



Between Errors of Optimism and Pessimism – Observations on the Real Estate Cycle in the United States and China



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Part One: An Analysis of the Real Estate Cycle

“Prosperity ends in a crisis. The error of optimism dies in the crisis, but in dying it gives birth to an error of pessimism. This new error is born, not an infant, but a giant.”

A.C. Pigou, *Industrial Fluctuations*, 1927

Many Americans seem convinced that their housing market will remain in the doldrums indefinitely. Conversely, the rapid recovery of China’s economy from the global financial crisis has led many to believe that real estate in the Middle Kingdom is a one-way bet. In fact, property is the most cyclical of assets. Housing booms crater, while depressed real estate markets eventually recover. Part One of this paper aims to describe a typical real estate cycle through its various stages. In particular, I try to identify the characteristic features of the cyclical peaks and troughs. Part Two applies this understanding of the real estate cycle to the world’s two most important property markets, namely those of China and the United States.

Rudiments of the Cycle

Over the long run, income and household formation determine the facts of the real estate market. Home prices rise in line with household incomes. The level of construction reflects the underlying demand for homes from newly formed households. The real estate cycle describes undulations around a relatively stable long-term trend. In the upwards phase of the cycle both valuations and new construction rise above their historic trend. The opposite is the case during the downturn. Mean reversion is the most salient feature of the real estate market: the excesses of the cycle, both at the peak and at the trough, are self-correcting.

This doesn’t mean the real estate cycle is necessarily easy to read. The various phases between the boom and the bust are not clearly defined. Most people can’t tell whether they are in the seventh or the ninth inning of the property game. Even the cognoscenti of the real estate cycle can’t agree on its length. Homer Hoyt, whose classic text *One Hundred Years of Land Values in Chicago* (1933) is essential reading for anyone interested in this subject, identified an 18-year cycle for American real estate prior to the Second World War. Other researchers have described a multitude of overlapping cycles of varying length, consisting of minor or short cycles (3 to 5 years), long cycles (9 to 10 years), and long waves (from 30 to 70 years).¹

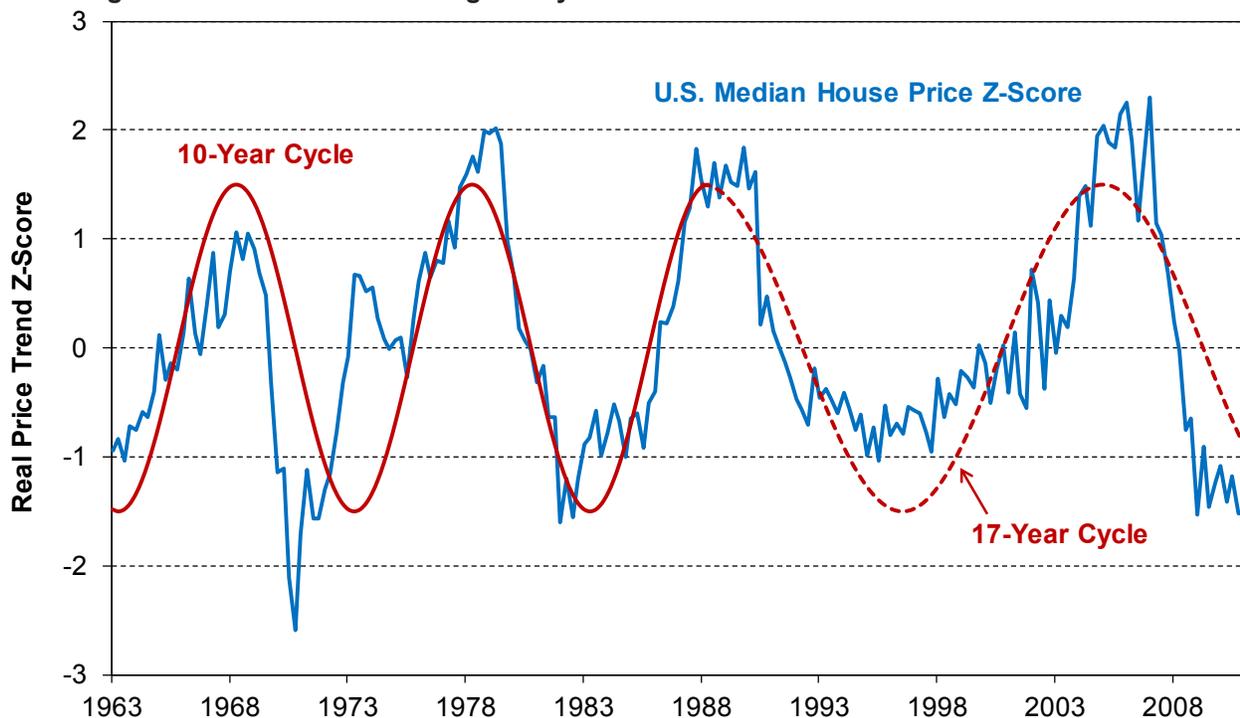
¹ See Lewis Maverick, "Cycles in Real Estate Activity," *Journal of Land and Public Utilities*, 1932; Jack Guttentag, "The Short Cycle in Residential Construction," 1946-59, *American Economic Review*, June 1961; Yoon Dokko, Robert H. Edelstein, Allan J. Lacayo, and Daniel C. Lee, "Real Estate Income and Value Cycles: A Model of Market Dynamics," *Journal of Real Estate Research*, 1999; Stephen Roulac, "Real Estate Market Cycles, Transformation Forces and Structural Change," *Journal of Real Estate Portfolio Management*, 1996; "Understanding the Property Cycle: Working Paper Number Two," *Royal Institute of Chartered Surveyors*, 1994.

Furthermore, the movements of the cycle appear to change over time. Following the Second World War, the gyrations of the U.S. real estate cycle appeared markedly less violent – until recently, at least. This has been ascribed to the greater role played by the Federal government in the U.S. property market following the Great Depression.² Hoyt believed that the U.S. real estate cycle was produced by the country’s rapid expansion in the century up to 1930. He argued that the cycle would disappear once the U.S. population growth started to slow.³

The real estate cycle doesn’t resemble a sine curve with fixed frequencies, peaks, troughs, amplitudes, and inflection points. Nevertheless, over recent decades the undulations of the U.S. housing market have shown some regularity. Between 1960 and 1990, real U.S. home prices peaked every 10 years (in 1969, 1979, and 1989). Then, a long 17-year interval occurred before the next top in 2006. The U.S. housing bubble at the turn of the century, fostered by Alan Greenspan’s easy money policy, appears to have extended the real estate cycle both in terms of duration and deviations from its trend.

Exhibit 1

U.S. Housing Follows a More or Less Regular Cycle



Source: Bureau of the Census, GMO As of 6/30/11

Drivers of the Real Estate Cycle

1. Demographic Demand

Over the course of a full cycle, the demand for residential real estate is determined by demographics. As the population expands, housing supply fails to keep up with demand. This puts upwards pressure on rents, raises home prices, and encourages new construction. The property cycle is partly created by the lag as new construction fails to respond in a timely way to demographic changes. However, once a boom is under way, construction generally overshoots demand (unless regulations severely impede new construction, as has recently been the case in both the United Kingdom and Australia). After the boom, an excess of housing supply contributes to the cyclical downturn.

² For instance, Roy Wenzlick in “The Coming Boom in Real Estate” (1936) identified an 18.5-year cycle from 1797 to the 1930s with an average peak to trough duration of 9 years. This cycle disappeared after 1945, possibly due to the introduction of self-amortizing mortgages (see Alan Rabinowitz, *The Real Estate Gamble*, 1980).

³ Homer Hoyt, “The Urban Real Estate Cycle,” Urban Land Institute, 1960.

Despite the fact that short-term population forecasts are relatively accurate, demographic demand for housing is unpredictable. Hoyt observed that Chicago's potential population growth was often magnified to "undue proportions." Household formation is influenced by the real estate cycle itself. When home prices are rising sharply, young couples rush to get onto the housing ladder. In hard times, families double up and couples delay setting up home, further reducing the demand for property. In nineteenth century Chicago, rural migrants returned to the country during business depressions.

Demographic demand for housing can fluctuate widely for nations as well as cities. During the roaring twenties, America's urban population rose by nearly 15 million, which spurred a "period of sensational speculation" across the nation, from Miami to Chicago.⁴ In the decade of the Great Depression, however, urban population growth slowed dramatically and the birth rate even declined. Up until a few years ago, Spain and Ireland experienced extraordinary levels of construction. At the time, their building frenzies were justified by reference to demographic "fundamentals."⁵ Yet many of the Spanish and Irish immigrants were construction workers. When the demand for their labor evaporated, they packed their bags and went home.

Chicago's boom-bust real estate cycle in the century to 1930 is revealed in the records of the city's subdivision activity.⁶ During booms, demographic demand was exaggerated and too much land was prepared for development. Chicago's subdivisions of the 1920s became the stuff of legend. By 1928, there were almost half a million improved and vacant lots in Cook County. Later it was calculated that these plots would suffice to house the city's expected population growth over the next thirty years.⁷ Great housing booms generally leave behind the debris of empty buildings and half-built homes. Today, scars of blighted developments can be seen across Spain's Costa del Sol, in Country Leitrim in Ireland, in the Gulf state of Dubai, and across several U.S. states, from Nevada to Florida.

2. Human Psychology

Attitudes towards property fluctuate over the course of the cycle. Optimism at the property market's peak gives way to despair at the trough. This is an age-old phenomenon. In the 1870s, *The Real Estate and Building Journal* described a decade in which the "feeling [toward the real estate market] changed from dismay amid the ash heap to furious speculation and back again [to dismay], then softening into apprehension, then into half belief, and finally into full confidence."⁸

Players in the real estate market show the typical flaws identified by behavioral psychologists. Their worst trait is a tendency to extrapolate by overweighting recent experience in their judgment. Conventional attitudes toward real estate ignore the reality of the cycle. "Most real estate participants," writes one commentator, "operate from a premise that the future will be a repetition of the recent past."⁹ During the boom, they suffer from "disaster myopia."¹⁰ For instance, many Japanese in the late 1980s and Americans in the last decade believed that their housing markets were special and could never decline. A rising property market generates a crowd mentality. Property bubbles are national obsessions, as housing investment becomes the staple of TV shows, magazine features, books, and now websites.

The euphoria of a boom creates what Keynes's Cambridge contemporary A.C. Pigou termed an "error of optimism." At the trough, this is replaced by an "error of pessimism."¹¹ There is symmetry between the extremes of optimism and pessimism.¹² The extent of pessimism is exacerbated by what Pigou quaintly refers to as "the detonation which

⁴ Herbert Simpson, "Real Estate Speculation and the Depression," *American Economic Review* (1933).

⁵ In 2005, immigration added 4.5% to Spain's population.

⁶ In the U.S., when land is prepared for development it is generally carved up into smaller "subdivisions."

⁷ Simpson, *ibid*.

⁸ Hoyt, *One Hundred Years of Land Values in Chicago*, 1933.

⁹ Stephen Roulac, "Real Estate Market Cycles."

¹⁰ My colleague James Montier suggests that real estate market participants exhibit the following behavioral traits: extrapolation, representativeness (judging by appearance), over-confidence, herd mentality, house money effect, loss aversion, and jingo-ism.

¹¹ A.C. Pigou, *Industrial Fluctuations*, 1927.

¹² Pigou believed that the "extent of the revulsion towards pessimistic error, which follows when optimistic error is disclosed, depends, in part, upon the magnitude of the preceding optimistic error."

accompanies the discovery of a given mass of optimistic error.” Or in plain English, great real estate booms are followed by great busts!

Not all participants in an *overboomed* real estate market are strictly irrational. The United States has a rich history of “land-jobbers” who have reaped vast fortunes whipping up property manias across the nation.¹³ The pay-off for developers is tilted in their favor. They tend to operate on leverage. When property prices rise, they earn an outsized profit. But when property prices fall, most of the losses end up with the bank. If a prudent developer withdraws too early, he foregoes all potential gains. Homebuyers with non-recourse mortgages have a similar inducement to participate in an overheated market. When it comes to timing the real estate market, the greatest risk comes from leaving the party too early.¹⁴

3. Credit

Over the short run, the real estate cycle is extremely sensitive to changes in the availability of credit.¹⁵ Easy money stimulates both housing purchases and new construction. Finance is a highly competitive business. As the real estate cycle progresses, lending conditions are progressively relaxed. Lower deposits are typically accepted on new property purchases. Novel forms of property finance (for instance, real estate bonds in the 1920s and mortgage-backed CDOs in the last decade) often appear as the credit cycle approaches a peak. New financial institutions add fuel to the fire. In the past, these have included “wild cat” banks in the 1830s, real estate banks in the 1920s, UK “secondary banks” in the 1970s, Japanese *jusen* banks in the 1980s, Thai finance companies in the mid-1990s, and subprime mortgage lenders most recently.

