

Did monetary policy cause a housing bubble in the US in the first half of the 2000s?

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Abstract:

Loose monetary policy is one of the causes of the housing bubble's burst. The relationship between monetary policy and the housing bubble is the main topic of this essay. Through analyzing economists' opinions, collecting data and making regression, and evaluating the cause of the housing bubble on my own, this essay concludes that monetary policy is not the main cause. In this essay, I consider the relationship comprehensively. I first select and evaluate two works of literature with different views about the relationship between the housing bubble and monetary. Then in the discussion part, I draw on both ideas and find other arguments to draw my conclusion. This essay announces that the housing bubble is affected by various factors, and monetary policy is just one of them.

Keywords: Housing bubble, Monetary policy, Interest rates, Housing prices, Various factors.

Introduction:

In the first half of the 2000s, the US experienced a serious housing bubble, which had a broad and far-reaching impact on the economic situation of the United States and the world. A Housing Bubble is a situation in which the real estate market in a certain region or country rises abnormally and unreasonably, and the rise is not in line with economic fundamentals (Investopedia, 2020). The damages included but were not limited to economic recession, financial crisis, and housing price collapse. It is shown in the later research that the housing bubble was one of the most important triggers for the 2008 financial crisis (Lewis, 2015). There are various reasons why the housing bubble burst, such as loose monetary policy, lenient credit terms, speculation, and innovative financial derivatives (Ross and McTague, 2017). In this research essay, we focus on the relationship between monetary policy and the housing bubble in the US.

Monetary policy is a set of instruments a national central bank uses to control the total money supply and promote economic growth (Brock, 2023). The central bank in the US is the Federal Reserve System, which implements the monetary policy to achieve two crucial goals: maximum employment and price stability. This is a kind of dual mandate, and two missions interact. Whether the relationship between employment maximization and price stability is complementary or conflict depends on underlying economic fluctuations. As a result, the Federal Reserve needs to exploit the influence of monetary policy to achieve the dual mandate. However, if the policymakers vaguely read the situation and implement the corresponding monetary policies, the negative impact

would be enormous and cause market collapse, such as a housing bubble. Therefore, some scholars believe that low-interest rates from the excessively loose monetary policy cause the housing bubble. Nonetheless, other experts' opinions show that monetary policy is not all to blame for the housing bubble.

Literature review:

Two papers can be evaluated to obtain opinions from two economists. They express views about the relationship between monetary policy and the housing bubble in the US but have different outcomes. It is helpful to form my view by studying their special insight.

In the journal "The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong," Taylor argues that loose monetary policy and lax regulation are mainly responsible for this housing bubble crisis. Specifically, Taylor contends that the longstanding low-interest rates set by Federal Reserve contributed to the housing market bubble and the later collapse of the subprime mortgage market. This is considered a loose monetary policy as more money floats in the market when the interest rate is low. Meanwhile, lax regulations which connive financial institutions to take risky actions such as securitizing subprime mortgages are also responsible for the crisis. To prove a connection between loose monetary policy and the housing market's collapse, Taylor provides empirical evidence (Taylor, 2009). One example is the figure "The Boom-Bust in Housing Starts Compared With the Counterfactual," which shows that the monetary policy is the key cause of the boom as well as the bust and crisis. The extra loose monetary policy and super low-interest rate give consumers great confidence to

involve in the housing market. As a result, units of house increase rapidly, just like the “boom” curve shown in the figure. However, when there is an excess of money and continuously rising prices, the “boom bubble” breaks and more and more people can not pay the housing loan. The housing bubble crisis breaks out.

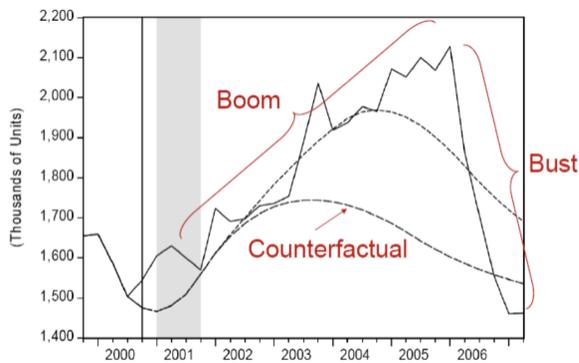


Figure 2. The Boom-Bust in Housing Starts Compared With the Counterfactual. (The line with shorter dashes shows model simulations with the actual interest rate.)

