“My view is that improvements in monetary policy, though certainly not the only factor, have probably been an important source of the Great Moderation. In particular, I am not convinced that the decline in macroeconomic volatility of the past two decades was primarily the result of good luck, as some have argued, though I am sure good luck had its part to play as well.”

—Ben Bernanke, Federal Reserve Board Governor (2004)

The past is a foreign country. In a celebrated speech on what economists hubristically called the “great moderation,” Ben Bernanke talked about what now seems a different planet—a world not of financial crisis and long-term economic malaise, but of outstanding stability and superlative monetary policy.¹ This may seem exaggerated. But look at what then-Governor Bernanke (2004) said: “improved monetary policy has likely made an important contribution not only to the reduced volatility of inflation (which is not particularly controversial) but to the reduced volatility of output as well.” This seems quaint.

The economics establishment failed. It failed to understand how the economy worked, at the macroeconomic level, because it failed to understand financial risk, and it failed to understand financial risk because it failed to understand how the economy worked at the macroeconomic level. The work of economists who did understand these sources of fragility was ignored because it did not fit into an imaginary world of rational agents that the professors Pangloss had made up.²

In what follows, I intend to address four questions: Where are we? How did we get here? What are the global implications? What are the implications for emerging economies?
Where Are We?

Sometimes, indeed, I have to pinch myself. Since 2008, the high-income countries have been in a “contained depression.” What are the symptoms? They are the combination of exceptionally aggressive monetary policies with weak economies, high unemployment, and low inflation. The Bank of Japan’s official intervention rate has been close to zero since 1995. The Federal Reserve’s rate has been near zero since October 2008. The Bank of England’s reached half a percent in March 2009. The European Central Bank (ECB), the advanced economies’ most conservative central bank, has been at half a percent since May 2013. But it reached 1 percent four years earlier, then made a ridiculous effort to raise rates in 2011, and was driven back down to 1 percent by December. Nobody but the ECB can imagine its monetary policies are not now too tight. Moreover, beyond nearly free money, these central banks have all engaged in huge expansions of their balance sheets (Chart 1).

Nevertheless, of the six largest high-income economies, only the United States and Germany were larger in the second quarter of 2013 than they had been at their pre-crisis peak. More striking is how far economies had fallen below pre-crisis trends. In the third quarter of 2013, the euro zone economy was 13 percent below its 1995–2007 trend, which was already far from dynamic; the
U.S. economy had fallen 14 percent below its 1980–2007 trend (Chart 2); and the U.K. had fallen 18 percent, again below its 1980–2007 trend (Chart 3).

A principal reason for this contrast between policy and effectiveness also seems clear: The credit machine broke. Measures of broad money have been stagnant and, to the extent that they have not been, that was because of quantitative easing. The evidence supports the view that, in the aftermath of a huge financial crisis, monetary policy is not that effective (Chart 4).

The zero lower bound bites. But willingness to use fiscal stimulus, which is the direct means of lowering excess desired savings, was, alas, limited. Politicians and the public suffered from “sticker shock” when they saw the huge fiscal deficits of 2009 and 2010 and chose austerity instead, leaving the macroeconomic policy burden on the frail shoulders of central banks.

**How Did We Get Here?**

The crisis is, in my view, the result of the interaction of a global savings glut (as suggested by Bernanke as chairman of the Federal Reserve), with a fragile financial system. The link between the two was forged by inflation targeting monetary policy, especially in the United States, but also inside the euro zone. When what some call the “Minsky moment” hit the financial system, the result

