U.S. Monetary Policy and its Role in the Global Financial Crisis: An Assessment after Ten Years

Akhand Akhtar Hossain[1]

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Abstract

This paper reviews three interrelated propositions advanced in the literature to explain the U.S. financial crisis of 2007 to 2009, and draws cogent implications for the roles of monetary and fiscal policies in improving macroeconomic management across countries to sustain global financial stability. The three propositions advanced to explain the U.S. financial crisis are: (1) the monetary-excess hypothesis (2) lax regulation and supervision of banks and financial institutions, and (3) large-scale foreign capital inflows. Of these interrelated explanations, the first appears to be the primary cause of the boom-bust cycle in the U.S. residential housing industry. It led to the financial crisis in an environment of lax regulation and supervision of banks and financial institutions, which intermediated large-scale inflows of foreign capital to finance large, sustained budget deficits. The U.S. financial crisis engulfed the global economy from 2007 to 2009. Its consequences continue to be felt internationally, especially in the context of the debate on the role of monetary policy in reviving an economy in recession in a low-inflationary environment. The body of literature that has emerged since the peak of the financial crisis suggests that the monetary and fiscal stimuli, aimed at rescuing the U.S. and other major economies from the recession, had limited effect. The key lesson that can be drawn from the U.S. financial crisis in a global setup is that rules-based monetary and fiscal policies can be more effective at not creating a boom-bust level of volatility in one or more economies. In addition, this paper concurs with the view that rules-based monetary and fiscal policies should be associated with improved financial regulation and supervision, in order to maintain global financial stability under the current regime of deregulated global capital markets.

KEYWORDS
- U.S. Financial Crisis
- Global Recession
- Monetary Policy
- Fiscal Stimulus
- Foreign Capital Inflows
- Financial Regulation and Supervision

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[1] Newcastle Business School, The University of Newcastle, Australia, *akhtar.hossain@newcastle.edu.au*

1. Introduction

All the factors underlying the global financial crisis that began in the U.S. in mid-2007, and its consequences across the globe, are yet to be fully identified and validated. The impact of the crisis on the global economy has been, in some ways, much deeper and more encompassing than expected. Consequently, public-policy responses to the crisis have been massive, with governments deploying a wide range of fiscal, monetary, trade, and social policy instruments. The causes of the crisis that have been identified, and the policy responses to them, have major policy implications for countries working to sustain future global financial stability through macroeconomic management.

It is widely suggested that the U.S. financial crisis was not completely unexpected. The crisis was brewing in September 2006 (Loungani, 2009; Mihm, 2008). It was predicted by prominent economists, such as Krugman (2005), as early as 2005. These economists predicted the crisis by straightforward observation and analysis, drawing upon mainstream theoretical knowledge and empirical experience from Latin American and East Asia financial crises of the 1980s and 1990s, and also from U.S. fiscal and monetary developments in the aftermath of the U.S. mini recession in 2001. A body of academic literature has now emerged on the U.S. financial crisis and its related issues. The main theme of this literature is that, with a long lead time, the crisis evolved from the interaction of domestic and external financial policies and developments, and lax regulatory and supervisory problems in the U.S. financial system (Taylor, 2007; Blanchard, 2009; Mishkin, 2016).

The U.S. financial crisis was associated with massive capital inflows following the East Asian financial crisis of the late 1990s. They were passive in nature — as distinct from active direct or portfolio investment in economic activity — in that they mainly funded large government budget deficits in the U.S. Another major destination of the inflows was to finance the increasing demand for residential housing, which provided high returns to investors holding mortgage-backed securities. From the late 1990s, boom conditions developed in the U.S. housing market, partly fuelled by a proliferation of non-traditional mortgages. They were issued by weakly regulated banks and specialised financial institutions under the government's housing and urban development policies. When interest rates started to rise in 2005, following a rise in the oil price, investors dumped high-risk, mortgage-backed securities, and the housing bubble burst. This caused liquidity and solvency problems for various financial institutions that were heavily exposed to the housing sector and lacked adequate risk-management policies. Once the crisis reached its peak, the credit market performed poorly due to higher financial frictions.[1] The consequent credit squeeze reduced economic activity and raised unemployment in the U.S., with inevitable knock-on effects on global economic activity.

