



Expansionary Monetary Policy Can Create Asset Price Booms

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The Subprime Mortgage housing boom that ended in a bust in 2006-2007 leading to a financial crisis in 2008 and the Great Recession may have been related to expansionary Federal Reserve monetary policy from 2002-2006 designed to offset incipient deflation. The housing boom which began in the late 1990s had its origins in a long tradition of policies to encourage home ownership in succeeding presidential administrations, financial innovation, lax regulatory supervision and oversight and corporate malfeasance.

John Taylor (2007, 2009) has led the indictment of the Fed for fueling the housing boom in the early 2000s. Based on the Taylor rule (1999) he showed that the Federal Funds rate was as low as 3 percentage points below what a simple Taylor rule would generate for the period 2002-2005. Taylor then simulated the path of housing starts had the Fed followed the Taylor rule over the period 2000 to 2006. His calculations suggest that most of the run up in housing starts from 2002 to 2005 would not have occurred. Taylor's results have been backed up by an OECD study for many countries in the 1990s and 2000s (Ahrens et al 2008) which found a close relationship between negative deviations and several measures of housing market buoyancy. This evidence as well as other papers suggests that expansionary monetary policy had a key role to play in fostering recent housing booms, some of which led to devastating busts. Other literature finds evidence linking expansionary monetary policy to equity booms and commodity price booms (Gerlach and Assenmacher Weshe 2008, Pagano, Lombardi and Lanzuini 2010).

There is an extensive literature on the relationship between monetary policy and asset prices. Asset prices are viewed as a key link in the transmission mechanism of monetary policy. The traditional view argues that added liquidity causes asset prices to rise as a link in the transmission mechanism of monetary policy actions to the economy as a whole. Friedman and Schwartz (1963) and Brunner and Meltzer (1973) spelled out the transmission mechanism following an expansionary Fed open market purchase. It would first affect the prices (rate of return) on short-term government securities, then via a portfolio balance substitution mechanism, the price (rate of return) of long-term government securities, then corporate securities, equities , real estate, old masters and commodities including gold would be bid up(their returns lowered). Thus the impact of expansionary monetary policy will impact securities, assets and commodities and finally the overall price level. This view sees asset prices as possible harbingers of future inflation.

An alternative approach going back to the Austrians, (Hayek, Mises and Robbins) viewed asset price booms as degenerating into bubbles if accommodative monetary policy allows bank credit to fuel the boom. The boom will lead to a bust that will cause a depression. The BIS economists Claudio Borio and Philip Lowe (2002) have extended the Austrian view. They view a buildup of financial imbalances (rapid credit growth and rapid increases in asset prices) as increasing the risk of a financial crisis and macro instability. They argue that low inflation can promote financial imbalances regardless of the cause of an asset boom. A credible commitment to price stability will make product prices less sensitive and output more sensitive in the short-run to an increase in demand. Indeed the absence of inflation may cause policy makers to delay tightening as demand pressures build up.

Asset booms also sometimes lead to big busts which can contribute to banking crises and severely impact the real economy. Moreover to the extent that banking crises are usually

followed by expensive fiscal bailouts, this can also lead to pressure on the monetary authorities to monetize the debt that is created hence engendering future inflation.

The important role that asset price booms and busts play in economic turbulence led to considerable policy debate in the 1990s and 2000s on whether the central bank should follow preemptive policy to head off booms before they lead to busts. This debate was unresolved before the recent crisis. Since the subprime mortgage crisis, focus has returned to the issue with the current emphasis on using macro prudential policies to defuse incipient booms.

Historical Narrative

Asset price booms have been a permanent fixture in economic history and an expansionary monetary environment is often present. In the eighteenth century the South Sea bubble and John Law's Mississippi scheme stand out. In the nineteenth century the crash and panic of 1825 in London was the first global financial crisis. The sale of stocks to finance trade and investment with Latin America after its independence triggered a stock market boom in London in 1825. The boom in which stocks rose by 78% was fueled by loose Bank of England policy. The boom burst when the bank tightened. It led to a banking panic which ended with LLR action but too late to prevent many failures. A railroad boom in England in the 1840s had resonance to the dot.com boom of the 1990s. It was driven by expectations of profits from the new railroad sector. It was also fueled by expansionary Bank of England policy. It ended when the Bank tightened, triggering the Panic of 1847 and a recession.

