Market Monetarism
Roadmap to Economic Prosperity

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With a foreword by Scott Sumner
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Foreword

During the 1930s most people thought the Great Depression represented a relapse after the exuberant boom of the 1920s, worsened by a severe international financial crisis. Then in the 1960s Milton Friedman and Anna Schwartz showed that the real problem was an excessively contractionary monetary policy. Yes, the Fed cut interest rates close to zero, and did what is now called “quantitative easing,” but it was too little too late. At Friedman’s 90th birthday party Ben Bernanke gave a speech that included this memorable promise:

"Let me end my talk by abusing slightly my status as an official representative of the Federal Reserve. I would like to say to Milton and Anna: Regarding the Great Depression. You’re right, we did it. We’re very sorry. But thanks to you, we won’t do it again.”

In this path-breaking study of the Great Recession, Marcus Nunes and Benjamin Cole show that Ben Bernanke and the Fed made many of the same mistakes that were made during the 1930s. Yes, the Fed was more active this time. And yes, it could have been much worse. But our monetary policymakers still haven’t fully understood the importance of adopting a monetary policy that does whatever it takes to keep nominal GDP growing at a rate consistent with economic prosperity and low inflation.

Nunes and Cole are part of a new movement called “market monetarism” which first arose on the internet and has recently revolutionized the way economists think about monetary policy in a deep slump. Prior to the recession, the standard formula called for adjusting interest rates up and down in order to target inflation. The hope was that a low and stable inflation rate would insure economic prosperity. We now know that this policy is not enough.

Nunes and Cole trace the evolution of monetary policy from the 1960s to the present. They show how monetary policy failures led to the Great Inflation of the late 1960s, how Paul Volcker and the Fed brought inflation to much lower levels in the 1980s, and then how the Fed was able to produce a long period of stable growth and low inflation. The key was that the Fed never slavishly targeted inflation, but rather kept nominal GDP (i.e. total spending) growing at close to a 5.5% trend line.

They also show how the ideology of “inflation targeting” became increasingly dominant at the Fed in recent years. The Fed lost its focus on nominal spending, and during 2008-09 didn’t realize the dangers of the sharp decline in nominal GDP until it was too late. By that point, interest rates had fallen to zero. But this didn’t represent “easy money” as people often assume, just as high interest rates during hyperinflation don’t represent “tight money.” Low interest rates reflected the weak condition of the economy.

With rates near zero, the Fed had to move on to more “unconventional” stimulus techniques. This is where the inflation targeting ideology created problems for policymakers. They saw a need for stimulus, but were so afraid that inflation would rise above 2% that they were very slow and tentative in developing alternative policies. Their job was made much harder by their refusal to admit their mistake, and switch to a nominal GDP target, which would boost current demand by increasing expectations of future growth in spending.

Meanwhile economists outside the Fed were increasingly drawn to nominal GDP targeting, with an all-star list including Christina Romer, Paul Krugman, Jan Hatzius, and Jeffrey Frankel endorsing the market monetarist proposal for NGDP "level targeting." More
recently, Mark Carney endorsed the idea. Carney’s endorsement represents an important breakthrough, as he will assume leadership at the Bank of England later in 2013.

Over the past few years both Marcus Nunes and I have developed blogs focused on promoting market monetarist ideas. Benjamin Cole has also participated in the blogging debate, doing guest posts at various sites. Marcus brought to light some of Ben Bernanke’s earlier academic papers that warned Japan not to be timid in using monetary stimulus when interest rates fell to zero. And yet after 2008 the Fed refused to do some of the more aggressive monetary actions that Bernanke recommended to the Japanese.

Marcus is also very skilled at using graphs to tell a story, and the graphs in this book are one of its strong points. I’d add that Benjamin Cole also contributed greatly to the market monetarist movement, and is a powerful writer.

At first readers might be skeptical of some of the arguments made by Nunes and Cole. In 2008 and 2009 it didn’t seem like monetary policy was the cause of the crisis, or even that there was much the Fed could do to fix the problem. I’d ask readers to suspend their disbelief until they’ve looked at all of the evidence. Monetary economics is a very counterintuitive field. Most people think the Fed merely moves interest rates up and down, and that once rates fall to zero there’s nothing more the Fed can do to stimulate the economy. But cutting edge research in recent decades has suggested otherwise. We now know that low interest rates do not mean easy money, and that there are lots of things the Fed can do to boost spending once rates hit zero.

If readers take an open-minded look at the evidence in this book, I believe they will be very surprised by what they see. The financial crisis and Great Recession that followed were not at all what they seemed to be at the time. The profession is beginning to come around to the market monetarist view of the importance of a stable growth path for nominal GDP, and this perspective casts a whole new light on the events of the past 5 years.

Scott Sumner, Professor of Economics, Bentley University
Chapter 0: Introduction and Summary

In 2008, for the first time since the Great Depression and some dips at the end of World War II, the nominal Gross Domestic Product of the United States—that is the sum of all spending, before adjustment for inflation—actually shrank. In all other recessions after World War II, while real GDP fell, nominal GDP growth had remained positive.

The 2008 recession was different, earning the moniker “the Great Recession.”

Globally, economies were contracting—Japan was especially ill—while in the United States real GDP shrank at an 8.9 percent annually compounded rate in the fourth quarter of 2008.

In the world of economic thought and punditry, there were two almost immediate ramifications. The first was that references (and comparisons) to the Great Depression became rife, the second was that the whole gamut of schools of economic thought—many of which had been dormant for ages—vied for explanatory supremacy (usually undergirded by political agendas).

We will not delve into the relative merits of different schools in “explaining” the Great Recession, but just mention a list of some of the favorite causes. Such a list would include:

- The excess savings in emerging markets (savings glut), and subsequent lax or aggressive lending
- Lax Wall Street underwriting standards, in search of deals
- Expansionary monetary policies in the advanced economies in 2002-2005 (interest rates “too low for too long”)
- The securitization of finance, especially property mortgages
- The underestimation of aggregate risks
- The fall in loan underwriting standards
- The errors made by rating agencies
- Regulatory failure
- The aggressive tactics behind mortgage loans
- The public policies related to homeownership, especially in the form of federal agencies Fannie Mae and Freddie Mac.

Most likely, all the above “suspects” share some degree of guilt in triggering loan defaults, and the unfortunate responses by monetary authorities leading up to the Great Recession.

But the above list is actually misleading, by pulling economic forensic detectives off of the proper path—and the proper path leads to the role of monetary policy, as practiced by the Federal Reserve Board (in the United States) and other central banks around the world but especially the European Central Bank and the Bank of Japan.

Above all, our view is that if central banks had not permitted nominal spending to seriously contract after mid-2008, there would have been no Great Recession.
Our story will be told from the perspective of a “new” school of thought that has been aptly named “Market Monetarism.” We say “new” as there is little new in economics, rather there is the updated application of mixes of economic ideas to current situations. Market Monetarism bears homage to many traditions and thinkers, particularly including Swedish economist Gustav Cassel and British economist Ralph Hawtrey, but including more modern thinkers (particularly in elements of application) such as the iconic Milton Friedman and Stanford scholar John Taylor.

In a 1978 well known academic paper—The Meaning of “Internal Balance” by the Nobel recipient British economist James Meade—proposed the Market Monetarist principle of targeting national nominal income:

...If, however, it was total money incomes which were stabilized, a much more moderate decline in employment combined with a moderate rise in prices would serve to maintain the uninflated total of money incomes.”

Sir Samuel Brittan, the doyen of British economic journalists, brought the idea into policy circles and has remained close to the theme ever since. In a May 10, 2012 column in the Financial Times, for example, he wrote:

...Yet there is a way of sustaining an expansionary policy while minimizing this threat. This is not through any financial market gimmick but by a different way of thinking. Long-time readers will not be surprised to learn that I have in mind something usually called a nominal GDP objective.

Over time, a long list of proponents and discussants of central bank targeting of nominal income followed. Among these lights are Bennett McCallum (Carnegie Mellon University), Robert Gordon (Northwestern), Robert Hall (Stanford), Gregory Mankiw (Harvard), Charles Bean (Deputy Governor Bank of England) and the recently deceased William Niskanen (Cato Institute).

In his 2001 paper at the Cato Journal—A Test of the Demand Rule—William Niskanen pertinently writes:

It is important to recognize that a demand rule is consistent with any desired price-level path, including a stable price level. My primary point is that a demand rule is potentially superior to a price rule, whatever the desired price-level path, because of the different response to changes in supply conditions. A central bank following a demand rule would not respond to either positive or negative supply shocks; such shocks would lead to a one time change in the combination of price and output changes in that year, but would not lead to a long term change in the inflation rate. A central bank following a price rule, in contrast, would increase the monetary base in response to a positive supply shock and would tighten the base in response to a negative shock, thereby increasing the variance of output. Similarly, a demand rule is potentially superior to a money-supply rule because it accommodates unexpected changes in the demand for money. The general case for a demand rule, thus, is that it minimizes the variance in output in response to unexpected changes in either supply or demand.

More recently, in the wake of the 2008-09 crisis and the rise of the Market Monetarist movement spearheaded by Bentley University professor Scott Sumner, the promise of targeting nominal national income has gained steam, being viewed in a favorable light or outright endorsed by Christina Romer (Berkeley and former Chairwoman of President Obama’s Council of Economic Advisers (CEA)), Paul Krugman (Princeton and NYT columnist), and Brad
DeLong (Berkeley). The latest addition to the list is Michael Woodford of Columbia University, regarded as the leading monetary economist.

In addition, the idea has been a frequent topic of discussion in the specialized media such as The Economist and Financial Times. Jan Hatzius, Chief U.S. Economist at major Wall Street brokerage Goldman Sachs, has also endorsed the nominal income (or NGDP) targeting proposal.

And, as 2012 drew to a close, the concept of a central bank targeting nominal GDP or national income growth was discussed in detail by Mark Carney, Governor of the Bank of Canada who in June 2013 will head the Bank of England.

That said, as a practical, cohesive set of very useful and timely ideas, Market Monetarism is the first economic school to be born out of the blogosphere, and interestingly so—for it could be argued that suffocating orthodoxy, institutional prerogative and politics cloud policy development in formal institutions, but not in the blogosphere.

The term “Market Monetarism” was coined by a Danish economist—Lars Christensen—in September 2011 and almost immediately seized by the fledging but rapidly growing Market Monetarism community. Such bloggers as the aforementioned Scott Sumner (U.S.), David Beckworth (U.S.), David Glasner (U.S.), Bonnie Carr (U.S.), Bill Woosley (U.S.), Nick Rowe (Canada), Kantoos (Germany), Britmouse (UK), Nicholas Goetzman (France), the aforementioned Christensen (Denmark) and Marcus Nunes (Brazil) have developed an online following impressive in its depth and influence. And also for the freewheeling and robust debates found on these blogs—hothouse discussions, fueled by appeal to Internet-available streams of economic data. The concept has also excited the minds of young scholars while still in the last year of high school, like Evan Soltas (U.S.) and Yichuan Wang (China/U.S.).

And what is this policy, dubbed Market Monetarism? Most basically, it is the announced, public, transparent and resolute targeting of nominal GDP—level targeting—by central banks, by all available means, including interest-rate adjustments, quantitative easing and the raising or lowering of interest paid by central banks to commercial banks on “excess” bank reserves.

As a practical matter, monetary policies would be sustained and even heightened until targets were hit—for example, in a flagging economy in which interest rates were already low; a central bank would sustain a program of quantitative easing and other stimulative policies until a stated level target for NGDP was obtained. Such a target would be public record.

It is advised by many Market Monetarists that a futures market for NGDP be set up, so that the central bank would offer to buy and sell NGDP futures contracts at a price that would change at the same rate as the NGDP target. Investors would initiate trades as long as they saw profit opportunities from NGDP being above (or below) the target. The money supply and interest rates would adjust to the point where markets expected NGDP to reach the target. These new-fashioned open market operations would automatically tighten or loosen the money supply and raise or lower interest rates.

In this circumstance, the central bank’s role would be somewhat passive, buying or selling the contracts, although active in the sense that a NGDP target would be defended.

Even sans futures markets, many Market Monetarists express a need for a rules-based monetary policy, in which interest rates, interest on excess reserves and level of quantitative easing adjust automatically to prevailing economic conditions and the publicly set target for
nominal GDP. In this regard, Market Monetarists are calling for an intelligent evolution of Stanford scholar John Taylor’s “Taylor Rule,” a rule that dictates the setting of the central bank’s policy interest rate—the Fed Funds (FF) rate in the U.S.—dependent upon inflation and real growth.

By virtue of Market Monetarism, and the transparent public targets of a central bank, every sensible business operator, banker and consumer would or should be aware that their nation’s central bank is determined to do all that’s required to achieve the NGDP target.

According to Christensen, This new school, which I refer to as Market Monetarism, was born out of the policy response to the crisis as well as in response to the analytical failure among mainstream economists, economic commentators and policy makers to grasp the causes of the crisis. Hence, in contrast to mainstream economic thinking, which sees the causes of the Great Recession as flowing from a banking and financial crisis, Market Monetarists think that the root of the crisis is in what Robert Hetzel—an economist with the Federal Reserve Bank of Richmond, and author of the superb book, The Great Recession: Market Failure or Policy Failure?—has termed the ‘monetary disorder’ view.

Christensen adds: An economic school’s name naturally should represent the key views of the school. The “Monetarist” part is obvious as there is a very significant overlap with traditional monetarism. The difference between Market Monetarism and traditional monetarism, however, is the rejection of money supply targeting and the assumption about the stability of velocity.

As stated, Market Monetarism (MM) is not new, but rather a practical and apolitical compilation of ideas and policies stretching back into the 1920s, and, of course, all the way to Adam Smith and David Hume for that matter (in relying on competition to hold rein on prices while providing a stabilizing monetary policy).

**Not Keynes vs. Hayek, But Cassel and Hawtrey**

We have mentioned the Swedish economist Cassel and the British monetary thinker Ralph Hawtrey and their writings and work during the interwar years leading up to the Great Depression—and we think a reappraisal of that great calamity, and some of the economic thinking of that time, is well-warranted.

There is a far richer economic debate and education to be had beyond John Maynard Keynes and Friedrich Hayek. Indeed, the monetarist perspectives of Cassel and Hawtrey anticipated the Great Depression and even our own Great Recession. Recognition of these two relatively unheralded economists and the potential their thinking has to improve present-day economic policies is long overdue.

On Cassel, the Dartmouth College economic historian Doug Irwin has this to say:

_The intellectual response to the Great Depression is often portrayed as a battle between the ideas of Friedrich Hayek and John Maynard Keynes. Yet both the Austrian and the Keynesian interpretations of the Depression were incomplete. Austrians could explain how a country might get into a depression (bust following an investment boom) but not how to get out of one (liquidation). Keynesians could explain how a country might get out of a depression (government spending on public works) but not how it got into one (animal spirits). By contrast, the monetary approach of economists such as Gustav Cassel has been ignored. As early as 1920, Cassel warned that mismanagement of the gold standard could lead to a severe depression._
Cassel not only explained how this could occur, but his explanation anticipates the way that scholars today describe how the Great Depression actually occurred. Unlike Keynes or Hayek, Cassel explained both how a country could get into a depression (deflation due to tight monetary policies) and how it could get out of one (monetary expansion).

And according to David Glasner, an economist with the U.S. Federal Trade Commission, blogger, and author of the book *Free Banking and Monetary Reform*,

Both Hawtrey and Cassel understood that restoring the gold standard after the demonetization of gold that took place during World War I would have hugely deflationary implications if, when the gold standard was reinstated, the world’s monetary demand for gold would increase back to the pre-World War I level (as a result of restoring gold coinage and the replenishment of the gold reserves held in central bank coffers). That is why both Hawtrey and Cassel called for measures to limit the world’s monetary demand for gold (measures agreed upon in the international monetary conference in Genoa in 1922 of which Hawtrey was the guiding spirit). The measures agreed upon at the Genoa Conference prevented the monetary demand for gold from increasing faster than the stock of gold was increasing so that the world price level in terms of gold was roughly stable from about 1922 through 1928. But in 1928, French demand for gold started to increase rapidly just as the Federal Reserve began tightening monetary policy in a tragically misguided effort to squelch a supposed stock-price bubble on Wall Street, causing an inflow of gold into the US while the French embarked on a frenzied drive to add to their gold holdings, and other countries rejoining the gold standard were increasing their gold holdings as well, though with a less fanatical determination than the French. The Great Depression was therefore entirely the product of monetary causes, a worldwide increase in gold demand causing its value to increase, an increase manifesting itself, under the gold standard, in deflation.

Beyond that, the Hawtrey-Cassel insights explain the relative severity of the Great Depression and the sequence of recovery in different countries, there being an almost exact correlation between the severity of the Great Depression in a country and the existence and duration of the gold standard in the country. In no country did recovery start until after the gold standard was abandoned, and in no country was there a substantial lag between leaving the gold standard and the start of the recovery.

So not only did Hawtrey and Cassel predict the Great Depression, specifying in advance the conditions that would, and did, bring it about, they identified the unerring prescription—something provided by no other explanation—for a country to start recovering from the Great Depression.

The much-touted Hayek, on the other hand (along with von Mises), advocated precisely the wrong policy, namely, tightening money, in effect increasing the monetary demand for gold. Hayek also welcomed deflation as the necessary price for maintaining the gold standard. In a modern economy, the ravages of deflation, on lenders and real estate, appear nearly lethal to an economy. The experience of Japan with deflation and related subnormal growth should be lesson enough for anybody.

It is worth noting that Hayek at one point in his career recommended a Nominal GDP Target, much as Market Monetarists do today. Glasner continues:

*This by the way is what explains the puzzle (raised by Larry White in his paper Did Hayek and Robbins Deepen the Great Depression?) of Hayek’s failure to follow his own criterion for a neutral monetary policy, stated explicitly in chapter 4 of Prices and Production: stabilization of nominal expenditure (NGDP). However, a policy of stabilizing nominal*
expenditure was inconsistent with staying on the gold standard when the value of gold was rising by 5% to 10% a year. Faced with a conflict between maintaining the gold standard and following his own criterion for neutral money, Hayek, along with his friend and colleague Lionel Robbins in his patently Austrian book The Great Depression, opted for maintaining the gold standard.

It would not be the first time the yellow metal colored otherwise good judgment.

We think it is worth mentioning two other “predecessors” to MM thinking. One is Clark Warburton (frequently mentioned by Friedman) who in the closing of the first essay (Monetary Disequilibrium Hypothesis, page 35) in “Depression, Inflation, and Monetary Policy”—Selected Papers, 1945 -1953, wrote:

In conclusion, a brief comment may be made regarding the apparent effects of shocks to the economy other than those originating in the monetary system. Such shocks must be very severe to produce effects of sufficient magnitude to enter into the record of “business cycles.” Perhaps the greatest of such shocks which have impinged upon the economy in recent decades have been transitions from peace to war and from war to peacetime activities. Whenever these transitions have been made without an accompanying monetary disturbance, their effects have escaped observation in business cycles, or have been registered only as extremely moderate fluctuations…

Another predecessor is Leland Yeager. His book, Essays on Monetary Disequilibrium, is full of gems. The first essay—A Cash-Balance Interpretation of Depression—is a must read. Yeager starts off: The usual account of inflation or depression stresses too much or too little demand for goods and services. It is enlightening to reverse this emphasis by focusing on the demand for and supply of money. The present paper views depression as an excess demand for money, in the sense that people want to hold more money than exists. It views an inflationary boom as an excess supply of money in the sense that more money exists than people want to hold.

This Book

This book attempts to analyze the post-1960 macroeconomic history of the United States and, to a lesser extent, recent macroeconomic history in other developed nations through the lens of Market Monetarism.

The story starts in 1961, just as “Camelot” (as the John F. Kennedy Presidency of 1000 days became known) came into being, and the “Golden Age” of the 1960s unfolded. It was also, according to Walter Heller (Chairman of the President’s Council of Economic Advisors from 1961 to 1964), the “Age of the Economist.”

In his book New Dimensions of Political Economy, Heller recounts:

President Johnson underscored his esteem of economists at the swearing-in of James Duesenberry as new CEA member in early 1966. He predicted that the new Council member would “write a record here, as his colleagues... have written, that will excite the admiration of not only all their fellow Americans, but will excite the admiration of leaders in other governments throughout the world who frequently comment to me about the wisdom, the foresight, the stability of the United States of America and its policies”.

In short, the conviction of the economists at the CEA and of many professors at prestigious universities (including future Nobel recipients Paul Samuelson and Robert Solow), was that Business Cycles are not inevitable and that government policy could and should keep
the economy close to a path of steady real growth at a constant target rate of unemployment (James Tobin, another future Nobel recipient and CEA member 1961-62).

According to them, “cyclical mentality” was a major barrier to full employment, and to counter it the Kennedy Council introduced the concept of “potential” real GDP (GNP at the time), estimated at a constant rate of utilization of resources, taken to be 4% unemployment.


From Golden Years to Great Inflation, to Volcker, to Greenspan

As this book will outline, the Golden Age—Age of the Economist set the stage for the “Great Inflation” of the 1970s.

During the inflation of the 1970s, monetary policy was viewed by Arthur Burns, then Chairman of the Federal Reserve as “inoperative” against the entrenched market power of large price-setters, such as OPEC, unions and gigantic manufacturers, who together created “cost-push” inflation. Tight money would not reduce inflation much, but would reduce real output.

With Federal Reserve Board Chairman Paul Volcker (1979 - 1987), the consensus view on monetary policy radically changed. Volcker proved (and the Bank of Japan would confirm in just a few years hence) that inflation could be brought down through monetary policy, indeed decisively and quickly. Inflation targeting gained center stage, and became all but sacrosanct in the central banks of developed nations.

With the inimitable Alan Greenspan (Federal Reserve Board Chairman 1987 - 2006) we arrive at the “Great Moderation,” a desirable era of low or moderate inflation and stable economic growth. In an era of higher interest rates than today, what was often and essentially nominal GDP level targeting could masquerade as inflation-targeting or a mix between growth-and inflation-targeting.

In fact, the perception of a “Great Moderation” only came alive in the late 1990s. With aplomb, GOP solon John Taylor published The Long Boom in the St. Louis Fed Economic Review in 1998, and asserted that the steady growth and low inflation observed since the mid-1980s was mostly due to the Fed applying the “Taylor Rule”—his rule, in which inflation and economic growth largely determine the setting of interest rates. It was a rules-based central bank policy (although it failed to anticipate the pending zero bound that Western economies would soon begin to breach).

Later, others came around to the recognition of the role played by monetary policy in the Great Moderation, but mostly it was either due to “luck” (small shocks) or technological improvements in inventory control.

There was steady resistance to crediting monetary policy, let alone something as unknown as nominal GDP level targeting.

For example, writing on Monetary Policy in the 1990s for the National Bureau of Economic Research, Greg Mankiw (2001) says:

*This paper discusses the conduct and performance of U.S. monetary policy during the 1990s, comparing it to policy during the previous several decades. It reaches four broad conclusions. First, the macroeconomic performance of the 1990s was exceptional, especially if*
judged by the volatility of growth, unemployment, and inflation. Second, much of the good performance was due to good luck arising from the supply-side of the economy: Food and energy prices were well behaved, and productivity growth experienced an unexpected acceleration. Third, monetary policymakers deserve some of the credit by making interest rates more responsive to inflation than was the case in previous periods (emphasis ours).

Ben Bernanke

The Bernanke story starts in January 2000, well before he became a Fed Governor, when he co-authored a piece in The Wall Street Journal entitled, What Happens When Greenspan is Gone? (Almost as if he knew he would become Fed chairman six years later). That op-ed also marks the beginning the semi-official “inflation-targeting obsession,” which would prove, like all obsessions, extremely dangerous and a proximate cause of the 2008 Great Recession.

Interestingly, some point to the “deflation obsession” (a subset of the inflation-targeting obsession) of 2001-03, which led to interest rates remaining low for an extended period, as an important cause of the crisis. They posit low interest rates led to a housing price bubble, and the subsequent burst drained global investors and banks of capital.

Under Bernanke, monetary policy once more became synonymous with interest rates and the stance of monetary policy closely associated with the level of the policy rate, known as the “Fed Funds rate.”

With Bernanke setting the Fed policy rate at close to zero at the end of 2008, the consensus view—at least the expressed by many economists, both left- and right-wing—became that monetary policy was both “easy” and “out of ammo.”

