that inflation targeting is about more than just inflation. Advocates like Bernanke see it as a tool for stabilizing aggregate demand, and hence reducing the severity of the business cycle. This is certainly understandable, as demand shocks tend to cause fluctuations in both inflation and output. So a policy that avoids them should also stabilize output.

I have already discussed one problem with this view—namely, the economy might get hit by supply shocks, as when oil prices soared during the 2008 recession. Some of that can be avoided by looking at the core inflation rate. But even the core inflation rate was surprisingly sticky, or slow to fall during 2008–09, even after oil prices plunged. This made it harder for the Fed to aggressively stimulate the economy. It is not hard to figure out what went wrong with demand-side models that predicted inflation would fall sharply during a severe slump; in fact, according to the Bureau of Labor Statistics (BLS), housing prices did not fall. On the contrary, housing prices rose between mid-2008 and mid-2009, despite one of the greatest housing market crashes in all of world history. And they didn't just rise in nominal terms; they rose in relative terms, that is, faster than the overall core CPI. If we take the longer view, we find that house prices rose about 8 percent between 2006 and 2012 (according to the BLS) whereas the famous Case-Shiller house price index shows them falling by nearly 35 percent. That is quite a serious discrepancy, especially given that housing is 39 percent of the core CPI.

Many people might argue that the BLS number is better in the sense that it measures the rental equivalent of housing costs, whereas Case-Shiller shows the sales price, which most consumers don't see in any given year. But the real question is: "Better for what purpose?" People like Ben Bernanke don't favor inflation targeting because they hope to keep consumers happy; they favor it because they hope to stabilize the economy. That means avoiding unemployment as much as possible. The level of employment in the housing construction industry is almost certainly more closely related to the price of new homes than the rental equivalent of apartments in buildings constructed 30 years ago. If you had to predict the crash in housing construction after 2006, which measure would work better—an 8 percent increase in housing prices or a 35 percent decrease?

There are of course errors in the measurement of both inflation and NGDP growth. But there's an important extent to which NGDP is a more objectively measured concept. The revenue earned by a computer company (which is a part of NGDP) is a fairly objective concept, whereas the price increase over time in personal computers (which is a part of the CPI) is a highly subjective concept that involves judgments about quality differences in highly dissimilar products.

Although the core CPI did not decline as quickly as expected during 2009 (due to high housing prices) core inflation did eventually fall to 0.6 percent in the late summer of 2010. That decline caused the Fed to push for higher inflation via quantitative easing, which meant buying bonds to increase the monetary base. In principle, this program should have been completely uncontroversial because inflation was well below the Fed's 2 percent target. Instead, the Fed ran into a firestorm of controversy. The public was outraged to hear news reports that the Fed was trying to raise their cost of living at a time when many people were suffering from the recession.

It is pretty obvious that the public and the Fed were operating under completely different mental frameworks. When Bernanke called for "higher inflation" he meant a higher level of aggregate demand, which economic theory suggests should raise both the inflation rate and, in the short run, the real incomes of Americans. In contrast, when average Americans hear the term "higher inflation," they think in terms of higher food and energy prices (due to a reduction in aggregate supply), which reduces their real incomes. The Fed understood that more spending would mean more inflation but hoped it would also result in greater employment and output.

The Fed does not directly increase inflation by creating more money; rather the Fed raises total spending or aggregate demand. Whether that increase leads to inflation depends on the growth of real output. It is very strange to call the goal of such a policy "higher inflation," because the inflation is essentially a side-effect of the increased aggregate demand—the desired effect of which is greater employment and real growth. Nevertheless, Fed officials routinely talk as if the side-effect were the thing that really mattered. No wonder the public is confused.

According to some news reports, the Fed was taken aback by the intense criticism of QE2, and that this had made them more cautious about doing further stimulus. The dual mandate, which the Fed

interprets as calling for about 2 percent inflation, would seem to have called for (and still calls for) a more expansionary monetary policy. Yet the Fed has held back, despite high unemployment and an inflation rate that has averaged only a bit above 1 percent since mid-2008, when the recession first became severe. It would have been both more accurate and less provocative for the Fed to have said in 2010 that the goal of QE2 was to boost American's nominal incomes, not their cost of living.