The U.S. had many stock market booms and busts in its history, several associated with banking panics and serious recessions. The railroad boom after the Civil War when the west was opened up was a classic boom bust. Railroad expansion was funded by British capital inflows. It was also accompanied by corporate malfeasance and corruption. It was fueled by gold inflows. The boom ended with a stock market crash in 1873 triggered by the Credit Mobilier scandal. The crash led to a banking panic and a six year recession.

The 1920s experienced boom busts in both the stock market and in real estate. The 1920s stock market boom which ended in the Wall Street Crash of 1929 was associated with massive investment in new industries like automobiles and consumer durables. It was also a period of rapid productivity advance and financial innovation. Debate continues over the role of Federal Reserve policy in fueling the boom. Adolph Miller of the Federal Reserve Board in Washington DC blamed the boom and Wall Street Crash of October 1929 on expansionary monetary policy in 1924 and 1927 by Benjamin Strong, Governor of the New York Fed to aid the British pound in rejoining the gold standard and then keeping on it. The 1920s also had a housing boom from 1923 to 1925. Eugene White (2009) shows that deviations from a Taylor Rule which suggests that it was fueled by loose Fed policy.

The post World War II era exhibited a large number of stock market and housing booms in many countries which often occurred in an environment of loose monetary policy. Also expansionary monetary policy in the 1960s and 1970s led to a commodities boom which presaged the Great Inflation of the 1970s. Key examples of money fueled booms included stock and property booms in the UK in 1971-1974; real estate boom busts in the Scandinavian countries in the late 1980s.

The key driving force for these booms was financial liberalization; Japan's massive stock and property booms in the 1980s fueled by an increase in bank lending and easy BOJ policy after the Plaza Accord of 1985.

The Tech boom of the 1990s in the U.S. reflected innovation in internet technology in an environment of rapid productivity growth. The boom was financed by easy bank credit in an environment of low inflation and accommodative Fed policy.

Finally, global commodity price booms occurred in the 1930s reflecting Franklin Roosevelt's gold and silver purchase policies designed to reflate the U.S. economy and in the 1960s and 1970s, reflecting expansionary monetary policy which pushed up the prices of inelastic raw materials. The rise in commodities later fed into overall inflation. Thus expansionary monetary policy, although not the sole cause, was an important ingredient in the long history of asset price booms.

Empirical Evidence

In a recent paper with John Landon Lane (2012) we identify booms and busts in houses, equities and commodities using annual data for 18 countries from 1920 to 2010. We identify booms using business cycle dating techniques. We define a boom as a sustained expansion in asset prices that ends in a significant correction. For real house prices and commodity prices it must last at least two years and average at least 5% per year. For real stock prices it should expand by 10 % per year. To identify the bust, the price correction that follows the boom must be greater than 25% of the expansion in price that occurred during the preceding boom. Using this metric we identified housing price booms in several countries in the 1920s, in the 1970s and 1980s and then in the 2000s. The most dramatic recent boom busts were in the U.S. and Ireland. We identified many more stock price booms than housing price booms with international patterns in the 1920s, 1950s in Europe, and the 1990s tech boom in many countries. Finally we identified global commodity price booms in the 1930s, 1970s and the 2000s.

To determine the impact of expansionary monetary policy on asset booms we ran a panel regression which pooled the observations for each type of boom. As controls in the regression we included country-specific effects to control for unobserved factors that differ across countries but not across time. To measure the impact of expansionary monetary policy we used two measures of loose monetary policy: deviations of the interest rate from the optimal interest rate as given in a standard Taylor rule; and the deviation of the growth rate of broad money from 3%. This represents Milton Friedman's original (1960) monetary policy rule of setting money growth equal to the underlying trend growth rate of real output. In addition we included other controls including: a measure of the Austrian/BIS effect to account for sustained periods of low nominal interest rates—deviations from a long-run trend of short-term interest rates; a measure of credit conditions in each country (total bank loans as a proportion of GDP); the growth rate of real GDP, a measure of financial liberalization and a measure of current account imbalances.