Despite several massive injections of fiscal and monetary stimuli into its economy since 2008, the U.S. economy remained in a state of recession or slow recovery for almost a decade. Responding to sustained monetary stimulus, the U.S. dollar, which remained relatively stable and highly valued until mid-2010, depreciated substantially thereafter. U.S. interest rates remained at very low levels for a decade. In the early stages of the crisis in 2007, there was a flight to quality as investors shifted substantial funds from toxic corporate financial assets to government securities, whose returns were considered risk free by the market. The subsequently slow U.S. economic recovery, combined with a continuing government policy of fiscal and monetary stimuli, induced investors to move away from U.S. dollar-denominated assets altogether. This accounted for the sharp depreciation of the U.S. dollar since the mid-2010s. Fears of high inflation in the future, as public debt continues to accumulate on an already huge base, together with successive large tranches of Fed[2] monetary easing, which has massively expanded bank reserves with the Fed, have created an environment conducive to a sharp rise in U.S. interest rates in the near to medium term.

This paper reviews three interrelated propositions to explain the U.S. financial crisis and its dynamic behaviour, and then draws implications for (1) macroeconomic management in general, (2) monetary and fiscal policies in particular, and (3) banking regulation and supervision. The remainder of the paper is organised as follows. Section two reviews three propositions that have been put forward to explain the U.S. financial crisis. Section three provides explanations for expansionary U.S. monetary and fiscal policies since the early 2000s. Section four discusses the factors underlying lax regulation and supervision of the U.S. financial sector. Section five draws implications and lessons from the U.S. financial crisis on macroeconomic management in general, and banking regulation and supervision in particular. It also highlights the importance of rules-based monetary and fiscal policies across major economies to avoid creating policy-induced shocks, which spill over across economies and undermine global financial stability. Section 6 provides a summary of the paper and makes concluding remarks.

2. Origins of the U.S. Financial Crisis

This section analyses three interrelated propositions that have been advanced to explain the origins of the U.S. financial crisis: the monetary-excess hypothesis, lax regulation, and supervision of banks and financial institutions, and large-scale foreign capital inflows. Monetary excess appears to represent the primary source of the boom-bust cycle in the U.S. residential housing industry. The proximate cause is lax regulation and supervision of banks and financial institutions, which intermediated large-scale inflows of foreign capital to finance high-risk mortgage-backed securities.

2.1. Monetary-Excess Hypothesis

Monetary economists generally hold the view that the U.S. financial crisis originated mostly from a loose monetary policy from 2001 to 2005 when the Fed did not address the policy-induced housing bubble in a timely fashion. The immediate reason for the collapse of the housing bubble in mid-2007 was a policy-imposed increase in interest rates. This was in response to inflationary pressures flowing from a sharp rise in international oil prices in the mid-2000s. Taylor is the main proponent of the monetary-excess hypothesis, and has elaborated it in a historical context:

> The classic explanation of financial crises, going back hundreds of years, is that they are caused by excesses — frequently monetary excesses — which lead to a boom and an inevitable bust. In the recent crisis, we had a housing boom and bust, which in turn led to financial turmoil in the United States and other countries. I begin by showing that monetary excesses were the main cause of that boom and the resulting bust… Figure 1 [not reported] shows that the actual interest rate decisions fell well below what historical experience would suggest policy should be. It thus provides an empirical measure that monetary policy was too easy during this period [2001-05], or too "loose-fitting" as *The Economist* puts it. This was an unusually big deviation from the Taylor rule. (Taylor, 2009a, p.1)

Since then, Taylor has expanded his thesis, provided evidence, and drawn policy implications for countries across the globe to sustain global financial stability (Taylor, 2017, 2018). Some support for the monetary excess hypothesis has come from other empirical studies. For example, using the structural vector-autoregressive modelling approach, Brackke and Fidora (2008) investigated three types of structural shock in different regions of the global economy. They are (1) monetary shocks (the excess-liquidity/monetary hypothesis, discussed in this section), (2) preferences shocks (the savings-glut hypothesis), and (3) investment shocks (the investment-drought hypothesis). According to their results, monetary shocks explain the largest part of the variation in real and financial imbalances and financial-market prices in different regions of the global economy.[3]

The excess-liquidity hypothesis provides two further perspectives that suggest lines of inquiry into the early development of the financial crisis in the U.S. First, there is a need to explain why the Fed adopted an expansionary monetary policy and sustained it for so long, despite the emergence of a housing bubble. Second, an explanation is needed as to why the Fed, once the bubble had developed, did not act in a timely manner to deflate it, and introduce appropriate remedial or preventive regulatory and supervisory measures.