Keynesians seized on the moment to call on the federal government to turn to fiscal policy to dampen the recession, while right-wing economists (perhaps subscribing to GOP orthodoxy, or perhaps wanting President Barack Obama to lose), did not call for an aggressive expansionary monetary policy, or even called for tightening.

Thus, in the view of Market Monetarists, one of the great opportunities to prove the effectiveness of monetary policy, even to the exclusion of a stimulative fiscal policy, was lost. Of course, millions of jobs and billions, if not trillions of dollars of business profits were lost too.

Market Monetarists maintain that the so-called zero lower bound (ZLB, when interest rates hit zero and thus cannot go lower) is not a hindrance, given that central banks can still engage in Quantitative Easing (QE). Unfortunately, Bernanke and the Federal Reserve made poor use of the policy tool—announcing in advance the size and duration of QE, but not a level target for NGDP, and that target accomplished by an aggressive and open-ended QE assault.

Thus, the real stimulative effect was limited, and the perceived stimulative effect was likewise limited. Indeed, the market may have perceived Bernanke was more afraid of inflation than he was enamored of growth, and adjusted accordingly.

Complementarily, the setting of an alternative target for monetary policy—an NGDP Level Target—is seen by Market Monetarists as much more effective in satisfying the Federal Reserve’s dual mandate of low inflation and maximum employment.

This book will cover these stories and a few more squarely within a Market Monetarist framework, which we believe provides the best unified explanation of the events. In addition,
this book will show that international events - the recent Eurozone calamity, the sad example of Japan’s lost decades, the contrast between Australia and New Zealand and the differential behavior of countries such as Sweden - can also be analyzed and understood within the Market Monetarist (MM) framework.

**Market Monetarism**

The chart below summarizes the US story from a MM perspective.

The Basic Chart – Nominal Spending Growth—links the different parts of our story.

![Chart 0.1 Aggregate Demand Growth](chart.png)

**Chapter Summaries**

1. **It’s all in the framing—contrasting inflation targeting and NGDP level targeting.** where we write-up a nontechnical review to provide readers with a better understanding of the main market monetarist proposition: NGDP level targeting

2. **Camelot and the origins of the ‘Great Inflation.’** It is the Age of the Economist; Keynes moves to America and takes up residence at President Kennedy’s Council of Economic Advisors (CEA). The Great Depression is not to be forgotten, so low unemployment is the “policy target.” New concepts enter the economic lexicon. The most important being the concept of “potential output.” The CEA indicates that 4% unemployment is consistent with output being at potential. Fiscal policy is viewed as the major stabilization tool while monetary policy plays a “supporting” role, seeing to it that interest rates remain low. The experiment stokes inflation leading to...

3. **The ‘Great Inflation’*. A period when monetary policy is viewed as “powerless” to control inflation, which is the result of market power of oligopolies, huge national manufacturers and retailers, labor unions and sovereign oil nations. In other words, inflation is a real, or cost-push, phenomenon. To deal with it there is need for “incomes policy” and even President Nixon’s “price controls.” Monetary policy is geared to neutralize the employment effects of the real shocks. Friedman’s 1968 prediction that an expansionary monetary policy, over time, would not reduce unemployment but only increase inflation is borne out. “Stagflation” characterizes the 1970s leading to...

4. **The ‘Volcker Transition,’** in which the effectiveness of monetary policy in controlling inflation is rediscovered, giving rise to...
5. **The ‘Great Moderation,’** in which low inflation quickly becomes a worldwide phenomenon and this is credited to the “inflation targeting” strategy adopted either explicitly or implicitly by a large number of major, national central banks.

Market Monetarists have an alternative story that is consistent with the simultaneous attainment of price and output stability, hallmark of the Great Moderation. This story appeals to the fact that over this period aggregate nominal spending (NGDP) evolved along a stable growth level path. The Great Moderation extends from 1987 to 2007. Both Volcker and Greenspan were mindful of stabilizing expectations as the way to obtain price, or more generally, nominal stability. The point is that neither Volcker nor Greenspan articulated their “monetary policy rule.” Bernanke thought that those rules could be conveyed by an explicit inflation target, but as it turned out, that’s very different from “nominal stability” and ended up leading to...

6. **The ‘Great Recession’ (or ‘Bernanke’s Lesser Depression’): Why did it happen?** In which nominal national spending (or NGDP) takes a tumble for the first time since 1938. The “excuse factory” works overtime. Keynesianism takes a new lease on life and so does “old monetarism”. Austrians of all stripes vie for attention and so do fringe groups like Modern Monetary Theorists. This is the blogosphere age, and views are peddled in real time and nonstop. But in this new rough-and-tumble the strongest ideas can flourish, and the unified approach of Market Monetarists gains rapidly mounting recognition. Market Monetarists analyze the economy through the lens of nominal spending (NGDP), a quantity over which a country’s central bank has better control than many other variables. In that vein, Market Monetarists assign major responsibility for the Great Recession to monetary policy, both for the depth and breadth of the fall and for the sluggishness of the recovery.

7. **The international experience** is viewed through the prism of Market Monetarism. The Japanese Saga is up first and stands as the clearest example of the bad consequences of erroneous monetary policy. But there are positive examples such as Australia and Sweden.

8. **Where we take risks in our concluding comments**

Chart 0.2 on the next page depicts three moments in the modern history of the US economy. The 1960’s where monetary policy led the economy to the “Great Inflation” by allowing nominal spending to get “out of bounds”; the first stage of the “Great Moderation” where nominal stability is almost “perfect”, and the second stage of the “Great Moderation” which morphs into the “Great Recession” when the Fed loses control of nominal spending and allows it to crash.
Chapter 1: It’s All in the Framing

“Usually problems are hard not because our technique is deficient but because our understanding is deficient”. Fisher Black

The framing we carry in our minds is the framing we’ve been conditioned to accept.

In all GDP data releases, for example, the analysis by the media, academics and professional economists is framed in terms of the components of GDP, i.e. in terms of Consumption (C), Investment (I) and Net Exports (NX) which is calculated as Exports (X) minus Imports (M). There is another component that makes up GDP, Government Spending (G), but that’s under the purview of the “political process”.

Pundits and academics show interest in the contribution of the individual components to the final result, so analysts often try to estimate the effects of particular policy actions on the different components to get a feeling for how the aggregate result will be affected.

The GDP identity is written as:

$$GDP = C + I + G + (X - M)$$

Thinking in terms of the GDP components can produce interesting conjectures. One of the most perplexing is the following, frequently found after the data release:

“If imports (M) had not increased so much, GDP growth would have been even higher.”

That is because since M, which is spending by domestic residents on foreign goods, therefore something that increases the GDP (or income) of foreign countries, is preceded by a negative sign it is supposed to decrease our own income. But when you pressure an analyst to explain why imports grew so much, the retort is that imports rose because GDP grew robustly!

Obviously, pondering whether a rise in imports shrinks GDP is troublesome. In the limit, every country would want only to export (sell) and no country would want to import (buy), an impossibility. It also suggests economic nirvana could be had by exporting all goods and services produced, and living like Spartans while other nations enjoy the benefits and comforts of domestic production.

Many years ago one of the authors wrote an op-ed on that exact topic, arguing that it was not very useful to analyze the GDP numbers in the traditional terms. What matters for macro analysis is the aggregate, so trying to do a “components analysis” is sort of doing a “micro analysis of macro”.

That’s the reason why, having read one of the very first posts Scott Sumner, Bentley University, wrote when he started blogging in February 2009, we immediately became Market Monetarists (in those days—before Lars Christensen came up with the MM moniker in September 2011—we endured the term “quasi monetarist”). The Sumner blog post title was inspired: “C+I+G+NX=Gross Deceptive Partitioning”.

Sumner writes:

When I discuss the effect of monetary stimulus on aggregate demand with other economists, I notice that they often want an explanation couched in terms of the major components of GDP. I find this very frustrating, as this approach does more to conceal than illuminate. Suppose you were policy czar in a liquidity trap (such as right now), and you were
asked to increase nominal GDP by 3-fold (i.e. 200%) in the next five years. If you were given a choice of only one tool, which would it be—monetary or fiscal policy? Any economist with an ounce of common sense would take monetary policy. OK, so how would you explain its effect in terms of the 4 components of GDP?

One might object that this isn’t a fair question, such a rapid increase in GDP can only occur through inflation, and in that case the classical model applies—money (and velocity) determines the price level in the long run. OK, so let’s go as far from the classical model as possible. You are at the lowest level of output (relative to trend) in American history, i.e. March 1933. What policy tool do you choose? FDR used both monetary and fiscal policy, although initially it was monetary policy that had the greatest effect.

So let’s look at FDR’s most effective stimulus—dollar devaluation. How does one explain its effect using the famous four components of GDP? One might have expected a sharp increase in the NX component, as a lower dollar boosted exports and discouraged imports. Output did soar after the dollar was devalued, but it wasn’t because of a rise in NX, rather it was despite a sharp fall in NX. Imports rose much faster than exports, as the “income effect” outweighed the “terms of trade effect.”

...Now let’s look at another well-identified shock, the biggest year-over-year fall in the monetary base in modern American history, 1920-21. The sharp fall in the base caused the sharpest 12-month deflation in modern American history between 1920 and 1921. And it also caused the sharpest one-year increase in real wages in modern American history. And real output plummeted. What does the C+I+G+NX approach add to this story? Nothing. Of course investment usually falls more sharply than consumption in a depression, but that would be true almost regardless of what caused the depression.

Between October 1929 and October 1930 the same thing happened again, to a lesser extent. The monetary base fell significantly, the price level fell, and real wages rose sharply. Higher real wages made it less profitable to produce all sorts of goods—both consumption goods and investment goods. Economists often flounder around seeking the mysterious cause of the drop in AD after late 1929. Did consumers suddenly stop spending? Or did a change in animal spirits hold back investment? The answer is much simpler, as with any decline in nominal spending either the monetary base declined, base velocity declined, or both. In 1930 it was both. The various components of GDP will respond in different ways to the lower nominal spending under different conditions, but they don’t add any explanatory value.

Macroeconomics should be about aggregates, not components of spending. Yes, changes occurring in the various components of GDP can impact interest rates, and thus velocity. And if monetary policy is inept (i.e. doesn’t offset changes in velocity) that can impact nominal spending, but it certainly isn’t the most illuminating way of looking at the issue. It’s like trying to explain changes in the overall price level by modeling changes in the nominal price of each good—theoretically possible, but a waste of time.

That Sumner post was an eye-opener, intuitive and simple—as in elegantly simple, which is often the shape of inquiry when it reaches the right vantage point or answer.

This is a good point to introduce charts. We firmly believe in the power of charts, in particular their power to enable the visualization of models.

Let’s first write our model. Instead of saying that Nominal GDP (NGDP) or total spending is the sum of C, I, G & NX, we write it as:

\[ M \ast V = P \ast Y \]
Where \( M \) is the money stock, \( V \) is its velocity of circulation (think of it as the number of times a dollar bill changes hands. Intuitively we can interpret it as the inverse of the demand to hold money because if velocity falls this means people are holding on to their money, i.e. not spending it). \( P \) is the price level (an index of all prices in the economy) and \( Y \) is real GDP or income or output. It is a quantity index of all the final goods & services produced by domestic residents. Therefore, when we multiply that quantity by the price level we get nominal spending in the economy. Note that the components of GDP are absent, they are in the “background,” so to speak. In other words, we are interested in what happens to the whole aggregate.

The formula says that the quantity of money multiplied by its velocity of circulation is equal to total spending in the economy, where we may call total spending Aggregate Demand (AD). If we think of the formula in terms of growth rates, we can write, where small letters stand for the rate of growth in the capital letter:

\[
m+v=p+y
\]

This says that the change in AD \((p+y)\) is equal to the change in the money stock plus the change in velocity. Think of it this way: If the Fed increases the quantity of money and velocity (money demand) doesn’t change \((v=0)\), people don’t want to hold that extra quantity of money, so they’ll go out and spend it. This increase in spending will either increase real output \((y)\) or inflation \((p)\) or a bit of both.

So let’s look at the 1921-22 period in the quote from Sumner. Chart 1.1 show what happened to the quantity of money, velocity (remember that if it falls it means money demand went up), prices and real output (and also AD which is the sum of changes in prices and in real output).

“What does the C+I+NX approach add to this story? Nothing.”

The story repeated itself more durably and painfully in the early 1930s.
Chart 1.2 is the same chart for the latter period. “What was the mysterious cause of the drop in AD from late 1929?” The simple answer:

*as with any decline in nominal spending either the monetary base declined, base velocity declined, or both. In (1920 and) 1930 it was both.*

Now, let us look at the FDR engineered recovery that took place in 1933 – 36. How did money, velocity, prices, real output and AD behave? With the money stock rising and velocity rising (money demand falling), there’s only one way AD can move, and that’s up! Chart 1.3 shows that both prices and real output increased from the depressed levels attained.

The BIG question is: Why did it take so long (and the interference of a new President in monetary affairs, overriding the “conventional wisdom”) for the correct policy to be implemented?
Fast forward to late 2012: Why has Federal Reserve Board Chairman Ben Bernanke moved glacially, even timidly, to expansionary monetary policies he bear-hugged before becoming Chairman? What’s constraining him? That’s a part of the story we’ll be telling in this book.

Chart 1.4 helps visualize why Market Monetarists favor a monetary policy that strives to keep nominal spending growing at a stable rate along a defined level path. It vividly demonstrates what happens when you let nominal spending crash!

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Chart 1.4  
NGDP & Trend - 1923 - 36

Note in Chart 1.5 how the same thing happened in 2008, only at a much smaller scale. That’s why we didn’t call it the “Second Great Depression,” being content with naming it the “Great Recession.” But note that four years after the drop there’s no movement of spending back towards the trend level that prevailed before.

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Chart 1.5  
NGDP & Trend - 2001 - 12

And see how that closely matches with what happens to employment which, like spending, remains far below a “normal” level.
Basic Principles of Modern Monetary Policy

As practiced currently (late 2012), major central banks do not target NGDP, as favored by Market Monetarists. For more than two decades (at least), monetary policy is perceived as being conducted through the manipulation of interest rates, in particular the Federal Funds (FF) rate, which is the rate the Fed targets and which determines the rate banks pay for loaning money to each other.

The modern day monetary theory “Bible” is the textbook by Michael Woodford, *Interest & Prices*. Note the absence of the word money!

It is thought that by controlling a short-term overnight rate, the central bank can influence the whole structure of interest rates. In addition, the interest rate that affects spending is the real interest rate. That rate is defined as the nominal interest rate minus the expected rate of inflation. To grasp the idea, imagine you’re taking a loan at a bank (or from a friend). You borrow $100 and agree to pay back after twelve months the sum of $105. The (nominal) interest rate you are paying is 5%. But what is the underlying interest rate?

If at the time you take out the loan your own expectation of inflation—how much, in percentage terms—prices are going to rise over the next twelve months is 2%, the real rate you expect to pay is 3%. That is to say, 5% minus 2%, equals 3%.

If your expectation was wrong and inflation for those twelve months is only 1%, your loan was more expensive than you imagined (you will have to give up more resources to pay the loan back). If inflation comes in at 3%, the real rate is lower and your loan was cheaper than you imagined when you took it (you will have to give up fewer resources than you imagined to pay it back). In the case there was a large miscalculation on your part (and on the part of the party that extended the loan to you) and inflation comes in at 8%, the real rate you pay is negative (-3%)! That means you got a “freebie,” in the sense that you pay back less (in terms of purchasing power, or in terms of the amount of resources you have to give up) than what you received 12 months before.

Say, for the sake of argument that you really expected that inflation would be higher than what the market was expecting. Maybe you had developed a better forecasting model for inflation over a twelve month horizon. In that case you would probably have taken out the largest loan you possibly could (leveraged yourself “up to the hilt”). With that money you could have bought some asset whose price reacts quickly to inflation, so that when the time came to pay back the loan you would be able to do it by selling the asset and in addition...
pocket a tidy profit (the difference between what you gained from holding the asset and the contractually fixed amount of the loan).

**The Modern Monetary Policy Model: Inflation Targeting**

Chart 1.7 below provides the essential elements for understanding the way monetary policy, as practiced, works.

As is custom, the components of Real Output (or Income) are important in the set-up. The first line in the chart describes how each component (C, I and NX) reacts to the real rate of interest. Government spending (G) is not included because it depends not on real interest rates but on a legislative, or political, outcome.

All the components are negatively related to the real interest rate.

We will explain: Take aggregate consumption (C). When the real interest rate goes up, this means that if you reduce consumption today by saving more, you will be able to consume more tomorrow. In other words, the “price” of consumption tomorrow — what you give up in today’s consumption has fallen or, alternatively, the “price” of present consumption has risen. Since usually people substitute away from those “goods” whose prices have risen, it’s not farfetched to suppose that aggregate consumption falls when real interest rates go up.

For investment the intuition is simpler. Say firms rank investment projects according to their expected returns. Since the opportunity cost (what it has to give up to make the investment) is the real rate of interest, the higher that rate is the fewer projects are going to be undertaken. Therefore, higher real rates of interest decrease investment.

But why should higher real interest rates decrease net exports (NX)? Think about it this way: When the domestic interest rate goes up, the country in question becomes an attractive destination for “capital in search of yield”. When foreign capital comes into a nation, it has to be converted into that nation’s domestic currency (dollars, in the case of the United States). This increases the demand for domestic currency (dollars), driving up its value in the foreign exchange market. That has two implications. One is that the country’s exports become more expensive (foreign buyers will have to pay more in their currency to purchase one unit of the country’s currency) and second, the country will tend to import more because foreign goods have become cheaper (require less money to be paid to acquire one unit of foreign currency). Both implications work to reduce net exports, reducing domestic aggregate demand.
The second line in the chart describes the monetary policy rule. It says that when inflation rises nominal interest rates have to go up by more than the rise in inflation in order to increase real interest rates. That’s required in order to reduce aggregate demand through decreases in C, I and NX.

That becomes clear after reading the third line which combines the relation between the real interest rate and real output and the monetary policy rule, resulting in the aggregate demand (AD) curve, which depicts a negative relation between inflation and real output. The intuition is clear. A rise in inflation requires a rise in the real rate of interest which reduces each component of output and, therefore, aggregate demand.

The world’s major central banks adopted monetary policies conducted according to inflation-sensitive rules roughly in the early 1980s in response to soaring inflation of the 1970s, which reached into double digits in the United States and topped a 20 percent annual rate in Japan. Targeting low rates of inflation became a global norm.

The rules are known as Taylor-type rules, only differing in their details. All satisfy the condition specified in the description given in the chart above: the central bank increases its target policy rate (the FF rate in the US) by more than the increase in inflation.

In 2001 Gregory Mankiw wrote the chapter on Monetary Policy in the 1990s for a National Bureau of Economic Research panel. Mankiw argued that during the 1990s—characterized by reduced volatilities in both real output growth and inflation, or the Great Moderation—monetary policy had become more effective due thanks to increased sensitivity and reaction to inflation rates.

Mankiw puts up a Taylor-type rule which he estimated for the 1990s, the “good monetary policy” period. Mankiw has the Fed reacting to the rate of inflation and unemployment, without any concern for the “output gap” or the “natural real interest rate.” Mankiw thus deals with observable variables available in something approaching real time (although subject to revisions) and on a monthly instead of quarterly frequency.
To see if and how monetary policy in the 1990s was different from other periods or decades, Mankiw calculates the FF Target rate based on his “rule” and compares those rates to the actual FF rate.

Chart 1.8 shows how the “rule” rate and actual rate compare over the 1958-2008 period (before the FF rate was lowered to “zero”). The chart also shows the behavior of inflation (PCE-Core) over the same time span.

The result is qualitatively the same as that obtained from the application of the “popular” Taylor-rule. In the 1990s inflation came down and remained low and stable because the Fed set the FF rate according to the rule. Note that in the late 1950s and first half of the 1960s, the result is the same: inflation remains low and stable because the FF rate also followed the rule closely.

During the second half of the 60s and throughout the 70s, the rule rate is consistently above the actual FF rate. The result: money growth is excessive and, as expected, the outcome is high and generally rising inflation.

The period from 2001 to 2005 is contentious. The FF rate remains consistently below the rule-rate, and many have branded the Fed as “too easy” in this four year stretch, thus setting up “bubbles.” Nevertheless, inflation remained low and stable. Why didn’t inflation blow up in the 2001-5 period, if the Fed’s monetary policy was too expansionary? The Taylor-type rules stopped working.
And looking at the more recent period, the actual FF rate remains below the rule rate all the way through the Great Recession. Should rates have been even higher? That seems unlikely.

**The Market Monetarist Perspective: NGDP Targeting**

Though the Taylor Rule and Taylor-type rules were admirable advances in practical applied monetary policy, we believe market Monetarism offers better explanations of economic outcomes due to monetary policy and thus better guidance for present and future monetary policy.

Market monetarists fixate not on interest rates, but on nominal Gross Domestic Product (NGDP) to gauge the stance of monetary policy, and obtain more-consistent and compelling explanations.

Chart 1.9 shows NGDP and trend for 1954 to 1969. Observe that inflation takes off after nominal spending rises above trend. That is consistent with the information from chart 1.8 comparing the FF rate with the rule rate.

Into the 1970s, according to Chart 1.10, nominal spending shows a rising and volatile trend, clearly inconsistent with low and stable inflation but quite consistent with the observation of high, rising and volatile inflation.
Chart 1.11 shows that during the Great Moderation, NGDP remained close to its trend level. As in the 1950s and early 1960s, inflation was low and stable. In 2008 NGDP tumbles below trend, the opposite move from what happened in the second half of the 60s when NGDP rose above trend.

In the chart we can see that NGDP goes initially above trend in the late 90s and then drops below trend in the first years of the 2000s. Chart 1.12 below gives a clearer picture, showing the NGDP “gap” (the difference between actual spending and the trend level).

The late 1990s were trying times for monetary policymakers. In the second half of the decade productivity growth accelerated. That has the effect of bringing down both inflation and unemployment. That’s an unusual combination for all those versed on Phillips Curve (that is, relatively speaking, higher unemployment results in lower inflation, and vice-versa), and for anybody trying their hand at economic policy in the United States in the postwar period.

No wonder economists such as Paul Krugman and Steven Roach (at the time Morgan Stanley’s chief-economist) were clamoring in 1997 and 1998 that the Fed was behind the curve. Furthermore, there were the shocks from the Asia Crisis in 1997-8, the Russia Crisis and Long Term Capital Management (a highly leveraged hedge fund) meltdown in 1998, the Y2K scare, the 9/11 terrorist attack, several major corporate meltdowns (Enron et al) in 2001, not to mention wars in Afghanistan and Iraq.
Initially, Fed Chief Alan Greenspan (1987-2006) kept a steady course, but eventually he relented and interest rates went first down and then up. The result was NGDP instability.

By Market Monetarist principles, when NGDP dropped below trend by the end of 2001 it signaled that monetary policy had tightened excessively, so that bringing the FF rate down and keeping it down was the correct policy.

And the FF rate stayed down until NGDP started recovering towards trend. But as seen in chart 1.8 comparing the FF rate with Taylor-type rules, rates were “too low”—that is, by strict adherence to Taylor-type rules, the Fed should have been tighter.

We have more confidence in the NGDP indicator for the stance of policy. As Milton Friedman said long ago, the level of the policy rate is a bad indicator of the stance of monetary policy.

The obvious yet challenging question about this time frame is this: Why, with spending crashing, didn’t inflation fall and even turn into deflation?

After all, didn’t inflation go up and keep climbing after spending rose above trend in the 1960s? Didn’t inflation soar in the 1970s, when nominal spending rose above trend?

And didn’t deflation set in after the spending crashes of 1920 and 1930?

The difference is that this time around the Fed is a credible inflation - and deflation - fighter. In 2002 Bernanke, as Fed Governor, gave the famous Deflation, Making Sure “It” Doesn’t Happen Here speech, while the Fed had already 20 years of successful inflation-fighting under its belt.

A better understanding of the implications of stabilizing spending along a level path is provided by Charts 1.13 below.

Panel A shows NGDP growth and volatility during selected periods. The “Great Moderation” witnessed a marked spending stabilization. It’s clear that Bernanke lost that difficult “conquest”.
Panel B shows inflation and its volatility over the same periods. Although spending stability was lost, the same cannot be said for inflation.

Panel C shows that real growth stability was also forsaken more recently.
What this implies is that nominal spending stability is a necessary condition for real growth stability, but inflation stability can be obtained without nominal spending stability, as long as spending is below an adequate trend level, and remains depressed.