For the policy responses to the crisis, Taylor is critical. He argues that they were poorly designed and implemented. For example, Taylor thinks the Troubled Asset Relief Program (TARP) was unnecessary. It is more effective to recapitalize the banking system rather than the government purchasing troubled assets from banks. The government’s stimulus efforts also had little effect on stimulating economic growth through his research because it was misguided. Taylor concludes with principles to prevent future financial crises for policymakers, including maintaining a stable monetary policy, promoting market discipline through regulations and incentives, and avoiding policies that distort market incentives (Taylor, 2009). Generally, Taylor analyses the causes of the housing bubble and the 2008 financial crisis with sufficient empirical evidence. This journal presents that loose monetary policy is one of the key causes of the housing bubble crisis and gives evaluations and recommendations to policymakers.

In the speech “Monetary Policy and the Housing Bubble,” published by former chairman of the Federal Reserve, Ben Bernanke, there is another opinion about the relationship between the housing bubble and monetary policy. In the paper, Bernanke announces that loose monetary policy contributed to the crisis in the early 2000s but not the main cause after evaluating the role of monetary policy in the housing bubble crisis. He points out that the features of the housing bubble are a sharp increase in home prices and a rapid expansion of mortgage lending. Many factors, such as the availability of exotic mortgage products, the

relaxation of lending standards, and a general increase in optimism about the housing market fuel the development of the crisis. It is inappropriate to simply conclude monetary policy is the main cause of the housing bubble. Although Bernanke admits that low-interest rate probably affects the housing market and results from a housing boom, their relationship is too complex to draw a single cause.

Meanwhile, Bernanke notes that the evaluation of monetary policy should base on the background of that past session, and we should not judge the action just using what had already been done and conclude. According to research based on both econometric models and purely statistical analyses that make no use of economic theory, it is shown that only a small portion of the increase in house prices earlier this decade can be attributed to the stance of US monetary policy (Bernanke, 2010). This means the decisions made during that period were probably suitable and did not cause much trouble. The housing bubble finally broke after many other factors’ influences, such as inflation rate, consumers’ confidence, and economic growth combined with low-interest rates.

Also, Bernanke discussed the limitations of monetary policy in dealing with the bubbles. It is mentioned that the Federal Reserve can not control asset prices directly but exploits interest rates to affect inflation. Bernanke contends that targeted regulation and supervision of financial institutions is a better way to address housing bubbles. He also mentions that policymakers should learn lessons and be vigilant in monitoring asset prices and financial stability from the 2008 financial crisis and housing bubbles. Federal Reserve may need new methods and tools to address financial risks before they become systemic.

Data and analysis:

I searched for data and made a regression model for the relationship between the housing bubble and monetary policy. I select the all-transactions house price index for the US to represent the factor of the housing bubble and the federal funds rate to represent monetary policy from the website FRED. The time series I choose is a set of quarterly data from 2000.1.1 to 2005.10.1 to represent the early 2000s. I assume a simple regression model: $y=a+bx+e$, where x is the federal funds rate, and y is the house price index. Using the data analysis tool, I find that the coefficient of x , which is b , is around -9. This data fits the opinion that lower interest rates make housing prices higher. However, the p -value is around 0.026, which represents the coefficient is insignificant at a 1% significance level. The insignificant coefficient shows

that the conclusion that interest rates have a negative relationship with housing prices in the early 2000s is probably unreliable. Although there is a trend, we may

not say that x causes y, and factors together influence the housing price and the housing bubble.

SUMMARY OUTPUT						
regression statistics						
Multiple R	0.45362132					
R Square	0.2057723					
Adjusted R Square	0.16967104					
standard deviation	35.7233405					
observation value	24					
variance analysis						
	df	SS	MS	F	Significance F	
regression analysis	1	7273.922752	7273.92275	5.69986486	0.025987893	
residuals	22	28075.45518	1276.15705			
total	23	35349.37793				
	Coefficients	standard deviation	t Stat	P-value	Lower 95%	Upper 95%
Intercept	311.54902	13.38968748	23.2678336	5.5137E-17	283.7805078	339.317532
x=interest rate	-9.2027529	3.854654705	-2.387439	0.02598789	-17.19681746	-1.2086883

Discussion:

The logic of the housing bubble:

Based on two papers and information from data analysis, I agree that both economists make sense but prefer Bernanke's view more. Low-interest rates from a loose monetary policy substantially impact the housing market. Consumers are tempted to borrow to purchase houses, and the housing price rises. The boom in housing markets attracts plenty of investors and further extends the scale of borrowing. The connections among investment, loan, and consumption make housing prices far higher than their actual value. When the market reaches the rooftop and supply and demand, start to be out of balance, investors gradually realize that housing price cannot grow sustainably and leave the market. Therefore, real estate prices fall sharply in a short period, just as they have risen rapidly. However, the bust's results are painful: house owners are heavily in debt, and financial institutions face default risk. The bubble breaks, and the whole economic activities are depressed. This logical chain seems to be reasonable. I conclude the logic and find it is coincident with Taylor's view. However, I argue that the cause of the housing bubble starter, "rapidly increasing housing price," is not suitable to mainly define as loose monetary policy.