2.2. Lax Regulation and Prudential Supervision of Banks and Other Financial Institutions

An alternative to the excess-liquidity hypothesis is that the U.S. financial crisis was due to lax regulation and prudential supervision of banking and financial institutions (Bernanke, 2010, 2011, 2013). Bernanke added that the crisis revealed not only weaknesses in the regulators' oversight of financial institutions, but also important gaps in the architecture of financial regulation around the world. In contrast to Taylor's view, he did not consider the expansionary monetary policy as an independent source of the crisis. He writes: 'Thus, when historical relationships are taken into account, it is difficult to ascribe the house price bubble either to monetary policy or to the broader macroeconomic environment' (Bernanke, 2010, p14). He further elaborates his view to counter the criticism that the interest-rate policy pursued by the Fed from 2001 to 2005 was too expansionary as per the Taylor rule. According to him, the Taylor rule is a descriptive rule of thumb and that simple rules are insufficient for making monetary policy decisions. He argues that, depending on the construction of the particular Taylor rule, the monetary-policy stance of the Fed did not diverge significantly from its historical path. Overall, he concurs with a suggestion made by Alan Greenspan, former Fed Chairman, of a weak link between short-term interest rates and house prices. The U.S. *2011 Financial Crisis Inquiry Commission (FCIC) Report* (FCIC, 2011) endorses the view that the financial crisis was a regulatory failure, especially of the Federal Reserve System.

The 2011 FCIC report has not gone unchallenged. One of the Commissioners of the Inquiry Commission, Peter Wallison, provided a dissenting statement on the cause of the financial crisis originating from regulatory failure. The question arises whether the imposition of stringent bank regulations would have dampened the housing bubble that was in progress from the late 1990s and was fuelled — if not originated — by expansionary monetary and fiscal policies after the mini recession in 2001. Bernanke (2010) acknowledged that the Fed's deployment of additional regulatory measures in a bubble environment was effectively too little, too late.

2.3. Foreign Capital Inflows

The U.S. financial crisis was linked to the massive capital inflows into the economy. This was a feature shared by the East Asian currency crisis of the late 1990s, although the nature of the capital inflows to the centre of the two crises differed from each other in some respects. Pre-Asian crisis large-scale foreign capital inflows to East Asian countries were active in nature and intermediated through weak and poorly supervised banking systems. These inflows funded private-sector investments, especially in the construction sector. As government budget deficits were small or negligible, foreign capital inflows to East Asian countries were considered beneficial because they funded private-sector aggregate investment.

In contrast, the pre-U.S. crisis large-scale foreign capital inflows to the U.S. were passive in nature, mainly funding large government budget deficits. They also financed an increasing demand for residential housing in a booming economic environment. Foreign capital inflows were intermediated by a poorly regulated, poorly supervised financial system, which created non-traditional mortgage-backed securities under government-supported housing and urban development policies.

Some empirical studies suggest that sustained U.S. budget deficits were a contributing factor to its large current account deficits and associated foreign capital inflows. For example, an empirical study by Chinn and Ito (2007) have shown that large current account deficits in the U.S. were caused by its large budget deficits and not by excessive or high saving in East Asia, Germany or other European countries. They drew the following conclusions:

For the United States, our analyses confirm the view that it is a saving drought — not an investment boom — that is contributing to the enlargement of current account deficits… In this context, there is no evidence of 'excess domestic saving' in the East Asian emerging market economies. Rather, they appear to be suffering from an investment drought over the post-crisis period. (Chinn & Ito, 2007, p.548)

Bernanke (2010) prefers a monetary policy over a fiscal policy view of the issue. He showed that large capital inflows led to house prices to appreciate. However, he could not explain why there were large-scale capital inflows to the U.S. in the midst of low real interest rates caused by accommodative monetary policy. He provided evidence that large capital inflows were indeed associated with the appreciation of house prices, but did not look at the link between budget deficits and capital inflows — as the 'twin-deficit hypothesis' suggests. Instead, he proposed the global-saving-glut hypothesis that he had set out in a speech delivered on 10 March 2005.

