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A Housing Bubble with Chinese Characteristics

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The onset of the global financial crisis in September 2008 led many countries around the world to implement stimulus packages to revive their economies. For China, this policy was coupled with a surge in new lending in 2009, up to a total of RMB9.2 trillion (US$1.35 trillion) in the first eleven months of the year, equivalent to 188 percent of total lending in 2008 and 253 percent of total lending in 2007.[1] Many have touted this credit expansion with keeping China's economy afloat during these turbulent times; however, others have warned of possible asset bubbles emerging, particularly in China's stock and real estate markets. In addition to loosening its credit policy, the People's Bank of China (PBoC) announced several key measures in late 2008 to shore up the property sector, including reducing the floor mortgage interest rate for commercial individual housing to 70 percent of the benchmark lending rate and lowering the minimum down payment for first-time home buyers from 30 percent to 20 percent.[2] These policy changes reversed the credit controls put in place by the PBoC in 2007 when the government deliberately cooled what many considered to be a bubble in China's property sector. However, rising housing prices in 2009 have led the government to consider how and when to rein in the housing market to avoid another potential bubble. As an important driver of economic growth in China and a source of many private sector jobs by way of construction, the government has been hesitant to cool the housing market for fear that it would potentially slow down the entire economy during these critical times. In its 2009 second quarter monetary policy report, the People's Bank of China aptly explained the inherent dilemma: "With regard to the real economy, consumption, investment, imports and exports, the real estate market, and the labor market have not formed a synergy that can achieve rapid recovery of the global economy."[3]

The financial crisis, surge in new lending in 2009 and rising housing prices raise many important questions. First, what is a bubble and is China's housing market there or on its way? Second, how much of this new lending is going into asset markets instead of to the real economy? Third, given unique international circumstances such as low worldwide interest rates, how effective will China be in trying to reverse a potential housing bubble if it decides to do so? In this paper, I will attempt to address these questions and argue that China's government, through various administrative controls, is just as much creating as cooling bubbles in the housing market. In addition, current housing data suggests that the Chinese housing market is fast approaching a bubble, thus making it essential for the government to explore policy options in 2010. First, I will explore the theory of asset bubbles and use these concepts against the backdrop of China. Second, I will address the liquidity boom since the start of the year, along with the decision by the government in late 2008 to loosen restrictions for the property sector, to analyze the implications of a housing boom for real estate developers, who control supply in the market, and consumers, who dictate demand. Third, I will evaluate the current situation and discuss potential PBoC policy responses going forward in the context of the current global crisis.

Current literature offers an array of explanations to describe bubbles. Frederic Mishkin states that a bubble is determined by "pronounced increases in asset prices that depart from fundamental values and eventually crash resoundingly."[4] A more colloquial definition proposed

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[1] People's Bank of China
[2] China Monetary Policy Report Quarter Four, 2008, People's Bank of China, p.46.
[3] China Monetary Policy Report Quarter Two, 2009, People's Bank of China, p.38.
[4] Frederic S. Mishkin, Speech, Wharton Financial Institutions Center and Oliver Wyman Institute's Annual Financial Risk Roundtable, Philadelphia, Pennsylvania, 15 May 2008.

by Andy Xie suggests that a bubble is "whenever you see prices so much higher than the normal range."[5] These examples show that defining a bubble appears to be both difficult and subjective, forcing economists to rely on certain causal factors when determining potential asset bubbles. Hyman Minsky placed importance on the role of leverage in acquiring financial assets. A high loan-to-value ratio could destabilize the financial system if the price of those underlying assets plummets, hindering the acquirer's ability to repay his or her loan. Minsky further argues that the events leading up to the crisis begin with a form of "displacement," or some exogenous shock to the financial system. Examples of such displacement could be a war, crop failure, political event or surprising financial success, bringing new opportunities for profit and diverting funds from one sector of the economy to another.[6] In the case of a speculative boom, when a few investors decide to take their profits and sell out, this may lead to a period of financial distress whereby other investors perceive a possible rush for liquidity, causing a race out of long-term assets and into real money. Common signals that instigate a crisis following a speculative boom include the failure of a bank or firm or a decline in the price of the asset itself. A period of revulsion follows, in which investors are loathe to hold assets or securities and banks subsequently cease to lend on the collateral of those assets. This downturn continues until prices fall so low that investors are again keen to invest in less liquid assets, trade is cut off by establishing a floor for price declines or a lender of last resort intervenes to reassure investors that ample liquidity is available should it be needed.[7]