Hoyt described the periodic reappearance of “shoestring finance” at times of real estate euphoria. In Chicago of the 1830s subdivisions were sold on “canal terms,” with only a quarter of the purchase price paid down. In the great Florida boom of the mid-1920s development land was acquired on “binders,” which likewise required only small deposits. In the last decade, Miami condos were financed by letters of credit with only 20% down. The providers of subprime mortgages who lent to homebuyers with poor credit histories, required no down payment, and obliged with “teaser” rates were part of a venerable American tradition.

There is an old saying that during an economic downturn “money gets easy but lenders get tight.”¹⁶ After the boom, banks are more cautious with their mortgage lending and often increase the minimum deposits. They foreclose on delinquent mortgages, thereby increasing the supply of properties for sale in a depressed market. Thus both in good times and bad, the behavior of lenders amplifies the real estate cycle.

4. Government’s Role in the Cycle

Local governments are generally active participants in the real estate cycle. Their coffers are bolstered by land sales and rising tax assessments on property during the boom. Hoyt observed that the rising phase of Chicago’s real estate cycle was typically accompanied by extravagant public improvements as new bridges were built, streets widened, and sewers dug.¹⁷ After the property market turned down, municipal finances became stretched. This pattern has been repeated in the U.S. from the first crisis of local government finances in the 1830s through to the current day.

Since the Great Depression, government policy has dampened the real estate cycle. Government-sponsored entities underpin the mortgage market, while unemployment benefits are paid to homeowners during recessions. Public

¹³“America, from its inception, was a speculation,” writes the author of an early history of land-jobbing, A.M. Sakowski, *The Great American Land Bubble*, 1932.

¹⁴ Of course, the same is true of professional investors who experience “career risk” when they sell out too early from bubbling stock markets.

¹⁵ See Jack Guttentag, “The Short Cycle in Residential Construction, 1946-1958,” *American Economic Review*, June 1961. The author suggests that the “long cycle” in real estate is driven by demographic factors but the short cycle is determined by “changes originating in the mortgage market.”

¹⁶ *Ibid.*

¹⁷ Simpson, *ibid.* Following the downturn in Chicago property market in 1873 officials were accused of “lavish expenditures, downright thievery on a mammoth scale, and the creation of sinecures for political abettors.” This pattern was repeated in the 1920s when the great bulk of municipal government revenue came from real estate. “Public officials exploited real estate groups,” wrote one contemporary, “as systematically and thoroughly as the real estate groups had exploited the rest of the public.”

policy can also exacerbate the real estate cycle. The subprime debacle ensued from Washington's desire to expand homeownership among low income families. When housing is implicitly supported by government, participants in the real estate market – whether lenders, developers, or homeowners – take on more risk.

5. The Global Real Estate Cycle

The old financial saw that “when New York sneezes, London catches a cold” also holds true for the world's property markets. Since the collapse of Bretton Woods, the U.S. dollar has served as the international reserve currency. Interest rates set by the Fed in Washington influence housing markets around the globe. International capital flows also act to synchronize the real estate cycle in different countries. In the last decade, for instance, German banks acquired U.S. subprime mortgages, lent to property developments in Spain, and, through the interbank loan market, indirectly financed Australian mortgages.

As a result of these developments, the real estate cycle is no longer a national phenomenon. In the late 1980s, housing in the U.S., UK, Scandinavia, and Japan climbed in tandem and peaked together as the decade drew to a close. In the mid-1990s, the real estate markets of the Asian “Tigers” also rose and fell in synch. In the 2000s, real estate bubbles appeared simultaneously in the U.S., UK, Ireland, Spain, Australia, and across central Europe from the Baltics to the Balkans.

The Peak

The top of the real estate cycle is often revealed by overly ambitious developments. In the early 1890s, Chicago experienced the first skyscraper boom. From that time onwards, cynics have observed that plans to construct the world's tallest buildings have generally been a poor omen (e.g., New York's Empire State and Chrysler Buildings in the late 1920s, Malaysia's Petronas Towers in the mid-1990s, and Dubai's Burj Khalifa in the last decade). Since it takes a number of years to build a skyscraper, its completion usually lags the peak of the cycle.

The late stages of the property cycle often descend into a farce, with frantic construction, rising levels of leverage, and a high volume of property sales. A carnival atmosphere prevails. The English writer, Harriet Martineau, who visited Chicago in the mid-1830s at a time when the number of subdivisions exceeded the existing population by a factor of 15, observed that the “absurdity is so striking... the wonder is that the fever should have attained such a height as I witnessed.”¹⁸

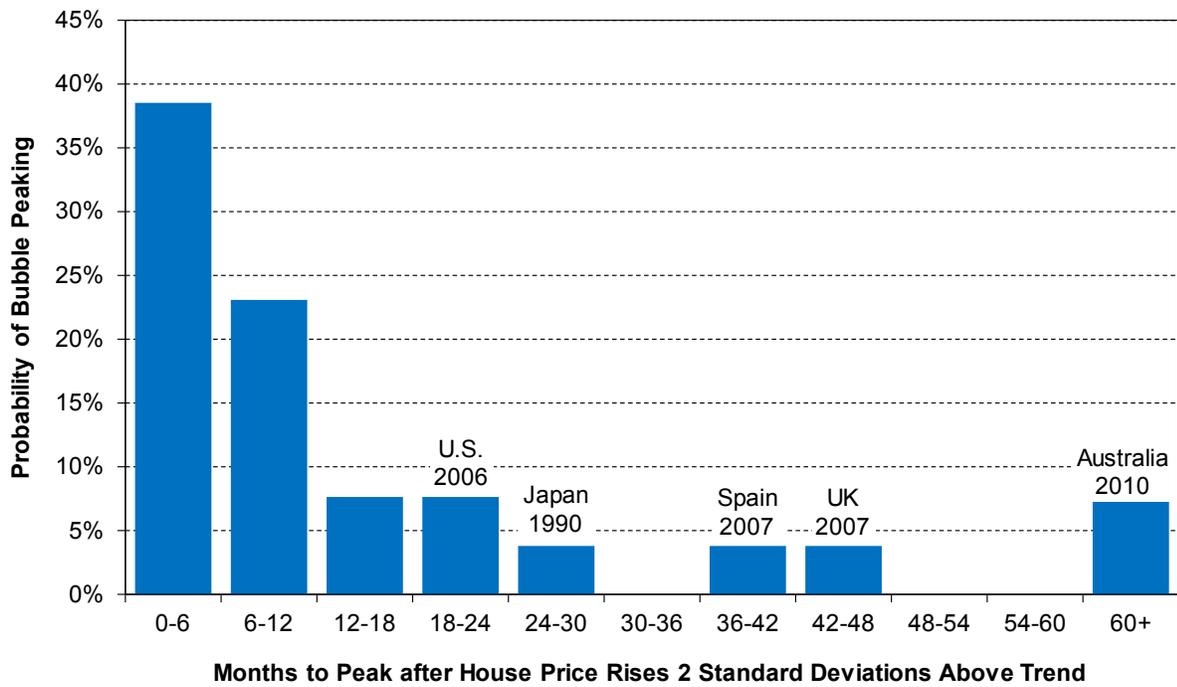
It's impossible to predict with any accuracy the exact moment when the real estate cycle turns. A peaking market, however, is likely to have several of the following characteristics.

- **Real estate valuations** have climbed two standard deviations above their long-term trend. At GMO, we have examined 25 property bubbles. The majority of them peaked within nine months after real home prices rose two standard deviations above their long-term trend. Overvaluation alone does not predict that the end is nigh. A number of housing markets have remained in bubble territory for several years (e.g., Spain, Ireland, UK, and Australia in the last decade – see Exhibit 2).
- **Above trend credit growth.** The property busts across Asia in the 1990s and in the UK, Ireland, Spain, and the U.S. in the last decade were all preceded by high levels of private sector credit growth.
- **Newfangled instruments of real estate finance.** Rising property markets often generate new forms of lending, which facilitate higher leverage and improve affordability, e.g., real estate bonds in the 1920s, multi-generational mortgages in Japan in the 1980s and the UK in the 2000s, securitized mortgage bonds in the 2000s, etc.
- **High levels of construction.** It is generally a bad sign when residential completions have been above trend for a prolonged period. In the last decade, Spanish housing permissions exceeded starts in the year before the market peaked (see Exhibit 3). U.S. housing permissions expanded faster than starts in the months prior to the 2006 market peak. High levels of construction can continue for a very long time. For instance, Irish residential building

¹⁸Sakowski, *ibid.*

Exhibit 2

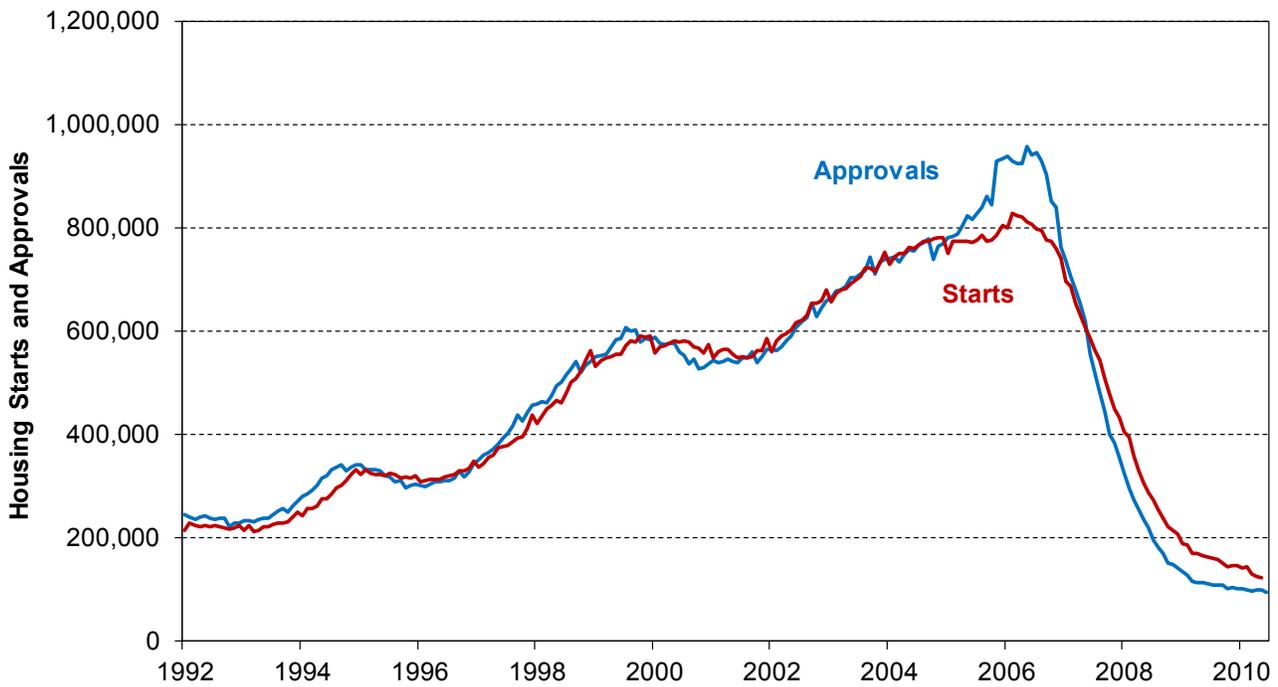
Real Estate Bubbles Can Last a Long Time



