

The following is from an unpublished manuscript by Scott Sumner, entitled “The Money Illusion: Market Monetarism and the Great Recession”

Introduction: The Real Problem Was Nominal

“Tell me,” the great twentieth-century philosopher Ludwig Wittgenstein once asked a friend, “why do people always say it was natural for man to assume that the sun went around the Earth rather than that the Earth was rotating?” His friend replied, “Well, obviously because it just looks as though the Sun is going around the Earth.” Wittgenstein responded, “Well, what would it have looked like if it had looked as though the Earth was rotating?”

Most readers of this book have fairly vivid memories of the post-Lehman financial crisis, as well as the Great Recession of 2007-09. Liberals and conservatives may differ at the edges, such as which public policies they blame, but both sides share a common understanding of the basic trajectory of the crisis. The bursting of a major real estate bubble helped trigger first a banking crisis and then a deep recession. Monetary policy was extraordinarily expansionary, but largely ineffective at boosting the economy.

In this introductory chapter, I present a radically different interpretation of the Great Recession. At first it may seem implausible, even preposterous. Yet this radical view is based almost entirely on standard macroeconomic concepts, as they were understood back in 2007. It is the rest of the profession that abandoned this standard model, and that needs to justify its new view of macroeconomics.

Unfortunately, few non-economists are aware of the state of macro theory circa 2007, so you will have to initially suspend your disbelief in order to see if an alternative view of the past decade makes more sense than the standard view. This alternative is called “market monetarism,” and it developed out of the crisis of 2008.

All of the components of market monetarism are well-established economic principles, although the exact way they are assembled is novel in a few respects. The remainder of the book will lead you on an intellectual journey—how I came to my current views on monetary economics, which were well-established by 2007. These views have always been heavily informed by both data and theory—one without the other leads nowhere. Thus we’ll toggle back and forth between the major empirical findings of monetary economics and the models used to make sense out of those relationships. Bit by bit we’ll see how I came to reach market monetarist views, and not some alternative such as old monetarist, Keynesian, Austrian or New Classical.

The second half of the book will return to the crisis of 2008, armed with a much better understanding of monetary economics. I’ll ask you a question similar to the

Wittgenstein quotation above: What would the crisis of 2008 have looked like if the market monetarist view of reality were correct?

The Conventional View

Here is how Robert Hall, a brilliant Stanford macroeconomist, started off a survey article in the Fall 2010 *Journal of Economic Perspectives*: “The worst financial crisis in the history of the United States and many other countries started in 1929. The Great Depression followed. The second-worst struck in the fall of 2008 and the Great Recession followed.”

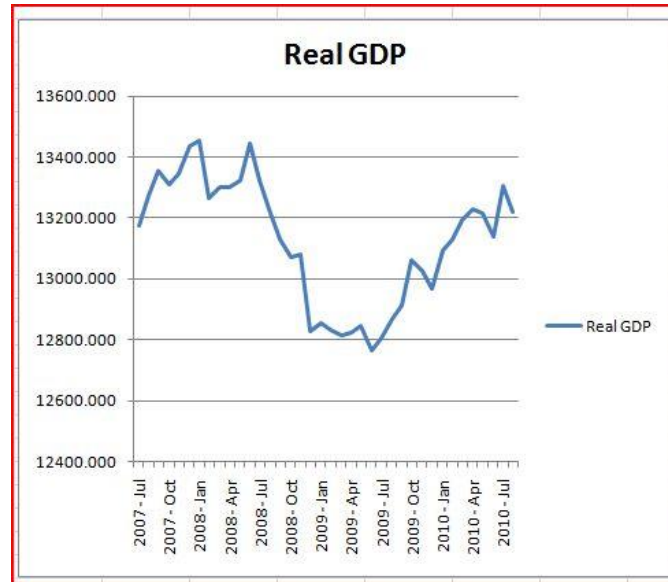
Although Hall is one of my favorite macroeconomists, I think he’s almost totally wrong here. And wrong in a very revealing way. There was no significant financial crisis in the U.S. during 1929. The major financial crisis of the Great Depression occurred in 1931. Now, why is this timeline so important? Because Hall’s description makes it seem like the financial crisis in 1929 triggered the Great Depression, whereas what actually occurred is that the Great Depression led to a severe financial crisis. Debts are harder to repay when national income is falling rapidly.