In the context of the above guidelines, China's housing market is a unique case. The relatively recent privatization of China's housing market in the 1990s has driven homeownership up to 70 percent from 15 percent, and newfound wealth in the country has established a firm demand for new housing.[8] Coupled with the lack of other lucrative investment opportunities, it is no wonder that real estate is a popular investment channel for most consumers. However, demand for housing is especially vulnerable to administrative controls put in place by the government, which I argue constitute a form of "displacement" as suggested by Minsky. Tightening credit, larger down payment requirements and higher mortgage rates reduce the demand for housing in China, allowing the government to effectively cool the housing market as it did in 2007. However, easier access to credit, low mortgage rates and lower down payment requirements revive investors' interest in the real estate market. Given these circumstances, funds may be redirected to the property sector in search of profitable opportunities and away from the real economy, inflating housing prices in the process. This trend is likely to continue until the government reverses its current policy or the imbalance between supply and demand conditions causes a sharp downturn in prices. Increased leverage in the property sector, especially among real estate developers, and rising property prices have fulfilled two out of three features of what economists consider when identifying a bubble. The third feature, a precipitous drop in prices, has yet to occur.

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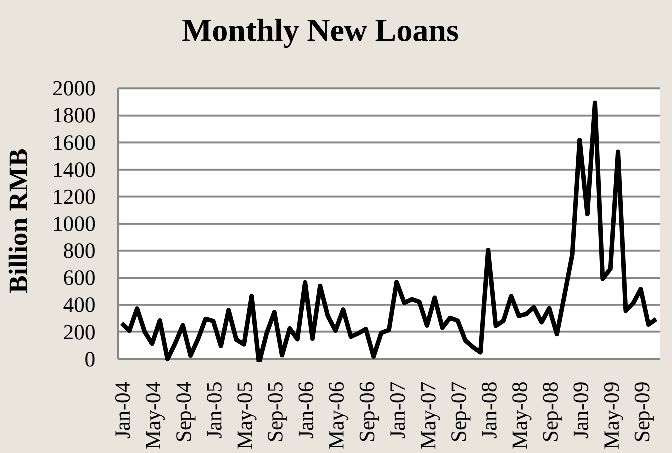
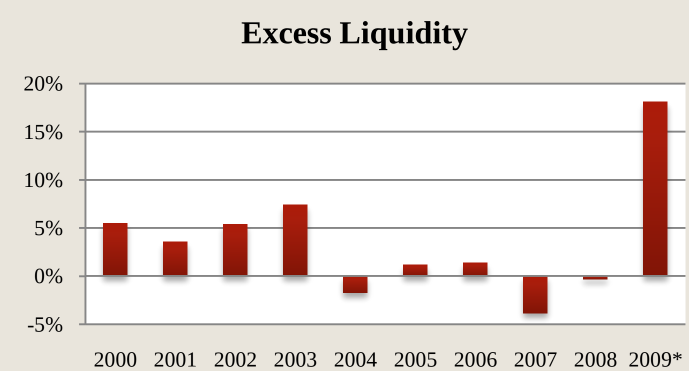
[5] Allison Jackson, "China spending to continue despite fears: experts," *AFP* 19 September 2009.
[6] Charles P. Kindleberger, *Manias, Panics and Crashes* (New York: Basic Books, 1989) pp.16-17.
[7] Kindleberger, *Manias, Panics and Crashes*, pp.21-22.
[8] Andy Rothman, "LUV or W? China Strategy," *CLSA Asia-Pacific Markets*, p.14.