Source: GMO

Exhibit 3

Building Spanish Castles in the Air

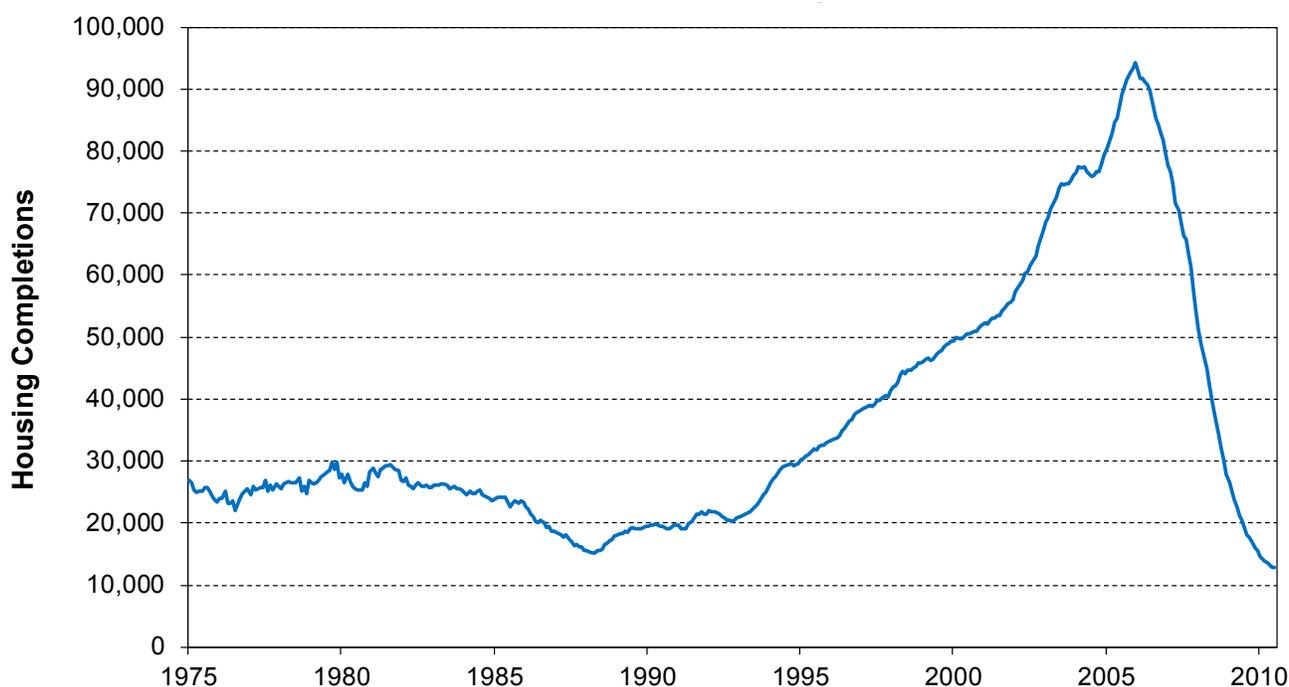


Source: Bank of Spain As of 4/30/11

remained above its prior trend between 1994 and 2009. Some property cycles have also peaked without a massive increase in supply (this was the case for Japan in the 1990s and the UK in 2007).

Exhibit 4

The Great Irish Building Boom



Source: Ireland Department of the Environment, Community and Local Government As of 6/30/11

- **Rising vacancy rates.** As the property market begins to turn, transactions tend to drop. The vacancy rate rises and the ratio of housing supply to transactions increases. In 1995, a Thai government survey found that 300,000 residential units in the Bangkok Municipal Region were unoccupied. A couple of years later, the region's residential vacancy rate climbed to 15%.
- **Speculative purchases.** When housing affordability becomes stretched, first-time buyers find themselves priced out of the market. A rising share of property sales to speculators is another indicator that a top may be approaching. In 2005, the share of speculative purchases in the U.S. (as measured by "non-owner share of purchase mortgages") peaked at 17%.¹⁹ In that year, up to 80% of new condo sales in Miami went to speculators.
- **Official measures to dampen property speculation.** When housing booms start posing a threat to the banking system, the authorities often seek to dampen animal spirits. In 1990, the Bank of Japan took several measures to pop the property bubble, including a new tax on land ownership. In 1995, the Bank of Thailand instructed banks to refrain from further real estate lending. In 2006, the Federal Reserve belatedly introduced measures to control "non-traditional" mortgage lending.
- **Rising interest rates.** The real estate cycle generally peaks after a period of rising interest rates. Tighter monetary policy brought an end to the property booms in Japan, the U.S., UK, and Scandinavia in the late 1980s. The inversion of the yield curve, as occurred in the U.S. in 2006, is also likely to mark the top of the real estate cycle.
- **Credit crunch.** Sudden stops in the availability of new loans generally signal the turn in the real estate cycle even when the origin of the credit crunch is unrelated to property. Bank failures brought an end to Chicago's property

¹⁹Zelman Associates, "Underwrite This, Amortize That," August 15, 2011.

booms in 1836, 1856, 1873, and 1890 (this last instance was induced by the collapse of Barings Brothers, which had experienced losses on loans to Argentine utilities). The U.S. subprime crisis in 2007 spread contagiously through the European banking system to prick the property bubbles in Ireland, Spain, and the UK.

- **Defaults on existing property loans.** Hoyt observed that foreclosures on second mortgages in Chicago picked up in 1927. By the middle of 2006, defaults had picked up on recent vintages of subprime mortgages.

Every peak in the real estate market is accompanied by a chorus of voices denying that a top is anywhere in sight. Every property bubble finds its academic shill. In 1926, at a time when Chicago's population had just topped 3 million, Professor J. Paul Goode claimed that Chicago would shortly have a population of 15 million, at which point it would become the greatest city in the history of the world.²⁰ In December 2004, the New York Federal Reserve published a paper on the U.S. housing market, denying the existence of a bubble, whilst claiming that the "upturn in home prices is largely attributable to strong market fundamentals." Less than a year later, Ben Bernanke repeated this claim to Congress.²¹ Neither Bernanke nor his then boss, Fed Chairman Alan Greenspan, appeared to understand the operations of the real estate cycle.

The Trough

Real estate markets spend longer going down or moving sideways than they do going up. Owing to the illiquid nature of real estate, property markets correct more slowly than stock markets. Hoyt describes the aftermath of the real estate boom as a "process of attrition." Lenders are reluctant to push foreclosures. Homeowners, who have bought close to the top of the market, are reluctant to realize losses. Housing transactions dry up and home prices deflate gradually. "The lack of short-selling," writes Hoyt, "the tenacity with which owners cling to their mortgaged homes or apartments, and the slow and cumbersome process of foreclosures... prolongs the agony."²²

Severe downturns in the property market are often characterized by banking failures, surging vacancies, and a glut of supply on a lackluster market. "The wreckage is generally cleared away in four to five years," writes Hoyt. In *This Time Is Different*, Professors Reinhart and Rogoff find that house price declines last on average for 6 years after a financial crisis.²³ The downward phase of the cycle is prolonged by the deleveraging that follows great credit booms (see Exhibit 5).

In general, the higher property prices go during the boom, the longer they take to decline. In the late 1980s, Japan experienced the greatest property bubble in history. After the market peaked in 1990, Japanese land prices fell for more than a decade. There is a rough symmetry between the degree of overvaluation at the top and the subsequent extent of the decline (see Exhibit 6).

At the bottom of the real estate cycle, the housing market is likely to exhibit the following characteristics:

- **Low valuations.** Property prices must be affordable before a sound recovery can take place. Normally this involves a fall in nominal home prices. Inflation can also play an important role as was the case after the UK housing bubble in the mid-1970s.
- **Lower leverage.** At the trough of the cycle, leverage is eschewed by both homebuyers and lenders. Loan-to-value ratios tend to be lower and deposits higher. More property transactions are all-cash deals.
- **Decline in foreclosures.** Not only do foreclosures add housing supply at a time when demand is weak, they also signal to prospective homebuyers the risks of leveraged real estate purchases. "Foreclosures must run their course and old obligations be wiped out before the real estate market is in a position to revive," writes Hoyt.²⁴

²⁰Hoyt, *ibid.*

²¹Bernanke claimed that recent rises in home prices "largely reflect strong economic fundamentals," such as strong growth of jobs, incomes, and the number of new households. Not long after it was revealed that these "fundamentals" were in fact driven by the bubble whose existence he denied.

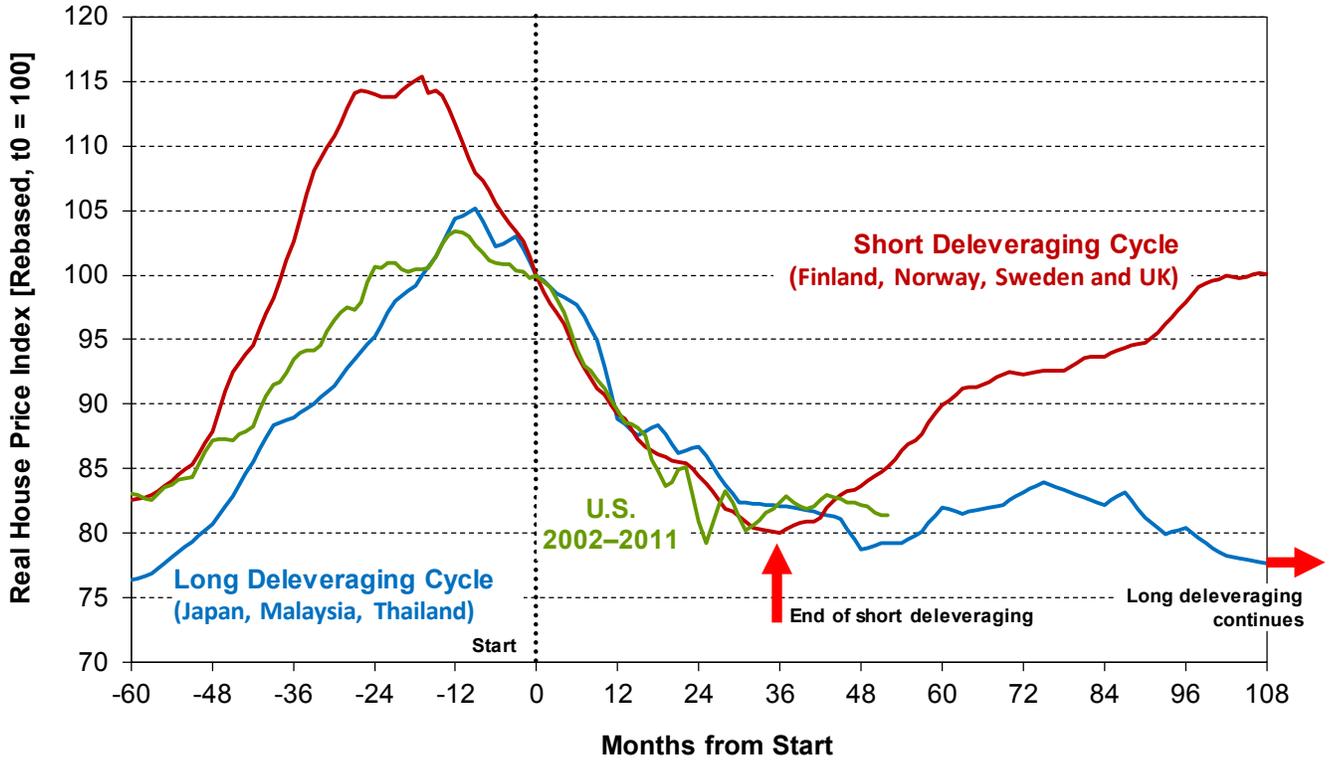
²²Hoyt, *ibid.*

²³Carmen Reinhart and Kenneth Rogoff, *This Time is Different: Eight Centuries of Financial Folly*, 2009. Professor Morgan Kelly of University College, Dublin, looked at 18 housing bubbles in OECD economies and found the average period between the real estate peak and trough was 5.6 years. (See Morgan Kelly, "On the Likely Extent of Falls in Irish House Prices," UCD Centre for Economic Research, February 2007.)