In the 1960s, the obsession with unemployment led to the Great Inflation. Now, the obsession with inflation has given us the Great Recession, which may also be entitled “Bernanke’s Lesser Depression.”

To bring inflation down, Volcker had to constrain nominal spending growth. Conversely, to bring unemployment down, Bernanke has to increase spending growth.

The key position of the Market Monetarists is that unemployment can be brought down—that is employment growth stimulated—with little or no inflation collateral effects if a level target is specified for nominal spending.

As Bill Woolsey, another star in the Market Monetarist movement, argues in a blog post:

“that the Fed generally kept nominal GDP close to a trend growth path in the Great Moderation, doesn’t necessarily mean that the performance of interest rates or the quantity of money were the same as they would have been if the Fed had clearly articulated that goal. Leaving aside the desirability of keeping nominal GDP on trend during the dot-com boom, after nominal GDP fell below that trend, a clear commitment to return nominal GDP to trend could not only have resulted in a more rapid recovery in spending and output, but also resulted in a decrease in short term interest rates that was smaller and of shorter duration. In other words, inflation-targeting using an interest rate target is a really bad idea”.

And this one from Nick Rowe, a Carleton University professor and also in the Market Monetarism camp, commenting on Columbia University economist Michael Woodford’s much-discussed “Jackson Hole” presentation in August 2012, at a conference-retreat of the Federal
Reserve Board (Woodford is considered by many as one of the world’s foremost monetary economists):

We think of monetary policy as a conditional path for a nominal interest rate. “Setting an interest rate is what central banks really do.” That way of thinking about monetary policy is what creates the problem. That strategy space fails when the nominal interest rate hits the Zero Lower Bound. Michael Woodford’s text reinforced that way of thinking about monetary policy. It helped to define that failed strategy space. His Jackson Hole paper re-endorse that failed strategy space.

We agree—and this is the role and challenge for Market Monetarists: to open up and revamp current thinking on conventional and unconventional monetary policies, and to convince academia, punditry and policymakers that close attention to nominal GDP is preferable to inflation-targeting. We will examine the effects and shortcoming in coming chapters of this book.
Appendix: Professor John Taylor defends a troublesome Target

Writing for Bloomberg in September 2011, John Taylor goes all in for the Fed concentrating exclusively on “price stability” (meaning 2% inflation target):

...By contrast, for most of the 1980s and 1990s — starting when Paul Volcker became chairman — the Fed stressed the goal of price stability in its actions. The result was much lower unemployment than before or since.

The dual mandate language is based on an outmoded concept of a tradeoff between inflation and unemployment. Moreover, too many goals blur responsibility and accountability. The dual goal enables politicians to lean on the Fed, and people often cite it as an excuse for unconventional policies.

Indeed, one of the reasons for the growing interest in removing the dual mandate is the extraordinary discretionary actions the Fed has taken in the past few years — including large-scale purchases of mortgage-backed securities and longer-term Treasuries, a strategy commonly called “quantitative easing.”

The Fed has explicitly used the dual mandate to justify these unusual interventions. During the 1980s and 1990s, Fed officials rarely referred to the dual mandate (even in the early 1980s, with unemployment rates as high as today). When they did so, it was to make the point that achieving price stability was the surest way for monetary policy to keep unemployment down.

In his Monetary Policy and the Long Boom published in the St Louis Fed Economic Review in 1998, Taylor was one of the first to “identify” what came to be known as the “Great Moderation”. The main reason according to him: More aggressive response of the FF rate to changes in inflation. And he shows the following figure (which has become a staple in textbooks) that reflects the “Taylor Principle”:

![Chart 1.14 A Change in Monetary Policy](image)

The response of the federal funds rate to changes in inflation is more aggressive (solid line) in The Long Boom than in the prior 15 years (dotted line). The dashed line has a slope of 1 and represents a constant real interest rate.
When the members of the FOMC make decisions about the interest rate—whether back in the 1970s or today—they look at a number of factors, including the inflation rate and real GDP.

Is it possible to see a change in this decision-making process that could explain The Long Boom? Has anything important changed about monetary policy? To explore these questions, consider a numerical example that illustrates how the FOMC might respond to a change in the economy, such as an increase in the inflation rate. First, imagine that the FOMC gets reports that the inflation rate is 1 percentage point higher. Let us suppose that in this circumstance the FOMC decides to raise the federal funds rate by .75 percentage points. The inflation rate is up by 1 percentage point, and the interest rate is up by three-quarters of a percentage point. The FOMC has raised the interest rate in response to inflation. But what happened to the difference between the federal funds rate and the inflation rate, a measure of the real interest rate? According to this measure, the real interest rate has gone down by a quarter of a percentage point. In other words, the federal funds rate did not go up by enough to raise the real interest rate. It is the real interest rate that affects spending.

So by allowing the real interest rate to fall, the FOMC would be doing exactly the opposite of what it should do when the inflation rate rises. The FOMC members would be voting to stimulate the economy just when they should be trying to cool off an inflationary surge. So this policy, with a response of .75 percentage points, is not a good policy. It adds fuel to the inflation fire.

It’s not surprising to learn that according to Taylor the “bad” Monetary Policy in 2003–2005—where by “bad” he means that Fed policy, by not following the “Taylor Principle”, kept interest rates “too low for too long”—bears responsibility for the house bubble and, therefore, is an important “cause” of the crisis.

In 1995, Marcus Nunes wrote a paper—The US economy, are analysts missing the point?—which inter alia tried to probe explanations for the increased economic stability since the early 1980’s. A surprising result was to discover, contrary to the idea mentioned in Taylor’s The Long Boom that after 1983 the Fed reacted more strongly to inflation, that in fact the opposite is evidenced, with the Fed Funds (FF) rate showing no significant response to inflation.

Chart 1.15, which shows the impulse response functions from a VAR between the FF, inflation and unemployment, indicate that after 1983 monetary policy did not react significantly, either to inflation or unemployment. Although not significant, the response to inflation has the wrong sign!
One plausible explanation for the result that reconciles the (apparently contradictory) absence of response of the federal funds rate to inflation after 1982 with a postulated increase in the Fed.’s resolve to fight inflation is that the behavior of inflation changed after the 80/82 recession.

In fact, inflation after 1982 exhibits substantially less persistence than in the previous years (see Chart 1.16) so that increases in inflation in one month are viewed as temporary. In other words, inflation is much less auto correlated so that lagged values of inflation provide little information about future inflation. As a result, unexpected movements (or innovations) in inflation no longer require a monetary policy response (which sits well with the argument that the fed funds can be a poor indicator of monetary policy).

![Inflation Persistence Chart](chart1.16)

This leads us to think that “inflation targeting” as the sole mandate for the Fed may not be a good idea. What propels the economy is nominal (or dollar) spending, so to achieve economic stability we should be concerned with “spending stability” along a target path.

It appears that the “Great Moderation” came about exactly because, even if unwittingly, Greenspan managed for the most part to keep spending pretty stable along a determined path.

The two pictures in Chart 1.17 below tell a compelling story. The first indicates that a “Great Moderation” is possible to achieve and “perpetuate”, even if the talk is always about the “inflation fighting credentials” of the Central Bank. The ultimate cause is the maintenance of “monetary equilibrium”, which requires that changes in money demand (velocity) are offset with changes in the stock of money, which, from the equation of exchange: \[ MV=Py \], is equivalent to keeping nominal spending (Py or NGDP) stable. In this case, inflation expectations are well anchored.

The second figure shows that during the period of the “Great Inflation”, from around 1965 to 1980, inflation expectations weren’t anchored so that growth in nominal expenditures was mostly reflected in changes in inflation. Real growth was very volatile. The oil price (supply) shock, which increases inflation and reduces real growth, is clearly visible. To Arthur Burns, there was nothing monetary policy could do and nominal expenditures were increased to reduce unemployment, with inflation control being the province of “incomes policy”. The result: more inflation.
One of the dangers associated with the absolute pursuit of “price stability” is the occurrence of supply shocks. This quote is from a Bernanke, Gertler and Watson 1997 paper entitled “Systematic Monetary Policy and the Effects of Oil Price Shocks” (our emphasis):

Macroeconomic shocks such as oil price increases induce a systematic (endogenous) response of monetary policy. We develop a VAR-based technique for decomposing the total economic effects of a given exogenous shock into the portion attributable directly to the shock and the part arising from the policy response to the shock. Although the standard errors are large, in our application, we find that a substantial part of the recessionary impact of an oil price shock results from the endogenous tightening of monetary policy rather than from the increase in oil prices per se.

Symmetrically, in the case of a positive supply (productivity) shock, a substantial part of the expansionary impact of the shock would result from the endogenous easing of monetary policy.

In both cases the unwavering pursuit of price stability (inflation targeting) would be destabilizing!

According to the views of Market Monetarists, since a nominal GDP target ignores aggregate supply shocks it dominates an inflation target. It sees movements in the price level as a symptom of whatever underlying shock is taking place while regarding movements in nominal spending as an underlying shock itself – an aggregate demand shock – over which the Fed has direct influence and can respond to much more effectively. In essence, by not reacting to the “symptoms” and striving to keep Aggregate Demand stable, Fed policy would result in overall stabilization.

What’s interesting about Bernanke is that he seems to know all the dangers associated with inflation targeting. The quote above is one example. He also seems to know all about how to get an economy out of the “hole” it can fall in when monetary policy errs dramatically. This is evident in his now (in)famous 1999 paper “Japanese Monetary Policy – a case of self-induced paralysis”?

Yet he managed to make both errors. First by reacting strongly to the oil/commodity price shocks of 2007/08, Bernanke managed to throw an already frail economy into a “deep hole”. Second, by adhering to his “Creditist” views, all the while maintaining concern with the “inflation target”, he has been incapable of giving the necessary uplift to the economy. Naturally, the “Fiscalists” came forth in defense of “fiscal stimulus”. That didn’t work, with the end result being that after more than three years of a so called “recovery”, the only possible solution seems to be found in overall austerity – both fiscal AND monetary!
So no Professor Taylor, the proper single mandate should be “Spending Stability”, i.e. targeting NGDP-Level targeting.
Chapter 2: Camelot and the origins of the Great Inflation

It may be difficult for younger readers today to relate to the heady optimism of the United States, its leaders and even its academics as the 1960s began. Before Vietnam, urban riots, and before the inflation and the “stagflation” of the 1970s, there was a “can do” spirit in the nation, perhaps physically manifested most symbolically in a plan to land a man on the moon, a mission indeed successfully carried out in 1969.

That same optimism in the United States in the 1960s, perhaps born of victory in World War II, solid economic growth through the 1950s, by far the world’s highest living standards and mastership of the world’s leading technologies, applied also to the realm of economics.

Economists were confident and relied upon, especially by the striking and young President that decade ushered in, in the form of John F. Kennedy and his entourage of intelligentsia. In some regards, in the White House it was the Age of the Economist.

Or, at least some economists. While Keynes was the star, monetarism was cast in a circumscribed supporting role.

Optimization of economic growth by government intervention was sought—no longer was the federal government a mere observer of economic growth. Fiscal policy was supreme.

Perhaps the 1960s can-do spirit is best summed up by Arthur Okun, an active participant in the economics of the time, first as staff member (1961-2), then member (1964-7) and then Chairman from 1968-9 of the Council of Economic Advisers (CEA), and then later a Brookings Institution scholar, before an untimely passing away in 1980:

The strategy of economic policy was reformulated in the sixties. The revised strategy emphasized, as standard for judging economic performance, whether the economy was living up to its potential rather than merely whether it was advancing...the focus on the gap between potential and actual output provided a new scale for the evaluation of economic performance, replacing the dichotomized business cycle standard which viewed expansion as satisfactory and recession as unsatisfactory. This new scale of evaluation, in turn, led to greater activism in economic policy: As long as the economy was not realizing its potential, improvement was needed and government had a responsibility to promote it. Finally, the promotion of expansion along the path of potential was viewed as the best defense against recession. Two recessions emerged in the 1957-60 period because expansions had not had enough vigor to be self-sustaining. The slow advance failed to make full use of existing capital; hence, incentives to invest deteriorated and the economy turned down. In light of the conclusion that anemic recoveries are likely to die young, the emphasis was shifted from curative to preventive measures. The objective was to promote brisk advance in order to make prosperity durable and self-sustaining...The adoption of these principles led to a more active stabilization policy. The activist strategy was the key that unlocked the door to sustained expansion in the 1960s.

In this 1960s view, informed heavily by the Great Depression, the ever-present threat was that of economic entropy, in the form of recession and possibly depression, and of business losses that discourage investing, thus becoming a self-fulfilling prophesy. Economic gloom gathers mass, unless actively dispelled. Anyone who had lived through the Great Depression, and then the World War II boom, would probably assent to that.

And even if an economist did not fear a self-generating recession, a buttressing view was that recessions marked a shortfall from potential, not a business cycle above and below an optimum output level. Why endure shortfalls?

In this context, monetary policy became a sidekick to White House planners and fiscal stimulus. According to Okun: The stimulus to the economy also reflected a unique partnership...
between fiscal and monetary policy. Basically, monetary policy was accommodative while fiscal policy was the active partner. The Federal Reserve allowed the demands for liquidity and credit generated by a rapidly expanding economy to be met at stable interest rates."

Of course, to make monetary policy an accommodative sidekick to fiscal policy in a sustained manner invited inflation, as another CEA member, Christina Romer (2012), pointed out more than forty years after Okun, though she was armed with four decades of hindsight. Even at that late date, however, she pondered why the Fed had been so acquiescent to White House leadership.

While these new views (of fiscal stimulus yet monetary accommodation) were more prevalent in the administration than at the Federal Reserve, some members of the FOMC were clearly supportive. Perhaps more important, William McChesney Martin, who was Federal Reserve chair in both the 1950s and 1960s, did not challenge the new views. Whether he went along out of a loss of faith in his own views, or out of a conviction that Federal Reserve independence extended only so far is unclear. What is clear is that the new views carried the day among both fiscal and monetary policymakers.

It is perhaps worth noting here that the Federal Reserve only “won” its independence in 1951, after a tussle with Treasury Department officials in the Truman Administration. During World War II, and the subsequent early Cold War (the Korean War was from 1950-3), the Fed was under pressure to help meet national goals that felt transcendent at the time. President Lyndon B. Johnson embarked in earnest on the Vietnam War in 1964, and heavy spending commenced in subsequent years. It was no doubt difficult for Fed officials to intone about inflation when U.S. soldiers were dying and the nation needed output to fight wars, cold or hot.

It may seem obvious today that unadulterated monetary accommodation will lead to inflation. And monetary accommodation did lead to inflation in the late 1960s and 1970s—however, there was yet another strain of thought running through mainstream economists in that era, and that was that inflation was a juggernaut, and not vulnerable to attack by monetary policy anyway. There was an impervious “cost-push” type of inflation underfoot, in which prices were dictated by big suppliers, unions or other institutional rigidities.

Again quoting Romer, Arthur Burns, Federal Reserve chair starting in 1970, added the notion that the economy had changed in key ways that made inflation relatively impervious to slack. The FOMC Minutes say Burns concluded: “monetary policy could do very little to arrest an inflation that rested so heavily on wage-cost pressures. In his judgment a much higher rate of unemployment produced by monetary policy would not moderate such pressures appreciably (June 8, 1971, p. 51)”. This was a view that was also championed by the Carter Council of Economic Advisers and G. William Miller, Federal Reserve chair for eighteen months in the late 1970s.

Indeed, Republican President Richard Nixon was advised by Burns to implement wage and price controls, which he did on August 15, 1971—a near-total failure.

The panels in Chart 2.1 below illustrate the increasing rates of inflation in this era of monetary accommodation and targeted maximum Real Gross Domestic Product, or RGDP.
It appears that potential output calculations by the economists at the CEA were too optimistic relative to potential output calculations made by the Congressional Budget Office (CBO) available today. In fact, by 1965, the year after the tax cut was enacted, the economy was beginning to overheat, and creating what may be called a “demand-pull” inflation. Both nominal spending and real output began to grow above potential levels. This is confirmed by what happened to inflation and unemployment, where the continuing fall in unemployment is indicative that the rise in inflation was not expected.

The CEA optimism is clearly demonstrated in the panels of Chart 2.2. The potential output calculated by the CEA in the 1969 Economic Report of the President (ERP) is much higher than the equivalent calculation by the CBO. In short, policymakers of the 1960s were both overshooting the GDP potential, and conducting lax monetary policy.

The Phillips Curve

A much-discussed idea of the 1960s and 1970s was the “Phillips Curve,” that is a trade-off between unemployment and inflation. The lower unemployment, the higher the inflation that could be expected, and vice-versa.
As Chart 2.3 shows, in the 1960s the Phillips Curve was “well behaved” in the sense of providing a “stable” relationship between unemployment and inflation. But monetarist Milton Friedman (1968) argued that well-behaved Phillips Curve could not endure for long, and was indeed illusory, because soon workers would anticipate inflation, and demand higher wages. Thus, “low” unemployment would only be maintained by ever-rising inflation.

It was one of many of Friedman’s useful insights. As can be observed by the chart below, indeed the Phillips Curve went haywire in the 1970s, as workers, and perhaps many other economic entities, came to anticipate inflation, and Cost of Living Adjustment in wage and business contracts, known as COLAs, became commonplace.

**Chart 2.3  Phillips Curve 1960s & 1970s**

![Phillips Curve 1960s & 1970s](chart.png)

**Reassessing the 1960s from Market Monetarist Perspective**

To be sure, there is nothing inherently wrong with trying to keep economic output at potential, the guiding principle of well-intentioned macroeconomists in the 1960s. The big problem is that potential output is hard to estimate precisely, especially in real time. It is easy to over-estimate potential. Then, to marry over-estimated potential with an accommodative monetary policy is to all but an invitation to double-digit inflation.

Market Monetarists, on the other hand, do not emphasize the control of real quantities like unemployment or real output, but propose that monetary policy be geared to stabilize nominal spending—the dollar value of total spending—in the economy, along a target or growth trend path.

Chart 2.4 below gives an illustrative example. First, the nominal spending trend from 1954 to 1964 is calculated (the red line). Then actual nominal spending is presented, in the blue line. Observe what nominal spending would be if it had progressed along the trend path.

Since actual nominal spending deviated systematically—that is, rose dramatically above—the trend after 1965, the result was increasing inflation. Additional nominal demand for goods and services had to be rationed by price. Accordingly, inflation rises or falls (indicated by the circles), depending on if nominal spending is above or below trend.
It was also in the 1960s that the idea of a balanced federal budget—even if balanced through tax hikes, as had been the case in the 1950s—was cast aside. That the federal government should stimulate the economy, and lower tax rates would help in that regard, was the 1960s thinking (and of later decades).

By the end of his second year in office, President Kennedy was preaching the virtues of stimulative tax cuts:

It is a paradoxical truth that tax rates are too high and tax revenues are too low and the soundest way to raise the revenues in the long run is to cut the rates now … Cutting taxes now is not to incur a budget deficit, but to achieve the more prosperous, expanding economy which can bring a budget surplus.

Perhaps it is not too cynical to observe that in the case of tax cuts, or more federal spending, that the White House and members of Congress may have had constituents and lobbyists in mind, as much as macroeconomic policy. To have deficits sanctioned as “good policy” may be akin to informing an alcoholic that drinking red wine is actually salubrious.

Not surprisingly, monetarists were not impressed with the 1960s style of macroeconomic policymaking, including the tax cuts (which later would become right-wing orthodoxy as the fuel for economic growth). In a debate with Walter Heller (President Kennedy’s first CEA Chairman) on “Monetary vs. Fiscal Policy” (1969), Milton Friedman argued:

...So far as I know, there has been no empirical demonstration that the tax cut had any effect on the total flow of income in the US. There has been no demonstration that if monetary policy had been maintained unchanged...the tax cut would have been really expansionary on nominal income....

When the Chickens Come Home to Roost

The uninhibited expansionist fiscal and monetary policies of the 1960s—but especially the monetary—had telling effect, and inflation, and thus interest rates, began to rise by 1965. Chart 2.5 shows that when nominal spending “took off”, interest rates and inflation followed suit.
At that point the policymakers began to have doubts. According to Arthur Okun:

In 1965 the nation was entering essentially uncharted territory. The economists in government were ready to meet the welcome problems of prosperity. But they recognized that they could not provide a good encore to their success in achieving high-level employment.

And as Gardner Ackley, then CEA Chairman, put it in a talk entitled the “The Contribution of Economists to Policy Formation” in December 1965:

...The plain fact is that economists simply don’t know as much as we would like to know about the terms of trade between price increases and employment gains (i.e., the shape and stability of the Phillips Curve). We would all like the economy to tread the narrow path of balanced, parallel growth of demand and capacity utilization as is consistent with reasonable price stability, and without creating imbalances that could make continuing advance unsustainable. But the macroeconomics of a high employment economy is insufficiently known to allow us to map that path with a high degree of reliability...It is easy to prescribe expansionary policies in a period of slack. Managing high-level prosperity is a vastly more difficult business and requires vastly superior knowledge. The prestige that our profession has built up in the Government and around the country in recent years could suffer if economists give incorrect policy advice based on inadequate knowledge. We need to improve that knowledge.

(Some might say that even in 2012, and given macroeconomic policies of our era, we still very much need to improve our knowledge).

But despite the doubts, the White House still kept faith in the power of fiscal policy to stabilize the economy near its potential. The financing needs of the escalating Vietnam War made policymaking harder and confusing.

Chart 2.6 summarizes the history going into the 1970s. Eager to keep employment high for both political and policy reasons, the White House evidently cowed the Fed into keeping monetary policy consistently expansionary, thus creating a rising trend to nominal spending. Of course, that translated into rising inflation, as the economy neared capacity, and as structural rigidities, such as COLA contracts, were enforced.
As will be shown in the next chapter, the 1970s inflation reflected the failure of monetary policymakers to realize or act upon the knowledge that that inflation was a monetary phenomenon.

A drastic revision of monetary policy had to wait until the early 1980s and the arrival at the Federal Reserve Board of the titanic figure of Chairman Paul Volcker. Later chapters will also address how, in ensuring decades, a monetary “experiment” was practiced by Fed Chief Alan Greenspan, which can be construed as “stabilizing nominal spending along a level path,” or a policy very close in practice to the targeting of nominal GDP growth along a level path.

Parting note: Yes, the macroeconomic policies of the 1960s were flawed, and inflation was invited to the party. Yet it is worth again reviewing what Okun statement about the decade, to the extent that, “The activist strategy was the key that unlocked the door to sustained expansion in the 1960s.”

The sustained 1960s expansion raised per capita inflation-adjusted income in the United States by more than 37 percent over the decade. Whereas in the 1950s it was still possible, if rarely, to see the effects of malnutrition in the population—rickets and such—by 1970 malnutrition had all but become but a bad memory. There was a sense among average Americans that life was getting better, materially and palpably, from one decade and generation to the next.

For businesses, for investors, and for employees, on balance the 1960s was a terrific decade. The Dow Jones Industrial Average, despite a late decade pull-back, was up more than 31 percent in those 10 years.

In addition to noting the flaws of policymakers in that era, it is worth remembering the benefits that economic growth confers upon a population.
Chapter 3: The Great Inflation

The Great Inflation that characterized the United States economy from 1966 to 1980 was “the central monetary event of the latter half of the 20th century,” by the description of no less than Allan Meltzer, Carnegie Mellon professor and author of a recognized definitive history of the Federal Reserve Board. Like many epic events, the unwanted Great Inflation shaped government policy responses thereafter, often for the better, but also in more recent years when the underlying economic topography had changed and new realities have emerged.

Chart 3.1 illustrates the generally low inflation rates of the 1950s through 1965, and then the Great Inflation, or the surge to a peak of 14.4% in mid-1980. Note that the core CPI, which excludes food and energy, also rose and thus strongly indicates that the Great Inflation was not the province of the period’s supply shocks (especially jumps in oil prices) experienced in 1973-74 and 1979.

So, why this surge in the reported inflation, and why did it happen in the United States from 1966 to 1980?

Market Monetarists have a short answer: the Fed allowed nominal spending (NGDP) to grow “out of bounds,” or much too rapidly. In layman’s language, they “printed too much money” or expanded the money supply more rapidly than the economy was able to absorb without rationing by upward price movements.