The flush of new liquidity into the economy since the start of the year addresses the leverage issue in asset bubbles. Rather than cut interest rates to near zero as many other countries have, the Chinese government instead prefers to use the credit channel to support growth. In late 2008, the government removed the credit controls put in place in 2007, instructing banks to lend out a portion of their excess reserves. As a result, new lending grew an astronomical 1489 percent in December 2008, indicating that the Chinese Communist Party still exerts full control over all Chinese banks and can quickly direct lending. New lending reached RMB9.2 trillion (US$1.35 trillion) in the first eleven months of the year, far exceeding the RMB6.8 trillion (US$872 billion) in new lending between 2006 and 2007 during China's last housing bubble.[9] Recipients of the bulk of new lending in the first half of the year were primarily state-owned enterprises who used this financing for infrastructure investments in line with the government's stimulus package, which is expected to account for over half of GDP growth this year. Because of this massive credit expansion, excess liquidity (growth in M2 minus growth in nominal GDP) grew at its fastest pace on record, reaching an all time high in the first nine months of the year. Despite the surge in new lending, the loan-deposit ratio only increased to 66.8 percent in November from 65 percent in December 2008, indicating that many loans are not spent on real economic activities but have merely supplied leverage for asset market transactions.[10]



Source: People's Bank of China

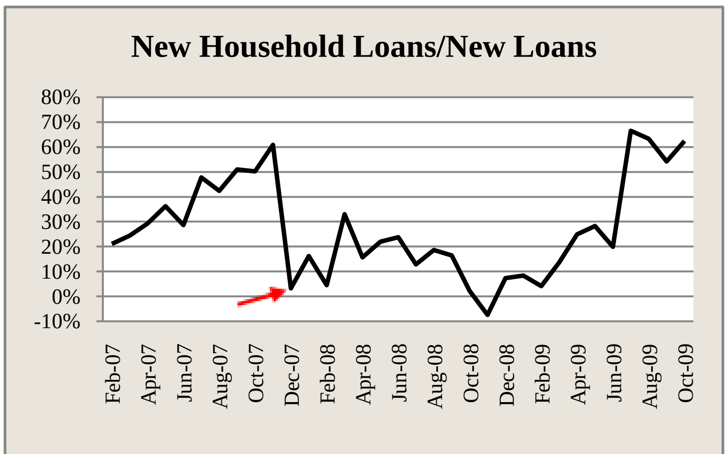


*Through Q309
Source: People's Bank of China

With regard to the housing market, banks supply financing support in two important ways: mortgages for homebuyers and loans for real estate developers. Although new lending has slowed since the first half of the year, the composition of lending has shifted. The share of new credit going to households, the bulk of which make up mortgages, reached an average of 61.2 percent in the third quarter, up from an average of 16.5 percent in the first half of the year. The larger share of new loans going to households for mortgages also means that the duration of new loans is more medium- or long-term in nature. New lending to households followed a similar trend in 2007 with one noticeable difference. In November 2007, households' share of new lending reached a peak of 60.7 percent before plummeting to 3.3 percent the following month. This precipitous fall is most likely due to the implementation of various credit controls by the PBoC in late 2007 to curb lending to the property sector. The recent surge in household lending,

[9] People's Bank of China
[10] Andy Xie, "China Counts Down to the Next Bubble Burst," *Caijing* 5 August 2009.

likely stemming from the lifting of administrative controls in late 2008, suggests that demand for mortgage financing is quite elastic in relation to government controls.



Source: People's Bank of China

This two-way channel for credit to the property sector requires one to disaggregate the effects of credit controls and lending growth on consumers and real estate developers, since mortgage financing targets housing demand and loans to real estate developers affect housing supply. Since 1998, the PBoC has regularly loosened and tightened credit conditions for the property sector, as well as enacted other regulations to limit foreign investment in real estate after 2006 and strengthen practices regarding evaluating the creditworthiness of borrowers, namely real estate developers. 1998 was a notable year as the government's supply-driven approach to the property sector led to an overbuilding of housing while demand remained insufficient, leading the government to pass China's first mortgage financing laws.[11] Common policies aimed at consumer lending for housing include adjusting the down payment threshold, raising or lowering mortgage rates and levying various taxes. To promote real estate investment by certified developers, the PBoC generally targets credit supply by adjusting lending quotas and reducing the reserve requirement ratio for banks, thereby expanding the pool of available funds for real estate development. An analysis by BBVA reports that reducing the reserve requirement ratio by 8 percentage points is equivalent to releasing RMB4 trillion (US$585 billion) into the banking system.[12]