²⁴Hoyt, *ibid.*

Exhibit 5

Housing Remains Depressed During Deleveraging

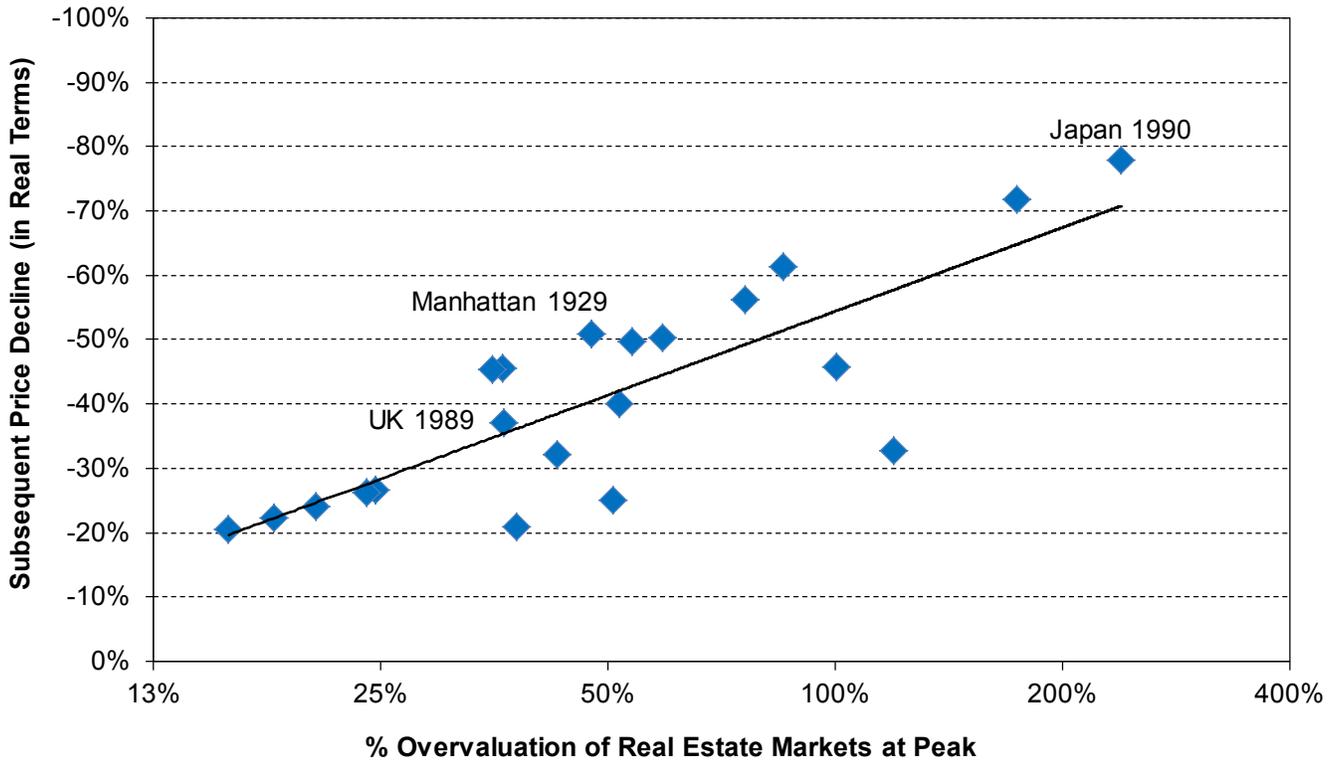


Source: Datastream, Bank Negara Malaysia, Bank of Thailand (Q3 2008)

Exhibit 6

The Higher they Rise, the Harder they Fall

21 Housing Bubbles from Peak to Trough



Source: GMO

- **Credit availability.** As long as unresolved bad property debts exist in the banking system, the real estate market remains vulnerable. Japan’s lengthy downturn in land prices only reached a trough after the banks were recapitalized following a second banking crisis in 2002.
- **End to deflation.** Deflation has a baleful effect on the housing market. While deflation raged in the early 1930s, the U.S. real estate cycle remained depressed. It is possible, however, for the real estate cycle to turn upwards even while deleveraging continues (i.e., when private credit is contracting relative to GDP). U.S. residential construction picked up after 1933 even though deleveraging lasted for the rest of the decade.
- **Low housing turnover.** As long as prices are falling, or appear vulnerable to further declines, potential buyers hold back, waiting to catch the trough. Homeowners with negative equity are trapped in their houses. Housing transactions decline to their low point at the trough.
- **An economic recovery.** New building permits and housing starts are traditionally considered leading economic indicators.²⁵ The housing market is especially sensitive to changes in the level of employment. A sustained recovery depends on a widespread improvement in business conditions.
- **Rising rents.** Whilst people remain cautious of homeownership, the first effect of rising demographic demand is felt in the rental markets as rents start to rise. In time, rising rents push up the prices of existing homes and spur new construction.
- **Pent-up demographic demand.** At the bottom of the cycle, new construction comes to a virtual standstill. The excess housing supply left over from the boom gradually diminishes and the property market finds support from new household formation. “An upturn in real estate activity,” writes Hoyt, “is usually started by a spurt in population growth, caused by... an increase in the rate of family formation.”²⁶
- **Continuing pessimism toward real estate.** In the good times, a house is seen as a highly levered asset that only goes up. In the downturn, the same property is viewed as illiquid, expensive to maintain, and heavily taxed. Leverage is a snare. In the aftermath of Chicago’s first skyscraper boom, the Real Estate and Building Journal opined that “real estate is a liability rather than an asset.”²⁷

In summary, the real estate cycle is ready to trough at the point when housing valuations are reasonable, underlying demographic demand is firm, boom era overbuilding has been absorbed, rents are rising, employment is picking up, and monetary conditions are accommodative. Several years must pass before the process of liquidation is complete.

Table 1

Homer Hoyt’s Real Estate Cycle	
1. Gross rents begin to rise rapidly	12. All real estate factors at full tide: turnover, construction, and subdivisions peak
2. Net rents rise even more rapidly	13. The lull
3. Selling prices of existing buildings advance sharply	14. Foreclosures increase
4. It pays to erect new buildings	15. Stock market debacle
5. The volume of new construction rises	16. Attrition
6. Construction stimulated by easy credit	17. Banks reverse their boom policy on real estate loans
7. Shoestring finance swells number of new structures	18. Period of stagnation and foreclosures
8. Land boom	19. The wreckage is cleared away
9. Optimistic population forecasts during the boom	20. Ready for another boom
10. Hectic subdivisions	
11. Lavish expenditures on public improvements	

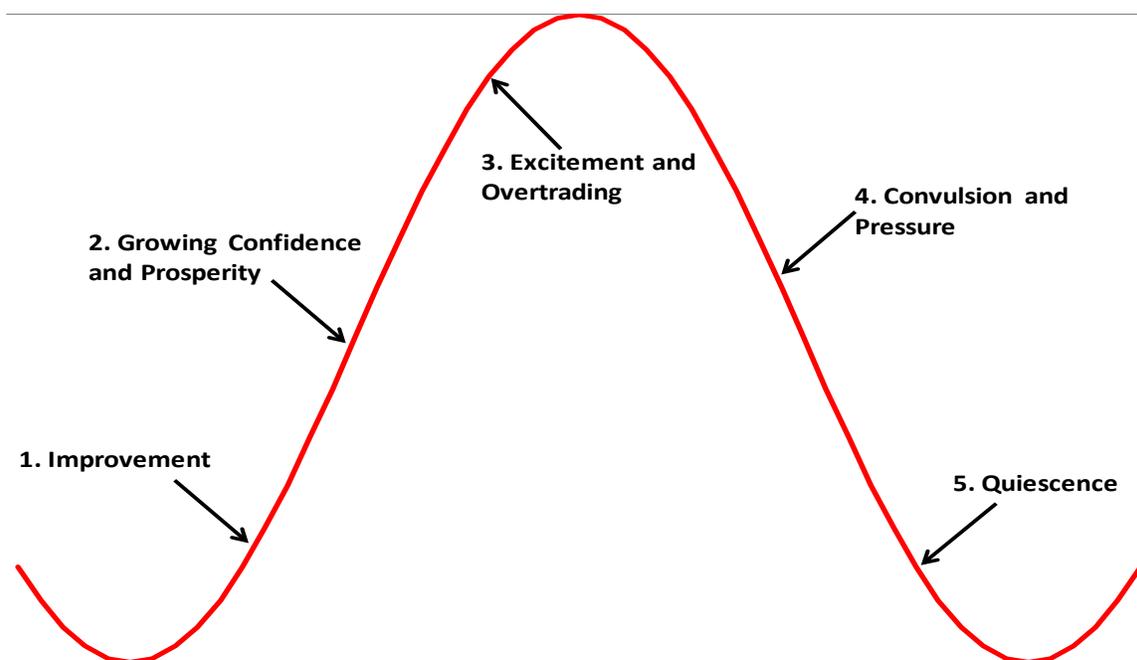
²⁵ Geoffrey Moore, *Business Cycles, Inflation, and Forecasting*, 1983.

²⁶ Homer Hoyt, “The Effect of Cyclical Fluctuations upon Real Estate Finance,” *Journal of Finance*, Vol. 2, No. 1, April, 1947, pp. 51-60.

²⁷ Ibid.

Exhibit 7

The Real Estate Cycle in Five Stages



Source: GMO

Conclusion: The Real Estate Cycle in Five Easy Stages

The real estate cycle has several stages. Hoyt described twenty of them, starting with rising rents and ending with a spate of foreclosures which clears away the wreckage of the boom (see Table 1).

This seems excessive. One of the earliest descriptions of a speculative cycle was provided by the nineteenth century banker and economist Lord Overstone, who described it as starting from “a state of quiescence, –next improvement, –growing confidence, –prosperity, –excitement, –overtrading, –convulsions, –pressure, –stagnation, –distress, –ending again in quiescence.”²⁸ This description seems equally apt for the real estate cycle (see Exhibit 7), which can be divided into the following phases:

- 1. Improvement.** Demographic demand leads to rising rents. Vacancies fall. New housing supply is constrained. Home prices are affordable. Credit is available, but mortgage underwriting is relatively strict and leverage discouraged. Real estate is not the most favored asset class. Housing is seen as a necessity rather than an exciting investment.
- 2. Growing Confidence and Prosperity.** Home prices rise above trend. New housing supply fails to keep up with demand. Rising collateral values support greater issuance of mortgages. Property is seen as a sound investment.
- 3. Excitement and Overtrading.** Home prices rise to two standard deviations or more above trend. Rental yields approach record lows. New housing supply exceeds fundamental demand. Spurious demographic arguments justify still more construction. The macro-economy becomes increasingly dependent on the real estate market as rising home prices spur consumption and building activity provides jobs. Mortgage growth remains strong despite rising interest rates. New financial instruments improve affordability. Despite elevated valuations and excess supply, real estate is seen as the most attractive asset class. Speculators increasingly dominate the market.

²⁸S.J. Loyd (Lord Overstone), “Tracts and Other Publications on Metallic and Paper Currency,” 1858

4. ***Convulsion, Pressure, Stagnation and Distress.*** The higher cost of mortgages and/or the restrictions on property lending induce a downturn. Losses appear on real estate loans. Home prices fall and rental yields rise. Housing transactions dry up, vacancies increase, and new construction dips sharply. The downturn in the housing market hurts the wider economy. Household formation and the rate of homeownership experience a cyclical contraction. Despite falling interest rates, credit conditions remain tight. Banks foreclose on delinquent mortgage loans. A rising number of homeowners experience negative equity. The general attitude toward real estate is one of panic and scapegoating.

5. ***Quiescence.*** House prices have fallen below their long-term trend. Fundamental demand for housing pushes up rents. Excess supply during the boom has been offset by insufficient construction during the downturn. Employment conditions stabilize. Mortgage credit is available, but lenders remain conservative. Leverage is eschewed. Despite improved affordability and sound demographic underpinnings, spurious arguments are made against the prospect of a recovery. Property is seen as an illiquid and unattractive asset class. As the “error of pessimism” waxes, the real estate cycle approaches its trough.

Part Two: A Cyclical Analysis of the U.S. and Chinese Housing Markets

“Nothing certainly could be more useful, than to be well instructed in his hope and fears; to be diffident when others exult, and with a secret joy buy when others think it [in] their interest to sell.”

Sir Richard Steele, *The Spectator*, No. 428, July 11, 1712

A close reading of the real estate cycle might have alerted anyone to the great dangers posed by the U.S. housing boom toward the middle of the last decade. Subprime mortgages, high levels of construction, the prevalence of speculative purchases, tighter monetary policy, etc. were all signs that the cycle was close to its high point. Today, a rather different set of conditions pertain. The U.S. housing market is extremely depressed. In the general pessimism, we find grounds to hope that a trough in the U.S. real estate cycle is not far off. Across the Pacific Ocean, China’s real estate market has been on fire for several years. Many investors expect China’s property boom to continue for decades to come. Regarded through the prism of the real estate cycle, however, the prospects for Chinese homeowners look very bleak.

Section 1: The U.S. Housing Market – An Error of Pessimism?