Chart 3.2 illustrates that nominal spending, or nominal GDP growth, rose close to a “sustainable” trend path, one that would not result in too much inflation, from 1954 through 1965. But after 1965, nominal spending, or nominal GDP growth, skyrockets. Almost inevitably, when nominal GDP rises too quickly or exceeds a sustainable growth path (or too much money is printed), inflation will result. As we see from 1966 to 1980, inflation did accelerate and become problematic.
Monetary policymakers from 1966 to 1980 were not targeting spending, but were rather enthralled by the famed Phillips Curve, a curve that assumes a trade-off between inflation and unemployment. In brief, devotees of the Phillips Curve contended higher unemployment will lead to lower inflation, and vice-versa.

But some policymakers also came to believe that some inflation was locked-in by powerful labor and business market-makers, and would not wilt even if monetary policy were tight. There were powerful structural biases pushing up prices, impervious to levels of demand. Certainly, the OPEC fit that description, at least in the epoch. OPEC was successful in unilaterally driving up prices—and indeed, made more money at lower levels of output, a grievous condition (for non-OPEC nations). To get prices higher, given inelastic short run demand, OPEC would cut production. Additionally, large retailers, manufacturers and unions populated the American economy, all with some market heft.

It is true that by the late 1960s, Milton Friedman had deftly deconstructed the putative existence of a stable Phillips Curve—he showed that attempting to hold unemployment below the natural rate would lead to rates of inflation ratcheting upwards, as all actors became aware of circumstances and modified their behavior. Partly in response to Friedman, by the late 1960s Keynesian and other policymakers had gravitated towards the “natural rate hypothesis,” or the idea that there is a structurally determined rate of unemployment that policymakers cannot tamper with. Policymakers also thought that when an economy performed under an optimum level—a level that federal deficit spending could help obtain—there were irrecoverable income and wealth losses.

Just as the Kennedy-Johnson policymakers thought that the “full employment rate of unemployment” was at or below 4%, the policymakers in the 1970s continued to believe that the natural rate of unemployment was quite low, and that there was a great deal of wage and price rigidity in the marketplace.

Although he was no longer a policymaker, even so eminent an economist as James Tobin hewed to the original view of the Phillips Curve. In May 1971, he published an influential article, “Living With Inflation,” in the New York Review of Books (Tobin, 1971). It is worth quoting at length as it so clearly represents the consensus of the mainstream economics profession at the time. The lack of monetarist perspective is also notable.

To wit, from Tobin (our emphasis):
The cruel choice between two evils, unemployment and inflation, has become the major economic issue of the day. Democrats and Republicans agree that both evils must be avoided and differ only on the means—with Democrats largely favoring the more drastic remedies. Congress has thrust upon the President authority for direct controls on wages and prices. The Administration has relied on traditional fiscal and monetary measures, including changes in taxes and spending and Federal Reserve control over the supply of money. First it tried to hold down prices by using tight money to restrain demand; now it is trying to create jobs by using budget deficits and easier money to expand demand. But the results, so far, are not encouraging. The traditional measures produced a recession and rising unemployment, but inflation hardly slowed down. Now both the recession and the inflation seem very stubborn.

Nevertheless, inflation and recession are usually alternative afflictions. One of the most dismal and best verified observations of modern economics is that there is ordinarily a trade-off between the rate of inflation and the rate of unemployment. Less of one means more of the other. Hence, full employment (which means an unemployment rate between 3 1/2 and 4 1/2 percent) can, on the average, be sustained only with 4 to 5 percent inflation. Price stability (another Pickwickian term, meaning annual inflation of no more than 1 to 2 percent) is possible only with more than 5 percent unemployment.

Tobin elaborates further, discussing the “money illusion” that is a central idea among Market Monetarists:

One reason for the inflationary bias of our economy is that strong unions and corporations are insulated against the pressures of competition. But even in the competitive sectors of the economy there are powerful forces which push up prices during good times. The crucial factor is the universal reluctance to accept setbacks in money income. Wage rates for a given job can almost never be cut. Many firms would rather lose short-run profits than lower prices. The economy depends on changes in prices and wages as signals to move labor and other resources from sectors of declining demand to sectors of growing importance. But if prices and wages can never go down, there is only one direction in which they can move in response to changing economic conditions.

Although a slowdown of demand aggravates one disease, unemployment, while ameliorating the other, inflation, it does the first right away and the second with a lag. The first reaction of most businesses to disappointing sales is to cut output and employment, not to change their established price lists and wage scales. Unions do not give up hard-won wages as soon as actual or potential members become unemployed. Unemployed workers search for jobs at prevailing wages; they rarely volunteer to take a lower wage in order to get a job. Meanwhile the momentum of adjusting prices to past wage increases, and wages to past price increases, continues. The moderating effects of slack demand on prices and wages occur slowly and indirectly.

That is why 1970 was a year of both sharply rising unemployment and inflation. Today’s perverse combination of the worst of both worlds, 5 percent inflation and 6 percent unemployment, reflects the difficulty of transition from several years of rapid price increases. Continuing unemployment at current levels should eventually suffice to reduce inflation to 1 1/2 or 2 percent a year. But this would take two years or more.

Tobin then tried to argue against Friedman’s “deconstruction” of the Phillips Curve:

A more fundamental problem is raised by Milton Friedman and others, who deny that we can reap the gains of high employment by choosing to live with more inflation. They argue that there is no long-run trade-off between inflation and unemployment. The Phillips curve, in
their view, expresses only short-run alternatives. In the long run, there is only a single, "natural" rate of unemployment for a country's economy. If we try to reduce unemployment beyond this point we may have some temporary success, but the resulting price increases will prod unions and other workers to raise their wage demands, while inducing employers to grant them. Once again, the sum of wage and profit claims will exceed the value of output available to satisfy them. An even higher rate of inflation will be necessary to resolve this conflict.

Moreover, Friedman argues, this new round of inflation will also, in turn, be reflected in a new round of wage demands. As a result, the Phillips curve trade-off will become increasingly worse. Where initially we might have been able to choose 3 percent inflation with 4 percent unemployment, we might soon have to accept 6 percent inflation for the same rate of joblessness. Over time, in this view, the economy cannot choose its rate of unemployment, but can merely decide how much inflation it wishes to endure in a futile attempt to alter that rate.

Friedman's argument rests on an appealing but unverified assumption: that you can't fool all of the people all of the time. If labor and business are making inconsistent demands, then in Friedman's view a mere renumbering of prices and wages through inflation will not resolve the conflict. But, in fact, the evidence suggests that even sophisticated people are far more sensitive to direct losses in money incomes than to declines in their purchasing power through higher prices. Wage and salary reductions are almost unknown in industrial countries, even though it is not uncommon for employees to suffer temporary losses in purchasing power. So long as wages and prices are set in dollars, and money retains its age-old power to deceive, inflation can be used to resolve economic conflict.

At the time Tobin wrote, this was the inflation-unemployment configuration he faced (Chart 3.3):

Unemployment had risen strongly but inflation showed downward resistance. Fighting inflation through traditional fiscal and monetary policy may seem at times futile, but Tobin warned there was yet another reason inflation had to be checked: International trade in an era of fixed exchange rates (the dollar and major currencies were then pegged).

Tobin continues:

Concern for the balance of payments limits our freedom to inflate at will; this is no doubt a major reason for Arthur Burns' caution. So long as the exchange rate between the dollar and other currencies is kept fixed, inflation in the US that is faster than that in the rest of
the industrial world will damage our exports, increase our imports, and push more dollars into the hands of nervous foreign governments and central bankers. Like General de Gaulle a few years ago, they may ask for gold, or at least make us uncomfortable by threatening to do so.

Twelve years of living under this gun have at last made most observers realize that it is not really loaded. There is now widespread understanding in political and financial capitals, as well as among academic economists, that exchange rates among currencies cannot be permanently fixed, and that the present dollar standard places the onus of changing them on other countries, not on the US. European central banks can always avoid unwanted accumulation of dollars by making their currencies more expensive. If instead they insist on piling up dollars and then cashing them in for gold, they can no doubt force the US to cut the link between the dollar and gold. But this would be no calamity for the US; indeed, it would make clear our freedom to pursue economic policies that meet our domestic objectives. For that reason, our friends abroad are not likely to precipitate such a showdown. It is more likely that the international monetary system will continue to evolve toward more flexible arrangements.

So let us aim at the 4 percent unemployment rate, which would in effect mean full employment, and accept the 4 percent inflation that comes with it. But it is also vital for us to take measures that will over the long pull diminish the inflationary bias of the economy.

Then, in what seem like an incredibly alien suggestion today, Tobin talks of wage and price controls! To wit:

But structural reforms to increase mobility and competition will happen slowly if at all. In the meantime, if we want to improve the Phillips trade-off we must consider a more direct approach. The alternatives are guide-posts—what Paul Samuelson has called “talking the Phillips curve down”—and controls.

Guideposts under favorable circumstances can possibly somewhat reduce the level of inflation to be expected from any given rate of unemployment. During the early 1960s they seemed to have this effect. Why they worked is unclear. The Kennedy steel price confrontation may have made big business wary of government retaliation if prices rose too sharply. Alternatively, guideposts might have helped to deflate price and wage expectations. Since inflation often proceeds through futile attempts to stay ahead of the race, one way of curbing today’s inflation is to convince everyone that tomorrow’s won’t be so bad.

... Out of frustration with the current regime of high unemployment and high inflation, Congress has prodded the President to adopt direct wage and price controls. Controls, if imposed, would undoubtedly resemble the overall freeze of prices and wages adopted during the Korean war more than the detailed OPA price schedules in effect in World War II. A case can be made that the Korean controls were useful in bringing a rapid inflation to a fairly smooth halt. Controls were imposed just as the rapid inflation caused by the beginning of the war was running out of steam; thus the ceilings were superfluous in many areas of the economy, while elsewhere their mere existence helped to break inflationary expectations.

So, we see that Tobin’s support for wage and price controls was informed by the somewhat successful use of such not only in World War II, but during the Korean War. Moreover, the United States in 1971 was still fully involved in the Vietnam War, and was deeply enmeshed into a Cold War with the Soviet Union. Today it is difficult to fathom the Cold War atmosphere of the national capital, Washington, D.C., and of how much of the nation’s attention was focused on international politics and conflicts, and not economics. As we have
seen, even monetary policymakers such as Federal Reserve Board Chairman Martin were willing to take a back seat to perceived wartime or Cold War needs.

And so it came to be that on August 15, 1971, a conservative Republican president, Richard M. Nixon, imposed a 90-day wage- and price-freeze on the nation, an action today that would be unthinkable. And on the same day President Nixon closed the “gold window,” in effect ending the convertibility of the U.S. dollar breaking with the Bretton Woods system of fixed exchange rates, and meaning the U.S. Treasury would no longer exchange gold in the vaults for U.S. currency. A 10% fee on imports into the United States was enacted as well. In the space of a few months the dollar dropped 15% relative to the yen and 9% relative to the German mark.

As for inflation and unemployment, this is what transpired after Nixon did his deeds:

As for inflation and unemployment, this is what transpired after Nixon did his deeds:


Inflation came down significantly, but unemployment remained elevated.

The superb monetarist and author Robert Hetzel in 1998 penned an article in the Federal Reserve Bank of Richmond Economic Quarterly entitled Arthur Burns and Inflation. It is a must read for those who want to capture the spirit of the time, and Burns’ thinking. Hetzel writes (our emphasis):

*Burns shared the conventional business and Keynesian view that monetary policy was an unduly blunt instrument for controlling inflation. Almost from the beginning of his tenure as Fed Chairman, he pushed for government intervention to restrain prices and wages.*

Hetzel then quotes Burns, who uses language that would strike some today as heresy, especially if uttered by a Federal Reserve Board chairman.

*Another deficiency in the formulation of stabilization policies in the United States has been our tendency to rely too heavily on monetary restriction as a device to curb inflation... severely restrictive monetary policies distort the structure of production. General monetary controls... have highly uneven effects on different sectors of the economy. On the one hand, monetary restraint has relatively slight impact on consumer spending or on the investments of large businesses. On the other hand, the homebuilding industry, state and local construction, real estate firms, and other small businesses are likely to be seriously handicapped in their operations. When restrictive monetary policies are pursued vigorously over a prolonged period,*
these sectors may be so adversely affected that the consequences become socially and economically intolerable.

We are in the transitional period of cost-push inflation, and we therefore need to adjust our policies to the special character of the inflationary pressures that we are now experiencing. An effort to offset, through monetary and fiscal restraints, all of the upward push that rising costs are now exerting on prices would be most unwise. Such an effort would restrict aggregate demand so severely as to increase greatly the risks of a very serious business recession.

There may be a useful role for an incomes policy to play in shortening the period between suppression of excess demand and restoration of reasonable price stability.

The 1960s and the 1970s Together

Burns thus all but joins hands with Tobin, and becomes the link between the two decades of rising inflation.

Burns’ “cost-push” view of inflation would really bloom a little later, in late 1973, when the Organization of Petroleum Exporting Countries (OPEC) restricted the supply of oil, and crude oil prices almost quadrupled in a short time. Obviously, that was an event to which monetarism, especially in the short-run, spoke to very little.

Chart 3.5 shows that when the oil price jumped in late 1973, inflation and unemployment surged while real output growth collapsed—this is the classic “stagflation” bogeyman come to life, the specter that has been continually raised by pundits ever since, and that haunted economic policymakers for years. And for good reason—a stagflation suggests every option is bad, that actions to suppress inflation will raise unemployment, and vice-versa, when both miseries are already barely tenable.

Note that contrary to Phillips Curve precepts, both inflation and unemployment moved up. Still, for economists who did not camp with monetarists, this somewhat reaffirmed the view that monetary policy was not well-suited to deal with the heavily structuralized cost-push inflation of the period.
Nevertheless, as soon as oil prices stopped rising, inflation came down and growth resumed, with unemployment falling. In 1979 there was a second oil shock, this time following the Iranian Revolution. Again, growth falls and inflation and unemployment increase.

![Chart 3.6](chart.png)

So the decade ends with high inflation, low growth and high unemployment, a combination of economic circumstances lethal to the 1980 reelection chances of President Jimmy Carter (who, ironically, was the president who initially appointed Paul Volcker to be Federal Reserve Board chairman).

Aside from structural rigidities, were other factors militating for rising inflation rates in that era? Christina Romer (2007) offers this assessment, which is an echo of Arthur Okun in the early 1960s:

> The stimulus to the (1960s-1970s) economy also reflected a unique partnership between fiscal and monetary policy. Basically, monetary policy was accommodative while fiscal policy was the active partner. The Federal Reserve allowed the demands for liquidity and credit generated by a rapidly expanding economy to be met at stable interest rates”. (emphasis ours).

In the 1970s, although inflation naturally acquired much greater importance, the worries about high levels of unemployment never subsided. Romer asserts that monetary policy was viewed as feeble in the battle to control inflation. Monetary policy could at most mitigate the unemployment effects of supply shocks.

No wonder the trend in nominal spending growth rose too-rapidly all through the 1970s.
The trend shown above is quite incompatible with low or stable inflation, being in fact a harbinger of higher inflation. Inflation began and kept rising for more than a decade because policymakers deemed it too costly, in terms of the unemployment size and duration, to reverse. And besides, they thought monetary policy was a feeble force against inflation.

Interestingly enough, the oil shocks of the decade were a public relations “blessing in disguise” for policymakers, especially for the Federal Reserve policymakers. The public understands gasoline prices every well, and they are posted on nearly every major boulevard in the United States, on big signs. And so OPEC was easily painted as the inflation-heavies, the bad guys who curtailed supply of this most basic commodity, and thus became the cause of spiraling inflation—certainly in popular commentary and perception.

To wrap up this chapter, it’s instructive to take a look at the behavior of the stock market (S&P 500) from the 1950s to the early 1980s.

From Chart 3.8, you could infer that the stock market does not like inflation. It didn’t mind the Korean War but maybe it didn’t like the Vietnam War. But even after the war ended in 1975 it kept moving sideways. In real (inflation-adjusted) terms the picture is much worse, with the real value of stocks in 1982 back to the level that had prevailed in 1950. That is 32 years of sideways drift.
We know that from 1982 to 1999 returns on the S&P 500 radically improved from the 1965 through 1982 period. Maybe we can, like Christina Romer did for the 1960s, identify another ‘revolution’ in economic ideas, which again radically changed the model policymakers used to understand the economy.

That’s the story of the next chapter.

Post-Script

Because we are economic historians, and because we believe that intellectual diversity and dissent must always be encouraged—and that lonely, but correct voices should be honored when they can be—we now take this opportunity to mention the superb economist Harry Johnson, of the University of Chicago. A prolific writer, Johnson died prematurely at age 53 in 1977. This is what he said in the first De Vries Lectures – “The Problem of Inflation” – delivered in 1971 in The Netherlands (Johnson (1971)):

...while monetary analysis assumes as a matter of empirical fact that the economic system tends toward a rational full-employment allocation of resources so long as management of money is well-behaved, and can only be thrown off course by severe monetary mismanagement...And though I do not wish at this particular point to go into the empirical evidence in detail, I should remark that I have arrived at this judgment, not by dogmatic conviction, but out of the growing dissatisfaction with the explanatory power of the theories and the empirical results of the policies of Keynesian economics in which I was instructed during my youth at the two major centers of the revolution."

The lesson of the Great Inflation is that monetary mismanagement, if persistent, can lead to the poor results expected by Harry Johnson.
Chapter 4: The Volcker Transition

Paul Volcker was nominated Fed Chairman on August 7, 1979, a key date in any monetary history of the United States.

Volcker was the ultimate insider, having made his career at the Fed where he became President of the New York Fed in August 1975, a position that assured him a permanent voting position at the FOMC. In many regards, Volcker was the opposite of his predecessor William G. Miller, a business executive with no monetary policy experience who had replaced Arthur Burns in March 1978. The idea of cracking Fed insularity with an outsider Chairman is an interesting one, but in practice—at least then and there in the late 1970s—it proved a dud.

Happily, Volcker is no one’s definition of a dud. In his first Federal Open Market Committee (FOMC) meeting as chairman of the Federal Reserve Volcker, “defined his moment” by emphatically asserting:

*Economic policy has a kind of crisis of credibility. As a result, dramatic action to combat inflation would not receive public support without more of a crisis atmosphere.*

Volcker boldly outlined a plan that would revolutionize the Federal Reserve’s operating procedure. One sentence captures the essence of the plan: The FOMC *would seek to hold increases in the monetary base and other reserve aggregates to amounts just sufficient to meet monetary targets and to help restrain growth in bank credit, recognizing that such a procedure could result in wider fluctuations in the shortest term money market rates.*

The Volcker plan went into effect on October 6, 1979, another date in monetary history.

For those who want a detailed account of this historic epoch in U.S. monetary policy, the March/April 2005 (Part 2)—*Reflections on Monetary Policy 25 years after October 1979*—issue of the St. Louis Fed Review is a very worthwhile read. In their presentation, David E. Lindsey, Athanasios Orphanides, and Robert H. Raasche summarize the monetary events of October 1979’s thusly:

*The record suggests that the reform was adopted when the FOMC became convinced that its earlier gradualist strategy using finely tuned interest rate moves had proved inadequate for fighting inflation and reversing inflation expectations.*

*The new plan had to break dramatically with established practice, allow for the possibility of substantial increases in short-term interest rates yet be politically acceptable, and convince financial market participants that it would be effective. The new operating procedures were also adopted for the pragmatic reason that they would likely succeed.*

We define the seven-year period going from the fourth quarter of 1979 to the fourth quarter of 1986 as the “Volcker Transition.” That is when the US economy transitioned from a high inflation and high volatility economy, to one characterized by more-stable real output and lower and steadier rates of inflation. The result of the Volcker Transition is the “Great Moderation” that extends from 1987 to 2007.

We provide a visual analysis of the period from the perspective of NGDP growth—the primary Market Monetarist measure of the ease or tightness of monetary policy. We also track inflation, measured as the year-on-year percent change in the personal consumption expenditures index (excluding food and energy) and we also present unemployment rates.
We divide the Volcker Transition in two phases: The first goes from the fourth quarter of 1979 to the third quarter of 1981. When the Fed tightened in early 1980, inflation stopped rising but unemployment jumped.

Almost instinctively, the “unemployment concern” manifested itself. Monetary policy turns highly expansionary with spending reaching 14% growth. Inflation rises but quickly recoils somewhat, probably reflecting a dissipation of the 1979 oil shock. Unemployment remains elevated.

In the first leg of the second phase, the Fed “goes for broke”. Spending growth is forcefully contracted, inflation falls significantly and unemployment shoots up.

A consensus perception emerged in the 1980s that “Fed credibility” was in fact obtained because with the end of the deep recession in November 1982, the Fed initially “pumped on the gas” and the recovery was immediate and robust—but with both inflation and unemployment dropping significantly.
The indications are that by mid-1982 the broader equities market had “bought” the vision of future stability, especially regarding prices, and that Volcker was serious and credible when it came to fighting inflation. After 17 years moving sideways with a lot of volatility in nominal terms and plunging in real terms, over the next 17 years equities presented a sustained bull market‖ in both nominal and real terms.

Alternate FOMC member Frank Morris, President of the Federal Reserve Bank of Boston said (our emphasis):

I think we need a proxy—an independent intermediate target— for nominal GDP, or the closest thing we can come to as a proxy for nominal GDP, because that’s what the name of the game is supposed to be.

... Nominal GDP, if we were to use that as a target, would be a politically sensitive target, and we ought to avoid it for that reason. But we need a proxy for it.

This is an astonishing statement in that time and place—all the more so, as Morris had been a member of the FOMC since 1968, and was one of the senior dons of that body.

We argue that Morris was correct in his views, and that it was Alan Greenspan’s implicit targeting of NGDP along a level path that was the linchpin for the successful period in U.S. economic history we call The Great Moderation—and that is the subject of the next chapter.
Chapter 5: The Great Moderation

The “Great Moderation,” an economic era of lower and less erratic inflation, yet steady economic expansion, followed the “Volcker Transition,” and extended from the mid-1980s all the way to 2007.

Harvard economist James Stock coined the “Great Moderation” phrase while writing a research paper with Mark Watson of Princeton in 2002, entitled Has the Business Cycle Changed and Why?

Future Federal Reserve Board Chairman Ben Bernanke further popularized the phrase in 2004, when he gave a speech titled, in fact, The Great Moderation. At the time, he was a Federal Reserve governor, and Alan Greenspan was the chairman.

Why was there a Great Moderation?

1. Was it due to circumstances—for example, a changed economic structure reflected in the rise of the service sector, more stable than manufacturing? Or the rise in imports into the United States economy, preventing price increase across a broad range of products? Or the steady de-unionizing of the private-sector workforce?

2. Was it due to technological improvements that allowed, for example, better control of inventories (“Just in Time”), or rapid comparison of price via the Internet?

3. Was it plain luck, resulting from fewer and weaker shocks relative to those like the big oil shocks of the 1970s?

4. Was it the result of better economic policy, particularly monetary policy?

5. Was it a “mirage,” something that slowly nudged the economy—mainly through the building of “bubbles”—leading towards debacle, and the Great Recession beginning in 2008?

We contend that better monetary policy is the crucial reason for the Great Moderation, as it is the variable that consistently explains differences among the Great Inflation, and the Great Recession, that sandwich the Great Moderation.

The rise in importance of the service sector, for example, is a gradual process that had been going on—and continues to do so—for a long time; “just in time” inventory control technology does not help explain the fact that when you take inventories out and consider only final sales, the observed reduction in volatility after the mid-80s is comparable; “luck” is unexplainable, and in any case twenty-plus years would be an unlikely long streak of good luck.

International trade and the de-unionization of the U.S. economy have been proceeding apace through all three periods also.

Moreover, during the Great Moderation there were significant shocks impacting on the economy; there was the 1987 October stock market crash (when the Dow dropped 22.6 percent on Black Monday), the rise in oil prices in the Gulf War, the Asian and Russian crises of 1997-98, Y2K, trust-sapping corporate shenanigans (Enron et al). In addition, there was 9/11, not one but two hugely expensive wars (Afghanistan and Iraq), and renewed oil price shocks after 2003.

The “mirage” explanation reflects the views of those who believe that economic stability breeds all sorts of bubbles that inexorably will lead the economy into trouble. In other
words, “too much stability may be hazardous to the economy’s health”, a concept which we find hard to swallow (and the related sullen school of economic thought, that it is better to stay in a recession, than enjoy robust growth that might lead to inflation, and thus Fed tightening, leading to recession. Better a perma-recession).