The PBoC argues that the housing bubbles prior to 1998 were largely supply-driven, with subsequent bubbles being mostly demand-driven following the advent of a mortgage financing system in China. With regard to the current situation, concerns over supply and demand differ

[11] Shahid Yusuf and Tony Saich, "China Urbanizes: Consequences, Strategies and Policies," *The World Bank* (Washington, DC: 2008) p.23.
[12] Li-Gang Liu and Andrew Tsang, "PBOC Watch," *BBVA* 26 November 2008.

somewhat, especially with respect to leverage. Current regulations require a 20 percent down payment for first-time homeowners, although data suggests that of those homeowners with a mortgage, around 25 percent willingly pay more than the minimum up front.[13] In addition, the second mortgage rule limits the use of mortgages for investment purposes by requiring a 40 percent down payment. Unlike in the United States, Chinese consumers are much less reliant on credit, with only one quarter of middle class homeowners having a mortgage. The average loan-to-value ratio in China is approximately 46 percent, compared with 76 percent in the United States.[14] Prudent down payment requirements, relatively limited use of mortgages among consumers and favorable loan repayment rates suggest that China's mortgage market will not be a source of financial instability in the near future. In addition, the lack of sophistication of China's mortgages with respect to securitization reduces the likelihood of a real estate bubble expanding into a credit and financial bubble. Furthermore, lending quotas have created a "culture of liquidity hoarding" in China whereby consumers jump on available credit with the expectation that credit controls will return again in the future.[15] This latter point strengthens the argument that China's administrative controls not only serve to cool the property sector in the midst of a bubble, but also release pent up demand for housing when conditions are favorable.

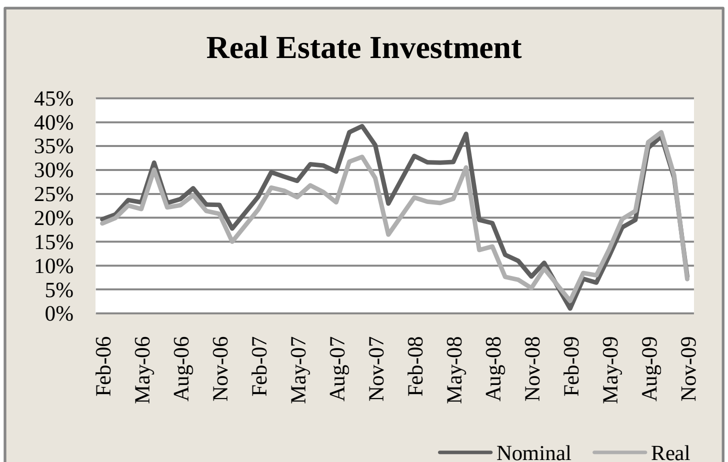
The second channel for credit to the housing market concerns real estate developers, where the picture is grim. Unlike consumers, real estate developers are highly leveraged and depend on low interest rates and rising property prices. The recent debt crisis in Dubai foreshadows the risk of real estate developers becoming overridden with debt, with Dubai property developer Nakheel recently announcing a six-month standstill on its debt. In May of this year, the State Council reduced the minimum equity capital requirement for real estate development projects to 20 percent from 35 percent, the first cut since 1996.[16] With increasingly more credit available to developers, this suggests the extent to which real estate developers are overleveraged. The China Banking Regulatory Commission recently announced that it plans to review the debt levels of some real estate developers for fear that excess borrowing may be fueling hikes in property prices.[17] Of greater concern is the propensity to overbuild in the midst of a property bubble. An oversupply of housing could lead to a drastic drop in prices, undermining the ability of highly leveraged real estate developers to repay their loans. Although a drop in prices would hardly be a favorable outcome for homeowners, their reduced leverage decreases the likelihood of massive non-performing loans in the banking system from mortgages. The silver lining is that developers have switched to favoring domestic financing over foreign sources, allowing the government to more effectively tighten the market should it become overheated.[18] Nevertheless, the government should tightly monitor the borrowing capacity of real estate developers. Should property prices drop, the number of non-performing loans on banks' balance sheets originating from real estate developers could be catastrophic.