I would argue that something quite similar occurred in 2008. Admittedly, the 2008 case is more complicated than the Great Depression. Whereas the financial system was in excellent shape in 1929, financial stresses were developing well before the 2008 recession, due to problems with subprime loans. Even so, the specific financial crisis that Hall is referring to (“the fall of 2008”) is the post-Lehman crisis that began in late September 2008 and intensified in October.

Why is the timing so important? Because the Great Recession began in December 2007, and became severe after June 2008. Just as during the 1930s, a slump in the economy created financial distress. In the 2008 case, it transformed a modest banking crisis into a severe crisis. Unfortunately, due to long lags in collecting GDP data, at the time no one understood that when Lehman failed in September, the country was already in the midst of a severe recession. It looked like Lehman *caused* the severe recession, as the truly horrifying GDP data came out later in the year and in early 2009.

Real and Nominal GDP

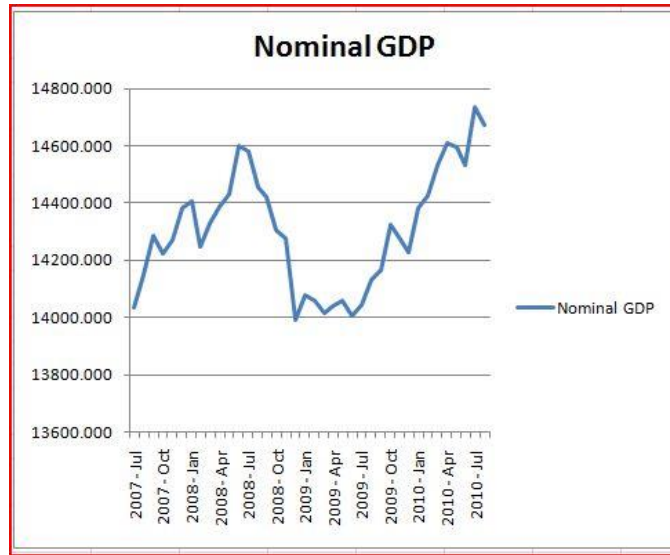
Macroeconomic Advisers estimates monthly GDP data derived from the various data series that the government uses to construct its quarterly GDP estimates. Here’s what things looked like during the Great Recession:



The sharp drop that you see occurs between June and December 2008. Keep that six-month period in the back of your mind, as we will continually be referring back to this crucial period of time. Due to quirks in the relationship between levels and rates of change, even a quarterly data series can be very misleading. Thus real GDP looks pretty level in the first three months of 2009, but quarterly real GDP actually shows a sharp decline from the fourth quarter, even though the *level* of GDP in 2009:Q1 was not much different from December 2008. That's because GDP during October and November 2008 was far higher than during December.

To summarize, the bottom dropped out of the economy in the second half of 2008, even though this wasn't understood until very late in the year. Lehman failed about halfway through this steep decline (in September 2008), triggering a major global banking crisis. By December most of the damage was done; the Great Recession had begun, and the effects would linger for years.

I'm going to argue that the financial crisis did not cause the Great Recession. Rather, the direct cause of the recession was a fall in nominal GDP (NGDP), and the cause of the decline in NGDP was an excessively contractionary monetary policy. In a sense the Fed was to blame, although it's probably more accurate to say the entire economic profession is at fault, as they were operating with a flawed model of monetary policy. The Fed rarely strays very far from the consensus view of mainstream macroeconomists. So let's take a look at NGDP during the same period of time:



Notice the same sort of steep decline in NGDP as in RGDP during the period of June to December 2008. At this point I usually get questions: “Isn’t this pretty much a tautology?” . . . “Real and nominal GDP are quite similar; obviously if one declines then the other will as well.” . . . “In what sense is a decline in NGDP a cause of a decline in RGDP?” . . . “The real question is what caused them both to decline.”

