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Central Banks and Asset Bubbles: A Perspective

VANDANA SINGHVI PATEL

In 1977 the United States Federal Reserve adopted a dual mandate of maximising employment and stabilising prices, and along with several other central banks has been moving towards increased transparency in policy decisions. However, this did not protect the us and the world from the financial and economic crisis of 2007-08. The paper throws light on the ongoing debate about the completeness of the central bank's reaction function, highlighting the need to explicitly incorporate asset bubbles in it. The essay also discusses and critiques the Fed's current stance towards asset prices, and argues for a role for monetary policy in containing asset bubbles before they burst, even if inflation is not a threat in the near term. Further, it examines the weak effects of asset price movements on the Indian economy, obviating the need to use monetary policy to address the bubbles.

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Central banking has evolved dramatically in the last two decades. There has been a conscious shift by monetary policymakers to be more open and transparent in the way they operate and make policy decisions.

The pioneer in this effort was the Reserve Bank of New Zealand. In 1989, it legally mandated the adoption of inflation targets and public disclosure of its macroeconomic forecasts based on which it makes its monetary policy decisions. The United States (us) Federal Reserve had introduced a dual mandate of inflation targeting and unemployment way back in 1977. This amendment legally mandated the Federal Reserve "to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates". These objectives are termed "dual mandate" since moderate, stable long-term interest rates are viewed as a natural consequence of stable prices and maximum employment. Thereafter, the Federal Reserve pursued the dual objectives of maximum employment and price stability. However, it was only in 1994 that the Federal Reserve Bank moved towards greater openness. It initiated the public release of a statement after each Federal Open Market Committee (Fомс) meeting regarding any interest rates move. Prior to that, the FOMC meeting minutes were kept under secrecy. Since then it has gradually moved towards even greater transparency.

There are three main reasons for having increased transparency. The first reason is related to the Fed's desire to maintain its independence. The rationale being that in a democratic society, an independent central bank should be politically accountable for its actions as they have serious and long-term macroeconomic implications. Second, transparent and pre-specified objectives and public disclosure of a central bank's strategy help in guiding market forces, aid market participants in their decision-making and thus implicitly ensure support from economic agents in achieving the central bank's objectives (BIS 1997). Also, an independent central bank is far more effective in reaching its inflation targets (Carlstrom and Fuerst 2006). Third, clarity in communication increases the credibility of the central bank, makes monetary transmission mechanism more efficient and effective, and imparts financial stability (Bernanke 2008).

Arriving at the Right Reaction Function

The ongoing crisis first emerged in the us housing sector; then evolved into a credit crisis affecting the global banking sector and is now threatening governments that accumulated large fiscal debts while providing stimulus to their domestic economies. As the world watches how some of the European countries grapple with this chapter of the crisis, the role of central banks in maintaining financial stability becomes all the more urgent

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and required. Clearly, the well-intentioned dual mandate and improved transparency did not protect the us and the rest of the world from the fallout of the worst economic crisis since the 1930s. The ongoing debate among central bankers, regulators, policymakers, think tank advisers, academicians and market participants is now focused on whether there exists incompleteness in the Fed's dual mandate reaction function. Did we miss something in the way we view central bank's core macroeconomic objectives and how financial stability relates to these macroeconomic objectives? Having insight into the Fed's reaction function is helpful, but what is even more critical is that the central bank employs the right reaction function to achieve its objective of macroeconomic stability.

One of the most contentious issues that has taken centre stage as the world is trying to understand the evolving economic crisis, is regarding the central bank's reaction function. Specifically, it is the ongoing debate over whether asset prices should be explicitly incorporated in the central bank's reaction function. Should the Fed actively target asset bubbles as they emerge? The current approach towards asset prices is to ignore them unless they have an impact on the two components of the Fed's reaction function: unemployment and inflation. Along with the Fed, at least 20 central banks have a monetary policy principally geared towards stabilising inflation. As a result of this exclusive treatment, most industrial economics have enjoyed low, stable inflation along with stable economic growth. The us, in particular, has enjoyed price stability, stable output growth and low volatility in business cycles in the last two decades until the recent economic crisis.