There is no shortage of bad news surrounding the U.S. residential housing market today. Although U.S. home prices came out of their vertical decline in 2009, they have sagged since the middle of last year. National home prices fell by 6.9% in the year to June.²⁹ Across the nation, the demand for homes has collapsed. The national housing market remains in a glut, with around 9 months of supply. An enormous “shadow inventory” of future distressed sales hangs over the market. The number of vacant homes remains at very high levels.³⁰ Behind the bad news, however, the real estate cycle is grinding away, clearing the wreckage from the last boom and preparing the grounds for an eventual recovery.

Underwater Mortgages

Around a quarter of homeowners with mortgages are under water. Foreclosures remain at very elevated levels. Repossessed homes are being dropped on to a depressed market. A third of houses for sale represent “distressed” sales from foreclosed properties. There’s worse to come. Current foreclosures are only a small fraction of the number of mortgages that are currently delinquent or in arrears (see Exhibit 8). The foreclosure process is painfully drawn out. At the recent pace, it has been calculated it will take sixty years to repossess all the New York homes that are in severe default or foreclosure.³¹

Distressed Banks

Mortgages constitute around a third of outstanding loans by American banks. Although the banks have been bailed out and recapitalized, they remain vulnerable to further mortgage losses. In August, credit default swap spreads on Bank of America, the country’s largest mortgage lender, soared to nearly 400 basis points. At mid-year, some 8% of mortgages were delinquent. Banks have responded by tightening lending standards and requiring higher down payments. As expected, this has had a dampening effect on the housing market. Mortgages for home purchases are still falling and recently reached their lowest level since 1990.

“Medicated Market”

The recovery of the real estate cycle normally occurs when past excesses have been liquidated. Yet policy measures have hindered the clearing process. Home sales were boosted by the first-time home buyer tax credit that was introduced in July 2008. Demand evaporated, however, when this was removed in April 2010. The maximum value

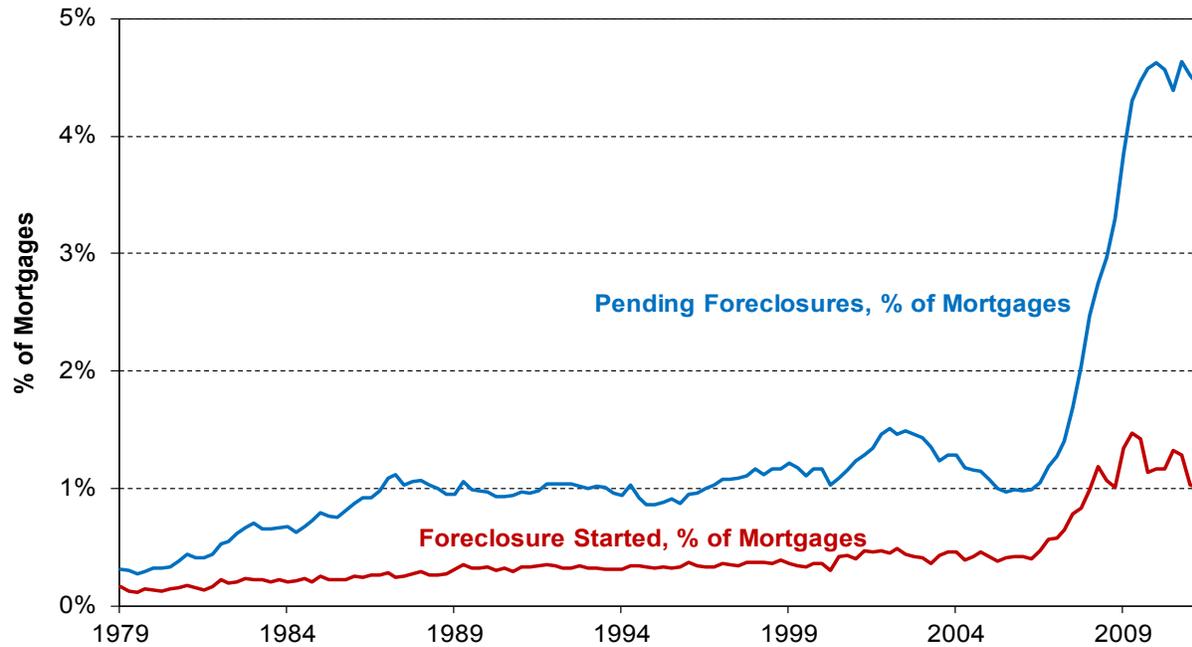
²⁹ Zelman Associates, *ibid.*

³⁰ Zelman Associates, *Housing Update*, August 2011: The vacancy rate in 2010 was nearly 8% compared with a long-run average of below 6%. Zelman reckons that 2.7 million excess vacancies need to be absorbed.

³¹ *New York Times*, June 19, 2011.

Exhibit 8

A Huge "Shadow Inventory" Hangs Over U.S. Housing Market



Source: Mortgage Bankers Association of America As of 6/30/11

of properties underwritten by Fannie and Freddie has been raised during the housing downturn with the result that the overwhelming majority of new mortgages are ultimately provided by these government-sponsored entities. The Federal Housing Administration continues to supply mortgages with minimal down payments. The Federal Reserve has chipped in with zero-interest rates and quantitative easing. How will this “medicated [housing] market” fare when the life-support system is removed?

Double Dip?

Macro-economic conditions are scarcely benign. It appears increasingly likely that the U.S. economy will enter a “double dip,” as is relatively common in the aftermath of great credit booms. Unemployment is high, consumer confidence has dipped, and U.S. companies are reluctant to invest. Despite the weak economic recovery, the Federal government is being forced to tighten its belt. U.S. households still have too much debt and will likely continue deleveraging for years to come. The continuation of foreclosures, distressed home sales, cautious banks, and uncertain economic conditions explain why the U.S. housing market remains depressed. Nevertheless, several indicators suggest that the worst is behind us.

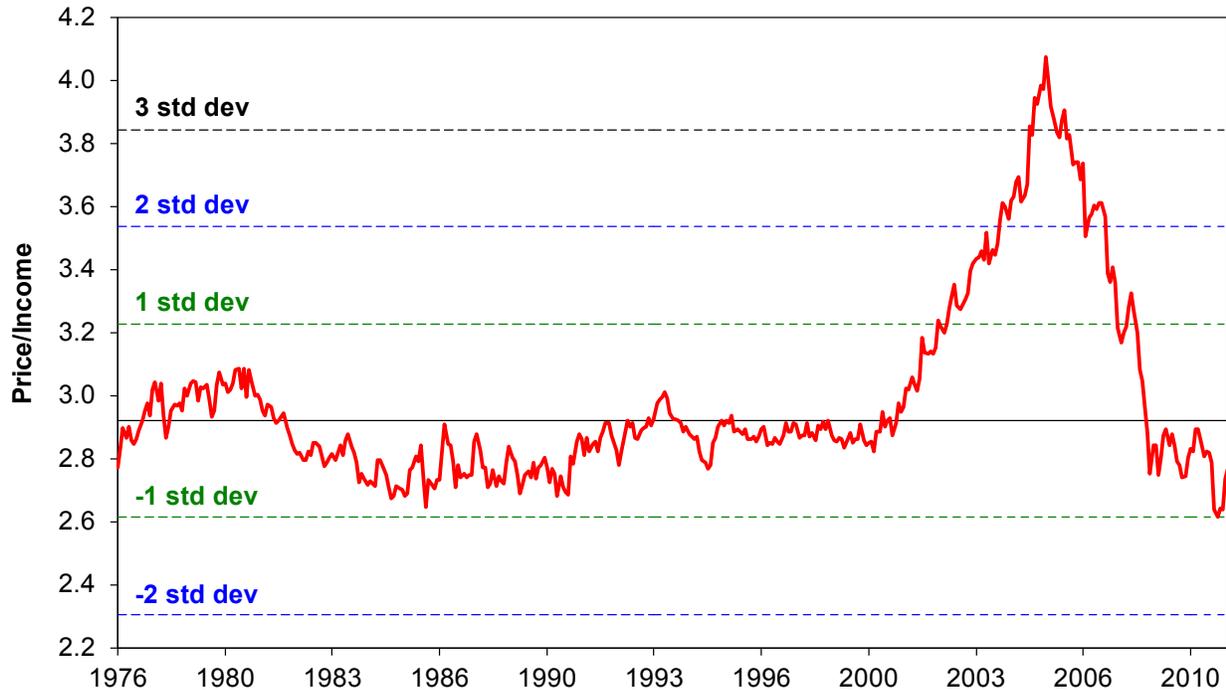
A Trough in the Real Estate Cycle?

- **The healing passage of time.** Five years have passed since U.S. housing prices peaked. That’s about the average amount of time it has taken for real estate markets to trough after previous housing bubbles. Deleveraging by households may continue for some time to come, but this doesn’t preclude a recovery in the housing market.

Exhibit 9

After the Bubble: U.S. Housing is Reasonably Valued

U.S. Median Home Price to Family Income Ratio



Source: National Association of Realtors, U.S. Census Bureau, GMO As of 8/31/11

- **Valuations are no longer over-stretched.** The home price to income ratio is around one standard deviation below its trend. Rental yields have also recovered. For the first time since 1981, median monthly mortgage payments are lower than rents.³² Following the decline in long-term interest rates, owning a home has become much more affordable. The National Association of Realtors' affordability index is at an all-time high.³³ This is one of the best times ever for Americans to buy a home.
- **Speculators replaced by investors.** At the bottom of the cycle assets typically move from weak hands to strong hands. The share of speculative purchases financed with mortgages has come crashing down since the 2005 peak. Conversely, the number of cash transactions (an investor proxy) in June rose to 29% of total existing home sales.³⁴
- **Credit crunch is over.** Although delinquencies on mortgages remain high, one should not exaggerate the tightness of the mortgage market. The number of foreclosures has turned down over the last year.³⁵ The latest Fed loan officers' survey suggests that credit conditions are loosening. The demand for residential mortgages may still be falling, but lenders are not expecting this decline to continue. Subprime mortgages are no longer available, but more than 80% of requests for new mortgages are approved.
- **End to Deflation.** The Fed has kept short-term rates at zero for three and a half years. Ben Bernanke has shown a grim determination to ward off deflation. We have experienced successive bouts of quantitative easing, with more to come if necessary. In the year to July 2011, the U.S. consumer price index climbed 3.6%.

³²Capital Economics, May 16, 2011.

³³Zelman Associates reckons that mortgage payments on an averagely priced home with a 10% down payment would consume only 16% of median household income (compared with a long-term average of 22%).

³⁴Ibid.

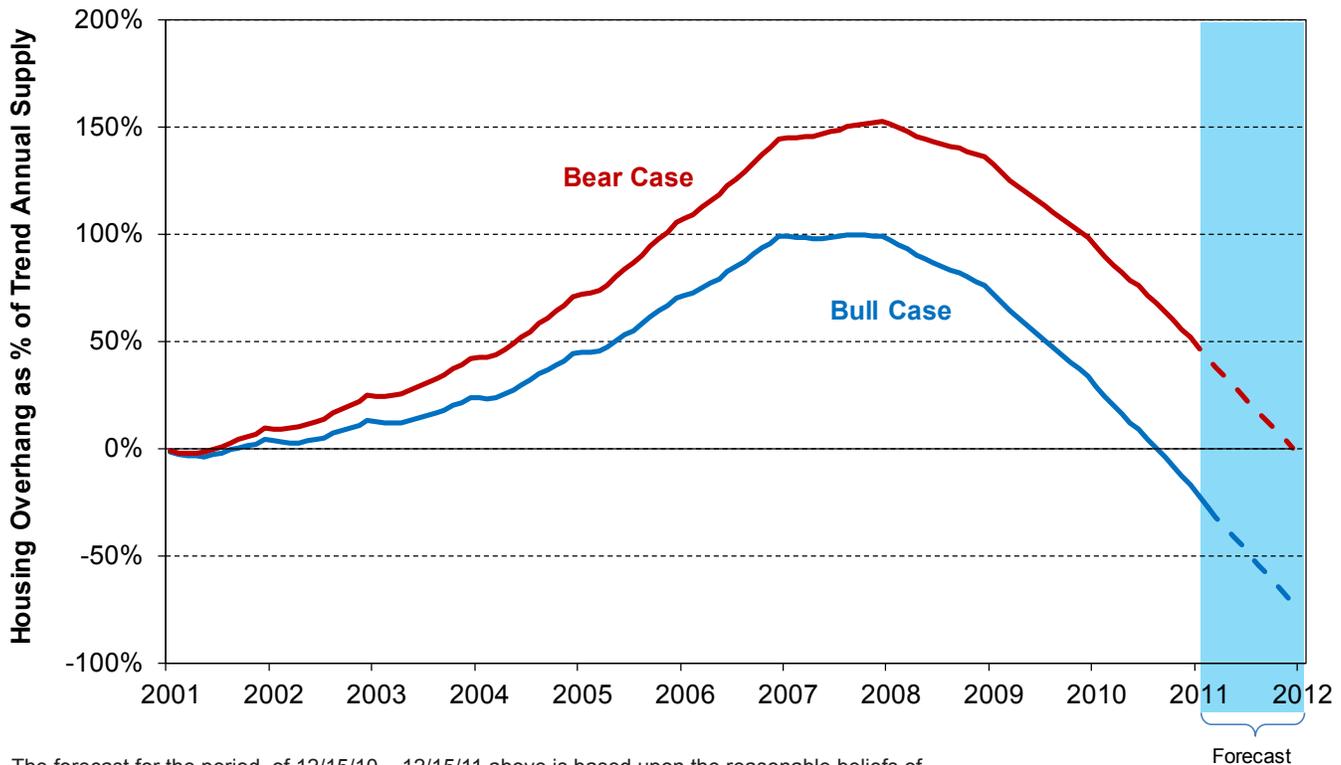
³⁵The number of new foreclosures fell by 41% in the second quarter of 2011 from its level a year earlier. See Peter Warburton, Economic Perspectives, September 2011.