Confusion over the nature of inflation targeting creates another political problem: it leads to the perception that central banks control inflation, and the fiscal authorities control real GDP growth. Our textbooks treat monetary and fiscal policy similarly, as two tools for controlling spending. Yet one almost never sees any discussion of fiscal policy from an inflation-targeting perspective. If inflation is above target, the press almost always focuses on what the central bank needs to do. When there is an output shortfall, on the other hand, it's much more likely that people will call for fiscal stimulus. Yet there is absolutely nothing in economic theory that would justify this imagined asymmetry, at least from the perspective of demand side-initiatives like higher government spending.

One example of this confusion occurred in Britain during the recent recession. The pace of recovery there had been especially disappointing. Yet between 2010 and 2012 inflation ran well over the Bank of England's 2 percent target. Admittedly the Bank understood this to be due in part to transitional factors, such as a higher VAT rate and increased oil prices, so it was prepared to tolerate inflation that was modestly above its target. The political pressure caused by the high inflation nevertheless made it unwilling to further boost NGDP growth, which was far below trend. At the same time, the perception that the British recovery was lagging led to further calls for fiscal stimulus, despite Britain's high deficit and debt ratios. But fiscal stimulus cannot boost spending if the monetary authorities are targeting inflation. It's like the legislature stepping on the gas pedal at the same time that the central bank presses on the brake.

The point is that fiscal and monetary policy both work by influencing aggregate demand. If the central bank targets inflation at 2 percent, any fiscal policy that succeeds in increasing aggregate demand, will also tend to boost inflation, causing the central bank to tighten

so as to keep inflation near its target. It's been known for decades that the fiscal multiplier is zero when the central bank targets inflation. But because people have become used to thinking that monetary policy determines the rate of inflation, while fiscal policy determines real growth, they have overlooked this. If central banks instead targeted spending, the futility of fiscal stimulus would be more evident. If, for example, the Bank of England was committed to a 4 percent nominal GDP growth target, and everyone knew it, the government would not be able to argue that by spending more it could make the economy grow faster. Since it obviously couldn't even boost the growth rate of nominal GDP, how could it possibly cause real GDP to go up?

The preceding analysis points to still another advantage of NGDP targeting: such targeting would make it easier for the public to appreciate the need for sound supply-side policies. If the fiscal authorities understood that the central bank was going to allow only 4 percent NGDP growth, then they would know that the only way to boost real growth would be with supply-side policies, even in the short run. Tax reform that lowered MTRs would tend to increase aggregate supply, and hence improve the inflation/output growth split in NGDP growth.

Conversely, bad economic policies would be more difficult to justify. When NGDP is allowed to fall sharply, as when inflation is kept stable despite an adverse supply shock, unemployment tends to rise. This makes it harder to insist on market-oriented policies, which typically call for "creative destruction," with unemployment in parts of the economy tolerated for the sake of allowing for more expansion elsewhere. When spending collapses generally, however, people will ask "Where do the workers go who have lost their jobs?" It's not an easy question to answer. Nor is it therefore so easy to argue against bailouts and other measures aimed at keeping even those firms or industries that ought to fail from actually failing. In contrast, with NGDP targeting there is never a general collapse of spending, regardless of what's happened to productivity generally or to any particular industry or firm. Therefore with such targeting, bailouts like the recent ones of GM and Chrysler would have been much harder to justify. Since they would not boost NGDP, any extra spending on cars made by these two companies would be fully offset by less spending on other American-made products. NGDP targeting would

help to restore policymaking to a “classical” framework, where decisions to benefit special interest groups would always have relatively visible opportunity costs.

It would also be much easier to avoid bailouts of big banks, because proponents of “too big to fail” could no longer claim that failing to bail out banks would push us into a recession. Indeed with NGDP growing at a steady rate it is much less likely that we would have the sort of contagion of financial failures that could produce a systemic crisis.

And finally, NGDP targeting would help to depoliticize monetary policy. The current ill-defined dual mandate allows each side of the political divide to latch onto its preferred policy indicator and argue that money is either too easy or too tight. Indeed this polarization has been especially pronounced during the Great Recession. NGDP targeting would provide for much greater transparency as to whether policy was overshooting the target, or falling short.

Can We Trust the Fed to Target Any Variable?

Many libertarians are skeptical of the Federal Reserve, and instead favor a more *laissez-faire* regime, such as free banking. The issues involved here go well beyond the scope of this article. However, I believe there are several ways to reduce the discretion of central banks under an NGDP targeting regime.