All this underscores the success of the Fed's dual mandate monetary policy in achieving its macroeconomic objectives. The reason for this hands-off approach by the Fed towards asset bubbles is clearly elucidated in the paper presented at the Jackson Hole Federal Reserve Conference in 1999 by Bernanke and Gertler. In their paper, they argue that the goals of price stability and financial stability go hand in hand and can be pursued "within a unified policy framework". The way to achieve these twin goals is by adopting flexible inflation targeting. Under this regime, price stability is considered as the principal long-run objective of the central bank's monetary policy. However, in the short run the central bank is allowed to take up its other goal, namely, stable growth and low unemployment. According to them, monetary policy should respond to anticipatory and actual pressure on prices only and not to asset price movements, except when they "signal changes in expected inflation". In doing so, "a central bank effectively responds to the toxic side effects of asset booms and busts without getting into the business of deciding what is fundamental and what is not".

This paper examines the role played by asset bubbles in the Fed's monetary policy. The paper is organised as follows. Section 1 outlines the implications of asset bubbles on the real economy. It describes the various channels through which asset prices can affect the real economy. Given these linkages between the financial cycle (asset price movements) and business cycle, it highlights the need to include asset bubbles in the Fed's reaction function. Section 2 outlines the current stance of the Federal Reserve towards asset prices. Section 3 discusses why the Fed

does not include asset bubbles in its reaction function. Section 4 puts forth the reasons why monetary policy should be actively used to pop bubbles and specifies the associated cost of ignoring asset bubbles on their upward trajectory. It critiques the Fed's current stance on asset bubbles. Section 5 briefly answers the question whether the Reserve Bank of India (RBI) should address asset bubbles. Section 6 concludes with some discussion.

1 Implications of Asset Bubbles on the Real Economy

There are multitudes of definitions to describe asset bubbles. However, the common thread in these definitions is that asset bubbles exist when asset prices increase at a rate that cannot be explained by market fundamentals alone. The asset trades above its fundamental value today only because its price is rising rapidly and investors believe that it will continue to do so. This leads to momentum-driven price appreciation. We use this definition of asset bubbles in this paper.

The macroeconomic goals of the Fed are to maintain price stability, promote stable sustainable growth and employment. However, asset price movements can disturb these measures of macroeconomic stability because of the linkages between financial cycles and business cycles. The linkages operate through the following channels:

First, for the household, an equity and real estate bubble influences consumption through the wealth effect. Rising asset prices make individuals feel wealthier; this translates into higher spending and lower savings, and hence boosts aggregate demand (AD). This is called the wealth effect. When the bubble eventually bursts, it leaves the households holding shrunk portfolios and higher levels of debt. This reduces their purchasing power, reduces spending and lowers AD. Research shows that the wealth effect is stronger for housing bubbles than for equity bubbles (IMF 2002).

Second, for firms, higher asset prices increase investments through the balance sheet effect. With rising asset prices, the value of assets assigned as collateral increases. This facilitates easier terms of financing and encourages borrowing and investments. However, it can lead to over-investments and lending booms. For example, in the us during the late 1990s, excessive investments were made in fibre optics, the telecom sector, technology infrastructure and venture capital money was easily available to startups. Some of this resulted in misallocation of resources and wrong investment decisions. In the aftermath of the dotcom bubble burst and again in the more recent housing bubble, we witnessed how these lending booms were replaced by extreme risk aversion that froze credit markets to the extent that even creditworthy borrowers found it difficult to raise money for promising investments. This lending bust can result in various structural changes in the economy that have long-term implications and can take several years to correct until the next bubble strikes.