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**CHART 2**

**U.S. GDP against Trend to 2007:Q4**

<table>
<thead>
<tr>
<th>Year</th>
<th>US GDP annualized (left scale)</th>
<th>Deviation (right scale)</th>
<th>Trend to 2007:Q4 (left scale)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>4</td>
<td>–10</td>
<td>2.5</td>
<td>0</td>
</tr>
<tr>
<td>1985</td>
<td>8</td>
<td>–5</td>
<td>3.5</td>
<td>–5</td>
</tr>
<tr>
<td>1990</td>
<td>12</td>
<td>–1</td>
<td>4.5</td>
<td>–10</td>
</tr>
<tr>
<td>1995</td>
<td>16</td>
<td>0</td>
<td>5.5</td>
<td>–15</td>
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<tr>
<td>2000</td>
<td>20</td>
<td>5</td>
<td>6.5</td>
<td>–20</td>
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<td>2005</td>
<td>15</td>
<td>10</td>
<td>7.5</td>
<td>–15</td>
</tr>
<tr>
<td>2010</td>
<td>10</td>
<td>15</td>
<td>8.5</td>
<td>–10</td>
</tr>
</tbody>
</table>
**CHART 3**

**Euro Zone GDP against Trend to 2007:Q4**

- **€ trillions**
- **Percent**

![Graph showing Euro Zone GDP against Trend to 2007:Q4](image)

**CHART 4**

**Money Supply in the Great Recession**

Indexed to 100 in 1999

![Graph showing Money Supply in the Great Recession](image)
was a huge financial crisis, a decision by states to back the entire financial system of the high-income countries and the aggressive monetary policies we have seen.

The Asian financial crisis coincided with a sharp fall in global real interest rates, which is indicated by evidence from index-linked government bonds. The fall in U.K. index-linked bonds was from close to 4 percent before mid-1997 to close to 2 percent afterwards. This fall coincided with a beginning of house price inflation in developed economies with elastic supply of credit. Causality is hard to prove. But it is hard to believe these are mere coincidences (Chart 5).

In the aftermath of the Asian financial crisis, many emerging economies, including China, decided to pursue exchange rate, monetary, and other policies that generated large current account surpluses. How far these surpluses were intended is unclear. They were a natural reaction to the Asian crisis—“never again” became the motto—and a natural consequence of sterilized interventions in foreign exchange markets. But they were also supported by important structural shifts towards profits, particularly in China. These policies contributed to the emergence of large “global imbalances.”

Three important capital exporting regions emerged: China and other emerging East Asian economies; the oil exporters; and some old industrial
countries, particularly Germany and Japan. At the same time, two important capital importing regions emerged: the United States and peripheral Europe. The latter, without exception, went into financial crisis in 2008–10. Was this yet another coincidence? I suggest not (Charts 6 and 7). An important feature of this world was that the fast-growing economies with, one must presume, the best opportunities, decided to lend huge quantities of capital to slow-growing economies with poor investment opportunities. The plausibility of the latter view is supported by another important fact: In the high-income economies, non-financial corporate sectors mostly ran financial surpluses: Their retained earnings exceeded investment. This was partly because of the exceptional buoyancy of profits. It was also because of the weakness of corporate investment after the stock market bubble burst in 2000. Thus, the domestic counterparts of the capital flows into the high-income countries were, again almost without exception, fiscal and household financial deficits, the latter associated with rising real house prices and booms in residential construction.

Meanwhile, in an environment of depressed returns on safe assets, we saw the “reach for yield,” the financial sector fabricated pseudo-triple-A, mortgage-backed assets in huge quantities. These were indeed “fool’s gold,” as my colleague Gillian Tett (2009) called it. The financial sector also leveraged itself up
dramatically in order to boost its return on equity (unadjusted for risk) and pay its management and staff huge bonuses: In the United Kingdom, for example, the median leverage of the banking sector rose from 20-to-1 to 50-to-1 during the first decade of the 2000s, only to collapse after the crisis was over. Furthermore, there was a huge expansion of the shadow banking sector, which increasingly took on the risks of a traditional banking sector, but without comparable oversight or insurance. Should someone steeped in the history of financial crises have been surprised? Not really. It was just a more imaginative and higher-technology version of previous excesses, supported by the illusion that our sophisticated modern financial sector understood so well how to manage risk that it needed essentially no capital at all.