I sympathize with these questions, but they are based on a fundamental misunderstanding of the relationship between real and nominal variables. Although RGDP and NGDP may sound similar, they are radically different concepts, even at a basic ontological level. You might say nominal and real variables are as different as words and physical objects. Even many economists don’t see this, because we are forced to use numbers to measure both and because RGDP includes many different types of objects and thus some sort of “index number” is required to make sense of the concept.

Nonetheless, real and nominal GDP are radically different. If you had to picture NGDP, you might visualize a dollar bill; it’s a monetary concept. If you want to picture real GDP, you might imagine thousands of factories, shopping malls, office buildings and homes. And, of course millions of workers providing services. In 2008, Zimbabwe’s NGDP might be visualized as follows:



And it was soaring higher at an astronomical rate.

In contrast, Zimbabwe's RGDP is a physical concept; in 2008 it took the form of abandoned farms and shuttered factories, due to inept government policies that punished wealth creators. Real GDP plunged as they fell into depression, while NGDP soared at the fastest rate in the world.

In the U.S., RGDP and NGDP are more closely correlated. But even here NGDP growth rates soared to double-digit levels in the 1970s, even as RGDP growth languished at about 3%, lower than during the 1960s. They are very different concepts.

And yet, over shorter periods of time, NGDP and RGDP are indeed highly correlated in the U.S. One of the basic goals of this book, and indeed in some respects the key to macroeconomics, is to understand why NGDP and RGDP are highly correlated in some cases and not at all in others. When we finally figure this out, we'll see that a policy that prevented NGDP from falling in 2008 would most likely have also prevented RGDP from falling, or at least greatly moderated the decline. A mild recession might have been inevitable, but the actual slump was far deeper than necessary.

What Is the "Stance" of Monetary Policy?

Let's say that the decline in NGDP was the proximate cause of the decline in RGDP (later I'll explain exactly how and why these variables are related). That still leaves open the question of how I can claim that the Fed is to blame for the Great Recession. After all, "everyone knows" that monetary policy was extremely expansionary during 2008. The Fed cut interest rates sharply, to near-zero levels by the end of the year. They also pumped lots of money into the economy. As we will see, however, what "everyone knows" just ain't so.

This is not the first time that economists confused low interest rates with easy money. The same mistake was made during the 1930s. Not until the famous *Monetary History of the United States* by Milton Friedman and Anna Schwartz was published in the 1960s did economists come to realize that policy was actually quite contractionary, or “tight” during the 1930s, despite near-zero interest rates. Today even Ben Bernanke accepts Friedman and Schwartz’s claim that the Fed was to blame for the Great Depression.

Unfortunately, many economists continued to judge the stance of monetary policy by looking at interest rates. In December 1997, Friedman expressed dismay that many were forgetting the lessons of the *Monetary History*. Interest rates in Japan had fallen close to zero, and many pundits wrongly assumed that Japan had an easy money policy, despite a falling price level. Friedman wrote in the *Wall Street Journal*:

Low interest rates are generally a sign that money has been tight, as in Japan; high interest rates, that money has been easy. . . . After the U.S. experience during the Great Depression, and after inflation and rising interest rates in the 1970s and disinflation and falling interest rates in the 1980s, I thought the fallacy of identifying tight money with high interest rates and easy money with low interest rates was dead. Apparently, old fallacies never die.

Although Milton Friedman was perhaps the greatest monetary economist of the 20th century, he was also a monetarist with some unconventional views. Maybe he’s wrong about the policy stance in Japan, perhaps they did have easy money. But Friedman isn’t alone. Consider these three key lessons for students, from the best-selling monetary textbook in 2008:

1. It is dangerous always to associate the easing or the tightening of monetary policy with a fall or a rise in short-term nominal interest rates.
2. Other asset prices besides those on short-term debt instruments contain important information about the stance of monetary policy because they are important elements in various monetary policy transmission mechanisms.
3. Monetary policy can be highly effective in reviving a weak economy even if short term rates are already near zero.

This was written by Frederic Mishkin, a highly respected New Keynesian economist who served with Ben Bernanke on the Federal Reserve Board. At that time their policy views were quite close, according to Bernanke’s memoir.