One, which I have already mentioned, is the importance of level targeting. Think of level targeting as a way of “keeping them honest.” From the 1960s to the 1980s inflation almost always exceeded the Fed’s policy goal. Whenever the Fed missed they promised to try to do better. But those promises lacked credibility, because the Fed was targeting growth rates, not levels, and so never felt obligated to actually make up for its mistakes. The public became skeptical, and rightly so. At the other extreme, the Bank of Japan (BOJ) has repeatedly fallen short of its inflation targets, has also kept promising to do better, and has also lost the Japanese public’s confidence.

In contrast, if a central bank fell short of its price *level* target by 1 percent every single year, it would lower the inflation *rate* only during that first year. For instance, suppose the BOJ had a price level target of 100. In the first year it falls 1 percent short due to a flaw in

its targeting method, ending up at 99. For it to allow the price level to drop to 98 the next year would mean being short 2 percent at the end of the second year—a failure to honor its commitment. However, if each additional year the BOJ falls 1 percent short of the policy goal, then the CPI will stay at 99, which means that policymakers will actually reach their goal for stable prices in every single year except the first. The public can adjust to any *level* of prices; what causes problems is *unanticipated changes*. The same rationale would apply to level targeting of NGDP.

In previous articles, I have also discussed how central bank discretion could be removed by a policy of targeting NGDP futures prices (Sumner 1989, 2006). The basic idea is to set the monetary base at a level where NGDP growth is expected to be right on target. Each time someone buys an NGDP futures contract from the central bank, their purchase signals worry that NGDP growth is too high, obliging the Fed to restrain money growth. Each sale of NGDP futures contracts to the Fed signals concern of a slowdown, and leads the Fed to inject more base money into the economy. Failure to do so would expose the Fed to potentially unlimited losses.

In essence, the market, not the central bank, would be setting the monetary base and the level of interest rates. Indeed the Fed's only role in this sort of regime would be to set the target path for nominal GDP. The Fed would essentially be defining the medium of account (i.e., during 2014 the dollar might be defined as one seventeen trillionth of expected 2014 U.S. nominal output.) Once the Fed is that far removed from the process, it is relatively easy to move on to free banking.

Conclusion

Many libertarian economists are acutely sensitive to the very real dangers of excessive inflation. But I believe some have a blind spot for shortfalls in nominal spending, which are arguably even more damaging. The United States had a relatively efficient small government policy regime under Presidents Harding and Coolidge. It was far from perfect, but as soon as the Depression began policy became more interventionist—and (with the exception of the dollar devaluation of 1933–34) almost completely counterproductive.

An almost identical sequence of events took place in Argentina during the late 1990s and early 2000s. Argentina grew quite rapidly from 1990 to 1997, partly thanks to neoliberal policy reforms. But Argentine monetary policy became contractionary in the late 1990s and early 2000s, causing a significant decline in nominal GDP. Finally, a new and more left-wing government took command, devalued the currency, and pursued a statist policy agenda. The new regime blamed Argentina's troubles not on tight money, but on its former free market policies, just as FDR had done 70 years earlier. The fall in NGDP also worsened a fiscal crisis. This led the Argentine government to swing to the opposite extreme—printing money to pay its bills. The result was high and rising inflation. The government blamed “capitalists” and put on wage and price controls. More recently, the sharp decline in NGDP in the Eurozone has led to calls for “fiscal union.” This might slightly ameliorate the current crisis, but the resulting increase in moral hazard would be storing up much more severe problems down the road.

Nominal GDP targeting provides the best environment for free market policies to flourish. It removes one of the most powerful excuses for statist policies, the claim that they will somehow create jobs. In the current policy environment, where NGDP growth has fallen far below trend, there is an unfortunate tendency for some on the right to view NGDP targeting at a sort of left-wing proposal, aimed at inflation. In fact, from Hayek in the 1930s, to people like McCallum (1985), Hall and Mankiw (1994), and Selgin (1995) in the 1980s and 1990s, to the so-called market monetarists of today, nominal GDP targeting of some sort has long had strong appeal among economists sympathetic to free markets and low inflation.¹⁰ We need to look beyond the current crisis, and to think long and hard about what sort of pragmatic monetary regime will best serve the economy in the decades to come.

¹⁰Lars Christensen (2011, 2012) coined the term “market monetarist,” and has been a forceful advocate of combining NGDP targeting with a more laissez-faire approach to banking. As far as I know Bill Woolsey (1992) was the first to connect futures targeting with free banking. The number of market monetarists in the blogosphere is growing rapidly, and includes David Beckwith, Lars Christensen, David Glasner, Josh Hendrickson, Marcus Nunes, Nick Rowe, Evan Soltas, Yichuan Wang, and Bill Woolsey.

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