The charts below show that the stability characteristics of the economy changed drastically following the “Volcker Transition”.

![Chart 5.1](chart1.png)

Many adherents to “the change in monetary policy is responsible for the Great Moderation” hypothesis, among them Stanford scholar John Taylor and Ben Bernanke, have attributed success to the inflation-sensitivity, and correspondingly higher interest rates chosen by the Federal Reserve Board, following the appointment Paul Volcker as Fed Chief.

From the perspective of the Taylor Rule, which relates the federal funds rate to the difference between inflation and its “target” and the “output gap,” the coefficient on inflation has increased and was set above 1, following Volcker. In English, this means the Fed leaned more to fighting inflation through higher interest rates.

Some astute observers argue there was a change in Federal Reserve Board “doctrine” from the Great Inflation to the Great Moderation.

According to Robert Hetzel, an economist and author at the Federal Reserve Bank of Richmond, during the period of the Great Inflation there was a view the Fed was somewhat impotent against powerful market players who controlled prices of oil, goods and labor—a view embraced by Fed Chairman Arthur Burns (1970—1977).
Burns held that inflation was largely caused by cost-push factors in the economy, such as price-setting large unions, huge national-scale manufacturers and retailers in somewhat cartelized markets, and an oligopolistic OPEC. Fighting inflation with monetary policy would only damp output, while prices held firm.

From that (Keynesian orthodoxy) perspective, the optimal combination of fiscal and monetary policy could deliver sustained real growth while an “incomes policy” would be effective in containing inflation pressures that might arise.

This view is clearly illustrated by Burns who argued as early as 1970 that, monetary and fiscal tools are inadequate for dealing with the sources of inflation such as are plaguing us now—that is, pressure on costs arising from excessive wage increases.

Later, in different situations, Burns would also blame oligopolists for keeping prices high and oil-producing countries for jacking up the price of crude. Since each of these shocks could be viewed as real (cost-push) shocks, Burns dismissed the role of the Federal Reserve in generating or allowing inflation.

When placed in the dynamic Aggregate Supply (AS)/Aggregate Demand (AD) framework, Burns’ cost-push view is that the short-run AS (SAS) curve is horizontal when output is below potential.

The implication of this perceived characteristic of the SAS curve is that negative supply shocks would drive inflation higher and output lower. Moreover, given the horizontal shape of the SAS, monetary policy could successfully increase AD without generating additional inflationary pressures.

Indeed, Burns argued following the 1973 oil shock that a markedly more restrictive policy would have led to a still sharper rise in interest rates and risked a premature ending of the business expansion, without limiting to any significant degree an upsurge in the price level.

History suggests Burns was in error.

On becoming Fed Chairman, Volcker jettisoned the Keynesian orthodoxy that held that the high unemployment and high inflation combination of the 1970’s arose from cost-push and supply shocks, and not from accommodative monetary policy.

With early-1980s inflation in double digits, and ratcheting up as predicted by Milton Friedman, Volcker returned to traditional monetarism, and made inflation-fighting the Federal Open Market Committee’s top priority, and was very public in this policy course.

Volcker—gifted with a powerful intellect, strong character and considerable personal bearing—forcefully brought to the fore of policy discussions the importance of inflation expectations and the question of central bank credibility.

To Volker, the policy adopted by the FOMC “rests on a simple premise, documented by centuries of experience, that the inflation process is ultimately related to excessive growth in money and credit.”

In simple English, inflation resulted from printing too much money.

Volcker’s challenge placed inflation as the FOMC’s top priority. He also brought to the fore of policy discussions the ideas developed during the previous 12 years—since Friedman’s address to the 1967 AEA meetings—on the importance of inflation expectations and the question of credibility raised by Kydland and Prescott on the part of the monetary authority.
Volcker’s view was a near-complete reversal of Fed doctrine under Chairman Burns. And Volcker rightfully was paid homage as an inflation-killer.

But after the initial early Volckerian battles against inflation were fought (and won), the data show something else emerging: The Fed did not target inflation per se, but rather effectively targeted a steady course of nominal GDP growth (here called aggregate demand growth), even if such a target was never expressed.

Thus, we argue, the important and key difference between the Burns and Volcker approaches is not the change in the Fed’s responsiveness to inflation (as argued by Taylor and Bernanke), but rather the changed responsiveness to aggregate demand or nominal income growth.

A collateral effect of the change in “doctrine” shows up in the reduction and stabilization of inflation and decreased volatility in real output, as shown in Chart 5.1 above.

Indeed, all during the Great Moderation the famously opaque Greenspan and the FOMC never explicitly targeted anything—inflation or nominal income (also called aggregate demand) growth—but effectually it targeted or promoted nominal AD along a 5.5% growth path.

Note that nominal demand growth is the sum of growth in prices ($p$)—inflation—and growth in real output ($y$). The average growth rate of real output has hovered around 3.2% since 1960, and from the start of the Great Moderation inflation has been on average a little above 2%, resulting in the 5.5 percent annual rise in nominal GDP, which may be something of a “sweet spot.”

Since long run real output growth is determined by real factors—productivity and labor force growth and the “institutional” backdrop—targeting nominal demand growth along a 5.5% growth path say, is equivalent to targeting inflation at close to 2%.

As seen in Chart 5.2 nominal spending or aggregate demand growth during the Great Moderation is not devoid of fluctuations, even ignoring the very large drop in nominal spending growth after mid-2008.

Chart 5.3 illustrates the NGDP Gap that is, the difference between the actual spending level and the trend level, after mid-1991. (The data are the monthly estimate of NGDP provided by the consulting firm Macroeconomic Advisors).
Notice that the Fed was successful, albeit at the cost a short recession in 1990-91, in bringing inflation down from Volcker’s 4% to around 2%. Then to mid-1998 NGDP grows very close to trend.

Suddenly, after mid-1998 nominal spending takes off. Why?

According to one of the pioneers of NGDP targeting, the late Cato scholar and Reagan era Council of Economic Advisers member William Niskanen, the demand rule (his name for NGDP Targeting) worked remarkably well for six years subject to various shocks. And it ended when the Federal Reserve chose to respond to several other shocks, as Niskanen wrote in A Test of the Demand Rule, in the Fall 2001 issue of the Cato Journal.

Herein lays a problem for advocates of inflation targeting. The occurrence of real shocks, such as productivity or oil price shocks, makes both interest rate and inflation targeting more unstable, leading to more volatile real GDP movements due to the fact that real shocks cause monetary policy to be procyclical.

In 1995 productivity growth picked up—a positive supply shock—meaning inflation retreated and real output growth rose. Inflation (PCE-Core) dropped to a little more than 1% and real output growth rose to 5%.

In the real world, this is good news.

But if the Federal Reserve has inflation-targeting rules, and inflation falls below target, then the central bank must adopt an expansionary monetary policy to take inflation back up to the target. The Fed went ahead and reduced the FF rate (that is, adopted a more expansionary monetary policy).

There were also other worrisome events that influenced the Fed’s behavior: In mid-1998 the Russian crisis erupted, followed by the heavily leveraged Long Term Capital Management (a huge hedge fund) meltdown that was viewed as posing systemic risk.

Unfortunately, by over-reacting to real shocks, such as the productivity shock, the Fed imparted instability to the system. The Fed could have maintained more stability by noting that nominal GDP was on a steady course.
The Fed over-stimulated in the late 1990s, than had to correct. By mid-2001 nominal spending had returned down to trend, but then nominal spending continued to fall despite the continued drop in the FF rate.

Following an inflation rule, the Fed was ever behind the curve, tightening or loosening after the fact, so to speak.

An analysis of the 2001 to 2006 period is important because many economists blame the Great Recession that began after mid-2008 on a credit boom instigated by the Fed in the years 2002-2005.

During that period the Fed is often accused of keeping the FF rate “too low for too long,” leading to a house price bubble and associated excessive credit creation in the securitized (especially mortgage) markets.

Charts 5.4 and 5.5 zoom on this period. They show the spending gap relative to the “Great Moderation” level trend growth path of around 5.5% per year and the actual growth rate of spending.

By mid-2001 nominal spending falls below trend. Since the nominal spending growth rate remained below the 5.5% trend growth, nominal spending distanced itself from the trend path.
At the same time, inflation was falling and remained below 2%—the informal target, though never quite acknowledged by Fed.

Chart 5.7 shows the moves in the FF Target rate during this period.
Note that despite the falling and eventually low FF rate, spending growth fell and remained subdued. As chart 5.4 shows, the level of spending was distancing itself from the trend level.

Chart 5.8 shows that real output growth was measly and the unemployment was on the rise.

In late 2002 things came to a head. Greenspan made the first move in a speech on November 13:

*There is an implication that the notion (of fighting deflation risks) that we are restricted solely to overnight funds. But our history as an institution indicates that there have been innumerable occasions when we have moved out from short-term assets and invested in long term Treasuries. We do have the capability, if required to do so, to go well beyond activities related to short-term rates.*

This was followed by Bernanke’s famous Deflation: Making Sure “It” Doesn’t Happen Here speech, just one week later.

Bernanke asked, *So what then might the Fed do if its target interest rate, the federal funds rate, fell to zero? One answer: One approach, similar to an action taken in the past couple of years by the Bank of Japan, would be for the Fed to commit to holding the overnight rate at zero for some specified period. Another: A more direct method, which I personally prefer, would be for the Fed to begin announcing explicit ceilings for yields on longer maturity Treasury debt.*
But Bernanke’s declarations of what could be done lacked market power. Unemployment kept rising, nominal spending growth didn’t get traction and real growth remained weak. The FF rate, which had been brought down to the unheard of level of 1.25%, remained at that scant level all the way to June 2003.

In the FOMC meeting of May 2003, given that unemployment remained elevated and inflation low and even falling somewhat, there was an important innovation in the language of the post-meeting statement:

> Recent readings on production and employment, though mostly reflecting decisions made before the conclusion of hostilities, have proven disappointing. However, the ebbing of geopolitical tensions has rolled back oil prices, bolstered consumer confidence, and strengthened debt and equity markets. These developments, along with the accommodative stance of monetary policy and ongoing growth in productivity, should foster an improving economic climate over time.

Although the timing and extent of that improvement remain uncertain, the Committee perceives that over the next few quarters the upside and downside risks to the attainment of sustainable growth are roughly equal. In contrast, over the same period, the probability of an unwelcome substantial fall in inflation, though minor, exceeds that of a pickup in inflation from its already low level. The Committee believes that, taken together, the balance of risks to achieving its goals is weighted toward weakness over the foreseeable future.

In the next FOMC meeting in June, unknown at the time to the general public, Vincent Rinehart (Director of the Board’s Division of Monetary Affairs) made a presentation entitled *Conducting Monetary Policy at Very Low Short-Term Interest Rates.* The post-meeting statement read:

> The Committee perceives that the upside and downside risks to the attainment of sustainable growth for the next few quarters are roughly equal. In contrast, the probability, though minor, of an unwelcome substantial fall in inflation exceeds that of a pickup in inflation from its already low level. On balance, the Committee believes that the latter concern is likely to predominate for the foreseeable future.

This signaled that a change in policy was likely in the near future.

That came about in the next FOMC meeting, in August 2003. The post-meeting statement said:

> The Committee perceives that the upside and downside risks to the attainment of sustainable growth for the next few quarters are roughly equal. In contrast, the probability, though minor, of an unwelcome fall in inflation exceeds that of a rise in inflation from its already low level. The Committee judges that, on balance, the risk of inflation becoming undesirably low is likely to be the predominant concern for the foreseeable future. In these circumstances, the Committee believes that policy accommodation can be maintained for a considerable period.

Interestingly, at the top of Reinhart’s alternatives for monetary policy at low rates was this one:

> Encouraging investors to expect short rates to be lower in the future than they currently anticipate.
Although the FF rate didn’t change, remaining at 1%, the new words, more recently labeled *forward guidance*, arguably did the trick.

As can be observed in charts 5.5 and 5.8, spending growth and real output growth rose markedly and unemployment trended down.

Other indicators of the markets appreciation of the stance of monetary policy reacted accordingly. In chart 5.9 we show the behavior of the stock market (S&P 500) and of the yield on the 10 year Treasury Bond. The “pessimistic” decline in those indicators prior to the Fed’s policy change was immediately reversed. The stock market, being more forward looking, reacted earlier.

![Chart 5.9](chart.png)

Chart 5.10 illustrates the behavior of 5 year expected inflation (from the Cleveland Fed). Any concern for an *unwelcome additional fall in inflation* was immediately forgotten!

![Chart 5.10](chart.png)

The *for a considerable period* language remained a feature of the statements following the next FOMC meetings in September, October and December 2003.

After the January 2004 meeting a new signal was provided in the statement:

*The Committee perceives that the upside and downside risks to the attainment of sustainable growth for the next few quarters are roughly equal. The probability of an unwelcome fall in inflation has diminished in recent months and now appears almost equal to*
that of a rise in inflation. With inflation quite low and resource use slack, the Committee believes that it can be patient in removing its policy accommodation.

Indicating that the moment that rates would start rising had been brought forward.

The language remained the same in the March 2004 FOMC meeting. But after the May 2004 meeting another signal was given:

*The Committee perceives the upside and downside risks to the attainment of sustainable growth for the next few quarters are roughly equal. Similarly, the risks to the goal of price stability have moved into balance. At this juncture, with inflation low and resource use slack, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured.*

The FOMC in effect was saying: Time’s up, but stay calm because the FF rate is not going to jump up!

On cue, the rate was raised by 25 basis points (one-quarter of one percent) in the June 2004 meeting and the words *at a pace that is likely to be measured* remained. And it was so all the way to Greenspan’s farewell FOMC meeting on January 31, 2006, when the FF rate was raised another 25 basis points to 4.5%.

Bernanke took over and kept the “promise” with the FF rate being raised in 25 basis points increments in the March, May and June 2006 meetings when the FF rate reached 5.25%. It remained at that level for more than 12 months, until August 2007.

By mid-2006, nominal spending had climbed back to trend. For it to do so, NGDP growth had to rise above the trend growth level of around 5.5% for a time (see chart 5.5 above). Unemployment had come down significantly and real output growth had stabilized at a normal level. Inflation remained contained and inflation expectations stabilized. It should be remembered, that in this period of 2000 through 2007, many pundits noted real growth was lackluster (compared to the dot.com 1990s) and inflation very tame.

And therein is the irony: By the numbers, the Federal Reserve Board applied reasonable monetary policy in the years following June 2003, as indicated by the charts above. Yet the Fed has been widely dubbed as being “too easy” in this period.

It appears, contrary to the views of many, that central banking isn’t really about interest rates. After all, in 2001-03 rates had been brought to the ground, but not much had happened. They were raised after that, when the Fed was criticized as “too easy.” Moreover, Volcker is lionized as an inflation fighter (inflation down to 4%-5% in his era), while Greenspan is “too easy” (inflation often around 2% in his time).

Consistent with our narrative, it may be better to view monetary policy as promises made, and kept. This last is also consistent with the requirement that the central bank have credibility. (And maybe good PR.) And a central bank must not only have credibility as an inflation-fighter, but as an institution willing to wage sustained war for overall macroeconomic stability, when that is necessary as well.

This may help us understand why things went so wrong in 2008.

While in 2003 the Fed managed to convince agents that monetary policy would not allow inflation to turn into deflation, it could not, in 2008, convince agents that it would keep nominal spending at an adequate level—especially if it was hamstrung by 2% implicit inflation ceiling. Implicit, but perceived as a hard ceiling.
Paul Krugman has an interesting take on this topic, in a post entitled, *Catastrophic Credibility*:

A little while ago Ben Bernanke responded to suggestions that the Fed needed to do more—in particular, that it should raise the inflation target—by insisting that this would undermine the institution’s “hard-won credibility.” May I say that what recent events in Europe, and to some extent in the US, really suggest is that central banks have too much credibility? Or more accurately, their credibility as inflation-haters is very clear, while their willingness to tolerate even as much inflation as they say they want, let alone take some risks with inflation to rescue the real economy, is very much in doubt.
Appendix: Bernanke – the man who ignores his own advice

Bernanke’s now (in)famous 1999 paper on Japanese monetary policy (Japanese Monetary Policy – A case of self-induced paralysis?) was a blueprint for what he should but did not do when NGDP crashed after mid-2008. But there’s more.

In 1997 Bernanke (with Mark Gertler) wrote “Systematic Monetary Policy and the Effects of Oil Price Shocks”. Their conclusion:

Substantively, our results suggest that an important part of the effects of oil price shocks on the economy result not from the change in oil prices per se, but from the resulting tightening of monetary policy. This finding may help explain the apparently large effects of oil price changes found by James Hamilton (1983) and many others.

If only Bernanke had heeded his own advice and had not tightened policy...

But the oil-monetary policy nexus is not ‘common knowledge’, helping to explain why Bernanke might have forgotten about his result. In 2009, no less than Jim Hamilton, an ‘oil shock specialist’ wrote:

Suppose you knew in 2007:Q3 what GDP had been doing up through that date and could know in advance what was about to happen to the price of oil. What path would you have then predicted the economy to follow for 2007:Q4 through 2008:Q4?

The answer is given in the diagram below. The green dotted line is the forecast if we ignored the information about oil prices, while the red dashed line is the forecast conditional on the huge run-up in oil prices that subsequently occurred. The black line is the actual observed path for real GDP. Somewhat astonishingly, that model would have predicted the course of GDP over 2008 pretty accurately and would attribute a substantial fraction of the significant drop in 2008:Q4 real GDP to the oil price increases.

And concludes:

Eventually, the declines in income and house prices set mortgage delinquency rates beyond a threshold at which the overall solvency of the financial system itself came to be questioned, and the modest recession of 2007:Q4-2008:Q3 turned into a ferocious downturn in 2008:Q4. Whether we would have avoided those events had the economy not gone into recession, or instead would have merely postponed them, is a matter of conjecture. Regardless
of how we answer that question, the evidence to me is persuasive that, had there been no oil shock, we would have described the U.S. economy in 2007:Q4-2008:Q3 as growing slowly, but not in a recession.

So, was it the oil shock or monetary policy ‘enhancing’ the oil shock that was responsible for the “greatness” of the recession?

Two back to back moments allow us to test the hypothesis. Chart 5.12 shows oil prices from 2004 to 2006 (Jan 2004=1) and from 2007 to 2008 (Jan 2007=1). If oil is determinant, as argued by Hamilton, the recession should have happened much sooner.

How did monetary policy differ in the two periods?

From a standard dynamic Aggregate Supply/Aggregate Demand (AS/AD) model (Chart 5.13) we know that following a negative supply shock (rise in oil price), real output growth falls and inflation rises. If nominal spending growth (NGDP growth) stays constant we go to point 2 in the chart below. Nevertheless, if monetary policy is contractionary and tries to curb the rise in inflation by restraining NGDP (AD) growth, inflation will fall somewhat but real output growth will fall further, taking the economy to point 3.

The real world counterpart is observed in chart 5.14, which describes nominal and real output growth in the two periods.
While under Greenspan NGDP kept ‘chugging’ along at a ‘constant’ rate, under Bernanke, with the FOMC ‘terribly worried’ about the possible inflationary consequences of the oil price rise, monetary policy soon turned contractionary and NGDP growth quickly began to fall. (Corroborating evidence: In the transcripts of the June 08 FOMC meeting we read that participants felt that the next move in rates would be up!).

And what about inflation. I use the core PCE variety that ‘strips-out’ the oil price effect.

By not abiding to his own advice, Bernanke allowed monetary policy to contract, which concomitant with rising oil prices and falling home prices was the coup de grace for both the real and financial sides of the economy.

We must mention that in one single point Bernanke acted true to form and in accordance with the results of his research. His unwavering belief in the credit channel of the transmission of monetary policy were behind his successful efforts in propping-up the financial sector. Pity this research effort was the one that produced the least convincing results!
Chapter 6: The ‘Great Recession’ (or the ‘Bernanke Little Depression’) – Why Did It Happen?

This is “G” number four in our saga, following the Golden Age which reached its apex in the first half of the 1960s, the Great Inflation in the 1970s and the Great Moderation from the second half of the 1980s to 2007.

The emphasis on fighting unemployment and obtaining “optimal” economic output of the 1960s planted the seeds of the Great Inflation, while the ‘change in Fed doctrine’ under the chairmanship of Paul Volcker directed the economy towards the Great Moderation, which was maintained under the leadership of Greenspan by the *de facto* targeting of nominal spending along a level trend path.

Today, the key question is, “What took the U.S. economy from the Great Moderation to the Great Recession?”

The present crisis has been labeled a “financial crisis,” the conventional wisdom being that its roots can be found in the housing boom and subsequent bust which, in its turn, was the result of lax monetary policy, with the Fed having kept interest rates “too low for too long” during 2002-2005.

To us, and to market monetarists in general, the moniker “Great” earned by this recession was the direct result of the Fed letting nominal spending take a dive after mid-2008. The Fed should have been more expansionary from 2007 on, and forthrightly revealed plans and targets for sustained stimulus to beat back the worst economic downturn since the Great depression.

But first we deal with the housing boom. This can be divided in two parts: “Overbuilding” and the “House price bubble”.

There is an idea that a building “frenzy” in the 1990s and 2000s contributed to the bust, and housing starts are illustrated in Chart 6.1. The somewhat cyclical pattern of house starts is broken in 1990, after which starts increase almost continuously for the next fifteen years to 2005. So was overbuilding going on? Probably not.

As Chart 6.2 indicates, starts were roughly consistent with the rise in the rate of population growth, which rose from 1% in the 1965 to 1989 period to 1.2% for the next 10 years.
years. A substantial portion of this rise was due to immigration, with the number of immigrants doubling from an average of 500,000 prior to 1990 to 1 million thereafter. There may even be more illegal immigrants than recorded.

Chart 3 shows that the house stock to population ratio reached a ‘steady state’ in the late 1980s. It appears, therefore, that the rising trend in house starts was just sufficient to maintain the house stock-population ratio constant.

Interestingly, note from Chart 6.1 that in 2000 and 2001 house starts dropped somewhat, bringing the house stock-population ratio below the “steady-state” level. That partly explains the increased number of house starts in 2002—2005 period.

But as Chart 6.3 shows that was just enough to bring the house stock to population ratio back to the steady state level.

Therefore, in terms of housing starts, there is little concrete evidence to suggest an overbuilding surge from 1991 through 2005. (And that, without taking into account the increasing number of Americans buying “second homes”).

What about the construction bust that followed?
Once you see that the housing stock to population ratio has remained close to the steady state level, the construction bust reflects mostly the sharp drop in United States population growth, which has averaged just 0.89% since 2005 (compared to 1.2% in the preceding years).

Also, largely because of the deep economic recession and slow recovery in the 2009—2011 period, the increase in the number of households fell considerably. While household formation averaged 1.1 million in 2006—2008, it dropped to just 338,000 in 2009—2011.

In 2010, there was an absolute decrease of 82,000 in household formation.

So housing construction fell as demand was actually falling. The picture emerges of an industry that built houses largely to fulfill demand, but then demand plummeted. There was not chronic or long-term overbuilding.

**House Prices**

If no overbuilding, what about house prices?

The set of Charts – 6.4-6.6 - below graph the Case-Shiller Home Price Index (HPI) for six different cities in different regions and states of the country.

Note how much variation there is in house price behavior in different places.

The shaded area in each chart represents the period during which interest rates have been deemed (by some) as “too low for too long,” and that Greenspan was overly accommodative.

But contrary to the conventional wisdom, house prices do not respond uniformly to this period of supposed overstimulation. The “too low for too long” argument has very limited explanatory power for house price behavior.
The set of Charts – 6.7-6.8 - below show the behavior of house prices for the states in which the cities in the above set are located. These are quarterly house prices from the Federal Housing Finance Agency (FHFA). Again, prices behave very differently in the different states. In addition, we compare prices in Texas and Nevada and provide an explanation for the differences in price behavior that transpire.

Unlike California and Massachusetts, Nevada, like Texas, did not have aggressive land development and zoning law restrictions.
But suddenly, after 2002, prices in Las Vegas (and in Nevada in general) soar. That may
be signaling that speculative activity increased (maybe they took their casinos “to the street”).
On the other hand, beginning in the early 2000s, environmentalists managed to obtain
restrictive legislation on land development in Nevada. This would have the effect of restricting
house (land) supply and thus raising house prices.