The Federal Reserve played a central role in all of this. As a result of policies pursued elsewhere, the U.S. external imbalance increased rapidly in the late 1990s and 2000s. This was (and remains) of no direct concern to the Federal Reserve. But it is a disinflationary force, tending, all else equal, towards underutilized capacity, rising unemployment, and falling inflation. As an inflation targeting central bank, the Fed’s job was to offset the external drag. It did that with its aggressive monetary policies of the early 2000s. But how do the monetary policies work on the economy? The answer is that they work either
through changes in asset prices or through changes in borrowing, or, more usually, both. In this case, it was both. It worked, above all, through house prices and the associated lending and borrowing. Moreover, as the supply of credit grew (created by the financial system itself) it went out into the world looking for better returns than those available in the United States. The United Kingdom was directly affected.

The ECB accommodated a similar process inside the euro zone. Partly as a result, overheating in credit-elastic peripheral euro zone economies suffering from “interest-rate illusion”—the confusion of nominal with real rates natural in economies that had never enjoyed such low rates before—offset the extreme weakness of demand in the creditor countries, particularly Germany. The euro zone average, which the ECB targeted, consisted of a part of the economy that was much too cold and a part that was much too hot, with capital flowing on an enormous scale from the former to the latter.

In brief, with house prices soaring and credit exploding, households and financial sector gross debt expanded rapidly relative to GDP (Chart 8). This combination of asset price inflation with a huge rise in gross indebtedness was sufficient to stimulate additional spending by households on consumption and residential investment. This then balanced economies that had huge current

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**CHART 8**

**U.S. Cumulative Private Sector Debt over GDP**

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<table>
<thead>
<tr>
<th>Year</th>
<th>Financial sectors</th>
<th>Nonfinancial business</th>
<th>Households</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1980</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2010</td>
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</tbody>
</table>
account deficits and so the world economy as a whole. But it did so only until the crisis hit. Then the pumped-up demand collapsed, leaving policymakers the painful job of trying to pump it up again.

**What Are the Global Implications?**

What we might call the “advanced countries crisis” is merely the biggest, but far from the first, large financial crisis of the past four decades. It was preceded by the debt crisis of the developing countries in the 1980s, the Tequila crisis of the mid-1990s, and the Asian financial crisis of 1997–98. Also important, in a host of other crises, was the one that hit Japan in the 1990s, which first brought the liquidity trap and the zero lower bound back to economists’ attention.

This history of devastating crises and particularly this last crisis, which took place in the world’s most sophisticated financial systems and most advanced economies, raises some very big questions. Here are five, with some brief and (I hope) provocative answers.

First, are such crises inescapable features of a liberal global economy and financial system?

The answer is: yes. The question seems to be how big and how often, with the horrible possibility that the less often they come, the bigger they will be. Stability breeds risk-taking, which then generates instability.

Second, was the notion that inflation targeting would bring economic stability a feeble-minded delusion?

The answer is: yes, it was. The critics were correct. Stable inflation may be a necessary condition for financial and economic stability (though one can debate even that), but it is clearly not sufficient.

Third, what is the role of an unconstrained credit system in generating instability?

The answer is: fundamental. Financial crises are either fiscal or private. We know, more or less, what causes a fiscal crisis. Private crises are created by the ability of an elastic financial system to generate unlimited increases in credit, until solvency concerns bring the party to a halt. But the elasticity of credit itself postpones concerns about solvency, thereby guaranteeing bigger crises in the end. This is why liquidity crises are ultimately solvency crises.

Fourth, will regulation allow us to enjoy the benefits of inflation targeting without risking huge financial crises?

The answer is: probably not. Macropurportunential policy will frequently find itself fighting monetary policy. This tension is more or less inevitable since it is precisely when monetary policy is most expansionary that regulators are most likely to worry about financial sector misbehavior. The least bad option is
probably to force much higher capital ratios permanently, with some semiautomatic countercyclical adjustments.