Third, for the government, a booming asset market typically increases revenues through capital gain taxes. This improvement in budget balance can encourage the government to increase expenditure and/or reduce taxes. When the bubble eventually collapses, it shrinks tax revenues. If this is followed by weakness or recessionary forces in the economy, government expenditures will rise as transfer payments and unemployment benefits increase along with the decline in tax revenues. The net result being smaller or negative budget balances. During times like this, it may not be possible or prudent for the government to look for ways to increase taxes. Thus asset bubbles can create fiscal weaknesses that have their own set of repercussions on the wider economy.

Fourth, bubbles affect the banking sector. Banks hold assets (mainly real estate) as collateral for the loans they make. As asset prices decline sharply, in the case of a bubble burst, this weakens the bank's balance sheet and reduces their ability to lend. Also, an asset bubble burst is typically followed by an increased perception of uncertainty in financial markets. This may spur a serious flight to safety. Both these factors may cause bank failures and through a ripple effect may harm firms, output, employment and onto a full-scale economic crisis. Furthermore, bank failures inflict additional cost on the taxpayers. Bailout packages and transfers to failing financial institutions and their creditors have long-term costs associated with them.

Lastly, for the economy as a whole, asset bubbles, specifically real estate bubbles can have a detrimental effect on the domestic savings rate and the current account balance. This was evident in the recent housing bubble. As home prices appreciated in the us, so did home equity extractions. These were used to fuel household consumption. For the us economy this specifically increased imports, as the asset dependent American consumer, seeing an increase in his wealth, increased his consumption of imports, further weakening the current account balance.

These are the consequences of asset bubbles on the overall economy. Bubbles in their growth stage stimulate the economy and increase spending, borrowing, investments and boost AD and once they collapse lead to higher risk aversion, lower spending, lending, investments and reduced AD. The ensuing lending boom bust cycles can cause inefficient resource allocation, higher debt levels, fiscal imbalances, weaker banking system and a weaker current account balance. Given these serious implications of asset bubbles on the wider economy, it is important that we examine the Fed's current policy towards asset bubbles.

2 Fed's Current Stance on Asset Bubbles

Few critics of an active bubble popping policy maintain that bubbles simply do not exist. Asset prices are determined in efficient financial markets where they are set based on rational expectations and collective information of all economic agents. Markets are rational and self-correcting. Asset prices reflect fundamental value. Even if prices diverge from their fundamental value, there will be enough rational agents in the market who will take opposite positions, i e, either sell or short sell or not buy at all, and bring asset prices closer to their fundamental value. According to these critics, assuming that bubbles exist and that the central bank should pop them is tantamount to believing that markets are collectively wrong and somehow the central bank is privy to better information or analysis. Therefore, any central bank intervention in asset markets is misguided.

However, most critics of active bubble popping policy do accept that markets are not efficient. They agree that bubbles do exist but cite problems in identifying these bubbles on a real time basis, measuring their size and the difficulty in directly observing the factors that cause these bubbles. This is the stance taken by the Federal Reserve (FRBSF Economic Letter 2005).

Earlier Greenspan and now Bernanke have steadfastly maintained the difficulty in reliably identifying asset bubbles in real time. Instead the central bank focuses exclusively on the inflationary impact of these bubbles. The link between asset bubbles and inflation is expected to roll out as follows: when asset prices rise above their fundamentals, through channels explained in Section 1, AD gets stimulated relative to potential aggregate supply (As); reducing the output gap, which, in turn, feeds inflationary pressures. Given the Fed's focus on stable prices in the real economy, the monetary policy responds to this with higher interest rates. The hike in interest rate is expected to douse inflationary pressure as well as pop asset bubbles. According to this transmission mechanism, inflation targeting ensures that stable macroeconomic conditions are maintained and simultaneously the issue of asset bubbles is addressed without an active policy of bubble popping. This way the Fed steers clear of identifying bubbles, and at the same time achieves its objective of price stability.