As a result, Bernanke's explanation of the crisis remains demonstrably unsatisfactory, as it omits to integrate monetary and fiscal policies with foreign capital inflows and the housing market bubble. Earlier, *The Economist* (2005) provided evidence against Bernanke's explanation of foreign capital inflows and its implications. Echoing that view, Frenkel (2006) was more reflective in his identification of fiscal and monetary excesses as the root cause of the U.S. trade deficit problem.

3. Factors Influencing U.S. Expansionary Monetary and Fiscal Policies

The U.S. operates under a floating exchange rate system. Hence, it has monetary-policy independence, in the sense that it gains control over interest rates or monetary aggregates that it can deploy to achieve a policy objective, such as price stability. The Fed can conduct monetary policy using its discretion or under a policy rule, such as the Taylor rule. The Fed conducted discretionary monetary policy throughout the 1980s and 1990s. Nevertheless, U.S. interest-rate movements mimicked the Taylor rule for the whole of this period. There is a suggestion that this strategy of monetary policy contributed to steady economic growth, and low and stable inflation until the late 1990s. However, as indicated earlier, Taylor argues that the Fed kept the policy interest rate too low for too long from 2001 to 2005, compared with any interest rate that might have prevailed had it continued to operate under a Taylor rule.

The question remains as to why the Fed adopted an expansionary monetary policy from 2001 to 2005. Taylor suggests that deviation of the interest rate from its optimal level 'was intended to ward off the perceived risk of deflation' (Taylor, 2011, p.59). This explanation is consistent with the proposition that the 2001 mini recession, followed closely by the technology dot-com bust in 2002, acutely focused the attention of U.S. policymakers on Japan's then decade-long deflation-stagnation malaise. They had developed a fear of the U.S. economy sinking into comparable conditions.

This explanation is consistent with the Fed Charter on the objectives of monetary policy. Although long-term price stability remains the key objective of monetary policy in the U.S., Alan Greenspan conducted discretionary monetary policy to achieve multiple objectives, one of which was high employment. Inflation had been subdued in the 1980s, through both policy and happenstance. Determined contractionary monetary policy had worked as well in the U.S. as it had earlier when devised and implemented by the Bundesbank in Germany. The U.S. had also benefited from cheap East Asian imports, especially from China, a region that had maintained a low-inflationary environment. The natural consequence was that the Fed's employment target acquired policy priority, together with the complementary policy goal of preventing a Japanese-style deflation. Bernanke confirmed this interpretation in his 2010 *American Economic Association* address, 'Monetary Policy and the Housing Bubble' (Bernanke, 2010).

Another politically inspired objective that played a key role in the housing bubble was added to the list of monetary-policy goals, especially during the conservative Republican Presidency of George W. Bush from 2000 to 2008. The objective was to use the Department of Housing and Urban Development to raise the proportion of home ownership through such measures as reducing mortgage underwriting standards.

Consequently, expansionary monetary policy achieved and sustained the lowest possible mortgage interest rates, known as non-traditional mortgages. These rock-bottom mortgage prices boosted loan volumes to about 27 million mortgages in 2007. This objective disregarded the bluntness of monetary policy, relative to more appropriate measures, as an instrument for achieving social policy objectives. Peter Wallison (FCIC, 2011, p.451) insists that the real reason behind the financial crisis was the U.S. government's housing policy, which created a weak financial system.

