



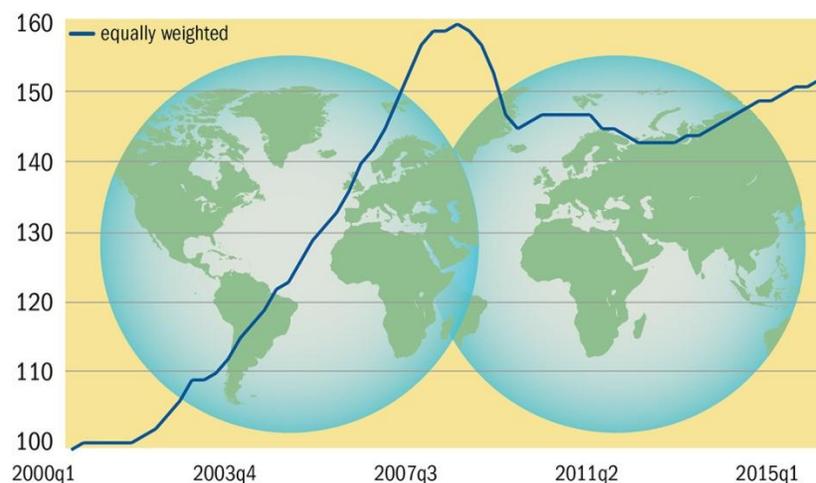
The January 2016 issue of the Global Housing Watch Quarterly Update includes:

- An update of the five core charts: the Global House Price Index, real house price growth, real credit growth, house price-to-income ratio, and house price-to-rent ratio across countries (pages 1 to 6).
- A summary of a recent [conference](#) that discussed China's housing market (pages 7 to 10).
- IMF's assessment of Sweden's housing market (pages 11 to 14).

Figure 1

Global House Price Index

Global housing markets continue a slow recovery.



Sources: Bank of International Settlements, Colliers International, European Central Bank, Federal Reserve Bank of Dallas, Savills, and national sources.



If we aggregate real house prices across countries and look at the big picture, we see that global house prices continue to march slowly upward. This is what we observe in the latest update of the Global House Price Index (Figure 1). The index has continued to edge higher for the past sixteen quarters.

This upward trend in the Global House Price Index is consistent with the pattern we see when we look at real house price growth across countries. Even though the growth rate varies across countries, house prices are rising in many countries (Figure 2).

Figure 2

Real House Prices over the Past Year

Real house prices increased over the past year in most countries.

(2015:Q3 or latest, annual percent change)



Sources: Bank of International Settlements, Colliers International, European Central Bank, Federal Reserve Bank of Dallas, Savills, Sinyi Real Estate Planning and Research, and national sources.



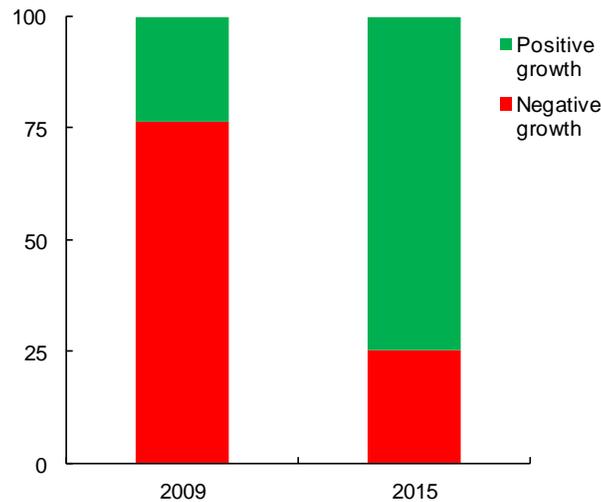
Moreover, there is also a clear shift in momentum when comparing house prices in 2015 vs. 2009—the peak of the global financial crisis. We can see this by comparing the proportion of countries with either positive or negative real house price growth for both periods (Figure 3). Specifically, the share of countries with positive real house price growth has gone up from 24 percent in 2009 to 75 percent in 2015. And we see the opposite, when we look at the proportion of countries with negative house price growth. Here the share of countries with

negative real house price growth has declined from 76 percent in 2009 to 26 percent in 2015. However, it is important to note that global growth has slowed recently, especially in emerging markets. So it will be important to monitor the data in upcoming quarters to determine the impact on the uptrend in global house prices.

Figure 3

Real House Price Growth: 2009 vs. 2015

Percent of countries with either negative or positive real house price growth



Source: Bank of International Settlements, Colliers International, European Central Bank, Federal Reserve Bank of Dallas, Savills, Sinyi Real Estate Planning and Research, and national sources.