Data on house permits (single units) may give some indication of what drove prices to
soar in Nevada. In Chart 6.9 observe that in Nevada permits increased significantly after 2002.

Would this be related to expectations of increasing land development restrictions over
time? The fact is that permit behavior in other areas did not change during the period. The
chart illustrates the argument showing permit behavior for Nevada and Texas.

![Chart 6.9 Building Permits - Nevada](image)

![Building Permits - Texas](image)

The “housing bubble” is an odd one. In some places house prices increased strongly
and fell relatively little, such as in Colorado and Massachusetts. In others, such as California,
prices rose quite a bit and also fell hard. In Texas prices increased steadily but did not reverse.

In most places prices peaked in the first half of 2006, more than two years before the
Great Recession. By the time NGDP tanked in the second half of 2008, house prices and house
construction had almost finished their downward moves. (Again, Nevada house prices being an
exception).

Now, as Chart 6.10 indicates, house prices began to accelerate after 1997. But why did
house prices rise steadily in those years, long before critics contend interest rates became “too
low for too long”?

![Chart 6.10 Case-Shiller National HPI](image)

In other words, whose was “the hand that rocked the cradle”?
In the old English crime novels, the butler was always the prime suspect. In the present crisis, the “butler” is deregulation, assisted by other sleazy characters such as “cheap money”, “Asian savings glut”, “excessive liberalism and laissez-faire” and, according to some, “wild greed” manifested in rampant speculative activities that created the house price bubble.

The list of suspects is comprised of vague and intangible characters (although many have tried to go behind “cheap money” to point the finger at Greenspan). Hard to convict any of these suspects on the evidence given.

Perhaps the best exposition for the collection of suspects listed above was given by Russell Roberts from George Mason University, in a The Wall Street Journal op-ed on October 3, 2008.

As a premise to Roberts’ arguments, we propose that credit is a “derivative,” in this case flowing from the increase in the demand for houses. If so, an evaluation of the causes of the house price bubble that is unlikely to be associated with wild greed or excessive liberalism and laissez-faire, should direct attention to its origin: the residential real estate market.

Furthermore, given that the residential market has a high “social” content, we cannot refrain from considering the role played by the government and if we are able to put government at the base of the problem, the cause of the crisis cannot be excessive liberalism, quite the contrary!

Roberts’s main points are:

- Beginning in 1992, Congress pushed Fannie Mae and Freddie Mac (government sponsored enterprises that buy residential mortgages) to increase their purchases of mortgages going to low- and moderate-income borrowers.

- For 1996, the federal Housing and Urban Development Department (HUD) gave Fannie Mae and Freddie Mac an explicit target: 42% of their mortgage financing had to go to borrowers with income below the median in their area. The target increased to 50% in 2000, and then 52% in 2005.

- For 1996, HUD required that 12% of all mortgage purchases by Fannie and Freddie be “special affordable” loans, typically to borrowers with income less than 60% of their area’s median income. That number was increased to 20% in 2000, and then 22% in 2005.

- Between 2000 and 2005, Fannie and Freddie met those goals every year, acquiring an thus effectively funding hundreds of billions of dollars worth of loans, including subprime and adjustable-rate loans, and made to borrowers who bought houses with less than 10% down.

- Fannie and Freddie also purchased hundreds of billions of subprime securities for their own portfolios to make money and to help satisfy HUD affordable housing goals, making the two giant agencies important contributors to the demand for subprime securities.

- The Community Reinvestment Act (CRA) did the same thing with traditional banks. CRA was “strengthened” in 1995, causing an increase of 80% in the number of bank loans going to low-and moderate-income families.
• Fannie and Freddie were part of the CRA story, too. In 1997, Bear Sterns did the first securitization of CRA loans, a $384 million offering guaranteed by Freddie Mac. Over the next 10 months, Bear Sterns issued $1.9 billion of CRA mortgages backed by Fannie and Freddie. Between 2000 and 2002 Fannie Mae securitized $394 billion in CRA loans.

• While Fannie and Freddie and the CRA were pushing up the demand for low-priced property, the Taxpayer Relief Act of 1997 increased the demand for higher valued property by expanding the availability and size of the capital-gains exclusion to $500,000 from $125,000. It also made it easier to exclude capital gains from rental property, further pushing up the demand for housing.

• Between 1997 and 2005 the average price of a house in the United States more than doubled. It wasn’t simply a speculative bubble. Much of the rise in housing prices was the result of public policies that increased the demand for housing.

These points are consistent with the widely diverse behavior of house prices in different regions, with the price diversity being explained by the different supply conditions prevailing in each city, state or region.

California and Texas are the two most populous states in the nation. They can serve as “natural laboratory” in compiling evidence on the presence of the “hand of the government” behind the house price bubble.

As Roberts’ points above suggest, the home ownership incentives for the lower income population were the driving force in the rise in demand for and prices of houses. Between 1994 and 2006, overall homeownership climbed from 64% to 70%. Among Hispanics it went up by 20.2%, for Asians the increase was 17.2% and for African Americans 14%. Among non-Hispanic whites the increase was 8.2%.

California and Texas have 46% of the Hispanic/Latino population of the United States, and 39% of the Asian population in the country, and 15% of the national African-American population. So we would expect that house prices in these two states would come under pressure. But as Chart 6.11 shows, the behavior of house prices in the two states is markedly different.

Chart 6.11

A few years ago Harvard’s Ed Glaeser argued that zoning laws were important in constraining house supply and that these laws were more restrictive in the “West” than in the
“South”. This helps to explain a significant part of the difference in house price behavior. Apparently in the Pacific, “affordable” housing was not so affordable after all!

The new “rules of the game” lifted the residential real estate market in California, which had been heavily and negatively affected by the S&L crisis of the late 1980s, experiencing a fall in prices. Prices in Texas also increased somewhat faster after 1997 given the same house demand “incentives”. We believe that the striking difference in the house price behavior in the two states can only be explained by the very distinct supply conditions observed.

Due to the arguments above we take issue with views such as this one from Vernon Smith and Steven Gjerstad (2009), which is representative of the conventional wisdom that has been built around the crisis:

*The crash of 2008 was caused by the bursting of a housing bubble of unusual size that was fed by a massive expansion of mortgage credit—facilitated, in turn, by the longest sustained expansionary monetary policy of the past half-century.*

In the Great Moderation chapter we argued against the view that monetary policy was expansionary in the 2002—2005 period.

As stated, Market Monetarists eschew noting interest rates when trying to determine if monetary policy is constraining or stimulative, and look instead at nominal GDP growth compared to the long-term level trend. Following the 2001 recession NGDP had dropped significantly below the “Great Moderation” trend.

We are not saying that mortgage credit expansion did not have Ponzi-esque features. One characteristic of Ponzi schemes is that the “wheels have to keep turning or the scheme flops”.

Chart 6.12 illustrates.

When Greenspan passed the Fed baton to Bernanke in early 2006, NGDP was back on the Great Moderation trend level path, and the NGDP Gap was zero, meaning the economy was running close to a natural full bore, though without generating inflationary pressures. Bernanke soon let it become somewhat negative.

While psychology is not our field, it may be that Bernanke felt a need to prove his inflation-fighting mettle to the market at the outset of his administration, for personal, institutional and professional reasons. One must concede that it would be a challenge for any brand-new Fed Chairman to immediately initiate bold expansionary moves that would be characterized by many, however unfairly, as reckless and inflationary.
Recent research by Matthias Neuenkirch (2012) - *Establishing a hawkish reputation: Interest rate setting by newly appointed central bank governors* – argues that:

*In their first year or two after taking office, newly appointed monetary policy makers are more likely to act tough on inflation. That’s especially true in countries where an independent central bank has a specific inflation target.*

*In central bank parlance, new officials are more likely to act like “hawks,” policy makers who are relatively more worried about inflation getting out of control. Policy “doves,” meanwhile, are sometimes more concerned about other economic problems, such as unemployment, and can be willing to let prices rise temporarily.*

Let’s see. In his first FOMC (March 2006) meeting as Chairman, Bernanke kept ‘Greenspan’s language’:

*The Committee judges that some further policy firming may be needed to keep the risks to the attainment of both sustainable economic growth and price stability roughly in balance.*

But in his second FOMC meeting (May 2006) there was a ‘hawkish’ change:

*The Committee judges that some further policy firming may yet be needed to address inflation risks but emphasizes that the extent and timing of any such firming will depend importantly on the evolution of the economic outlook as implied by incoming information.*

And the ‘hawkish’ tone increased during 2006, with added worries about ‘elevated’ readings on core inflation and high levels of resource utilization.

This went on throughout 2007. At the October 2007 FOMC meeting worries about the oil price increase was added to the list.

During 2008 there were several dissents, sometimes two in a meeting, favoring an increase in rates. From April 08 to September 08 the FF rate stayed put at 2%.

Whatever motivated Bernanke, we see the results on the national Case-Shiller House Price Index (Chart 5.10) above. Upon Bernanke’s tightening of Fed policy, house prices went flat.

On the HPI Chart we note that house prices peaked in early 2006 and remained mostly flat for the next twelve months, i.e. the “wheel” stopped turning.

As can be expected in Ponzi scheme situations, at that point participants start feeling the heat. In late February 2007, Freddie Mac announced it would not buy the most-risky subprime and mortgage related securities.

A few weeks later New Century Financial, a leading subprime mortgage lender, filed for Chapter 11. The gig was up—no more torrents of money were going to flood into housing. Note in Chart 5.12 above that is exactly when house prices begin to plunge.

And bad news just kept on coming. In the next few months there were bond downgrades, suspension of funds redemption, liquidation of major hedge funds (Bear Sterns) and more mortgage companies bankruptcies (American Mortgage Investment Corp. and Countrywide Financial Corp.). In other words, beginning in early 2007, the financial crisis was in full bloom, and financing for house purchases had been eviscerated,
Somewhat surprisingly, the official start date of the financial crisis is the rather-latesounding August 09, 2007. That is when Bank Paribas halts redemption of three funds, although two months earlier Bear Sterns had taken the same action.

In December 2007, the first of the “liquidity enhancements” was created by the Federal Reserve Board, in this case the TAF, for Treasury Auction Facility. Three months later TAF would be followed by the TSLF (Treasury Security Loan Facility) and the PDFC (Primary Dealer Credit Facility).

But more important from a Market Monetarist perspective, during 2007 and the first half of 2008, NGDP falls steadily below trend—and with grievous attendant results. Chart 6.13 below illustrates with weekly data on the S&P 500 beginning in January 2006. As students of recent financial history know, the U.S. equity market lost about one-half of its value by the end of 2008, a huge evaporation of wealth, with related import for consumer and investor confidence.

There’s always some irony to be discovered. The peak of the S&P over the last 7 years was on October 10, 2007. That is the day the Bush Administration’s Treasury Secretary Henry Paulson announced the HOPE NOW initiative, an alliance of investors, servicers, mortgage market participants, and credit and homeowners’ counselors encouraged by the Treasury Department and the Department of Housing and Urban Development.

Apparently the equities market lost hope at exactly the same moment!

The minutes of the June 2008 FOMC meeting, released on July 16, were more “bad news.” After a lot of discussion on the risks of inflation and inflation expectations taking off, readers learn on page 8 that:

*With increased upside risks to inflation and inflation expectations, members believed that the next change in the stance of policy could well be an increase in the funds rate; indeed, one member thought that policy should be firmed at this meeting.*

Three months after that meeting, the legendary investment house and Wall Street brokerage Lehman Brothers declared bankruptcy.

Yet, monetary policy was not only tight but had been tightening for some months, as indicated by a NGDP gap that had been widening all year. But the Fed was keeping its eyes on sensitive potential inflation, not nominal GDP growth.
Hindsight is perfect; but even at the time Market Monetarists and others were asking the question: Why was the Fed so tight going into a major recession?

The answer: Despite Bernanke’s extensive experience with Japan, on American soil Bernanke and Fed officials constantly referred to the risks of inflation be it from a “run-up” in energy prices or excessively” high levels of resource utilization”, such as low unemployment.

The relevant Charts (6.14-6.15) from the first quarter of 2006 to mid-2008 are displayed:

![Chart 6.14: Oil Price and Unemployment Rate](image)

But, it is too simple to bash Bernanke as a reflexive inflation fighter (although certain institutional impulses at the Federal Reserve Board may have become ossified). A gifted academic and writer, Bernanke not only worried about inflation but mentioned threats of deflation. And, unlike Greenspan, Bernanke believed in more-clear Fed communications of intended policies.

But whatever his true beliefs, Bernanke and the Fed responded in 2008 and succeeding years as if a nonmonetary view of financial crises prevailed; in other words utmost attention was paid to the credit channel of monetary policy.

Unfortunately, the way economic events played out and combined—a financial crisis, commodity and oil price increases, and low unemployment –was a prelude to a Federal Reserve Board assisted disaster.

**Sustaining the System? Yes; The Economy? Not So Much**
In August 2007 the Fed announced it will provide reserves as necessary...to promote trading in the federal funds market at rates close to the FOMC’s target rate of 5.25 percent. In current circumstances, depository institutions may experience unusual funding needs because of dislocations in money and credit markets. As always, the discount window is available as a source of funding.

Perhaps unsurprisingly, and perhaps for valid macroeconomic reasons, the Fed moved to provide liquidity and survival for banks and other financial institutions—after all, the Fed is heavily made up of bankers and their brethren.

But for the general economy the Fed was still geared to holding the line on inflation; the Fed signaled that its predominant concern remains the risk that inflation will fail to moderate as expected.

While the minutes from the June 2008 FOMC meeting are illustrative of the Fed’s mindset, it is interesting to note that from the January 2008 meeting to the August 2008 meeting there was always at least one, and sometimes two, dissenters.

For example, as late as the June and August meetings, with the FF rate at 2%, Dallas Fed president Richard Fischer voted in favor of an increase in the FF rate!

No wonder both NGDP and NGDP expectations were falling. Not only the stock market tanked on those expectations, but also longer term interest rates and inflation expectations. Between mid-2007 and late 2008, for example, the yield on the 10 year Treasury Bond fell by 200 basis points (and continued trending down thereafter).

Charts 6.16 and 6.17 illustrate the recession that began in December 2007 (according to the National Bureau of Economic Research), becoming the “Great Recession” of the years following mid-2008, especially for people seeking work.
A parallel can be made with what went on in the first half of the 1960s.

At that time, the de facto policymakers, the group of Keynesian economists in the Council of Economic Advisors was acutely attuned to the rate of unemployment, which had to be below 4%. As related in earlier chapters, the end result was a rise in inflation, leading to the Great Inflation of the 1970s.

Conversely, in the final years of the last decade, policymakers (including the somewhat Keynesian Bernanke) were all but fixated on keeping inflation below 2%. The end result was an economic crash that took unemployment to 10%, and has yet to fully recover even as 2013 unfolds.

Moral of the story: Policymakers with blinders on are a hazard to the economy’s health.

What is missing, and is the subject of the next section, is a discussion of why the recovery which began in mid-2009 has been so sluggish to the point it doesn’t feel at all like a recovery. That discussion will allow us to compare and contrast monetary vs. fiscal policies, particularly since the economy is at the “zero lower bound,” or the level below which interest rates cannot fall.

The take-away from this discussion is that in the second quarter of 2008 unemployment was still a not-bad 5.3%, and NGDP had not crashed. Financial troubles had flared up in several institutions since early 2007. And by the time Lehman Bros. folded, NGDP had already dropped by about half the final plunge.

A recession was perhaps inevitable given the magnitude of the shocks.

What was NOT inevitable was the recession becoming The Great Recession. The depth and duration of the Great Recession—just as with the length of the Great Moderation—is explained primarily by Fed policy.
The Sluggish Recovery

The Great Recession was a result of a monetary policy focused on restraining headline inflation—even while nominal GDP was retreating, the first time this happened since 1950 and the largest decline since the Great Depression.

The second leg of the present saga focuses on the weak, or sluggish, recovery since mid-2009.

Why do most analysts regard the recovery as sluggish?

Maybe they have in the back of their minds something along Milton Friedman’s “Plucking Model” of economic fluctuations. First proposed in 1963 and then revisited in 1988, the essence of Friedman’s “plucking model” says:

1. The economy might be thought of as a plucked string: The farther you pull it down, the more forcefully it snaps back (rebounds), and
2. That there appears to be no systematic connection between the size of an expansion and the succeeding contraction.

Importantly, description #2 casts serious doubts on those theories that see the source of the Great Depression in the excesses of the prior expansion.

How does the theory hold up?

Chart 6.18 shows RGDP and its growth rate, where the shaded areas denote recessions. We observe that between 1947 and 1984, the larger the RGDP drop in a recession, the stronger the upward bounce back.

There are two notable exceptions (dark circles):

1. The strong rebound from the “weak pluck” that characterizes the 1960-61 recession.
2. The strong rebound following the almost “total absence of pluck” in the 1969-70 recession.

Both cases have, so to speak, “political roots.”
As addressed in earlier chapters, President John F. Kennedy’s inauguration in 1961 brought in the “Nobel Prize” Council of Economic Advisers dedicated to fighting unemployment and optimizing economic output. With inflation (and inflation expectations) tame in the early 1960s, additional stimulus translates quickly into real output growth.

After the 1969-70 recession, President Richard Nixon teamed up with the recently appointed Arthur Burns as Fed Chairman. Nixon was concerned (remembering his 1960 defeat to Kennedy) about getting the economy into an upswing to reduce unemployment. Again, nominal spending soars. Inflation was coming down and just to be on the safe side, a Nixonian wage-and-price freeze was enacted in August 1971. With unemployment and inflation coming down, Nixon clinched the 1972 election.

Note also that following the long and robust expansion of the 1960s, the 1969-70 recession was shallow and brief. The same feature is observed in the recessions following the long expansions of the 1980s and 1990s—in short, the idea that a long “good times” expansion must result in an economic “hangover” is just anthropomorphism of the economy.

After the strong bounce back from the deep 1981-82 recession, the economy enters the Great Moderation, which lasts through 2007. This period was characterized by an almost complete absence of “plucks” and, therefore, of “big bounce backs.” The defining characteristic of the period is the maintenance, for most of the time, of a stable spending growth along a level path.

This comes to an end in 2008, when the Fed allows nominal GDP to tank, to a degree and intensity not seen since the 1938.

The question is: why has there been no vigorous “bounce back” from such a strong “pluck”? In other words, why is the recovery sluggish?

The Market Monetarist view is that this is due to an inadequately expansive monetary policy, and not to the popular notion that “This time it is different,” which argues that recessions due to financial crisis are followed by sluggish recoveries.

In one of his posts, Scott Sumner writes:

In my view this is why monetarism looks so out of touch with reality for many people with feet firmly planted in the real world. They see some “obvious” problem like a housing bust, which really is a problem. It’s capable of reducing RGDP growth by say 1%. Then they see a demand-side recession follow soon after. They see no sign of tight money (recall that rates are low). So they can’t imagine how this mysterious “tight money” could have caused the recession. But as we saw with Australia, if the central bank keeps NGDP growing (at least in terms of two year averages) then RGDP can hold up pretty well, despite a big drop in exports. Australia had the growth slowdown that we and the Europeans should have had, if we’d been following a NGDP level targeting approach.

Given that the financial crisis was international in character, a review of economic performance in relation to whether the relevant central bank kept nominal spending (NGDP) growing may be illuminating.

The panel in Chart 6.19 below considers a sample of six countries. The countries in the left hand column are those that either did not let spending growth contract or, as in the case of Sweden, quickly reversed the mistake. The right column countries allowed nominal spending to contract and have yet not managed to economically recover sufficiently to significantly affect real output growth.
Now, many analysts argue that given interest rates are close to zero, monetary policy is ineffective—a situation known as liquidity trap. In those circumstances, the argument goes; fiscal policy—more government spending—has to come to the rescue.

In the panel above we observed that those countries that kept spending up had both shallower recessions and more robust recoveries. The panel in Chart 6.20 illustrates what happened to government spending as a share of GDP in the same set of countries.
In all countries, the onset of the crisis was followed by a rise in government spending. Observe that the rise in government spending was larger in those countries (US, UK, France) where spending growth was first negative and then only weakly positive.

It’s interesting to observe, for example, that a strong reduction in government spending in Sweden after 2009 did not stop that nation’s real output from rising significantly more than is the case in the UK or the US, where government spending decreased much less.

In Sweden’s case “austerity was expansionary” because monetary policy “made it so”.

Note also that although Poland and Australia did not reverse the increase in the government spending that took place when the global financial crisis hit, that is not what appears to be driving the increase in real output in those countries.

France did not reverse the increase either, but nominal spending in France has also sagged, reflecting the chokehold of the inflation-sensitive European Central Bank.

Notwithstanding the evidence on the importance of monetary policy, it is fiscal policy, in particular the importance of government spending in sustaining the recovery, that gets press coverage and the punditry into action.

In a post from December 2009, at the time of Paul Samuelson’s death, Novel Prize winning economist Paul Krugman wrote on Samuelson, Friedman, and Monetary Policy:
Paul Samuelson was a great economic theorist. But he was also an acute observer of the real world, to such an extent that many of the things he said in his 1948 textbook ring truer than what many, perhaps most economists believed on the eve of the current crisis.

This is especially true with regard to monetary policy. By the 1980s, I think it’s fair to say that the vast majority of economists had been convinced by Milton Friedman’s assertion that aggressive monetary policy could have prevented the Great Depression. Some of us started to have doubts after contemplating Japan’s troubles in the 1990s; but as late as 2002 Ben Bernanke declared, on behalf of the Federal Reserve, “You’re right. We did it. But thanks to you, we won’t do it again.”

Krugman may have been somewhat selective in his observations.

Paul Samuelson, from pages 353-4 of his 1948 textbook:

Today few economists regard Federal Reserve monetary policy as a panacea for controlling the business cycle. Purely monetary factors are considered to be as much symptoms as causes, albeit symptoms with aggravating effects that should not be completely neglected.

But Krugman neglects to show that two decades later, in the 1967 edition of his textbook, Samuelson wrote: monetary policy had an important influence on total spending.

Two decades on, in the 1985 edition of the textbook, Samuelson goes much further: Money is the most powerful and useful tool that macroeconomic policymakers have, and the Fed is the most important factor in making policy.

So by 1985 Samuelson had come to agree, at least on certain monetary issues, with Milton Friedman. Samuelson had traveled a long road from his 1969 Newsweek column in which he implicitly referred to Friedman by saying:

There’s no sight in the world more awful than that of an old-time economist, foam-flecked at the mouth and hell-bent to cure inflation by monetary discipline. God willing, we shan’t soon see his like again.

It seems our present day monetary policy makers have to relearn Friedman’s lessons.
Appendix: “Uncertainty”

That’s a word we’ve been hearing a lot lately. It’s viewed by many as the major “cause” of all ills. In the last paragraph of his “Accounting for the Great Depression” Lee Ohanian, a good representative of this view writes:

**Uncertainty**, in fact, may be a primary reason why the recession deepened and persisted into 2009, well after the worst of the financial crisis. High uncertainty raises the value of delaying decisions in many economic models, which can depress economic activity. Recent and ongoing research on the impact of uncertainty on economic activity suggests that it can indeed induce recessions; in one forthcoming theoretical article, for example, uncertainty about the accuracy of government pronouncements regarding macroeconomic strength can lead households to reduce the labor hours they supply.

But that begs the question: What gave rise to the “uncertainty”? The “uncertainty” is seen as emanating from the panoply of “interventions” by the government to “support” the economy. This portion of Greg Ip’s article for the WAPO is a good summary:

Liberals and conservatives in the United States have long differed on how much the government should meddle in individual markets, whether for energy or health care. But they have largely agreed that the government should have at least some role in smoothing out the ups and downs of the business cycle — what economists call “macroeconomic stabilization,” that is, containing inflation in good times and boosting employment in bad.

But this is the consensus that many Republicans in effect now reject. In their view, the government has no more role meddling in the business cycle than in any other market. “Many of our problems can be traced to a misguided belief by politicians that the American economy is something that can be controlled or micromanaged or influenced positively by government intervention and borrowing,” House Speaker John Boehner (R-Ohio) said in a speech in May 2011. He went on to explain that “for job creators, the ‘promise’ of a large new initiative coming out of Washington is more like a threat. It freezes them. … The rash of ‘stimulus’ legislation passed by Congress in recent years has been one of those obstacles.”

Lee Ohanian writes that:

The 2007-09 U.S. recession differed considerably from earlier post-World War II recessions both in the behavior of key variables like output, consumption, investment and labor as well as in the possible factors that might account for fluctuations observed in these variables.