4. Factors Underlying Lax Regulation and Supervision of Banks and Other Financial Institutions

In a deregulated and liberalised financial system, banks and other financial institutions do not operate entirely outside prudential regulation and supervision. On the contrary, prudential regulation and supervision are considered critical in a deregulated environment to ensure financial stability in the midst of free capital mobility. In the U.S., banking regulation is fragmented in the sense that banks and other financial institutions are subject to federal, state, and local regulations. Consequently, there is some overlap of responsibilities of the regulatory bodies.

In addition to conducting monetary policy, the Fed has some regulatory responsibility for banks and other financial institutions. In the context of the financial crisis, the issue is to what extent any further banking regulation and supervision should be undertaken by the Fed and/or be delegated to specialised regulatory authorities. This is important to ensure stability in the financial system by lowering systemic credit risk. At the same time, one of the functions of banking regulatory bodies remains that of ensuring adequate credit to low-income families for family home ownership. With the objective of home ownership moving to the forefront of political policy from the 1990s, incentives diminished for the Fed to repair deficiencies in the manifestly lax regulatory regime governing housing mortgages and other lending by specialised agencies.

The Fed refrained from the use of monetary policy to deflate the housing bubble because of its concern that the action needed to do so could have created a recession. It would have had to raise interest rates. This would, of course, have lowered borrowing for investment in home mortgages but, critically, it would also have discouraged businesses from borrowing to invest in new projects that would create both profits and jobs. The authorities were already nervous about the fragile state of the economy and were unwilling to risk any action that could damage business confidence. Ben Bernanke, as a member of the Fed, had defended the Fed's hands-off approach to monetary policy during the housing bubble. In October 2002 he gave a speech to the *National Association for Business Economics*, in which he said: 'First, the Fed cannot reliably identify bubbles in asset prices. Second, even if it could identify bubbles, monetary policy is far too blunt a tool for effective use against them' (Bernanke, 2002, p.3). Alan Greenspan made a similar argument during the dot-com bubble and reiterated it in the context of the housing bubble. However, he was concerned about the rapid expansion of sub-prime mortgages and lax regulation of specialised financial institutions.[4]

The massive housing investment due to the policy of low-interest rates was grossly inefficient in a deregulated financial environment or, equivalently, in a poorly regulated one. As family home ownership supported by government-linked institutions, such as Freddie Mac and Fannie Mae, was favoured by policymakers, financial institutions originated massive housing loans by increasingly ignoring the risks associated with subprime loans. The extent was pervasive because of mortgage securitisation — a financial innovation that was not well understood, even by financial specialists (Mishkin, 2008).

After the housing bubble burst in 2007 some financial institutions, corporations and other bodies in the U.S. became illiquid or insolvent. The U.S. government rescued some of them and offered support to others on the grounds that further loss of public confidence would cause a collapse of the financial system. As there was no well-defined approach to these rescue efforts, it created ambiguity and uncertainty about the Fed's policy action. Rather than stabilising the markets, the selective and arbitrary way of dealing with various banks and financial institutions created uncertainty and caused panic. The *2011 FCIC Report* highlighted this issue. The result was a sharp rise in systemic credit risk and the drying up of credit markets. The plummeting capital base of some major financial institutions led to a credit squeeze, especially a failure in interbank lending. Furthermore, the loss of consumer and business confidence lowered consumption and investment, which lead to diminishing economic activity.

5. Policy Implications and Lessons from the U.S. Financial Crisis

The ongoing global economic crisis is an unfortunate but vivid demonstration of how highly integrated the world economy has become in the last four decades. The epicentre of the recent financial crisis was the U.S. It emerged there primarily due to the monetary and fiscal excesses committed under Presidents Clinton and Bush, and continued, barely abated, under President Obama. The U.S. financial crisis has added new dimensions and underwritten the critical roles of monetary and fiscal policies in effective macroeconomic management, especially under conditions of freely mobile capital. This section draws some lessons from and discusses the policy implications of, the U.S. financial crisis in a broader context.

5.1. Capital Mobility and the Financial Crisis

Like the East Asian currency crisis of a decade earlier, the U.S. financial crisis was symptomatic of systemic problems in global capital markets. Rapid and large-scale capital mobility contributed to a boom-bust cycle in both cases, although the underlying factors driving the capital movements, and the nature of those movements, differed. Both the East Asian crisis of 1997 and 1998 and the U.S. crisis of 2007 to 2009 reinforced, for the respective countries, the importance of continuing to upgrade the supervision and regulation of banks and other financial institutions whose function is to intermediate large-scale capital flows. Despite some proposals to impose restrictions on capital flows, most economists suggest that it is not possible, or even desirable, to distinguish between short-term and long-term capital flows.