The underlying presumption of this approach is that asset bubbles will create inflationary pressures. However, if asset prices movements do not exert pressure on the general level of prices, the Fed repudiates their presence on their upward path until they collapse. When the bubble does eventually burst, the Fed first examines whether this collapse can prompt economywide recessionary pressure affecting its growth, employment and price targets. If it does, to minimise the collateral damage to the economy and the financial system, the Fed "mops up" the mess by implementing an expansionary monetary policy.

This is exactly what the Fed has done in the past two decades. Starting from the late 1990s, we saw the dot-com bubble followed by the housing bubble and then the credit bubble. Each time the Fed waited on the sidelines since inflation targets were not affected, taking up arms only when the party was over to "mop up" the mess. During the dot-com boom phase, Alan Greenspan strongly believed that it was the "new economy" and its associated productivity gains that were driving asset prices (Greenspan 2000). Therefore, the Federal Reserve responded to it by marginally increasing the Fed funds rate starting June of 1999. When the bubble burst in 2001, it wiped away approximately \$2 trillion in household stock wealth. Investor and household confidence declined sharply. At the same time, the 9/11 attacks and us invasion of Afghanistan and Iraq were holding the us economy down. Concerned about a weak economy and fear of deflationary threats (Greenspan 2002), thanks to cost competitive Chinese imports, the Fed under Greenspan responded with a series of aggressive interest rates reductions. The Fed funds target rate declined from 6.5% (16/5/2001) to 1% (25/6/2003).1 This decrease in cost of borrowing made homeownership more affordable and thereby contributed to the boom in the housing market. It helped resuscitate the economy on a self-sustaining path just as the Fed had intended.

During the early stages of the housing boom, the Fed dismissed home price appreciations as localised events and mostly bubble proof that did not need any monetary intervention

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(Greenspan 2003). And eventually when the housing bubble burst, to cushion the economy from burst-induced recessionary forces, the Fed responded again with an expansionary monetary policy and new ways to provide liquidity. However, this time around the Fed had to do more than just increase liquidity and reduce interest rates. It encouraged borrowing from the discount window which traditionally has a stigma associated with it, introduced new programmes (e g, Term Auction Facility) to "address elevated pressures in short-term funding markets"² among various other non-standard measures.

To summarise the Fed's current stance, it addresses asset bubbles only if they interfere with its specified objective of price stability. It does not seek to actively pop bubbles. However, once the bubble collapses, to contain any macroeconomic costs associated with the fallout, it provides stimulus through expansionary monetary policy.

3 Why Does the Fed Not Actively Target Asset Bubbles?

The Problem of Identifying Bubbles: The long-held belief at the Federal Reserve has been that asset bubbles are difficult to identify in real time. To be able to reliably identify asset bubbles, we need to assess their fundamental value. A bubble exists when the asset's market price deviates from its fundamental value. A stock's fundamental value is derived from its expected future earnings and a house derives its fundamental value from its expected future value as shelter or from the rent it is expected to earn. This fundamental value is not easy to estimate because not all components driving it are directly observable. Therefore, the central bank has to make its assessment under uncertainty and assess the presence, size and ramification of the asset bubble. Any misjudgment regarding the existence of a bubble and placing a monetary policy action based on a wrong call can have grave macroeconomic consequences. Further, taking an action would also imply that the central bank is privy to superior information or has higher analytical skills compared to other market participants. A risk-averse central bank may decide not to take any action at all.

However, this argument of difficulty in identifying a bubble is weak. In making policy decisions, central banks always have to contend with uncertainty and poor data. What are required are improved statistical models and financial indicators that improve the quality of information and analysis rather than repudiation of the fact that asset bubbles should be dealt with on their upward journey. If poor data and uncertainty were reasons enough for not dealing with economic problems, then most macroeconomic problems would not find solutions or attention of policymakers.