We find that expansionary monetary policy (using both measures) has strong effects on real house prices and real commodity prices with lesser effects on real stock prices. The controls are also significant, especially credit and the deviation of interest rates from its long-term trend.

Thus expansionary monetary policy, even when accounting for the Austrian/BIS effect has a significant impact on real asset prices.

Policy Lessons

The evidence that loose monetary policy does contribute significantly to asset price booms leads to the question; should central banks use their policy tools to target asset prices? Should they give an important weight to asset prices when setting their policy instruments as a possible contingency to depart from their core low inflation targets? And should they have a separate financial stability mandate in addition to their mandate to maintain low inflation? The tech boom in the stock market in the 1990s and the housing boom of the 2000s led to considerable interest in the issue. Some proposed using monetary policy to defuse asset booms which could adversely affect the real economy. Others argued that to the extent asset booms are justified by fundamentals, they should not be dealt with. But it was argued that in the case of irrational exuberance or a bubble leading to economic collapse that a response may be required.

In the end little was done about this issue by policymakers until the crisis of 2007-2008. The crisis and the Great Recession led many policy makers to decide that financial stability should be an important goal of central banks along with inflation (and overall macro stability). The new view argued that central banks should be closely monitoring asset price developments and the state of the financial system (including banks and non-banks) and be willing to use policy to defuse threatening imbalances. This became known as the case for macro prudential regulation which promoted the use of policy tools such as countercyclical capital requirements and liquidity ratios. This case fostered by the BIS and many others, has led to important changes in the financial regulatory landscape including the 2010 Dodd Frank Bill in the U.S. which has given the Federal Reserve greatly expanded powers over the financial system as a whole. The question arises whether the new financial stability powers of central banks will work to prevent another crisis? Also whether the new impetus has gone too far in encroaching on the traditional role of central banks to maintain price stability, act as lenders of last resort to the banking system and protectors of the integrity of the payments system.

The history of financial regulation after the big financial crises, e.g. the Great Depression suggest that often the government overreacts and in the name of safety suppresses financial development and the price discovery mechanism of financial markets. The regime of the 1930s to the 1970s gave us financial stability at the expense of unworkable firewalls between complementary functions (Glass Steagall) and price controls and ceilings like regulation Q and the prohibition of the payment of interest on demand deposits. These regulations broke down in the face of the Great Inflation and financial market arbitrage and innovation. In addition in the immediate post World War II period central banks lost their independence to the fiscal authorities who had other, politically driven, objectives in mind. It would not be surprising if that happened again.

More fundamentally many of the recent institutional changes pose threats to the independence of central banks and their ability to perform their core mission which is to maintain the value of money (Bordo 2010). Central banks were also supposed to act as lenders of last resort to the banking system. They were not responsible for the solvency of banks or any other entities or the financing of government deficits (except in wartime) (Bordo 2012).

The bottom line is that asset price booms are important, potentially dangerous to the real economy and should be closely monitored and possibly defused. However the policy tools to do this should not be the traditional tools of monetary policy. Other tools such as margin requirements for stock prices, minimum down payments for housing and risk weighted, bank size weighted, capital requirements for banks could be used. Authorities other than central banks should preferably perform these tasks to prevent central banks from being diverted from their main functions.

To the extent that asset price booms including commodity price booms do not reflect real fundamentals they should also be viewed as harbingers of future inflation and as part of the normal transmission mechanism of monetary policy as did occur in earlier historical episodes. In this case they serve as a signal for tighter monetary policy.

Finally the evidence in Bordo and Landon Lane (2012) for close to a century, for many countries, and for three types of asset booms, that expansionary money is a significant trigger, makes the case that central banks should follow stable monetary policies. These should be based on well understood and credible monetary rules.

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