- **Overhang of excess housing supply has diminished.** During the bubble, housing starts were far above average. But this overbuilding has been offset by several years of below average housing starts. Single family housing starts are running at less than half their long-term trend. The overhang on the housing market resulting from excessive construction in the bubble years has thus largely disappeared.

Exhibit 10

After the Bubble: Excess Supply of Housing has Diminished

Cumulative U.S. Housing Completions Relative to Trend



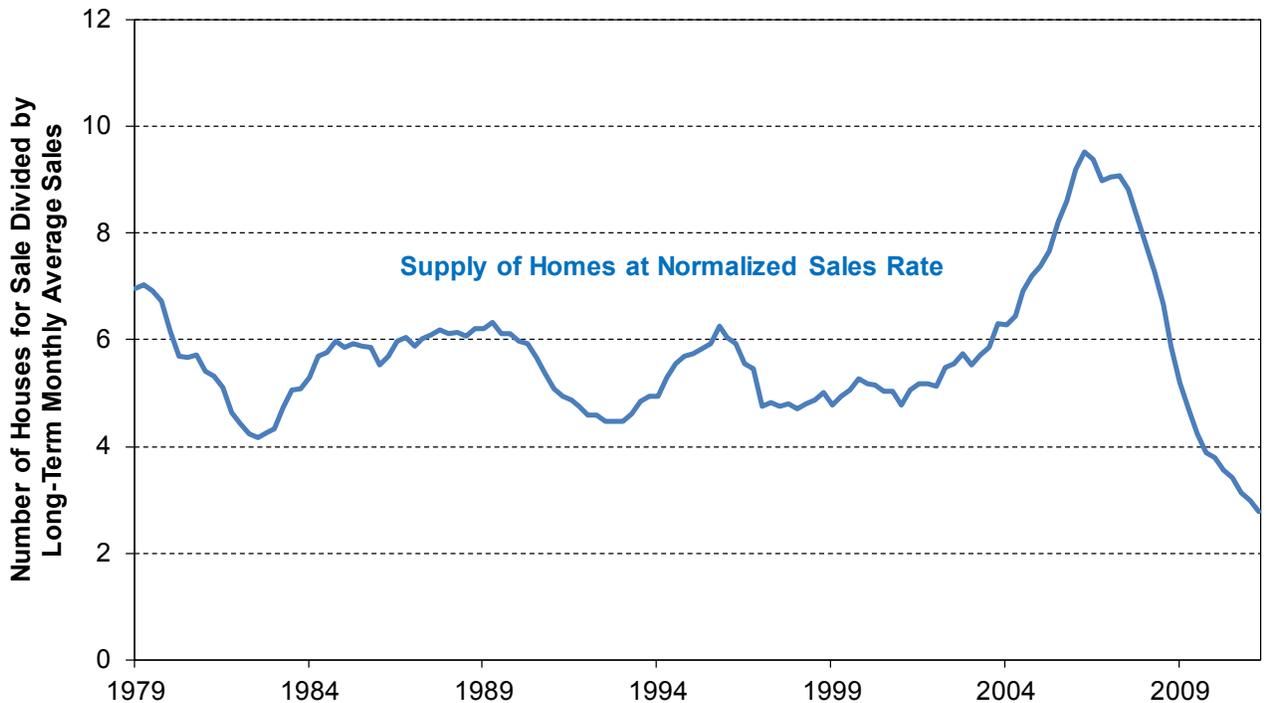
The forecast for the period of 12/15/10 – 12/15/11 above is based upon the reasonable beliefs of GMO and are not a guarantee. Actual results may differ materially from the forecasts above.

Source: GMO

- **Housing glut exaggerated.** The supply of houses for sale remains very elevated relative to current demand. But, then, homes sales have fallen to a 30-year low. If demand were to recover to normal levels, then today's excess supply would evaporate to be replaced by a shortage (see Exhibit 11).
- **Pent-up demographic demand.** The long-term fundamentals for the U.S. housing market are sound. The population is forecast to grow by around 10% over the current decade, which is only a little below average. Household formation has fallen to 40-year lows in the aftermath of the global financial crisis (see Exhibit 12). Around half of recent college graduates are reported to be living with their parents. The homeownership rate has fallen back from its bubble peak and returned to the level found at the turn of the century. Rents have been increasing. All of this suggests there is a rising pent-up demand for housing.
- **Extreme Pessimism.** Last September, a *Time* magazine cover story suggested it was time to “re-think homeownership.” There has even been talk of a “new paradigm” for U.S. housing with the claim that household formation will not regain its long-term trend and that renting will be permanently preferred to homeownership. The American dream is over.

Exhibit 11

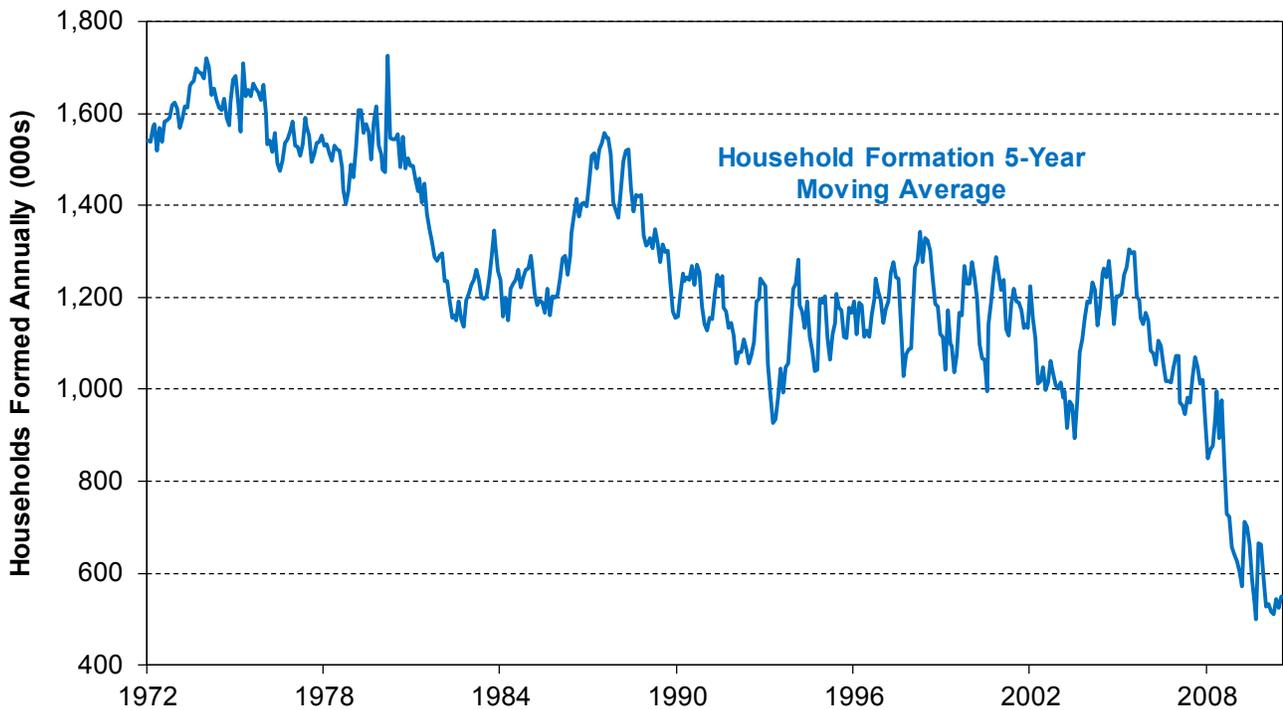
If Demand were at Average Levels U.S. Housing would be in Short Supply



Source: Bureau of the Census, GMO As of 6/30/2011

Exhibit 12

U.S. Household Formation at 40-Year Lows



Source: Bureau of the Census As of 6/15/2011

The U.S. real estate cycle appears to be revolving somewhere between the stages of *distress* and *quiescence*. Some indicators are still decidedly negative. In particular, the high levels of foreclosures and distressed sales are a matter for concern. Unemployment also remains stubbornly high and over-indebted households are reluctant to borrow. However, our checklist of housing trough indicators suggests that the worst is over: valuations are reasonable; mortgages are available; deflation has been dispersed; the construction overhang is largely gone; rents are rising; and a pent-up demographic demand is swelling. The long-term fundamentals for U.S. residential real estate are sound, however. When the economy eventually recovers and unemployment declines, household formation will rebound. Home prices will pick up together with construction. Another housing boom will follow.

Section 2: The Chinese Housing Market – An Error of Optimism?

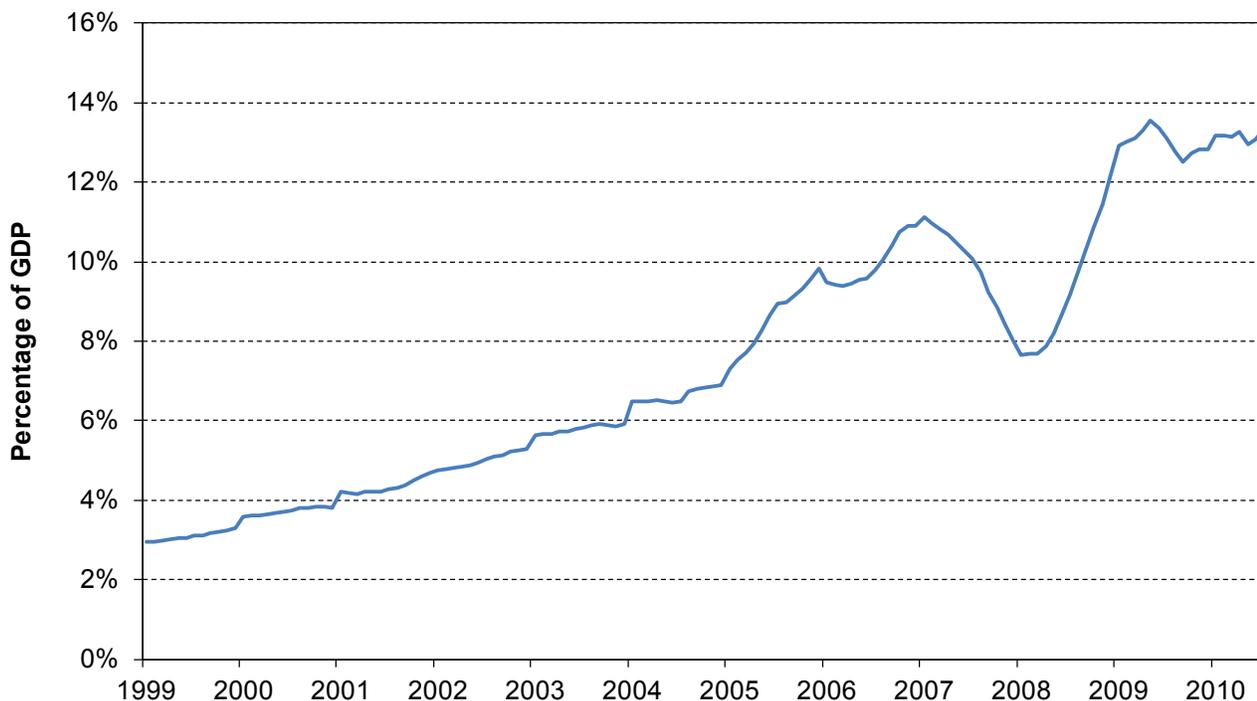
Chinese Property Matters

Chinese real estate merits attention. After all, property construction accounts for some 13% of GDP in the world’s second largest economy. Construction has been one of the most important drivers of economic growth.³⁶ Some 14% of China’s workforce is employed in the building trade. Construction also provides the largest market for steel and other heavy industries. Residential development is closely tied up with Chinese infrastructure, which since 2009 has constituted the bulk of fixed asset investment. Economist Stephen Green of Standard Chartered suggests that around 50% of China’s GDP is linked to the fate of the property market.³⁷

Exhibit 13

Chinese Property Consumes an Ever Greater Share of China's GDP

Annualized Sales of Buildings over 10,000 sq m as Percentage of Annual GDP



Source: China National Bureau of Statistics As of 6/30/11

³⁶ Jonathan Anderson, UBS, March 16, 2011.