Under a free-trade regime, the proper role of free capital flow is to complement global trade and investment by enhancing their efficiency by reducing transactions costs. Capital flows are also linked to asset transactions, which reflect international trade across time. Nevertheless, some controls over short-term capital flows are considered optimal under certain circumstances. Malaysia's direct capital controls during the financial crisis of the late 1990s is an example. East Asian experiences of the late 1990s, however, suggest that sterilisation measures deployed during large capital inflows could be so costly as to be counterproductive.

The U.S. financial crisis has brought the issue of re-regulation of the financial and corporate sectors to the forefront of policy discussion. In general, the idea is to avoid creating high exposure of banks and financial institutions to high-risk assets — that is, assets whose prices are highly volatile. Although exchange-rate flexibility remains critical for absorbing external shocks, it may not always be adequate on those occasions when large-scale capital movements defy the economic fundamentals, even if only in the short run.

5.2. Monetary and Fiscal Policy in Economic Stabilisation

As the U.S. financial crisis gathered pace, many countries across the globe were forced to consider the grim prospect of an approaching deep global recession. On a widespread basis, policy measures were introduced that included large-scale government spending and monetary expansion. The International Monetary Fund (IMF) discarded its earlier emphasis on fiscal prudence and consolidation and suggested that developed countries adopt expansionary fiscal policies. The advice intended to avoid a deep recession in developed countries and, more importantly, simultaneously quarantine them from the brewing crisis in the developing countries so heavily dependent on trade with the developed world. Accordingly, developed and developing countries, such as Australia, China, India, Japan, Singapore, the United Kingdom, Germany, and the U.S., introduced fiscal stimulus measures. Eschewing the finer points of the ongoing theoretical debate on the relative effectiveness of fiscal and monetary policies during recession, fiscal measures were deployed, along with a sharp reduction in interest rates. Where interest rates were already down to zero, such as in Japan, the straightforward and theoretically radical policy of money-supply expansion, or quantitative easing, was introduced.

There was some early enthusiasm about the ability of expansionary fiscal measures to rescue economies from recession. Simultaneously, many expressed some concern that fiscal measures introduced by some countries, the U.S. being one, were excessive and ineffective. Taylor (2009a, 2009b, 2010, 2011) was pessimistic from the beginning of the U.S. crisis about the impact of fiscal stimulus on economic recovery. As if the experience vindicated his pessimism, Taylor has since become an ardent critic of fiscal stimulus. He argues that the rapid accumulation of public debt originating from fiscal stimulus has heightened future inflationary pressure. Following the monetarist tradition, he emphasises the need for drawing lessons from modern economics for the improvement of macroeconomic policies. To add some credence to his views, he cites the example of emerging market economies, which have been more resilient since the 1990s due to improved macroeconomic policies.

5.3. Prudential Regulation and Supervision

The U.S. financial crisis has reinforced the importance of well-designed prudential regulation and supervision of banks and financial institutions. The Australian financial system provides an example of the importance of stringent banking regulation and supervision. Australia is credited with having escaped a financial crisis-induced recession due to stringent regulations and controls over its banks and other financial institutions. The policy of successive governments since the early 1980s to advance financial deregulation and reform has, ironically, led to new and tightened banking controls. It has also introduced financial regulation aimed at setting up competitive financial markets that create competitive pressure on both bank and non-bank financial institutions. Australia has not suffered a major banking crisis since the Great Depression, but the cultural memory of the damage that can be wrought on the real economy by irresponsible, unregulated financial institutions is deep.

Further lessons have been available to deregulatory policymakers from the experiences of many other countries across the globe that endured earlier financial crises. The wealth of policy lessons available appears to have gone unnoticed or to have been ignored, by U.S. banking regulators and policymakers. The U.S. financial crisis serves as a reminder that financial deregulation — the policy-driven transition redirecting the regulatory regime to creating price-competitive financial markets — has been subverted somewhat by the proliferation of innovative financial products.