The Problem of Responding to Bubbles: Bernanke in his speech to the National Association of Business Economists in 2002 said that even if asset bubbles can be identified, monetary policy is not the appropriate tool for "safe popping". According to him, a modest increase in short-term interest rates cannot arrest asset bubbles. A small hike will slow down the economy but may not have a significant impact on the bubble itself. When asset bubbles are turbo-charged with bullish optimism, any confrontation will require a serious hike. This may successfully pop the bubble but would have serious repercussions on the wider macroeconomy; as it may thrust the economy into an unwarranted recessionary environment – just what the bubble popping was meant to protect us from.

The Fed further supports this stance by arguing that very often bubbles are local events with "localised" impact that do not require the general sweep of monetary policy. In this case, monetary policy is too blunt a tool to be used on a micro bubble. This approach also loses its appeal especially when the bubble exists in a specific asset class. Using interest rate hikes to deflate sector specific bubbles would be like "performing brain surgery with a sledge hammer" (Bernanke 2002). The benefit may be eradication of the bubble but this will be achieved at the cost of putting brakes on the rest of the economy, which may not be desirable. The cost benefit trade-off may just not be worthwhile. According to Bernanke, there is no "safe popping" using monetary policy.

4 Including Asset Bubbles in the Reaction Function

The Fed through its monetary policy does contribute to asset price movements. First, when the Fed lowers its policy rate, and reduces borrowing costs, households are encouraged to take on more loans to buy assets (house, stocks, and commodity for households). This increased demand for assets leads to higher asset prices and through the wealth effect feeds into higher consumption and even higher investments in asset markets. Therefore, monetary policy does have spillover effects in asset markets because of its impact on cost of borrowing and its linkages with asset prices. The opposite happens when the central bank tightens interest rates. This linkage between asset prices and cost of borrowing is directly under the purview of the central bank's monetary policy.

Second, as discussed earlier, the current stance of the central bank is to address asset bubbles indirectly only if there are inflationary pressures brewing in the economy. However, asset bubbles can grow and sustain themselves in a low inflation environment (Borio and Lowe 2002). When does this happen? When there is easy availability of credit and there exist positive sentiment and general bullishness in financial markets. This will boost asset demand and will drive up asset prices. Given the interlinkages between financial markets and the real economy, higher asset prices will spur higher consumption and investment levels and boost AD. AD may grow to unsustainable levels causing the output gap to shrink. Yet, prices may not rise if the supply side dynamics are healthy. This price adjustment will get further delayed if the market does not expect prices to rise. This happens when the country's central bank has the reputation and credibility of targeting inflation effectively and thus anchors expectations. Borio (2006) calls it the "paradox of credibility". Given that the market participants know that monetary policy will not be tightened in the near future since there are no looming inflationary threats, asset demand would continue to rise followed by higher asset prices. Thus, the asset bubble is further nurtured, strengthened and escapes the attention of monetary policy. Here loose monetary policy is not the reason for the emergence and growth

of the asset bubble, but instead credible monetary policy increases risk taking and asset prices.

Therefore there is a role for monetary policy in containing asset bubbles before they burst even if inflation is not a threat in the near term. A monetary policy response to asset bubbles on their upward trajectory would reduce the macroeconomic cost and the systemic financial risks associated with a full-blown bubble burst. This becomes all the more critical when interest rates and inflation are already low prior to the collapse of the bubble. Post collapse, the economy would have to face the consequences of severe deflation with not much room to reduce interest rates.

Critique of the Mop Up Strategy

The current strategy of the Federal Reserve to clean up the mess after the party is over has its own set of challenges and long-term implications on the economy and behaviour of economic participants.