³⁷ *Wall Street Journal*, June 27, 2011.

Real estate shores up China's creaking credit system. Although loans to developers and mortgages only account for around a quarter of total bank loans, the banking system's total exposure to real estate is larger. Fitch estimates that 35% of bank loans are directly or indirectly related to Chinese property. This may be conservative.³⁸ Local Government Funding Vehicles, which have taken out an estimated RMB14 trillion (equivalent to a third of GDP) of bank loans to finance infrastructure projects, have been capitalized with land grants. An indeterminate amount of commercial and industrial loans have been either collateralized with property or diverted into real estate development. In addition, trillions of RMB of trust loans and other forms of "social finance" are linked to real estate.

China's fiscal health also depends on the housing market. Last year, local government revenues from land sales amounted to some 7% of GDP, or around one-third of their total receipts. This produces an immense boost to economic activity because local governments are required to spend in the same year any money raised from land sales. Local governments also tax new developments. The central government indirectly benefits from the real estate boom as corporation tax receipts have surged.

Chinese real estate casts a long shadow over the global economy. China is the world's largest consumer of steel and cement and dominates a number of other commodity markets, most notably copper. China has replaced the United States as the largest contributor to global economic growth. This contribution has depended ultimately on China's booming real estate market. It's no exaggeration to say that Chinese property has become the "most important sector in the universe."³⁹

The real estate cycle in China is particularly difficult to read. For a start, private property rights have only existed since the mid-1990s. The Chinese government wields enormous power over the property market, which is deployed as a tool of economic policy. It is able to do this because the government controls the banking system and owns all the land. The largest property companies are state-owned. The level of housing investment is influenced by local governments' GDP targets. There is also a large social housing program.

Inadequate data render the Chinese real estate cycle particularly opaque. This problem is exacerbated by Beijing's tendency to stop publishing statistics when they start pointing to unpleasant conclusions. For instance, two official data series for home prices and vacancies have recently been discontinued. Still, Chinese mandarins cannot suspend the laws of economics indefinitely. Nor can they permanently conceal the operations of the real estate cycle from the astute observer.

Inflated Valuations

In 2009, Beijing instructed banks to lend to infrastructure projects and property in order to shield China's domestic economy from the shockwaves of the global financial crisis. Massive credit growth re-ignited a property boom. A 2010 NBER study of real estate in major Chinese cities contains some startling figures. During the previous three years, real house prices were up by 140%, while land prices had risen twice as fast. A measly 2% rental yield suggested that homebuyers were expecting strong price increases in the years to come. The authors of the NBER paper concluded that "only modest declines in expected appreciation seem needed to generate large drops in house values."⁴⁰

Data on China's national housing market are too unreliable and short-lived to prove quantitatively that a bubble exists. House price statistics from different providers produce widely different results. They are also generally delivered in terms of price per square meter rather than housing units. We cannot accurately assess median incomes to gauge affordability. Some commentators argue that Chinese housing valuations are more reasonable than appears at first glance because a huge amount of household income is unreported.

³⁸UBS estimates "direct and indirect exposure to real estate is between 40% to 50% of loans outstanding." UBS, "China Real Estate – Final Destination," August 25, 2011. It has also been reported that nonfinancial companies have borrowed to lend on to property developers. Furthermore, some local government funding vehicles have used bank loans intended to fund infrastructure to acquire trust and wealth management products, which are exposed to the property sector.

³⁹Jonathan Anderson, *ibid.*

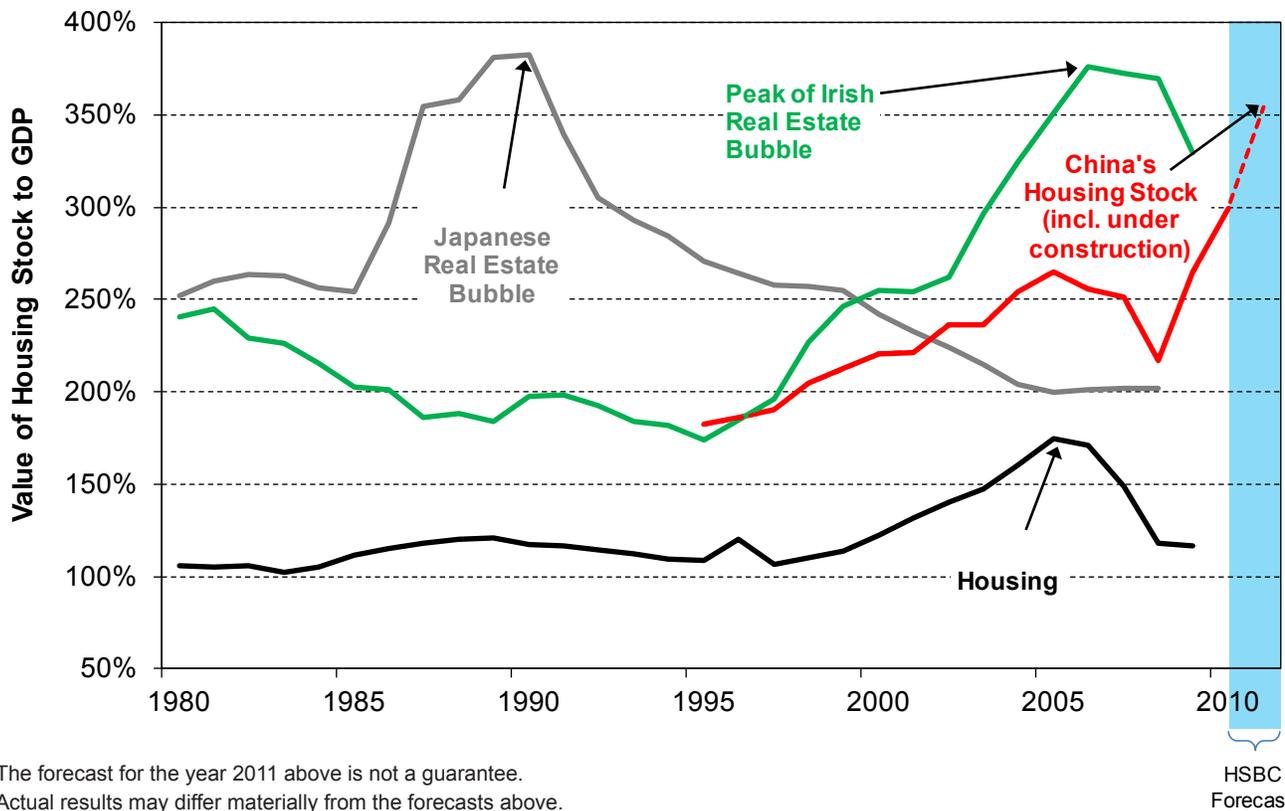
⁴⁰Yongheng Deng, et al., "Evaluating Conditions in Major Chinese Housing Markets," NBER, 2010.

Given data problems, disputes about Chinese property valuations are unlikely to be resolved any time soon. The housing bulls and bears argue from different premises. HSBC, for instance, estimates that China's housing stock is worth around 350% of GDP, which is in line with the peak overvaluation of Japan's residential real estate in 1990 and Ireland's in 2007. UBS, on the other hand, claims that the aggregate value of Chinese property may be as low as 75% of GDP.⁴¹

Exhibit 14

A Tale of Four Housing Bubbles

Housing Stock to GDP Ratio – Japan, Ireland, U.S., China



The forecast for the year 2011 above is not a guarantee. Actual results may differ materially from the forecasts above.

Source: HSBC, GMO

There's little doubt, however, that many Chinese feel they have been priced out of the property market. A 100 square meter apartment in China currently costs around 17 times average disposable income, according to Deutsche Bank.⁴² Chinese household incomes would have to rise by 10% a year for 20 years to catch up with German levels of housing affordability. Leaving valuations aside, there are other indications that China's property markets have moved from a stage of "excitement," in Overstone's cycle, to one of "overtrading."

⁴¹ UBS, "Bubble or No Bubble? The Great Chinese Property Debate," Tao Wang, March 25, 2011.

⁴² Deutsche Bank, "China's Housing Markets: Regulatory Interventions Mitigate Risk of Severe Bust," April 28, 2011. It is impossible to get an accurate picture of housing affordability for the nation as a whole. Housing data is poor and short-lived, household incomes are very unevenly distributed and largely unreported. It seems clear, however, that the rich can afford to amass empty apartments as part of their investment portfolios. Middle-class households, on the other hand, find themselves either priced out of the market or having to draw on parental savings to finance a home purchase.

Other Evidence of China's Real Estate Bubble

- ***Surging credit.*** In 2009 and 2010, credit expanded by the equivalent of 39% and 34% of GDP, respectively. In other countries, such credit growth has often preceded severe banking crises.⁴³ As we have seen, the combination of strong credit growth and high property valuations is generally a sign that the real estate market is vulnerable.
- ***New forms of real estate finance.*** It is often claimed that China's property boom is sound because there is no equivalent to subprime lending and the average loan-to-value ratio for mortgages is higher. Yet credit is fungible and subprime isn't the only dangerous type of real estate finance. China has witnessed a proliferation of nonbank lending in recent years. First, there was a surge of trust lending and bills of exchange. These have been supplanted by so-called "wealth management products," of which around RMB8.5bn were issued in the first half of the year. This type of finance is expensive, short-term, and often used to fund real estate deals.
- ***A cluster of emerging property booms.*** For the past three years, the Federal Reserve has kept short-term rates at zero to help revive the U.S. economy. Many developing countries, including China, peg their currencies to the U.S. dollar. The Fed's ZIRP (zero interest rate policy) has given a zip to their real estate markets. Real estate booms have sprouted across Asia, not only in China, but also in Singapore and Hong Kong, as well as in Brazil.
- ***Moral hazard.*** As noted above, Beijing uses real estate as a tool of economic policy. The state-owned banks are heavily exposed to property and local governments derive a large chunk of their revenue from land sales.⁴⁴ Communist party members are also heavily involved in land speculation. Moral hazard looms large over China's real estate market as market participants believe that property prices will never be allowed to fall.⁴⁵
- ***Pro-cyclical demographic demand.*** Since 1990, China's urban population has increased by 300 million. It is generally assumed that another 300 to 400 million rural Chinese will move to the cities over the next two decades. Ongoing migration, it is claimed, will sustain China's property markets for years to come. Yet urban migration in China, as elsewhere, is pro-cyclical. Workers leave the country because they can find better-paid jobs in the cities. Many of those jobs are in construction. Furthermore, many migrant workers don't have urban residency rights, are on the lowest end of the pay-scale, reside in dormitories and could never dream of purchasing the type of luxury apartments that property developers favor.
- ***High levels of homebuilding.*** China's residential construction share of GDP has climbed to around 10%, which is roughly the same level as Spain achieved during its late property boom.⁴⁶ Residential floor space under construction has climbed from under 2 billion square meters in 2007 to 4.5 billion this year (see Exhibit 15).⁴⁷ No one knows the average size of new homes. But this figure suggests somewhere between 45 million and 75 million residential properties are under construction.⁴⁸ The enormity of China's construction frenzy is revealed by the amount of cement consumed. Cement consumption exceeds 1,400kg per capita, which is somewhat higher than the peak of Spanish cement usage in the last decade.⁴⁹
- ***Elevated vacancy rates.*** A large number of new apartments in China are sold to investors. These properties are generally kept empty because rental yields are low and in China renting is believed to decrease an apartment's value. No one is quite sure how many properties are vacant. China is a big place. One widely published estimate, based on the number of properties attached to the grid but not using electricity, suggested there were 64 million

⁴³ Vincent Chan, Credit Suisse, June 20, 2011.