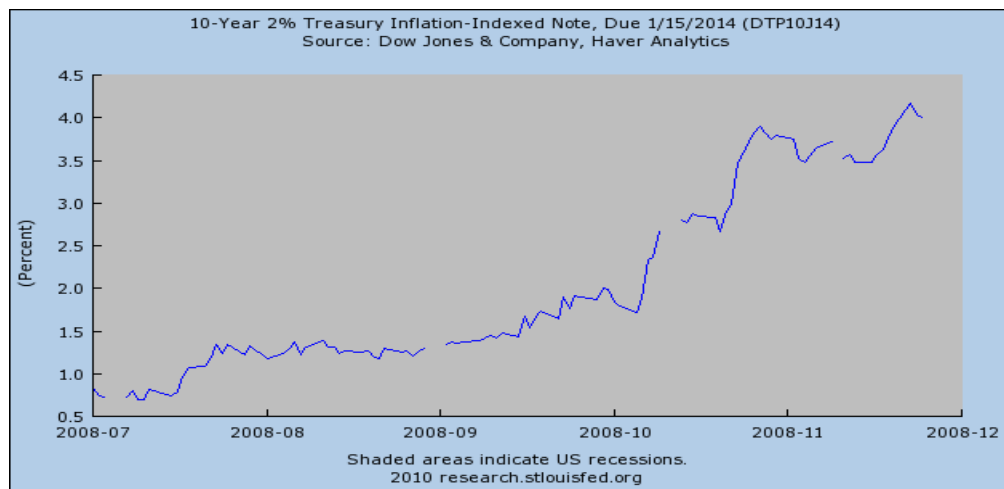
This is also the textbook that I had been using to teach for a quarter century before 2008. I believed these three ideas were extremely important, and always emphasized them in class. Consider my surprise, then, when I looked around in late 2008 and found that few of my fellow economists believed in these assertions. Most economists seemed to think that low interest rates did represent easy money. Most also seemed to think that monetary policy is not highly effective when interest rates are close to zero.

This discovery was quite a shock to me, as if I was a character in “Invasion of the Body Snatchers,” waking up in a world where everyone seemed subtly changed. It led me to devote my life to trying to change the conventional wisdom back to the ideas in Mishkin’s textbook. I started blogging, and in this book I will explain why I stuck with the textbook version of monetary economics in 2008, not the view that caught on with pundits. Monetary policy was widely viewed as being ineffective after rates hit zero in December 2008, if not earlier. As we will see, however, Mishkin was right in claiming that monetary policy remains highly effective at near zero interest rates.

How Did Asset Markets Move in Late 2008?

Recall that Mishkin claimed that the stance of monetary policy is not measured by the level of interest rates. Rather, one should look at the movements in other asset prices. So let’s do that, focusing on the key six-month period in late 2008.

When I point out to other economists that nominal interest rates are not a good indicator of the stance of monetary policy, they often accept my claim, but then point to the real interest rate. So let’s look at the real interest on five-year Treasury bonds during the period from July to November 2008:

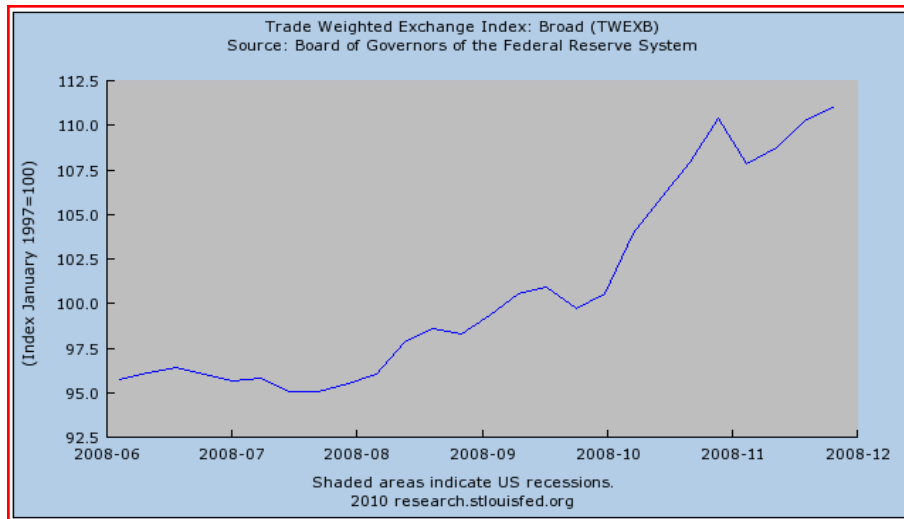


That’s a stunning increase in real interest rates, especially for such a short period of time. And yet most economists that I talk to are not even aware that real interest rates rose from less than 1% to over 4% during the teeth of the financial crisis. Why would the Fed allow this to happen?

In fact, those economists who point to the real interest rate are wrong—it’s not a good indicator of the stance of monetary policy, for the same basic reason that nominal rates are unreliable. Just as nominal rates can be distorted by changes in expected inflation, the real interest rate can be distorted by changes in real output. Ironically, however, many of the economists who say we should look at the real

interest rate seem unaware of the fact that this indicator suggests that monetary policy was *highly contractionary* in late 2008.

Another popular asset price is the exchange rate, which measures the value of the dollar in terms of foreign currencies. Once again, it's not always a reliable indicator of the stance of monetary policy, but to the extent it is useful, it was signaling extremely tight money in late 2008. Indeed, the foreign exchange value of the dollar soared by about 15% (in trade-weighted terms) in late 2008:



Interestingly, currencies almost always depreciate sharply during a severe financial crisis. Dozens of examples prove this, from Thailand to Mexico to Russia to Iceland. The rare examples when a currency appreciated during a financial crisis (the U.S. in 1931-32 and Argentina in 1998-2001) are cases that we now know involved excessively contractionary monetary policy.

Other asset markets showed the same pattern:

Stock prices crashed in late 2008.

Commodity prices fell by more than 50% in late 2008.

Commercial real estate prices started falling sharply about the same time as NGDP, long after the subprime bubble burst.

Residential real estate prices in the heartland (Texas, etc.) had been stable during the 2006-08 subprime crash, and started falling in late 2008 along with NGDP.

TIPS spreads (i.e., inflation expectations in the bond market) fell sharply.

So if we are to take seriously what we've been teaching our students for years, then it seems that all the "other asset markets" referred to by Mishkin were screaming that money was far too tight.

Of course, not everyone agrees with Mishkin's way of characterizing the stance of monetary policy. I prefer looking at NGDP growth, as does Ben Bernanke:

The imperfect reliability of money growth as an indicator of monetary policy is unfortunate, because we don't really have anything satisfactory to replace it. As emphasized by Friedman . . . nominal interest rates are not good indicators of the stance of policy. . . . The real short-term interest rate . . . is also imperfect. . . .

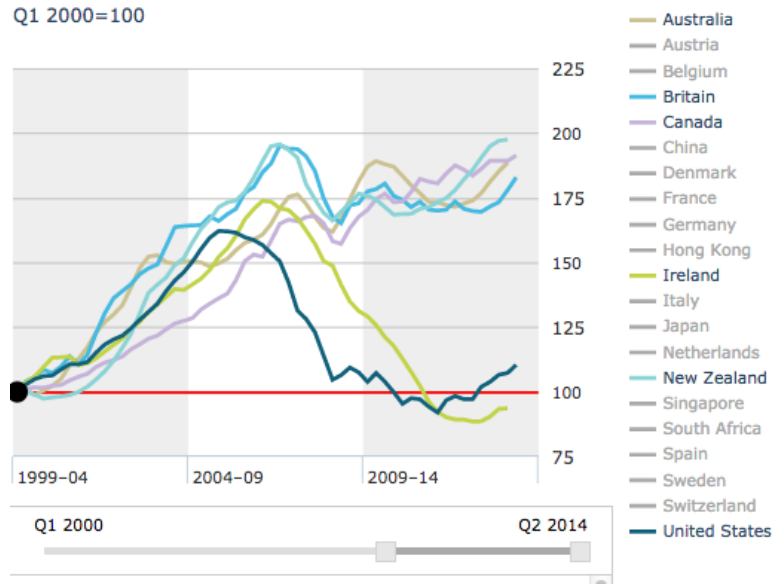
Ultimately, it appears, one can check to see if an economy has a stable monetary background only by looking at macroeconomic indicators such as **nominal GDP growth** and inflation.