Consequently, competition based on product differentiation has supplanted price competition in financial markets. The result has been economic inefficiency, since such products are complex and difficult to regulate, and their real risk-return ratios are relatively opaque to investors. This tendency of the markets to substitute product competition for price competition has reinforced the need for careful attention to the design of sensible, effective and comprehensive financial regulation, with the paramount goal of financial stability.

Changes are afoot on the regulatory front in the U.S. The Fed has strengthened its regulatory framework for the financial sector. If the revamped regulatory system does not work in the case of a bubble situation in the future, the Fed has realised that it may need to use monetary policy as a supplementary tool to lower risk, or price volatility, in the markets. Ben Bernanke, as chairman of the Fed, drew such lessons from the financial crisis.

A debate, however, remains about whether the Fed should take on the additional responsibility of regulation and supervision of the financial system. Taylor (2010, 2011, 2016c) argues that regulations and controls, combined with excessive discretionary power to run undisciplined monetary and fiscal policies, are no substitute for simple, transparent and disciplined policies. He appears to base this recommendation on the standard professional assumption that the government is committed to running responsible, efficient policy in the public interest.

Consequently, he opposes giving greater systemic regulatory power to the Fed to contain poorly defined, politically defined or undefined 'systemic risk'. According to him, such risk is created by the government through undisciplined and clumsy monetary, fiscal, and bailout actions and provisions. He details how imparting to the Fed such power and responsibility would (1) dilute its key mission of economic and price stability, (2) reduce its credibility, (3) create conflicts of interest, and (4) ultimately threaten its independence with respect to monetary policy.

In short, there is an emerging consensus view that there should be a simultaneous improvement in the conduct of monetary and fiscal policies and the regulation of the financial sector. Whether the Fed, or another institution or institutions, should be given more responsibility for financial regulation and supervision should be stated clearly, and implemented effectively to avoid duplication, ambiguity, and the shifting of accountability. In so far as the U.S. is concerned, whatever the institutional arrangements are, a higher level of coordination between the Fed and other regulatory bodies cannot be avoided if the aim is to achieve sustained financial stability. At the same time, the primary responsibility of the Fed remains price stability. The question remains for how long it can compromise this responsibility to circumvent any potential threat of financial distress to the system, should such a threat emerge, without compromising the credibility of monetary policy, and thereby its efficacy.

5.4. Global Financial Order: Standardisation of Rules-based Monetary and Fiscal Policies

A body of literature has emerged since the global financial crisis that shows how conventional monetary policy tools have been replaced by non-conventional monetary policy tools. It is suggested that in a low-inflationary environment, the policy interest rate that is deployed for the conduct of monetary policy may not be effective in stabilising output and prices. In a low-inflationary environment, when the policy interest rate is already at a low level, central banks are unable to lower it further to raise aggregate demand. Rapid monetary expansion can still play the trick of raising aggregate demand. However, the idea of a liquidity trap provides a contrary view that when an economy is in a liquidity trap, monetary expansion may not be effective in raising aggregate demand and output. Under these circumstances, some major central banks in recent decades have opted for non-conventional monetary policy tools, involving large-scale liquidity provision, asset purchases, and commitment to future policy actions. Liquidity provision and asset purchases lead to a rapid expansion of a central bank's balance sheet. The massive expansion of the monetary base is expected to raise inflationary expectations, lower financial market frictions, and ease credit market operations. This approach to the conduct of monetary policy is referred to as quantitative easing. Both Japan and the U.S. adopted this approach to monetary policy following the financial crisis. If the expansion of a central bank's balance sheet does not have a large impact on the economy, it is suggested that the composition of the balance sheet could be changed with the aim of improving the functioning of credit markets (Mishkin, 2016).

There are not only controversies and problems associated with such discretionary monetary policy. The deployment of unconventional monetary policy measures has caused a sharp deviation of the international monetary system from a sound rules-based monetary system (Taylor, 2017). This deviation represents a reduction in the independence of central banks in the design and conduct of monetary policy for price stability. As major central banks react to one another's policy decisions, excessive expansionary monetary policy in a large country is generally associated with similar expansionary monetary policy in other countries to fight off currency appreciations.