Finally, is it important that there is no global authority capable of mitigating the causes of crises and managing them when they hit?

Yes and no. It would have helped if the obvious “adding up” problems of policymaking in the 2000s had been made still clearer. But the links between global macroeconomics and what was happening in the financial sector were obscure and, to many, remain so. It is highly unlikely that if the International Monetary Fund (IMF), for example, had been far more powerful than it was, it would have been able to prevent the crisis. Similarly, as the euro zone experience shows, the presence of a shared central bank does not prevent crises and may well worsen them.

**What Are the Implications for Emerging Economies?**

After the emerging economy crises of the 1980s and 1990s, the emerging economies sought to minimize the risks of crises. In general, their chosen solutions included:

- Conservative fiscal policies;
- More reliance on borrowing in domestic currencies;
- Inflation targeting central banks;
- Floating or deliberately suppressed and so “undervalued” exchange rates; and
- Exchange controls.

By and large, these policies have worked. Emerging economies have proven far more resilient to shocks than they used to be (Charts 9 and 10). This was proven dramatically true in 2009, except in central and eastern Europe, which had fallen into the trap of easy borrowing. This is partly because their policies were better. It is also because China proved able to respond to the crisis by expanding investment demand strongly. Nevertheless, changes in policies in advanced economies, especially the United States, affect them all. That was true in 2008–09 and again over the summer of 2013, in the aftermath of discussion of tapering by the Federal Reserve. Indeed, it is striking how large a jolt that announcement of a possible reduction in the rate at which the Fed expanded its balance sheet turned out to give.

Would that be different if the renminbi became a global reserve currency? It is hard to see any reason why it should, unless one thinks China’s policies would be less domestically focused than those of the United States, which seems entirely implausible. Would it be better for emerging economies to have a choice
**CHART 9**

Net Capital Flows and Volatility

![Net Capital Flows and Volatility Chart](chart9.png)

**CHART 10**

Spreads over U.S. Treasuries

![Spreads over U.S. Treasuries Chart](chart10.png)
of reserve currencies? Possibly. But that might also exacerbate instability among the major currencies.

It would be different for emerging economies if the incidence and scale of shocks abated. I can see little reason to expect that. So the main global reform seems to be greater insurance, in place of the colossal investments in self-insurance we have seen over the past decade. A much larger IMF would be one possibility. It would even be possible for emerging economies to pool their reserves separately from the IMF for this purpose. But that does not seem to be on the table.

Another and perhaps more plausible possibility might be an extension of swap lines from the core central banks, such as the Federal Reserve, to a growing number of approved central banks of emerging economies. This would be a carrot for reform in emerging economies. It would also reduce the risks of “sudden stops” and so encourage net import of capital by emerging economies, which the advanced economies should definitely want. It could also be justified as a way for the central banks of the core countries to reduce the risks of instability that then affect their own economies. In the absence of better insurance, I believe emerging economies must control capital inflows—both net and gross.

Conclusion

I leave with five conclusions.

First, the world economy is now in a very strange place. We should not forget how strange and disturbing it is.

Second, we should be devoting a huge effort to understanding why we have ended up in the world of the zero lower bound and the liquidity trap.

Third, there is no reason to be confident we have eliminated the danger of doing this all over again.

Fourth, emerging economies have learned quite well how to cope with this volatility. But that may be largely because they have avoided large net capital imports.

Finally, the way to encourage a better balanced and less crisis-prone world economy is partly via greater insurance of emerging economies against liquidity risk. That should, in turn, encourage capital to flow the way it should, from countries with poor investment opportunities to countries with good ones. Using the world’s surplus capital to build houses in rich countries that nobody needs is silly. Let us not do anything as silly as that again.
REFERENCES


NOTES

1 Stock and Watson (2003) coined the term “great moderation.”

2 Foremost among the economists whose views were widely ignored were the late Hyman Minsky and Charles Kindleberger. See, for example, Minsky (1986) and Kindleberger and Aliber (2011).