The frequency with which the housing market has bubbled and burst in the past ten or so years warrants some attention.[19] Much of the recurrence is due to government control of the property

[13] Rothman, "LUV or W?" p.26.
[14] "Bull in a china shop," *The Economist,* 8 October 2009.
[15] Flemming J. Nielsen, "China: PBoC tries to calm financial markets," *Danske Markets Research* 30 July 2009.
[16] Bi Xiaoning, "Real estate companies trigger rush for land," *China Daily* 11 June 2009.
[17] "China Must Avert Loan-Fueled Bubbles, World Bank Says," *Bloomberg* 4 November 2009.
[18] "China real estate and construction market review," *Dragonomics* September 2009.
[19] The property market has boomed in 1992-1993, 1994-1995, 1998, 2001-2003, 2006-2007 and 2009.

market, urging both consumers and real estate developers to borrow funds when the real estate market is slow, later reversing these policies when prices accelerate too rapidly. For example, credit controls implemented in late 2007 caused housing starts to drastically decline. When demand rebounded this year, housing inventory levels fell sharply, suggesting that lifting controls on the property sector has more of an immediate impact on demand and a delayed effect on supply.[20] This policy-driven approach poses the threat that the property sector has artificially rebounded too early. If an oversupply of housing reaches the market after real demand has stabilized, the resulting price correction could prove detrimental. The question is not how and when to cool the property sector but how to reconcile these structural imbalances between supply and demand.

A closer look at the current situation in the housing market emphasizes the discrepancies that exist between housing supply and demand. The government's stimulus package and credit expansion have fed the economy through increased investment, directly affecting the supply of housing. Growth in real estate investment in 2009 peaked at 37.9 percent in September, approaching the peak rates in 2006 and 2007 before the government intervened to slow down real estate development. However, real estate development slowed to just 7.1 percent in November. This is likely due to seasonal factors rather than a government mandate to curb real estate investment as housing supply currently lags behind demand.



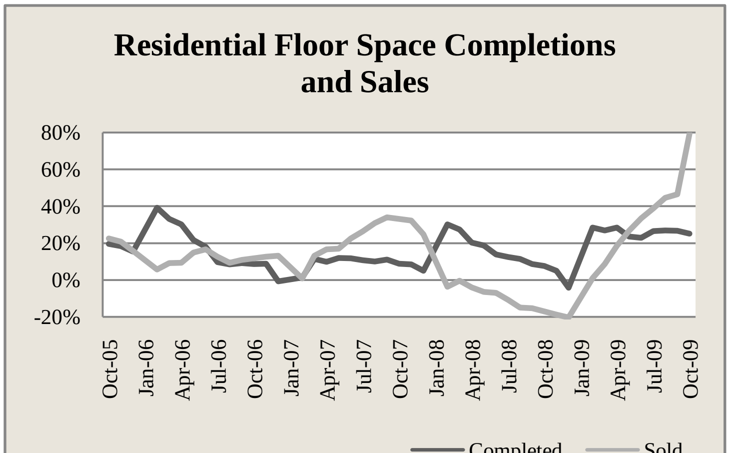
Source: National Bureau of Statistics

Sales growth is also accelerating, even though the low base in the second half of 2008 may be exaggerating these figures. As of May of this year, growth in housing sales surpassed growth in completions, putting further pressure on prices to increase. This trend occurred during the 2006-2007 housing bubble as well, reversing in 2008 as sales growth turned negative.[21] As a result of the current growth in sales, property prices turned positive for the first time in June. Despite analysts' assumptions that prices would stabilize in the fourth quarter, property prices rose 5.7 percent in November, up from 3.9 percent in October, the fastest pace in sixteen months. Housing prices have not just been on the rise in major cities; inland areas are also reporting property price increases.[22] In addition, the fall in rental prices relative to property prices