If we average out NGDP growth and inflation, we find that monetary policy during 2008-13 was the tightest since Herbert Hoover was president. And didn't Bernanke once argue that Hoover's tight money policies caused the Great Depression? Yes, he did. And yet although the stance of monetary policy was extremely contractionary by the criteria laid out by Bernanke in 2003, as Fed Chair, he continually insisted that policy was *extraordinarily accommodative* during 2009-13.

Didn't the Housing Bubble Cause the Great Recession?

If macroeconomic theory, circa 2007, clearly points to tight money as the cause of the Great Recession, then why do so few economists believe that? One answer is that it didn't look like tight money was to blame. Even though most economists understand that low rates don't mean easy money, many don't follow through with the implications of this fact. Instead, there's a tendency to focus on the most visible manifestations of a tight money policy, such as falling asset prices and financial distress. Just as to early humans it looked like the Sun went around the Earth, to most economists it *looked like* the housing bust and the subsequent financial crisis caused the Great Recession.

Let's start with the housing "bubble." I use scare quotes, as later I'll show why bubbles probably don't exist. The standard view is that American home prices soared to irrational heights during the 2005-06 housing bubble, and that a later sharp decline was almost inevitable. But was it? After all, housing prices soared in many other countries at about the same time. The following graph shows housing prices in six English-speaking countries:



Notice that house prices (in real terms) soared much higher in all six English-speaking markets, and yet prices later collapsed in only two of the markets: the U.S. and Ireland. In the other four economies house prices moved sideways in real terms (and rose even higher in nominal terms).

Back in 2006, it was impossible to predict which of these six markets would experience sharp house price declines. If you correctly predicted the housing bubble collapse in the U.S., you need to stop thinking of yourself as smart and start thinking you were lucky to have resided in one of the two out of six countries where your prediction would have been correct.

Even if the fall in U.S. house prices did not represent the bursting of a bubble, it obviously could have caused a recession. After all, there are lots of jobs in home construction and related industries. But did the housing slump actually cause a sharp rise in unemployment? The data suggests the answer is no.

Between January 2006 (when housing construction peaked) and April 2008, the U.S. experienced a more than 50% decline in homebuilding. By the latter date the vast majority of the decline in homebuilding was over. And yet during that 27-month period the unemployment rate merely edged up from 4.7 to 5.0% (which was still considered to be roughly "full employment").

Jan. 2006: starts = 2,303,000, completions = 2,058,000, average = 2,180,000,
Unemployment rate = 4.7%

April 2008: starts = 1,008,000, completions = 1,014,000, average = 1,011,000,
Unemployment rate = 5.0%

October 2009: starts = 527,000, completions = 745,000, average = 636,000.
Unemployment rate = 10.0%

This is exactly how economies are supposed to work, at least in (classical) theory. An economy has a “production possibilities curve,” which shows the maximum possible output in a variety of industries. If more resources are used to produce one type of good, then fewer resources will be available to produce other types of goods. The opportunity cost of more housing is less production of cars, computers, and restaurant meals. The period between January 2006 and April 2008 provides a pretty good example of the classical model in action. As homebuilding slumped, workers shifted into other sectors such as manufacturing, commercial construction, exports and services. Because NGDP kept growing (due to good monetary policy), the unemployment rate stayed fairly low.

The housing slump did impose some costs on the economy. Workers often find it difficult to switch from one sector to another, and that caused a small rise in the unemployment rate. But these “re-allocation” costs are utterly trivial compared to the costs that occur when money is too tight and NGDP falls. Between April 2008 and October 2009, when NGDP fell sharply, the unemployment rate soared from 5.0% to 10.0%. Now jobs were not just being lost in homebuilding, but also in manufacturing, commercial real estate construction, and even some service industries.