It sure did differ. But an “X-ray” can easily pinpoint where the “cancer” is located. Charts 6.21 below show the post-World War II growth in aggregate nominal spending (measured here by “final purchases of domestic product”), the rate of inflation (Headline CPI to 1957 and Core CPI thereafter) and the rate of unemployment.

We divide the 63 year history portrayed in five “periods”, each having particular “characteristics” which are briefly described in the pictures. The driving force of the whole process is naturally the growth of aggregate spending. It is likely, therefore, that that’s where we are likely to find the “tumor”. And that’s easily done. For the first time in the post-War history, in 2008 the growth of aggregate spending turned negative, and significantly so!
But what “caused” the tumor? It’s no good prescribing treatments (interventions) when the “doctors” cannot agree on a diagnosis (cause), since the side-effects of inappropriate treatment may well “kill” the patient.

One interesting aspect is that the “tumor” showed up right after the twenty years from 1987 to 2007 that the “economic organism” was the “healthiest” – showing low/declining inflation, declining unemployment and pretty stable nominal and real spending growth – a period that was popularized by Bernanke himself as “Great Moderation”. It appeared that, finally, economists had learned how to do “stabilization policy” or, in an echo of Arthur Okun’s words 45 years earlier, “manage prosperity”. Chart 6.22 illustrates.
The irony is that Bernanke took the helm of the Fed after a stint as Fed Governor and head of the CEA, having been the person that many years before had described what the Fed “should do” once Greenspan was gone!

U.S. monetary policy has been remarkably successful during Alan Greenspan’s 121/2 years as Federal Reserve chairman. But although President Clinton yesterday reappointed the 73-year-old Mr. Greenspan to a new term ending in 2004, the chairman will not be around forever. To ensure that monetary policy stays on track after Mr. Greenspan, the Fed should be thinking through its approach to monetary policy now. The Fed needs an approach that consolidates the gains of the Greenspan years and ensures that those successful policies will continue—even if future Fed chairmen are less skillful or less committed to price stability than Mr. Greenspan has been.

We think the best bet lies in a framework known as inflation targeting, which has been employed with great success in recent years by most of the world’s biggest economies, except for Japan. Inflation targeting is a monetary-policy framework that commits the central bank to a forward-looking pursuit of low inflation—the source of the Fed’s current great performance—but also promotes a more open and accountable policy-making process. More transparency and accountability would help keep the Fed on track, and a more open Fed would be good for financial markets and more consistent with our democratic political system.

Fast forward 10 years.

Bernanke’s October 15, 2010 speech is a “landmark”:

Although the attainment of price stability after a period of higher inflation was a landmark achievement, monetary policymaking in an era of low inflation has not proved to be entirely straightforward. In the 1980s and 1990s, few ever questioned the desired direction for inflation; lower was always better. During those years, the key questions related to tactics: How quickly should inflation be reduced? Should the central bank be proactive or “opportunistic” in reducing inflation? As average inflation levels declined, however, the issues became more complex. The statement of the Federal Open Market Committee (FOMC) following its May 2003 meeting was something of a watershed, in that it noted that, in the Committee’s view, further disinflation would be “unwelcome.” In other words, the risks to price stability had become two-sided: With inflation close to levels consistent with price stability, central banks, for the first time in many decades, had to take seriously the possibility that inflation can be too low as well as too high.
At another point of the speech:

*Overall, my assessment is that the bulk of the increase in unemployment since the recession began is attributable to the sharp contraction in economic activity that occurred in the wake of the financial crisis and the continuing shortfall of aggregate demand since then, rather than to structural factors.*

From these passages we surmise:

1. Bernanke is a die-hard inflation targeter (and symmetrically so)
2. Bernanke puts great weight on the “credit channel” of monetary policy

To him the “financial crisis” (meaning Lehman) started it all (and would have been much worse if the Fed hadn’t come out with all the “cannons” to “save the day...and the banks”).

On Bernanke’s “Creditist views”, in the closing paragraphs of chapter 18 – “The Role of Creditism in the Great Recession” – of his book – Money in a Free Society -, Tim Congdon argues:

*To summarize, the monetary (or monetarist) view of banking policy is in sharp contrast to the credit (or Creditist, to recall Bernanke’s term) view. Contrary to the plethora of misguided academic papers, the monetary view contained – and of course still contains – a clear account of how money affects spending and jobs...*

*The debate about quantitative easing, and the larger debate between creditism and monetarism to which it is related, will rage for years to come. Much will depend on events and personalities, as well as on ideas and journal articles. But there is at least an argument that Bernanke’s creditism was the mistaken theory which, by a remorseless logic of citation, repetition and emulation, spread around the world’s universities, think tanks, finance ministries and central banks and led to the Bedlam of late 2008...*

*The academic prestige attached to the lending-determines-spending doctrine and other credit-based macroeconomic theories is puzzling. [As noted earlier], Bernanke and Gertler include in their 1995 article the observation that comparison of actual credit magnitudes with macroeconomic variables was not a valid test of their theory. One has to wonder why. They claimed that bank lending was determined within the economy and so was “not a primitive force”...Bernanke and Gertler must have known that the relationship between credit flows and other macroeconomic variables were weak or non-existent, casting doubt on their whole approach.*

On the day Bernanke made the speech, Stephanie Flanders of the BBC wrote:

*Ben Bernanke declared war today – not on China, but on the possibility of deflation. He knows that a vicious cycle of slow growth, stagnant or falling prices and high unemployment poses a much greater threat to America’s way of life than China’s silly exchange rate.*

And less than 20 days later, QE2 began.

But that’s the problem. Bernanke does not see the inconsistency of targeting inflation (avoiding deflation) and stabilizing the economy after a monetary error has been made and the previous stability jeopardized, giving way to the “Bernanke Depression”!
For him it was the “financial crisis”. But we, like Robert Hetzel, subscribe to the “monetary disorder” that came about in mid-2008 when Bernanke and the Fed obsessed with “headline inflation” kept monetary policy “tight”. Remember that the FF rate was set at 2% at the April 2008 FOMC meeting and stayed at that level until October!

House prices began to fall in early 2007 at the same time problems with important financial institutions began taking place. The date for the start of the financial crisis was “set” as early August 2007.

The start of the recession was set by the NBER as December 2007. At that moment, unemployment was 4.8%. By the second quarter of 2008 it was still “only” 5.3%, after which it climbed fast to a bit more than 10%.

The panel in Chart 6.23 provides evidence for the “monetary disorder” view of the recession (and worsening of the financial crisis).

Chart 6.23

During 2006-07, despite falling house prices and problems with residential construction employment and financial institutions, monetary policy was “stabilizing”, with money supply growth offsetting the decline in velocity (increase in money demand). The result was that nominal spending, which had returned to its trend level in late 2005 (see Chart 6.22 above) kept growing at its trend rate of around 5%. In 2008 the Fed, obsessed with rising oil and commodity prices, restrained money growth at the same time that velocity was falling fast! The result, as expected, was a steep drop (the steepest since 1938) in aggregate spending. The fast increase in unemployment and worsening of the financial crisis were the almost inevitable consequences.

By December 2008, interest rates were down to “zero” and all the talk was that monetary policy had run out of ammo. Even Bernanke said that fiscal policy had to come to the rescue to help prop up the real economy. The “divisions” and “distortions” only accentuated, helping give rise to the “tea party” movement and the “debt ceiling great debate”.

All in all a very sad and hurtful ending to the “Great Moderation”. And soon we’ll likely have a new expression in the economic lexicon: “downward-sticky unemployment rate”!

But many will argue it’s “structural”.

The “takeaway”: After more than 10 years of papers, conferences and speeches on the topic of “monetary policy in a low inflation environment”, policy makers should have learned that “inflation targeting can be hazardous to the economy’s health”. In 1933 FDR “adopted” a “price level target”. It was of great help, immediately reversing the downward trend in prices and economic activity. Bernanke could do even better by announcing a “spending level target” (NGDP-LT).

Fortunately, more recently it appears that the odds against this happening are falling.
Chapter 7: The International Experience

7.1 Japan: Monetary Purgatory

The feeble, even pathetic economic performance of Japan since 1992 is a monument to rigid central banking, and the folly of fiscal stimulus (national government deficits), especially when married to tight-money inflation-fighting regimes.

Central banks that trade the robust waters of economic growth for the putative secure harbors of price stability will soon have neither: That is the lesson of Japan. The once-robust island nation has suffered from general price deflation in the last 20 years, while property markets have cratered in nominal terms by 80 percent, and the Nikkei stock market index is down 75 percent from late 1980s-early 1990s highs.

The misery does not stop there. Real wages have fallen, along with industrial production (even before the Fukushima troubles). Tight money and strict inflation targeting has brought not stability, not security, nor relative growth. It has brought a deflationary perma-recession. Incredibly, in nominal terms, Japan’s economy has shrunk by almost 5 percent since 1992. Yet there is today a huge bondholding class in Japan that would be injured by inflation, even if accompanied by robust economic growth.

Japan, Inc., once the envy of the world, is a relatively shrinking economy, in danger of becoming a backwater, while dynamism has shifted to mainland China, South Korea and other East Asian hotspots.

Japan provides an extensive, painful demonstration that nominal spending, primarily determined by a central bank’s monetary policy (in this case, the Bank of Japan), is crucial to the macroeconomic outcome. It is also a reminder that no matter how much fiscal stimulus a government provides, if monetary policy does not provide support, there is nothing to be gained and much to lose, in terms of mounting national debts and the creation of gigantic bondholding classes fearful of inflation.

The Big Picture

As seen in Chart 7.1, Japan has managed, on average, a miniscule 0.9 percent real growth since 1990.
The drop in the growth rate in the 1970s and 1980s is not mysterious, nor a result of monetary timidity. The slowing growth rate of Japan in the 1970s and 1980s was a feature observed in almost all advanced and maturing economies, with the United States being a notable exception. In France, for example, growth averaged 5.1% in the 1950s and 1960s, dropping to 2.8% in the 1970s and 1980s. In Germany the equivalent figures are 6.3% and 2.4%, while in the United States the change was much smaller, with growth falling from 3.9% to 3.2%. Additionally, the very high growth rates of a developing nation are rarely duplicated as the nation matures.

It is the miniscule post-1990 growth rate that is inexplicable, except when Japan’s monetary policies are considered.

As a result of this weakening economic performance, Japan is falling behind other nations, including the United States, as illustrated in Chart 7.2.

![Chart 7.2](image)

There are three stages of the Japanese growth process in the post-war era. In stage one, from the 1950s to early 1970s, Japan rapidly “caught up” or narrowed the gap relative to the United States and other developed nations. In stage two Japan maintained parity with the United States, creating a constant gap.

But after 1990s, rigid inflation-fighting policies ushered in Japan’s still-continuing “lost decades,” in which Japanese growth rates fell below even such statist nations as France or Italy, let alone the United States.

The ‘Downsizing’ of Japan

Japan’s economic implosion was almost completely unanticipated. In the 1970s and 1980s—at least in the popular and academic imagination—“Japan Inc.,” was an appellation that evoked reverence, awe and also consternation, particularly among Americans. During that time, most news articles and books spoke of Japan’s “miraculous” growth, its large trade surplus and, more importantly, about the threat this posed to the United States. (Books were even published regarding Japan’s wide scale acquisition of key technologies from United States businesses).

Many observers, especially those armed with partisan blinders, attributed Japan’s stellar growth to collaborative relations between government and business, as opposed to the United States often adversarial model. Some noted that Japan’s extremely strong culture of
low crime rates, high educational standards, and sense of duty helped promote growth. Monetary policy was then out of fashion in macroeconomic circles.

Up until the 1990s, it seemed nothing could hinder Japan. But, as is often the case in life, business and national affairs, there was something that could hinder Japan: Self-inflicted wounds, in this case provided courtesy of Japanese monetary authorities and the Bank of Japan.

The Backdrop

To be fully understood, the Bank of Japan’s asphyxiation of the island economy needs to be placed in historical and institutional context.

The seeds of the Bank of Japan’s errors were planted in 1971, with the end of the Bretton Woods system of fixed exchange rates among major economies, which is also when United States President Richard Nixon closed the “Gold Window.” The United States dollar subsequently depreciated. In early 1973 the Bretton Woods system, which defined the currency exchange architecture among major nations since WWII, was formally abandoned. National currencies could and did float against each other.

For Japan, the new system brought special challenges. Among the industrial economies, Japan was especially vulnerable to fluctuations in the Yen/USD exchange rate for three major reasons:

1) The dominant role of the dollar in Japanese exports and imports
2) The importance of the US as a trading partner
3) The fact that many Asian currencies were linked to the dollar

For these three reasons there is an expression in Japan – Endaya Fukyo – to designate recessions or growth slowdown induced by yen appreciation. (It is interesting to note the variance between Japanese popular and business response to exchange rates, and those of many in the United States, in which calls for a “strong dollar” are commonplace, often made with patriotic overtones.)

But the strong yen was an economic depressant for export-reliant Japan. Economic growth drops in 1971, as the yen appreciates against the dollar and other Asian currencies.

To neutralize the recessionary impact of yen appreciation, Japanese monetary policy turned expansionary in the early-1970s, with money supply growth (M2) ballooning and the Bank of Japan’s (BoJ) call rate being reduced.
Growth picks up again in 1972 and 1973 but inflation also increases, aggravated by the OPEC oil shocks of 1973-4. In 1974 recession hits, while inflation skyrockets to 24%—the modern-day macroeconomic nightmare of “stagflation.” That is the sort of double-digit inflation that gives central bankers sleepless nights, and certainly it is a rate too high—high enough to create a new and seemingly permanent monetary culture in Japan that considers itself a bulwark against inflation.

The 1970s worries about inflation were inflamed by Japan’s worst bout of labor unrest in the post-war era, in a country that prizes harmony. No wonder, Japanese monetary authorities then turned price stability into a nearly singular priority of economic policy. In fact, Japan was the very first country to adopt, albeit implicitly, an inflation-targeting regime.

The new policy worked. For the rest of the decade growth was rising and inflation was brought down. As Shakespeare would say: “All’s well that ends well.” Unfortunately that was not to be.

The “seeds of destruction” in the guise of “price stability” had been planted. First the fear of inflation had been deeply embedded into Japanese monetary authorities, and then inflation-targeting had evidently cured the disease.

The 1980s start off with the “majestic” rise of the dollar. From Japan’s perspective, recalling Endaya Fukyo, that would be good news.

But, unfortunately, United States policymakers and pundits were railing about the Japanese threat, and the chronic large trade deficit the United States had with Japan. Much like we hear today about Chinese “currency manipulation” and threats of trade sanctions against that country, in the early eighties it was all about Japan—and the large trade balance.
was prima facie evidence of an undervalued currency. Quotas, “Voluntary Export Restraints” and other protective measures were either imposed or threatened against Japan.

No wonder the Japanese felt that to allow the yen to depreciate against the dollar was a “no no”—its major trading partner (and national security partner) would be threatened, and perhaps even take retaliatory action.

What evidence do we have for that? Chart 7.6 shows the behavior of the yen and DM against the dollar during the eighties. While the German DM depreciates significantly against the dollar, despite Germany running a significant trade surplus with the US, the Yen doesn’t move much!

![Chart 7.6: Japanese & German Exchange Rates to USD - Index](image)

But note that as soon as the dollar begins to depreciate against all major currencies following the Plaza Accord, the yen appreciates. (The Plaza Accord or Plaza Agreement was an agreement between the governments of France, West Germany, Japan, the United States, and the United Kingdom, to depreciate the U.S. dollar in relation to the Japanese yen and German Deutsche mark by intervening in currency markets. The five governments signed the accord on September 22, 1985 at the Plaza Hotel in New York City. The dollar had appreciated by about 50% against major currencies before the accord). Note also that while the DM took a “round trip”, returning to the initial level, the yen appreciates 40% relative to the 1980 level!

So, in the mid-1980s the policymakers at the Finance Ministry and BoJ had to confront the problem of stimulating the economy. Faced with a steep appreciation of the yen and the resulting drop in growth, the call rate was reduced to the lowest historical level and money growth increased significantly, particularly following the Louvre Accord to reign in dollar depreciation, in which case the BoJ had to intervene buying dollars thus increasing the domestic money supply. Chart 7.7 illustrates.
Asset prices, particularly stock and real estate prices reacted strongly. According to this 1988 quote from an anonymous BoJ member: “Our intention was first to give a boost to stock and real estate prices. With the rise in those markets, export-oriented industries would have the opportunity to adapt to an expansion determined by the domestic market. The wealth effect from the rise in asset prices would increase consumption and then investment. An expansive monetary policy would thus induce an increase in economic growth”.

Chart 7.8 shows what happened to stock prices, which tripled between 1986 and 1989 (real estate prices increased even more).

Partly from ‘misfortune’ and partly from bad monetary policy things began to unravel during 1989. In January of that year the government introduced the consumption tax (CT). Inflation quickly jumps from 1% to 3%.
With that and conscious of the consequences of previous bouts of inflation, the BoJ quickly shelved plans for a domestic-demand driven growth strategy and increased the call rate from 2% to 6%. Money growth is also reduced. The effects show up pretty quickly.

Inflation is brought down and stays down, frequently visiting negative territory. In 1997, following an increase in the ‘CT’ inflation rises briefly. Real growth is permanently reduced, rarely rising above 2% and frequently being close to zero or even negative.

![Inflation and GDP Growth Charts](image)

Most observers, even professional economists and financiers (possibly including policymakers at the BoJ), look at the near zero interest rates and conclude monetary policy is expansionary. But a simple review of Japan’s M2 (a measure of the money supply) reveals that money growth has been quite “tight” since the early 1990s!

![Call Rate and M2 Growth Chart](image)

**Zero Bound**

Of course, the BoJ has also been facing the “zero bound” for longer than any other central bank. Zero bound describes a situation in which interest rates essentially hit zero, meaning that the usual or orthodox method of monetary stimulus—lower interest rates—is no longer possible. There is (not yet anyway) such a thing as negative interest rates. This has been the situation in Japan almost continuously since the 1990s. That is why even the conservative BoJ turned to QE (very timidly) from 2001 through 2006, and again in 2012.

But the Japanese perma-recession cannot simply be attributed to policymaker’s incompetence. As incredible as it may seem, the situation must reflects the BoJ policy objective! As evidence for that view, few economists doubt that a central bank can control nominal spending pretty closely. Furthermore, most would also agree that it is spending that drives the economy (assuming governmental structural impediments are kept at bay). So let’s take a look at how Japanese nominal spending (NGDP) has behaved.
Following the rise in inflation in 1989-90, the BoJ reduced the growth of nominal spending. Following the ‘CT’ induced rise in inflation in 1997 the BoJ – which had just been granted independence—thought it wise to reduce the level of spending. No wonder Japan’s economy has performed so miserably.

At times during this period the BoJ paid lip service to the need for monetary expansion. In 2001, for example, it introduced quantitative easing (QE, or the purchases of assets, usually bonds, by the BoJ), and promised to maintain QE (and rates at zero) until inflation was stably above zero, as expected by most members of the policy committee. By 2006 it deemed the objective had been attained. Japan subsequently slipped back into an economic twilight zone of feeble growth and near-zero interest rates and inflation.

Eventually, even BoJ monetary theologians had to cry “uncle”—but not loudly, just in a murmur. In the first half of 2012 the BoJ set a 0% to 2% inflation “goal.” Note the wording—goal, not target—because the BoJ deems the latter to be “too rigid.” And it has promised to maintain monetary expansion until it “judges that the 1% goal is in sight.” But note that the BoJ emphasizes expectations, not realized inflation. And the whole world knows that concerning inflation the BoJ remains an institution obsessed—so much so that a 1 percent inflation rate is considered excessive, even after 20 years of low growth, recessions and deflation.

To be sure, there are those who ascribe Japan’s faltering decades to structural impediments, banking ossification, or demographics. To the first point, Japan has introduced market reforms in the last 20 years—indeed, modern Japanese novels contain nostalgic references to Japan’s mom-and-pop retail past, a perhaps more-friendly system that has been largely obliterated. Lifetime employment is no longer a given at Japanese companies.

Indeed, there is no evidence that Japan, as a whole, has reduced or increased structural impediments more than other nations, such as Canada, France or the United States, that have easily outperformed Japan in the last 20 years.

Japan’s banks may be unwilling to write down loans, but “faking it” ought to encourage new loans, not restrict them.

To the third point, it is true Japan’s population looks set to age and decline. All advanced nations face the challenge of steady to declining populations (unless immigration is encouraged). Yet, demographically, Japan is also the envy of the world, with its low crime rates, universal education, low healthcare costs, sense of duty and work ethics. Indeed, at this point it may be Japan’s long-term economic decline that is helping to propel birth rates lower.
There is something desperate about the attempts to deny the flop that is Japan’s monetary policy—yet Japan from 1990 to present stands as the best and longest experiment in tight money. And even monetary contraction. The empirical evidence against resolutely tight money is copious.

Meanwhile, due to ill-considered attempts over the years to fiscally revive economic growth, Japan’s national deficits and public debt have exploded. So now the chronic talk in the Japanese Diet is about tax increases. On June 26, 2012 the lower house of the Japanese Diet passed a bill to double the 5% CT to 10%. Three weeks later the bill passed through the upper house so the tax will increase to 8% by April 2014 and to 10% by October 2015.

Indeed, Japan is in a monetary purgatory of soaring national debts and the perceived need to raise taxes—the latter of which would weaken economic growth.

Even more depressing, the BoJ will likely aggressively react to the resulting rise in reported inflation caused by the higher CT, and set Japan into an even lower growth profile.

But the election of Shinzo Abe has likely changed that forecast.

Ironic Footnote

One of the more ironic sidelights in monetary history is the roll-call of American economists who have traveled to Japan, and made proclamations, speeches or even written books about the need of Japan to practice monetary expansion and aggressive quantitative easing. Even more remarkably, the list is weighted towards economists associated with the conservative or right-wing of the profession.

Leading the list is the late, great and iconic Milton Friedman, who visited Japan and in 1998 published “Reviving Japan” under the aegis of Stanford’s University’s Hoover Institution. A seminal piece, it uses the phrase “the monetary kiss of life,’ and calls for the Bank of Japan to print money and buy government bonds, and keep doing so until Japan first sees robust growth and then inflation.

In some regards, Allan Meltzer, went even further than Friedman in his 1999 paper, “A Policy for Japanese Recovery,” when he advocated the BoJ pursue robust monetary expansion and yen devaluation, and publicly target inflation in asset prices, the latter of which would help stabilize banks by bringing underwater properties back up and thus turning bad loans into good. Meltzer ridiculed the idea of tax cuts in light of Japan’s huge deficits.

John Taylor, Stanford scholar and American GOP solon for whom the “Taylor Rule” is named, wrote a paper in 2006 “Lessons from the Recovery from the ‘Lost Decade’ in Japan: The Case of the Great Intervention and Money Injection,” that Japan’s then-QE program was successful, in broadly enthusiastic terms.

Of course, the voluminous works of Ben Bernanke, the GOP-appointed United States Federal Reserve chairman and noted scholar have been widely noted, and he has long been a vociferous and even exasperated proponent of monetary expansion in Japan.

The ironic aspect of this footnote is that in the intervening years, United States right-wing orthodoxy on economic and monetary matters has become increasingly rigid and even dogmatic (perhaps part of the much-noted polarization of political elites in the United States). These same scholars (Friedman excepted, of course, having passed away) have become critics of the Federal Reserve’s QE programs of 2009-12, and speak darkly of the threat of inflation,
despite record-low inflation rates and extremely low anticipated rates of inflation by market participants.

Bernanke has, of course, brought forth two smallish QE programs, the QE1 and QE2, in 2009 and 2010, though curiously, both were described by the Fed as finite in amount and duration—meaning markets knew the stimulus was limited in scale and duration before it even commenced.

On September 13, 2012, the Federal Reserve announced QE3:

*To support a stronger economic recovery and to help ensure that inflation, over time, is at the rate most consistent with its dual mandate, the Committee agreed today to increase policy accommodation by purchasing additional agency mortgage-backed securities at a pace of $40 billion per month.... If the outlook for the labor market does not improve substantially, the Committee will continue its purchases of agency mortgage-backed securities, undertake additional asset purchases, and employ its other policy tools as appropriate until such improvement is achieved in a context of price stability.*

It differs from the earlier versions in that it is open-ended and contingent on the state of the economy, in particular on the two sides of its mandate – maximum employment and price stability.