When confronted with the mess of an asset market collapse, the Fed has to first ascertain the implication of the collapse on the wider economy and the financial system. Only if the wider economy is affected will the Fed respond. This adds to the inside lag of a monetary policy response. When a central bank responds to a bubble burst by reducing interest rates, it has to decide when and by how much to reduce interest rates. Since monetary policy has a long outside lag and its impact is not felt immediately, monetary policy expansion may be staggered and the financial cost of clean up may be excessive. Also, the decision to reduce interest rates becomes difficult if policy rates were low to begin with and/ or signs of incipient inflation are visible. In this case, the central bank may not have much room to reduce interest rates.

The other associated problem with the mop up strategy is to time and sequence the "exit". Keeping interest rates low for too long will create a fertile ground for the next asset bubble. This becomes even more complex if the economy is facing low inflation because it becomes politically challenging for the central bank to defend its tightening stance.

The exit strategy becomes all the more difficult when both monetary policy measures and fiscal policy stimulus have been implemented in response to the collapse of asset bubbles. It can become difficult to track the effectiveness of each of these policy expansions separately as their individual benefits may be intertwined or opaque. To decide on which policy measures to scale back and which ones to continue with can be tricky.

Also a monetary exit may clash with the agenda of the government that may not want an early exit, as is the case in the us at present. The current us administration stands strong on its continuing support for expansionary stance on both monetary and fiscal fronts. However, fissures within the Fed are beginning to appear regarding timing of reversal of policy from an expansionary to a contractionary stance. This is rare since the Fed has a long-held reputation for being secretive and rarely are differences aired in public. Some members are anxious to implement a quick reversal of interest rates in the direction of normal, longterm rates lest inflation is ignited while others like Bernanke are cautiously holding the wait and see approach. Bernanke does not want to make an early exit and repeat the mistakes of 1937, which had then led to prolonged depression. At the same time, the Fed has to weigh the consequences of keeping interest rates too low for too long and repeat the mistake the Fed made after the dot-com bubble burst.

These are some of the decisions that most central banks are currently grappling with. The Reserve Bank of Australia was the first central bank among the G-20 nations to officially begin its exit strategy when it hiked interest rates on 6 October 2009. As the RBI Governor D Subbarao recently admitted at the G-30 International Banking seminar in Istanbul, "while there is broad agreement that we need to exit from the present excessively accommodative monetary and fiscal policies, there is less agreement on when and how we should exit" (Subbarao 2009).

The other serious issue with the mop up strategy is that it creates moral hazard. When investors believe and expect that the central bank will not intervene in asset markets to monitor bubbles unless inflationary expectations are altered but will provide safety net and lessen their losses when the bubble bursts, investors are prompted to seek higher risk in pursuit of higher returns (White 2006). Looking sequentially at the Fed's response after the stock market crash of 1987, the collapse of the hedge fund Long-Term Capital Management in 1998, the dot-com bubble burst of 2001 and now the housing bubble and credit bubble burst of 2007, the Fed is confirming the notion among investors that when the next asset bubble bursts, it will cover or at least lessen their losses. The other associated issue with the mop up strategy is to decide whom to protect. In the context of the current crisis, should the Fed's interest rate decision be targeted towards homeowners facing foreclosures or the banks? This issue becomes pertinent because it raises the question why should we reward homeowners who took excessive risk and purchased homes they could ill afford while prudent households continued to live in smaller homes.

5 Should the RBI Target Asset Bubbles?

Do asset bubbles have an impact on business cycles in India? We described earlier how wealth effect and balance sheet effect provide a conduit between rising asset prices and AD. As asset prices rise, their impact on spending will be felt only if households can and want to access their gains from their portfolio and use it to increase their spending. The balance sheet effect will work if higher asset prices stimulate lending and borrowing.