Another crucial factor:

Factors that affect housing prices are various and complex. According to Bernanke (2010), the rise of housing prices at that time was much higher than expected, and it is hard to explain just using monetary policy. Policymakers evaluated and made decisions using many economic theories, such as Taylor Rule but failed to forecast such a huge increase in housing prices. In my own data analysis, the conclusion presents that the relationship between housing prices and interest rates is insignificant at a 1% level. The cross-country evidence also shows no significant relation between monetary policies and the pace of house price increases (Bernanke, 2010). Therefore, it is reasonable to say that other factors combined affect the housing market. One of the most significant contributors is complex mortgage securities and financial derivatives (Sowell, 2010). These new and complex tools, such as Mortgage-Backed Securities (MBS) and Collateralized Debt Obligations (CDOs), can pack many housing loans to make an investment product and draw more investors to participate. Meanwhile, financial institutions transfer risky subprime loans to investors to lower their credit risk. As a result, more investors buy riskier products and extend this unhealthy subprime loan market. Due to a lack of regulation and bad evaluation, the subprime loan crisis

emerged and exacerbated the housing bubble. The boom of the subprime loan market has small relation to monetary policy but largely affects the housing market as well. Low-grade financial derivatives played a big role in extending the housing market and should be considered together.

Solutions:

Think about monetary policy differently, is changing monetary policy the best way to avoid or fix the housing bubble crisis? The answer is probably no. Some reports announce that a better way to deal with the housing bubble is through regulation (Atif Mian and Amir Sufi, 2015). Low-interest rates in the short run are not the most crucial reason why people continuously purchase subprime loans and push prices so high. Lax regulation and lower underwriting standards are problems. Powerful and strict supervisions are keys to constraining the housing bubble (Shiller, 2012). Private sectors and financial institutions also need to address the problem of inadequate risk management instead of making judgments about the sustainability of housing prices. These methods are more effective than simply raising interest rates. Hence, even if monetary policy had been adjusted in time, it would not have guaranteed the housing bubble vanished. In addition, the interest rate increase in the early 2000s could seriously weaken the economy's recovery from the last recession, and it is probably not worth the loss. From the perspective of the solution, the fact that changing monetary policy is not the best way proves that monetary policy is not enough to be the main cause of the housing bubble.

Conclusion:

In conclusion, I find that loose monetary policy contributes to the housing bubble in the early 2000s, and I regard it as one of the causes instead of the only main factor. To respond to demand and supply shocks, monetary policy is a powerful tool Federal Reserve can implement. There are too many factors and rules in the market for a central bank to consider making decisions, such as expectation inflation, unemployment rate, GDP growth, etc. Making perfect plans for all needs is barely impossible, so we need to accept the limitations of monetary policy. I learned that the Federal Reserve had good reasons for setting low-interest rates in the early 2000s and forecasted the consequences. But the crisis still showed up. From the present perspective, many economists criticize the decisions during 2000-2005 and argue what would happen if interest rates weren't so low. However, I think that situation would not be so bad if other factors remained normal, which is not what

the monetary policymakers from the central bank could decide. The lax regulation, risky financial derivatives, the overly optimistic mood among consumers, speculation, real estate speculation....., and the loose monetary policy contribute to the housing bubble. It would be too harsh to mainly blame the monetary policy.

We should learn lessons from the loss and crisis and improve the system. Taylor points out that the response of the monetary policy was ineffective and helps to conclude principles for policymakers to avoid crises from happening again. Bernanke states that the regulations must be improved, and the targeted measures after the crisis are lacking. The monetary policy does have a big problem during the housing bubble, but improvements should be anywhere in the financial markets. A chain reaction caused this crisis, so we must take every step seriously. According to economic theory, a systematic financial crisis like a housing bubble cannot be avoided forever. The markets and institutions should regulate themselves well to minimize the damage and decrease the frequency of the crisis. Government and policymakers also should recognize the situation and take appropriate measures to stabilize the market.

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