However, the efficacy of the new and improved version of “quantitative easing” would be far more effective in shaping expectations if it had been tied, not to a real and numerically unspecified unemployment target – later made precise - but instead to a numerically specified NGDP level target.

For some time, pundits and bloggers have pondered Bernanke’s actions at the Fed versus his advice to Japan many times. QE3 qualifies as a step in right direction, one consistent with his stated beliefs. Unfortunately it may end being qualified as a “baby step”, “too little, too late”.
How can we tell if any central bank is practicing good monetary policy?

For some economists, central banks have but one directive, and that is to keep inflation at zero or close to it (setting aside the problems of even accurately measuring inflation).

But as the lost decades in Japan, and recent history in the United States and Europe strongly suggest, the “zero tolerance for inflation” criteria is inadequate. In 2012, inflation is not a serious concern in almost every advanced nation, but the real economy—real output growth and unemployment—is a very serious problem, especially for those who need work and for smaller companies trying to eke out profits. Central bankers may think this situation is tolerable, but citizens and governments should not. (Older economists will remember when any inflation under 5 percent was considered pretty good, such as in the 1980s).

To say the weak economies of 2012 are caused solely by “structural problems” is to leave hanging the question why such economies prospered up until 2007. Indeed, the United States had a superlative run from 1984 to 2007—and then, we are to believe, suddenly structural problems emerged and undermined prosperity? Or five percent of the population overnight decided it no longer wanted to work? This strains credulity.

We reiterate that it is spending that drives the economy, such as people consuming, entrepreneurs and corporations investing, exporters and importers trading—and businesses competing for that spending that drives innovation and employment. All this, preferably while the scope of government is limited, and, of course, structural impediments are kept at minimums.

So a measure of good monetary policy is the observation that spending is growing smoothly, with minimized jolts and sputters. But how is spending measured?

The most encompassing measure is given by the quantity called Nominal Gross Domestic Product, or NGDP, a dollar (or yen, euro etc.) measure of all final purchases made during a period, usually measured in quarters.

A key problem facing economies is that they are frequently buffeted by shocks, or “surprises”. These can originate in nature, like the recent tsunami in Japan; they can be “man made,” like the sudden reduction in the supply of oil in the 1970-80s; or they can result from errors in the conduct of monetary policy, like the sudden and deep fall in nominal spending experienced by the United States, among other countries, in the second half of 2008. This fall in spending was triggered by a decision by the Federal Reserve to tighten monetary policy to fight global commodities inflation, incorrectly perceived as a harbinger of generally higher United States inflation rates (in fact, from 2008 through 2012, the United States has had its lowest rates of inflation in more than a half-century).

Shocks have two stages: the impulse, or impact, and the propagation. Imagine throwing a stone in a lake. There is an initial splash, and then ripples or wavy movements in the water.

Monetary policy cannot avoid the occurrence of shocks. But, at a minimum, good monetary policy should avoid being the source of the shock, and, at best, mitigate or counteract the “ripple” or propagation effect of natural or man-made shocks.
The best way to evaluate monetary policy, like grading exams, is to do it comparatively (grade on a curve). Imagine the group of students with the similar IQs and who only differ in height, weight, and hair and eye color. It’s quite likely the best grades will be awarded to those that studied the material in an intelligent way (and not necessarily to those that studied the most or hardest).

Now, take Australia and New Zealand. For sake of argument, let us assume that they have the same IQ. They are in the same geographic region, they have similar cultures, are both commodity producers, they have the same monetary policy objective—the central banks of both nations target a rate of inflation.

To be sure Australia and New Zealand have different geographies; New Zealand has lots of mountains and Australia has lots of deserts, but we can agree that is irrelevant. They also differ in size, but that is irrelevant also because monetary policy is easily scalable.

It is ever difficult to compare apples to apples in the world of national macroeconomics, but these two nations come as close as we are likely to get. So in the case of Australia and New Zealand we can grade the monetary policy of each based on the economic outcomes such as real output growth, inflation and unemployment in each country following the occurrence of a shock.

The comparative analysis that we undertake is done for two distinct time spans: 1997–99, which contains the Asian Crisis of 1997–98, and then 2006–11, which encompasses the commodity boost-bust-boom within the world financial crisis of 2008–09.

Chart 7.13 gives a broad characterization of both countries, showing the long-run close relationship of their exchange rates against the US dollar and an index of commodity prices. If the lines were not labeled it would be hard to know which is which. The three variables move in sync.

Although hard to distinguish, the interpretation of this process by the Reserve Banks (central banks) of each country was very different in the late 1990s. While the Reserve Bank of New Zealand adhered to a strict Monetary Conditions Indicator (MCI) according to which a depreciation of the NZ$ had an expansionary/inflationary impact (i.e. tantamount to policy easing), the Reserve Bank of Australia was much more pragmatic, trying to interpret the nature of the shock, in this case a negative shock to the terms of trade (the ratio of the country’s
export and import prices) from the Asia crisis which, in practice, tends to be contractionary and deflationary.

Charts 7.14 and 7.15 show the behavior of exchange rates and commodity prices, the monetary policy action described by the policy interest rate and what happened to real output growth and core inflation in both countries in the aftermath of the “Asia shock”. The two bars in the charts indicate the moment in which Thailand went “belly-up”, marking the start of the crisis in mid-1997 and the moment Korea went to the IMF in November 1997.

It seems clear that Australia wins this contest between similar Anglo island nations in the Pacific. But why?

In Chart 7.14 above we see that New Zealand’s Reserve Bank was “tricked” into raising the policy rate by the depreciation of the New Zealand dollar. Australia’s Reserve Bank avoided this misstep. When in mid-1998 New Zealand’s Reserve Bank realized its mistake, the policy rate came down abruptly. But it was too late, the economy had been destabilized—New Zealanders had unnecessarily lost jobs; vulnerable or exposed private investors had been savaged.

Chart 7.16 gives a good summary of the story. While Australia’s Reserve Bank managed to keep nominal spending growing at a relatively stable rate, New Zealand’s Reserve Bank engineered a reduction in nominal spending, which later had to be reversed.
Ten years later, with the experience of the Asian Crisis (and having less reverence for the MCI), New Zealand had become more flexible in its policy decisions. But not yet smart enough to beat Australia at the game.

Chart 7.17 shows the exchange rate-commodity price relationship from 2006 on. Up to mid-2008 the commodity price boom is closely associated with the appreciation of both exchange rates relative to the US dollar, as expected.

Charts 7.18 and 7.19 show that the commodity price boom was responsible for the rise above trend in nominal spending in both countries, more so in Australia. It also indicates that in 1997-98, during the Asia crisis, as we saw above, nominal spending was more stable in Australia than in New Zealand. So, even though policy rates were being raised (Chart 7.20) monetary policy is deemed to have been “easy” during this time.
Chart 7.21 shows that generally, inflation has not been an issue or reason for concern in either country. In Australia the target inflation is 2% to 3%, while in New Zealand it is the slightly more inflation-phobic range of 1% to 3%. The spike in core inflation in Australia just before the eruption of the financial world crisis may reflect the fact that the economy of Australia was very close to “full capacity”—meaning that factories, farms, and the workforce really could not produce much more, and new net demand was met by price rationing. One indication is that at the time unemployment had dropped to 4%, an historic low.
The big difference in outcomes between the two countries shows up in mid-2008 when nominal spending in the US crashed, and the global economy was staggered. As a result, commodity prices tanked, setting off exchange rate declines in Australia and New Zealand dollars (currency traders and others know the two nations are heavy exporters of commodities).

Chart 7.22 shows that while New Zealand’s real output growth took a big hit, turning negative, Australia only experienced a real growth slowdown—far, far less painful for employees and businesses. (If we may beg a digression—it is sometimes wise to recall an earnest economics professor, viewing a chart projected in front of his class in the early 1970s. “See that little downward squiggle on the graph?” he asked. “That represents millions of workers losing their jobs, perhaps coming home to their disgruntled wives and families. It is forsaken vacations, postponed marriages or divorce, educations quitted, homes not bought, teens without braces, cramped living with in-laws, a sense for some of uselessness, and sometimes worse, even in the United States. It is investors losing their stake, and people retiring sans security, it is dreams deferred. That is what that little downward squiggle holds inside of it.” We should never forget the real cost of the little downward squiggles).
Chart 7.23 compares nominal spending in both countries. You could be surprised by the fall in spending in Australia. But look back at Chart 7.21 and you will properly conclude that it mostly reflects the fall in inflation, with real output being only marginally affected.

Good monetary policy in Australia shows up in the period leading to the world financial crisis, when the Reserve Bank of Australia did not go “all out” (or as intensively as New Zealand) to restrain the rise in nominal spending from the commodity boom. So when the crisis came it was well positioned to calibrate the drop in nominal spending so as to keep it close to trend.

Unemployment in Australia went from 4% in early 2008 to 5.9% in mid-2009. In May 2012 it stood at 5%, the same rate as at the beginning of 2006 when the commodity boom was blossoming. In New Zealand the unemployment numbers are 4%, 6.9% and 6.7% for the same period.

Punch line: “Grading on a curve” results in the Reserve Bank of Australia getting an A!

Secondary lesson: Around the world, central banks seem to live in abject fear of runaway inflation—but the threat in modern economies may have shifted from inflation to slow growth and deflation. Certainly that is the case in Japan, and is arguably the case in the United States. The Australian central bank has been a little more growth-oriented than the New Zealand central bank—and performed better.

A world of liberalizing global trade, and freer flow of capital, services, goods and even labor, and the emergence of incredible communications technologies (such as the Internet) may have shifted the playing field against inflation. Add on high savings rates in Asia—and thus relatively high global savings rates and a resulting abundance of capital, and even “capital gluts”—and it may be that there is insistent pressure downward on interest rates, pushing everyone closer to the zero bound.

This brave new world is the one that central banks must today negotiate.
7.3 Swedish Lessons for all

Anders Aslund has written an essay which he titled “A Swedish Lesson for Ed Balls”:

To Brits, Sweden with its tightly regulated social welfare state is often a byword for socialism. But in the last two decades the country has been transformed. Today it offers a flexible and dynamic European model with ever falling public expenditure, lower taxes, economic growth and budget surpluses.

It can easily be generalized as “lessons for all”.

This is interesting because in a recent appearance on “This Week”, Krugman countered Mary Matlin’s assertion that “this is the worst recovery” saying this is what’s to be expected following a “financial crisis recession”. And cites Sweden in the early 1990s.

But let’s take a closer look and compare Sweden and the UK. The first chart shows that in the early 90s spending (NGDP) crashed in both countries. That may have something to do with the blow-up in the real estate market and banks in Sweden, but let’s leave that aside. They never regained the prior trend path of spending, but that’s because that spending path was associated with high inflation – of 8% on average during the 1980s in both countries.

**Chart 7.24**

Now take a look at the real output trend path and actual real output in Chart 7.25. Sweden took a long time reverting to the trend, reaching it in 2007, just before the international crisis erupted. But note that the UK never even tried to get back to the original trend path, remaining on a parallel lower path before shifting down following the crisis. Sweden, on the other hand appears set to regain the original trend level path.
As Aslund notes, Sweden after 1990 went through deep structural reforms, a difficult job after more than two decades of rampant socialist policies. Many of those were supply side reforms, allowing growth to rise so as to get back to the original trend path.

One indication is seen Chart 7.26. While since 1993 government expenditure has been on a downtrend in Sweden, more recently it has gone up significantly in the UK. Despite all the “austerity” talk in the UK, Sweden has been much more “austere”. During the crisis, mostly due to automatic stabilizers, government spending in Sweden went up by 3.2% of GDP. In Britain it went up by a whopping 7%. Since 2009 in Sweden it has dropped back to the initial level, but in Britain it is still more than 5% above. But that hasn’t helped British growth, which has remained well below Sweden’s.
The difference in their relative performance in the present cycle is due to what’s happened to spending growth in both countries. That’s illustrated in the Chart 7.27. Note that both countries remained close to the low inflation spending path to which they had ‘transferred’ after the early 90s adjustment, but while Sweden is well on the way back, Britain is still distancing itself from it!

**Chart 7.27**

![Chart 7.27](image)

Obviously, monetary policy in Sweden has been much better than in Britain. Lars Svensson, Bernanke’s Princeton colleague, is on the Board over there. Maybe he should be invited to cross the Atlantic!
Concluding Thoughts - Thinking the Unthinkable: Quantitative Easing as Conventional Policy Tool

Surging Central Bank Balance Sheets and Central Bank Independence?

It is a chart that trumpets monetary resolve and success—and yet also a chart that suggests that a page is turning in central bank annals, and new constraints and challenges may become, if not the norm, then commonplace.

The chart is of long-term interest rates on sovereign bonds, of some of the major Western economies around the world, from 1991 to present. The yields sink across the years and then the decades, unsteadily yet remorselessly or favorably down, depending upon how the investor is situated.

Of course, in general, lower interest rates are good, signaling less-expensive capital for business expansion, and granting relief to homebuyers and borrowers of all stripes.

But, as Milton Friedman pointed out, low interest rates may be a sign of tight money and that investors expect tight money.

As 2013 unfolds, with capital abundant and interest rates so low, business is not booming in a global economic hothouse. Instead, the word “bust” is more often heard. Japan is in a perma-gloom, Europe is sinking into a quagmire and the United States at best features tepid growth. Only China, with a central bank acquiescent in the face of even 4% inflation, is showing stellar growth among the world’s major economies.

In many regards, the secular decline in interest rates is a tribute to the central bank global war on inflation, a war won long ago in Japan.

The spoils of victory, however—as generals or perhaps more particularly, soldiers, have discovered so many times in so many places before—are not as sweet as thought, and perhaps even are becoming Pyrrhic.

Moreover—again, just as field marshals have discovered before—with victory comes responsibility. Central banks “own” this victory, as it results from their tireless (and even zealous) commitment to extinguishing inflation, or at least bringing it down to microscopic levels.
So now, having won the war, central banks own the territory—they cannot claim it is for others to assume command. Far from it. If central banks at this time abdicate, then the putative advantages of central bank independence are a cruel chimera.

Indeed, just as central banks led the way in beating inflation, so they must now lead the way to prosperity in a global environment of low inflation and widespread “zero bound.”

It will be a challenge for central banks and for central bank culture. Especially as they are independent.

Indeed, students of organizational and bureaucratic behavior might be surprised if central banks can appropriately respond. Long noted has been the tendency of public organizations to ossify—market forces do not compel in central banks’ the flexibility needed to survive found in private companies that serve the private sector. There is no “change or die” ultimatum for public agencies, especially independent central banks. Creative destruction is not a feature of central bank failures.

As with most other public agencies, central banks create legacies, institutional norms, and exalted goals or programs. Not needing to satisfy consumers, investors or even voters, independent public agencies eventually can pursue goals increasingly divergent from the public interest.

Quantitative Easing

Independent central bank insularity is one explanation for the glacial acceptance of sustained quantitative easing by the Federal Reserve Board after the financial collapse of 2008, and the ensuing Great Recession.

The conventional central bank weapon for economic stimulus—lower interest rates—was as useless as a fire-hose against a tsunami after 2008.

As we know from Japan, central banks can go to zero bound for decades, sans meaningful results. Indeed results can be miserable.

If nothing else, if only by default, central banks now advance into recessionary battlefield duties with but one major stimulus weapon, and that is quantitative easing (QE).

At best QE is deployed within a comprehensive package of monetary policy tools that has been dubbed “Market Monetarism,” and, of course, explained in detail earlier in this book.

(To be sure, nearly all economists favor lower taxes and less invasive regulations whenever possible—the much-reviled “structural impediments” that are alleged by some to be holding back global economies today. Yet, in general, developed economies flourished in the two decades leading up to 2008, structural impediments and all.

Moreover, Japan has instituted structural reforms since 1992, by some accounts devastating their mom-and-pop retail segment and wiping out the “employee for life” norm of their nation. The reforms were successful, although often had the unsettling effect of lowering business costs, and thus consequently prices, in an already deflationary environment. Still, robust economic growth did not result; indeed the only sustained growth in Japan was from 2002 to 2007, coincident with their quantitative easing program.

The real point is that without monetary expansion, structural reforms can only accomplish so much. Would that the United States could wipe out its ethanol program, eliminate jobless benefits, cut defense spending, open the borders to immigrants, halt federal
rural subsidies, crush the home mortgage interest tax deduction and then watch the economy boom. Would it? And what is the political feasibility of that happening? If such reforms never happen, then central bank authorities are within their proper province to stand idly by and moralize?

Even with structural reforms, economic good times won’t happen as long as the Federal Reserve is asphyxiating the economy (as the Bank of Japan and European Central Bank have discovered), and those structural reforms are unlikely anyway.

Yet after 2008, the independent Federal Reserve dragged its feet, fretted often about the perils of inflation, resorted to QE only in indecisive temporary spurts, before finally settling on a sustained QE program in 2012—four years after the economy went into a tailspin.

**Perma-QE?**

After five years of QE starting in 2001, Japan’s economy had improved but inflation was still dead. The onset of inflation sparked by monetizing debt didn’t happen. Zero bound remained the rule.

And in the United States, the various rounds of QE also coincided with tepid improvement in the economy, while inflation remained at historic lows.

So far, the use of QE in zero-bound or near zero environments has been almost completely benign, in terms of inflation.

For those obsessed with the U.S. dollar and gold prices, the Fed rounds of QE (the Fed in 2012 had a balance sheet of more than $2 trillion) must be supremely puzzling; gold prices in U.S. dollars cracked almost coincident to the deployment of the Fed’s QE program.

All of which raises questions that still will be regarded as profane by most economists: What if central banks make QE, and monetizing the debt—or at least escalating central bank balance sheets of various securities—a normal course of conduct? What if such actions must be sustained not for five years, but even longer?

The question may irk the orthodox, but if zero bound becomes the norm or commonplace (as it appears to be, based on the direction of interest rates for the last 20 years), then being irked will be the least of our concerns.

**If Perma-QE, How Executed?**

Central banks now face a choice of what kinds of securities to buy in a QE program, after they print money (or in today’s world, “digitize” money into creation).

Some economists favor the buying of only domestic government bonds, while others favor a mix of securities, or even a basket weighted towards riskier securities, or securities tied to housing market such as residential mortgage-backed securities.

Whatever the securities or assets purchased, central banks’ balance sheets will swell, and in the case of the Federal Reserve Board, generate more free cash flow, or profit, than by any other entity in history.

In just two years (2010-11) the U.S. Federal Reserve Board generated profits of $158.6 billion dollars and that by hardly trying. Add on 2009’s $46.1 billion, and you have $204.5 billion in profit in a three year period. This is serious money.
Many thought the Fed’s smallish QE program should be larger and more sustained—indeed, many critics contend Chairman Bernanke seemed to be aiming for the smallest QE program that might just barely nudge the economy out of outright deflation and recession, rather than an aggressive plan aimed at robust growth.

Bernanke’s reasoning and programs remain a mystery to many, so that many assume he is leading by consensus, and thus deferring much to “inflation hawks” within the institution, who have been raising the specter of runaway inflation since the first consideration of Fed QE (and even before that).

But it may also be that Bernanke has just become deeply imbued with the institutional norms of an independent central bank, and the putative glory and resolution of the Fed as a bulwark against inflation.

But if trends to lower global interest rates are secular and sustained, QE is the default option, and it is easy to see that central banks in the future night have hundreds of billions of dollars in profits, and trillions of dollars in assets.

So what is the best disposal or use of such assets for the economy, and what is proper and responsible in democratic societies?

Does “independence” of central banks—an axiom among most economists—make sense in democracies, when so much public cash is at stake? Cash that could alter tax policies? Cash that becomes revenues—a function usually associated with Treasury departments?

When Orthodoxy Becomes Dogma?

That central banks, even in democracies, should be “independent” is one of the most durable and accepted maxims of modern economics. But, upon reflection, and based upon recent performance, there may be reasons to re-examine this axiom. There are several reasons.

1. Central bank independence is undemocratic.
2. Public organizations always need oversight, and accountability. Even with democratic checks, public organizations—never the victims of creative destruction—tend to become devoted to internal goals and standards, not goals and standards the public needs.

Macroeconomic Policy and Democracy

That in democracies the voting public—or its elected representatives—cannot be trusted or permitted to directly control monetary policy seems to have become a norm within the economics profession. The fear is that the public will make bad choices, and possibly select an inflationary or deflationary course, or even mandate a gold standard.

The risks are that the public will leap at the temporary prosperity of monetary expansions (at the expense of longer term inflation warned of by wiser counsel), or fall prey to gold nuts and monetary theocrats.

But the stance that central banks should be independent hardly withstands comparative scrutiny—for example, in democracies, the voting public selects civilian leadership for military agencies (The President of the United States is also the Commander in
Chief).

Certainly the lethal arsenal of the U.S. Defense Department poses more potential threat to prosperity than Federal Reserve Board policy.

Similarly, in most democratic nations, important fiscal and regulatory agencies—that govern farm output, or regulate carcinogens and other toxins—are not thought above the reach of ordinary politics and elections.

That monetary policy is somehow sui generis becomes an even more difficult case to make.

Moreover, as seen recently in Europe, the citizenry may indulge in just anger at macroeconomic policies that upturn their lives, but over which they have little or no influence. How is the public to vote on the monetary policy of the ECB? Can a Greek citizen demand a better monetary policy for his nation?

Are citizens treated as important constituents at the Federal Reserve Board, or the Bank of Japan? If not, why not?

An interesting question: Would the aforesaid monetary authorities have pursued such rigid inflation-fighting stances from 2008 onward had the public been able to vote them out of office? Would the Japanese public choose 20 years of deflation and very slow growth, and could the Bank of Japan monetary figures hold office if they were not independent under the 1997 Bank of Japan Act?

A Forgotten Event

The idea of placing a central bank within a nation’s treasury department today is jarring, almost alien, and even forbidden.

Yet it was not always so. In December of 1984, then-Treasury Secretary Don Regan, of the Reagan Administration, issued a call to place some Fed powers within the Treasury Department. Regan, and the Reagan Administration, were angered that the Federal Reserve, then the province of Chairman Paul Volcker, was following a “tight money” path. The Reagnauts badly wanted growth—indeed, in this same time frame, the Wall Street Journal ran an editorial suggesting Volcker should ease up. Inflation was then running at four percent to five percent. Regan’s suggestions soon sank back into the immutable mire that is institutional Washington, D.C., where the perennial task of reforming federal agencies is ever thwarted. The Federal Reserve remained independent.

Largely forgotten today is that the Fed was a creature of the Treasury through World War II, and up through 1951. In a 1951 Accord, the Fed won a measure of independence, which since has become institutionalized. The accord specifically mentioned that the “monetization” of federal debt should be minimized.

Insularity and Elitism

In the United States, the Federal Reserve has long sought to be opaque, resisting even such obviously democratic minimums as releasing minutes of board meetings in a timely fashion, as if such matters were beyond the purview of the voting public or its elected representatives.

Even today the American public must wait six weeks to find out what board members were contemplating when they met. A recent Fed chairman, Alan Greenspan, actually bragged
about his ability to be incoherent in public (though he followed Market Monetarist principles in effect, with some success).

Citizens the world over know of the complacency or worse that can define any organization that falls outside private-sector market forces. Shorn of the need to satisfy or please paying customers, public organizations often arrange to define success by standards that are easily met, usually in exalted terms.

Central banks, for example, may select a single criterion—such as low or zero inflation—as the goal they should meet, and then they can wage brave war on that front alone, usually accompanied by much pompous pettifogging on the dangers of irresolute leadership on this sole score. History shows that hitting low inflation is a very doable target—no wonder central banks want to be judged only by that score, if they deign to be judged at all.

Other concerns, such as robust economic output or deleveraging of onerous national debts, are shoved outside central bank walls.

It is remarkable that the very people—central bankers—who hold that monetary policy is so vital to robust economic growth should then absolve themselves of any responsibility to assure such growth, and never willingly accept blame for dire economic contractions.

To be sure, there are dangers associated with placing central banks within the scope of elected national governments, and also with monetizing debts through QE. Surely, elected representatives could abuse the power to print money, to reward friends or finance government outlays best done so by taxes.

It can be hoped that adherence to Market Monetarist principles will obviate the need to address shortcomings associated with central bank independence.

But, as it stands, the aforementioned issues remain unaddressed, and the failures of central bank independence are becoming more manifest with each year that passes.