In the case of the housing sector, the Indian household has very limited opportunity to encash gains from increased prices of their holdings. In the us, as housing prices surged through the first half of this decade, homeowners were able to easily tap into this increased wealth for ready cash. Using mortgage refinancing products, home equity borrowings and by trading down (to smaller homes), along with the vast array of mortgage products, American households quickly translated their home price appreciation into ready cash to increase their consumption levels. When property prices rise in India, Indian homeowners cannot do the same because similar refinancing products and equity extractions options are neither available nor are they popular. Therefore it is highly unlikely that an asset boom in housing will have a strong wealth effect in India and influence spending, AD

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and business cycles the way it did in the west. This makes it unlikely that the RBI needs to worry about property bubbles' impact on spending. Moreover, property bubbles in India are largely demand-driven, the creation of monopoly ownership in the urban areas, and due to weak regulatory framework rather than overextended expansionary monetary policy. The RBI's current stance is to use regulatory norms rather than monetary policy tools to contain property bubbles.

In the case of equity bubbles, again the wealth effect is weak in the Indian context. An increased equity portfolio does not translate into increased purchasing power to the extent it does in the us. Typically, most Indian households hold their stock investments in long-term saving schemes that are not quickly and easily tapped to fund spending. When stock prices rise it does increase the household wealth but does not necessarily translate into higher spending and higher AD. Therefore in India, asset price movements do not cause ripple effects in the economy to the same extent as they do in the us because of the weaker wealth effect.

However, asset bubbles may spur increased spending through the balance sheet effect. As the value of the asset increases, value of the collateral against which loans can be obtained increases. This decreases the cost of borrowing and increases borrowing limits. In the case of equity, investors in India may have increased their spending by borrowing against increased asset prices more but it is unlikely that they did it to the same extent as the American consumers.

Hence the effect of asset prices on the real economy is limited in India. They do not influence spending decisions significantly and influence lending and borrowing decisions only to some extent. Therefore monetary policy need not be used to address asset bubbles. Moreover, the RBI addresses asset bubbles through its regulatory role over the banking sector. This is typically done by imposing stringent credit controls on lending against assets when it views that asset bubbles are present.

However, the presence of asset bubbles can present a problem to the RBI in its exchange rate policy. When increased foreign capital inflows assert upward pressure on both the rupee as well as the asset prices, this puts the RBI in a quandary as it tries to manage the rupee and address the bubble. To quell the bubble, the RBI needs to hike interest rates but this would attract even more capital inflows and put further upward pressure on the rupee. If the RBI reduces interest rates to protect the rupee, this would further strengthen the asset bubble. The exact opposite would happen if outflow of foreign capital was asserting a downward pressure on asset prices and the rupee. To nip the capital outflow and protect the rupee, the RBI should hike interest rates but this would further depress the asset market. Thus asset bubbles make it tougher for the RBI to stabilise the currency.

6 Concluding Remarks

The recent crisis should serve as a rich learning experience for central banks, regulators, academicians and market participants. As the crisis unfolded, it challenged some of the established views of central banks regarding prevention and management of, and reaction to asset bubbles burst. It is imperative that the Fed draws lessons from this experience, rethinks and adapts its role in maintaining financial and economic stability in a fast evolving, highly innovative, global financial landscape. As far as the monetary policy is concerned, it needs to re-examine the linkages between business and financial cycles along with its goal of maintaining price stability.

However, the most pressing current challenges facing major central banks are developing inflationary pressures on one hand and the incipient signs of recovery. Also at the same time, the banks need to plan and execute a timely exit strategy – the unwinding of the various stimulus and non-standard facilities that were provided to cushion the economy from the recessionary effects of this severe crisis.

However, it must be borne in mind that a crisis of this magnitude could not have taken root without the collective actions of various authorities, regulators, financial institutions and market participants. Therefore, the lessons learnt are not just for one single authority. Going forward, a more stable financial and economic system imperatively requires policy response from more than just the central bank.

NOTES

- Available on http://www.federalreserve.gov/fomc/ fundsrate.htm
- 2 Federal Reserve Bank Press Release, 12 December 2007, available on http://www.federalreserve. gov/newsevents/press/monetary/20071212a.htm

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