⁴⁴ A note from Andrew Collier of Bank of China International on February 10, 2011 claimed that "it is in the interest of local governments to keep land prices high to sustain the illusion they can pay off their debt burden in sales of future appreciated land."

⁴⁵ Typical of this view is a comment in a recent Deutsche Bank report (Property Sector Downside Risk Limited, July 5, 2011) which, after finding that home prices had inflated into a bubble, came to the weak conclusion that "the property sector is too big to fail and the government will relax policies as needed."

⁴⁶ Forensic Asia, "Chinese Property: Dancing with Chuck," June 24, 2011.

⁴⁷ National Bureau of Statistics of China, August 31, 2011.

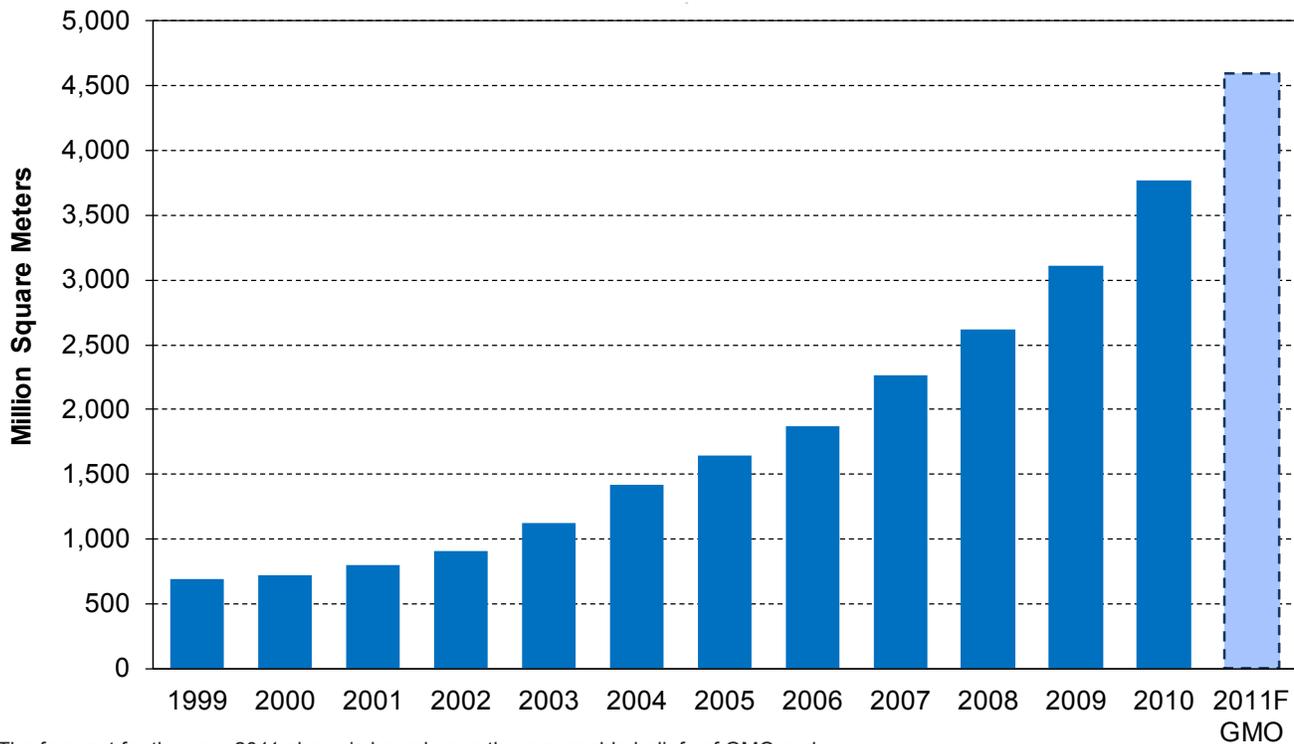
⁴⁸ This estimate assumes that the average size of new apartments under construction is somewhere between 60 and 100 square meters. The lower estimate suggests that new residences are being built for roughly one in every six households.

⁴⁹ SocGen, June 23, 2011. The report's authors state that "all countries where cement consumption has exceeded 1,000kg per capita for a number of years have gone through a construction crisis sooner or later."

Exhibit 15

Building up to 75 Million New Homes this Year

Chinese Residential Floor Space under Construction



The forecast for the year 2011 above is based upon the reasonable beliefs of GMO and are not a guarantee. Actual results may differ materially from the forecasts above.

Source: China National Bureau of Statistics, GMO

vacancies across China. David Murphy of CLSA claims there are only 16 million empty properties in the cities.⁵⁰ This is still a large figure, equivalent to 17% of the urban housing stock and higher than the Thai vacancy rate in 1996.⁵¹

- **Excessive infrastructure spending.** There has been a surge of official spending on infrastructure since 2008. According to anecdotal accounts, much of the money earmarked for infrastructure has gone into real estate development. New tunnels, bridges, roads, and railways have been constructed to support property developments. Wuhan, the capital of Hubei in central China, resembles a tawdry version of Chicago in the 1850s as the local property market is riding high on the prospect of high-speed rail links to Beijing and Shanghai and is buoyed by massive infrastructure spending.
- **A national obsession.** The world's largest population is fixated with real estate. A TV soap opera, *Snail House*, which dwelt on the negative social consequences of the property bubble, proved so popular that Beijing banned it. Apartments are seen as stores of value, which will protect against inflation. It's generally believed that Chinese property has never gone down in value and never will.
- **Skyscraper phenomenon.** Over two hundred skyscrapers are under construction in China today. This is equivalent to the total number of skyscrapers in the U.S. today.⁵² A 606 meter building has been commissioned for Wuhan from the designers of Dubai's Burj Khalifa. It is destined to become the world's third tallest building, just 25 meters shorter than the Shanghai Tower, which is due for completion in 2014.

⁵⁰David Murphy, "Property: a \$64m Question," June 8, 2011.

⁵¹UBS, "China Real Estate – Final Destination," August 25, 2011. The authors suggest that "30% to 40% of all new urban properties for sale are just bought for investment purposes, while the urban vacancy rate most probably lies above 12%."

⁵²SocGen, *ibid*.

- **Speculating abroad.** After people have made a great deal of money in their domestic property market, they often feel impelled to try their luck abroad. In the late 1980s, Japanese investors snapped up properties in Hawaii. Today, the mainland Chinese are pouring into Hong Kong, where rental yields have fallen to record lows. In Vancouver, Chinese speculators are reported to choose properties during helicopter rides above the city.⁵³ The Chinese are also providing a welcome tonic to New York City's drooping property market.⁵⁴ In the Arctic Circle, a Beijing-based developer is bidding to acquire 300 square kilometers of Iceland's tundra for an eco-resort.

A Peaking Market?

An IMF paper last December claimed there was no national real estate bubble in China, only some frothy local property markets.⁵⁵ Most commentaries on Chinese housing are similarly complacent. They usually point to long-term demographic trends or suggest that Beijing will always support China's real estate market. Hoyt's observation that the real estate cycle tends to be particularly violent in rapidly-growing economies is overlooked when it comes to China. This is regrettable since there are a number of signs that China's real estate cycle may be close to, or even past, the turning point.

- **Tighter monetary policy.** Beijing is caught between a rock and a hard place. Strong credit growth propels fixed asset investment and creates jobs. However, monetary expansion also fuels inflation. Soaring food prices lead to popular unrest. The People's Bank of China has responded to this threat by hiking interest rates and raising banks' minimum reserve requirement nine times since early 2010. Volatility in Chinese interbank lending rates (Shibor) during the course of this year indicates rising stress in the banking system.
- **Government crackdown.** Beijing is concerned that housing has become too expensive. Over the past couple of years, the authorities have introduced several measures to dampen speculation: minimum deposits on home purchases have been raised; households face new restrictions on the number of apartments they can own; companies that strayed into real estate development have been instructed to leave the business; property taxes have been introduced in Shanghai and Chongqing. Local governments have also introduced targets for the annual house price increases for individual cities.
- **Distressed developers.** Property developers have been forbidden to finance new construction with deposits on advance sales. Banks have also been required to curtail real estate and mortgage lending. Developers have turned to expensive foreign loans and China's own "shadow banking" system for funding. The authorities are now clamping down on trust loans and other forms of nonbank credit.⁵⁶ Distressed developers are discounting prices and extending credit to homebuyers. They have also been using accounting tricks, such as capitalizing interest payments and revaluing land holdings, to bolster their balance sheets.⁵⁷
- **Growing supply pipeline.** The recent surge in residential construction has produced a property glut. There has been a growing discrepancy, in recent years, between residential property under construction and officially reported completions. A Standard Chartered survey of 35 cities finds that the supply of unsold homes exceeds monthly demand by some 15 times (compared with 10 months' supply a year earlier.)⁵⁸ Some Tier 2 cities are reportedly swamped by more than 20 months of housing supply.
- **Weak transactions.** By April this year, new apartment sales in cities tracked by Standard Chartered were at half the level of a year earlier.⁵⁹ Transaction volumes in Beijing in the first half of August hit a new low.⁶⁰ It is one

⁵³ Grant's Interest Rate Observer, May 20, 2011.

⁵⁴ *New York Times*, August 12, 2011. One realtor cited in the piece claims that "people come to New York only for the weekend. They see the apartment, make the offer and right away fly back to China. Cash deal. Right away."

⁵⁵ "Are House Prices Rising Too Fast in China," Ashvin Ahuja, et al., IMF Working Paper, December 2010.

⁵⁶ *Wall Street Journal*, August 10, 2011. WSJ reported that "Chinese property developers are heading for a funding crunch."

⁵⁷ Forensic Asia, "Chinese Property: Data Obfuscation," January 17, 2011.

⁵⁸ "China – Real Estate Still on the Verge of Adjustment," Standard Chartered, June 1, 2011.

⁵⁹ Standard Chartered, *ibid*.

⁶⁰ China Property Special Report, Bank of China International, August 29, 2011. This report claims that the government is looking for a 30% drop in Beijing apartment prices.

of the peculiarities of Chinese real estate that the secondary market for residential housing is far smaller than the primary market. Chinese apartments resemble a roach motel, where investors can check in, but there's no checking out.

- **Falling land prices.** Over the last year, average prices for land sales have collapsed, although this also reflects the shift in development from expensive Tier 1 to less costly Tier 2 cities. Reports surfaced earlier this summer that the heavily-indebted Beijing Land Reserve, which finances land purchases from the local government, had run into liquidity problems.

A giant smog of unreality hangs over Chinese property. SocGen calculates that over the last decade, China has completed 16 billion square meters of floor space. This is equivalent to building Rome every two weeks.⁶¹ This construction boom has resulted in vast “ghost cities” across China, from Ordos in Inner Mongolia, with its reported 1 million empty apartments, to Zhengzhou in Henan province. The latter development – comprising two financial centers, 13 hotels, 15 universities and 9 malls – is said to be nearly four times the size of Ordos. A recent visitor noted little evidence of activity beyond (shoddy) construction.⁶²

Harriet Martineau observed the absurdity that accompanied Chicago's real estate boom in the mid-1830s and wondered only that it had lasted so long. Today, China's property market provokes similar thoughts. Real estate cycles peak at the point when credulity gives way to disbelief. China's does not seem far from that point.

⁶¹ SocGen, June 23, 2011.

⁶² Gillem Tulloch, Forensic Asia, July 11, 2011.

Mr. Chancellor is a member of GMO's asset allocation team and focuses on capital market research. He has worked as a financial commentator and consultant and has written for the Wall Street Journal, New York Times, Financial Times, and Institutional Investor, among others. He is the recipient of the 2007 George Polk Award for financial journalism. Mr. Chancellor is the author of several books including Crunch Time for Credit (2005) and Devil Take the Hindmost: A History of Financial Speculation (1999), a New York Times Notable Book of the Year.

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