Consequently, a deviation of monetary policy from the standard rules-based system emerges, and this leads to sharp exchange rate movements and capital flow volatility. Large-scale capital inflows to developing countries in particular trigger governments to impose capital controls, intervene in the foreign exchange markets, and deploy regulations to influence capital movements. Contrary to their earlier stance, international financial institutions, such as the IMF, now endorse capital controls to stabilise the foreign exchange markets (Taylor, 2017). The outcome of such a policy intervention is higher economic inefficiency, especially in the areas of trade and capital movements.

There is a related concern that central bank policymakers and political leaders now seem to use the same language when expressing their policy views. Meltzer (2009, 2012) showed that the Fed's de facto independence declined in the late 1960s and 1970s, rose in the 1980s and 1990s, and has declined since then. Taylor (2017) showed that the ups and downs in de facto independence are associated with higher and lower adherence to rules-based policies during this period. He argues that a rules-based international monetary system should be built from rules-based monetary policy in each country. A natural reform proposal would be for countries to forge an agreement whereby each country commits to a rules-based monetary strategy (Taylor, 2016a, 2016b, 2016c, 2016d).

6. Summary and Conclusions

This paper has reviewed three interrelated propositions advanced in the literature to explain the U.S. financial crisis of 2007 to 2009. It draws implications for the roles of monetary and fiscal policies in improving macroeconomic management across economies for sustaining global financial stability. The key argument made here is that the policy instruments whose application created the U.S. financial crisis were expansionary monetary and fiscal policies. These policies were directed at preventing a descent into deflation on the heels of the decade-long Japanese experience of a mix of deflation and economic stagnation, the U.S. mini recession of 2001, and the dot-com bust of 2002.

The consequent expansionary monetary and fiscal policies generated sustained current account deficits in the U.S., which were financed by large-scale foreign capital from across the globe. These inflows of foreign capital were not sourced from a global or Asian savings glut, but were a source of finance for large budget deficits in the U.S. One of the consequences in the U.S. of the large-scale capital inflows was the formation and support of a housing boom within a weakly regulated and poorly supervised financial system. The housing boom ended in 2007, following a rise in interest rates in response to an increase in oil prices. This led to the financial crisis and later caused recession across the globe.

The key lesson drawn from the crisis is that rules-based monetary and fiscal policies, as well as improved financial regulation and supervision, remain important in maintaining both price and financial stability, especially under the current regime of deregulated global capital markets. A global financial order requires the standardisation of monetary and fiscal policies to reduce policy-induced shocks. The key lesson drawn from the U.S. financial crisis and the prior experiences of countries in East Asia (Ee and Xiong, 2008), suggests that rules-based monetary and fiscal policies and improved financial regulation and supervision remain equally important in maintaining price and financial stability in the midst of freely mobile capital. However, there is no consensus as to whether the regulatory measures should be undertaken by a central bank or another regulatory body. Most central banks in the Asia Pacific region remain responsible for conducting monetary policy while ensuring financial stability through prudential regulation and supervision. Australia is an exception, having substantially transferred these functions from the central bank to other specialist government agencies. The argument against a central bank having the responsibility for control over banks and other financial institutions is that it may compromise monetary policy independence for price stability, while its actions may undermine financial stability. When a central bank has the sole responsibility for monetary policy, free from any potentially conflicting responsibilities, its ability to establish unassailable credibility and effectiveness in controlling inflation, through consistency of policy action, is enhanced. Central-bank independence is, however, constrained rather than unlimited. Central banks perform better in strong regulatory environments than in environments in which they have limited accountability, and in which the regulatory bodies for banks and financial institutions are weak.

Notes

1. Financial frictions refer to the difficulties of conducting transactions in financial markets.
2. Fed represents the Federal Reserve System, which is the central bank of the U.S.

3. For an empirical analysis of the issue, see also Merrouche and Nier (2010).
4. For a detailed discussion on this and related issues, see Greenspan (2010) and Mishkin (2016).

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