Another popular view holds that big financial crises always lead to big recessions and slow recoveries. It’s not at all surprising that the two are often *associated* with each other, as people, businesses and governments would be expected to have more trouble repaying debts when NGDP falls sharply. But that correlation in no way prevents the central bank from promoting a rapid recovery through monetary stimulus. The banking crisis of 1933 was perhaps the worst in American history, but both NGDP and RGDP rose rapidly after March 1933, despite the fact that much of the banking system was shut down at the time.

How did this growth miracle occur? According to Ben Bernanke, it was FDR’s decision to adopt a highly aggressive and unconventional form of monetary stimulus—in the form of dollar devaluation. In 1999, Bernanke wrote a paper entitled “Japanese Monetary Policy: A Case of Self-Induced Paralysis?” and answered the question in the affirmative. He ended the paper by imploring the Bank of Japan to show “Rooseveltian resolve,” in the face of the zero interest rate problem, just as FDR had in 1933.¹ Unfortunately, when it became the Fed’s turn to show Rooseveltian resolve at the zero interest rate boundary, they fell short.

Another misconception is that the Fed “did all it could.” Some excuse the Fed by pointing to the political unpopularity of unconventional tools such as qualitative easing and negative interest on bank reserves. But the Fed did not reach the zero bound until mid-December 2008, by which time most of the great NGDP collapse was over. When the Fed met two days after Lehman failed in September 2008, they

¹ In a number of ways the 1999 Bernanke critique of the BOJ mirrors the criticisms of the Fed provided in this book.

refused to take even the most basic conventional monetary policy step, such as cutting their target interest rate (which was 2.0% at the time). In his memoir, Ben Bernanke himself concedes it was a mistake not to cut rates in September 2008.

Later I'll explain why this should have been obvious to policymakers at the time. Even after interest rates finally were cut to 0.25% in December 2008, the Fed was far from doing all it could. It could have cut them further, to 0.0%, or -0.25%, or -0.5%, or -0.75%. It could have done far more QE. More importantly, it could have adopted an alternative policy target, such as the "price level targeting" that Ben Bernanke recommended the Japanese adopt, when faced with similar circumstances. Interestingly, Bernanke has recently resumed his advocacy of price level targeting now that he is no longer head of the Fed.

In fairness, I think Bernanke did better than most other economists would have in his place. He was not a dictator, but rather had to work with many other policymakers at the Fed, some of whom had much less enlightened views on monetary policy. The Fed did far better in 2008-09 than in 1929-33, and far better than the ECB, but still not enough to prevent an unnecessarily severe recession.

Almost Everything You Heard about the Great Recession Is Wrong

In the following chapters I will take you on an intellectual journey, showing you how and why I developed my views on macroeconomics. That will involve unlearning many of the things that you "know" that just aren't so. Here are a few of the many myths about the Great Recession:

1. Housing was a bubble that inevitably had to burst.
2. The decline in homebuilding caused a big rise in unemployment.
3. In 2008, low interest rates represented easy money.
4. In 2009, monetary policy was no longer highly effective at zero interest rates.
5. NGDP and RGDP declined despite monetary stimulus from the Fed.
6. The Fed was unable to stop the decline in GDP during 2008, because interest rates had already fallen to zero.
7. The Fed cut rates as far as they could.
8. The financial crisis caused the Great Recession.
9. The economy cannot recover rapidly during and after a severe financial crisis.
10. After the debt crisis many Americans struggled to make ends meet, and therefore it made sense for aggregate demand to decline, for Americans to "tighten their belts."

All these and many other misconceptions will be punctured in the following chapters.

To summarize, a well-functioning economy requires NGDP to rise at a fairly steady rate, but not too fast. The Fed has all the tools required to make this happen. When

NGDP performs poorly, it represents a failure of monetary policy. Ben Bernanke has already admitted that the Great Depression was the Fed's fault. Bernanke has also admitted that the Great Inflation of 1966-81 was the Fed's fault. Bernanke also has suggested that the Fed deserves credit for producing what he called the "Great Moderation" of 1984-2007, a period when the economy performed pretty well. I agree with all three of these claims; all three "Great" events were linked to Fed policy. So why is it so far-fetched to believe the Great Recession was also the Fed's fault?