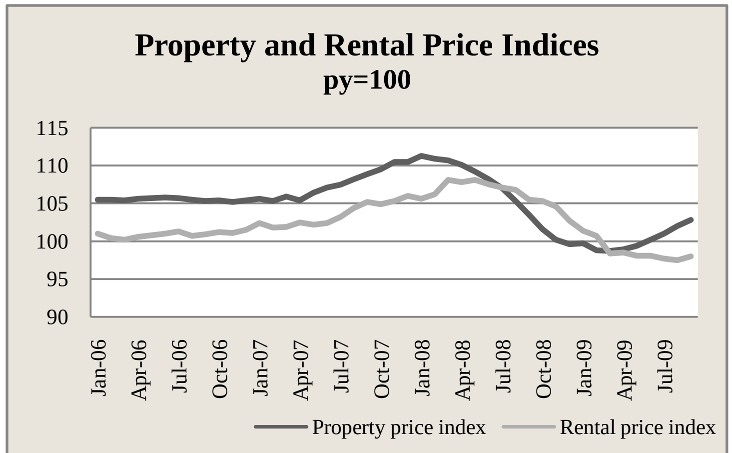
[20] Andy Rothman, "Is China's Property Market Bubbly?" *CLSA Asia-Pacific Markets: Sinology Series* 15 September 2009.
[21] "China real estate and construction market review," *Dragonomics* September 2009.
[22] Rothman, "Is China's Property Market Bubble?"

suggests that the bulk of sales volume is generated by investors rather than owner-occupiers, as the apparent abundance of rental properties has likely reduced rental prices. The above evidence suggests that the Chinese housing market is steadfastly approaching bubble levels making it vital for the Chinese government to begin considering how to stifle the bubble should it become problematic. Specifically, the government should continue to closely monitor property prices and the imbalance between property sales and construction.

In the past, the Chinese government has quickly responded to cool potential housing bubbles, the most recent of which was in late 2007. However, weighing the benefits of a vibrant housing market, especially in the midst of a global crisis, with the threat of a possible bubble has complicated the government's policies. China is very pro-homeownership, making it difficult to



Source: National Bureau of Statistics



Source: NDRC; National Bureau of Statistics

balance concerns of a bubble with a desire to see strong sales. The government also depends on a lively property market to support the economy, especially when the immediate effects of the fiscal stimulus package fade. Housing accounts for approximately 10 percent of GDP or 20 percent of total fixed asset investment, underscoring its importance as a driver for economic growth. In addition, investment in property and infrastructure together make up approximately 40 percent of total investment. Since infrastructure spending is largely funded from land sales, which is influenced by the property sector, a slump in land prices could have deleterious effects for the Chinese economy.[23] The former point highlights the importance of land sales as a source of local government revenue, since the government only taxes transactions, not property holdings. Andy Xie cleverly states, "Tomorrow's non-performing loans, if land prices collapse, are just today's fiscal revenues."[24] Furthermore, a healthy real estate market spurs private sector investment and employment in construction and absorbs overcapacity in key sectors such as steel. A vibrant housing market also contributes positively to GDP via private consumption by encouraging homeowners to spend more on furniture and electrical appliances. Rising property prices also aggravate the affordable housing issue in China. Although the national housing price-income ratio (HPIR) has declined to 8.7 from 10 in 2007, housing prices still remain out of

[23] Qing Wang and Steven Zhang, "Can the Property Sector Be Counted on as the Engine of Growth?" *Morgan Stanley Global Economic Forum* 4 September 2008.
[24] Xie, "China Counts Down to the Next Bubble Burst."

reach for many low-income, new urban residents.[25] In addition, cities in China lack a public housing authority or adequate incentives for developers to build low-cost housing.

The precarious nature of the current crisis and China's dependence on the property sector to shore up the economy are complicating the government's decision on when and how to reverse stimulus measures. Prematurely pricking the bubble might lead to a slowdown in other sectors of the economy; overstimulating may further exacerbate potential asset bubbles. Unlike in other economies, the PBoC lacks the flexibility to raise interest rates to stifle a bubble. Instead, it has depended on sector-specific micro tools to control the property market, including adjusting mortgage rates without altering rates for the rest of the economy, enforcing the second mortgage rule and implementing further incentives in line with PBoC objectives. For example, in January the State Council announced that individuals would be exempt from tax after two years of homeownership to encourage home sales. On December 10, the State Council extended this period to five years to discourage homeowners from rapidly selling off property in the event that prices begin to fall.[26] The PBoC has announced that monetary policy would remain loose until the end of 2010; clearly, concerns of an economic slowdown outweigh worries over rapidly rising prices in asset markets.

However, a U.S. dollar rally might burst the bubble before the government has a chance to do so. With the dollar weak and the RMB pegged to the dollar, the Chinese economy can accommodate ample liquidity without worrying about depreciation concerns. A weak dollar leads to bubbles in emerging markets, but this trend will reverse itself when the dollar strengthens, perhaps when the Federal Reserve begins raising interest rates to deal with inflationary pressures.[27] Another way to slow the acceleration of asset prices is a revaluation of the RMB. By keeping its exchange rate undervalued against the U.S. dollar over the past year, the Chinese government has effectively coupled its monetary policy with that of the U.S. Should the U.S. maintain low interest rates far longer than is necessary in China, the prolonged loose monetary environment could further swell asset bubbles. Pegging the RMB to the U.S. dollar has forced the Chinese government to forfeit independent monetary policy, a distinction that could prove fatal in 2010. In addition, an undervalued exchange rate, especially when pegged to a weak dollar, makes it difficult for locals to invest abroad, forcing a greater proportion of capital into domestic investments, inflating property and stock prices in the process. However, if the Chinese government were to allow the RMB to appreciate, it would have to be a swift revaluation to avoid a similar surge in capital inflows that occurred after 2005 as foreign investors anticipated the RMB to further appreciate.[28]

Strong housing sales and rising property prices suggest what many economists and government officials have predicted and feared: China's housing market is approaching a bubble. The Chinese government, in maintaining strict control over bank lending and the housing market, is largely responsible for the growth of the housing market in recent months. The removal of administrative controls is funneling money to real estate developers and potential homeowners

[25] "China real estate and construction market review," *Dragonomics* September 2009.
[26] Joy C. Shaw and Terence Poon, "Data Raise Fear of China Property Bubble," *The Wall Street Journal* 10 December 2009.
[27] Xie, "China Counts Down to the Next Bubble Burst."
[28] "A bubble in Bejing?" *The Economist* 8 October 2009.

and has released consumers' pent up demand for housing that had been previously choked off by the government in late 2007. Although bubbles provide a sense of euphoria when prices are on the rise, the abrupt reversal of these trends can be damaging, especially when asset market transactions are financed largely by debt. The limited use of mortgages by homeowners and conservative down payment requirements suggest that leverage does not play a dominant role in the mortgage market; in contrast, real estate developers are highly leveraged and dependent on rising property prices to ensure future cash flows adequate enough to service their debt obligations. The government's primary fear with regard to the housing market is that speculative investors are contributing to accelerating property prices and a rapid withdrawal could reverse this trend. However, the government fails to note that, whatever the reason for investing in housing, the real source of financial instability lies with real estate developers. Although a drop in housing prices would hardly be favorable for consumers, potential defaults on their loans by real estate developers could threaten the financial system as a whole. Government policies have focused too heavily on controlling demand and should instead try to reconcile the imbalance that exists between supply and demand in the market. Data suggests that demand responds fairly quickly to a change in administrative policies. This immediate effect is likely causing prices to skyrocket as housing supply lags behind. For example, growth in housing starts just turned positive in October after being in negative territory since late 2008.[29] Should real estate developers continue to overzealously erect properties and fund such projects with a high degree of leverage after demand tapers off, whether demand was real or speculative will hardly matter.

The current global crisis presents a new challenge to the Chinese government. Deliberately cooling the real estate market threatens other sectors of the economy as well, forcing the government to constantly weigh the pros and cons of maintaining loose monetary policy and supporting the housing market. In 2007, strong export performance allowed the government to slow the economy without worrying what effects such a strategy would have on the economy as a whole. Furthermore, by effectively pegging its exchange rate to the dollar, the government has more or less coupled its monetary policy with that of the United States. Loose monetary conditions in the United States, if kept in place longer than what China would warrant, escalate concerns of asset bubbles emerging. The government has prided itself on being able to effectively manage its exchange rate, foreign reserves and real estate market; however, due to international constraints, the government will be thoroughly tested. Maintaining a fixed exchange rate, accommodating excess liquidity, targeting low inflation, monitoring potential asset bubbles and shoring up the entire economy while worldwide interest rates are low and the dollar is weak seems nearly impossible. Eventually something's got to give.

[29] National Bureau of Statistics