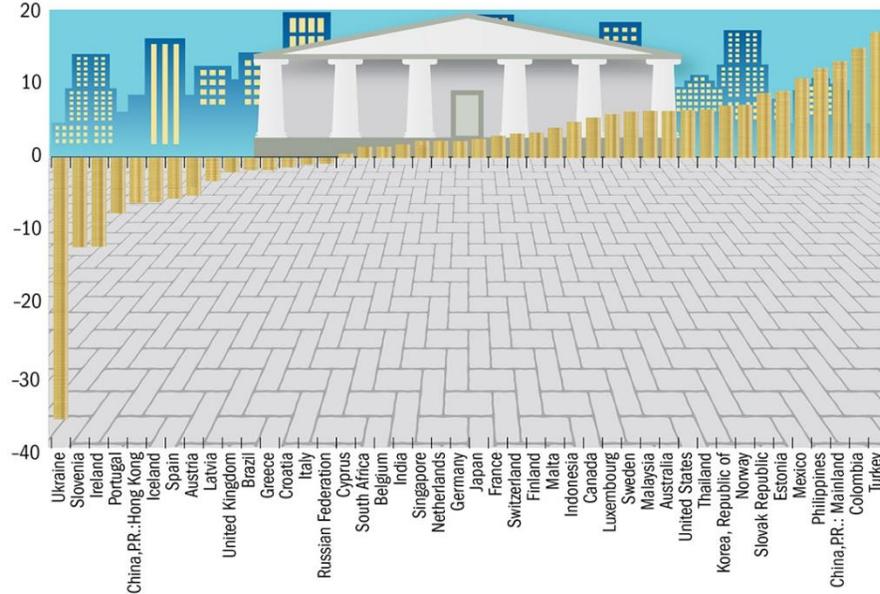
Finally, real credit growth, house price-to-income, and house price-to-rent are other useful indicators to watch when examining developments in the housing market. Similar to real house prices across countries, real credit growth is rising in many countries, although it is declining in some European countries (Figure 4). And the scale seems balanced when we look at the price-to-income and price-to-rent ratios (Figure 5 and 6). In half of the countries, house prices are rising faster than incomes and rent. However, these indicators should be interpreted with caution. For example, the price-to-rent ratio is not a useful indicator in countries where rent is controlled.

Figure 4

Real Credit Growth over the Past Year

Real credit growth, often associated with house price changes, was strong in many countries.

(2015:Q3 or latest, annual percent change)



Sources: Haver Analytics and IMF.

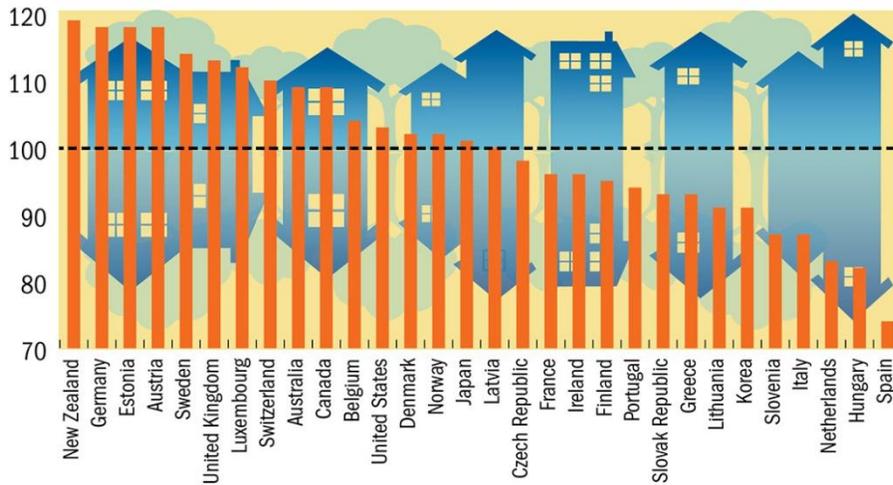
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Figure 5

House Price-to-Income Ratio Around the World

House prices have grown faster than incomes in a number of countries.

(2015:Q3 or latest available index, 2010 = 100)



Source: Organisation for Economic Co-operation and Development.

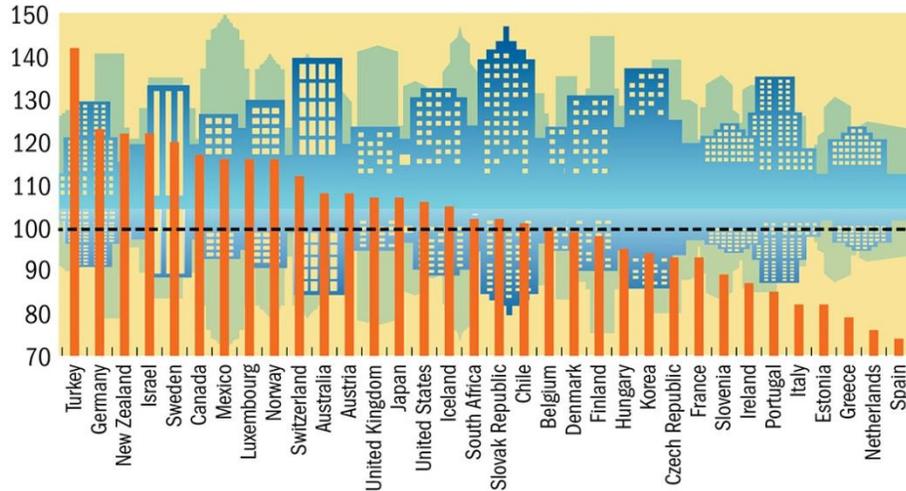
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Figure 6

House Price-to-Rent Ratio Around the World

House prices have grown faster than rents in over half the countries.

(2015:Q3 or latest available index, 2010 = 100)



Source: Organisation for Economic Co-operation and Development.



These charts and the underlying data are available from the IMF’s Global Housing Watch page:

<http://www.imf.org/housing>

The remainder of this quarterly update provides a summary of the conference on *International Symposium on Housing and Financial Stability* and extracts of the analysis contained in two IMF reports on Sweden.

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This update was produced by:

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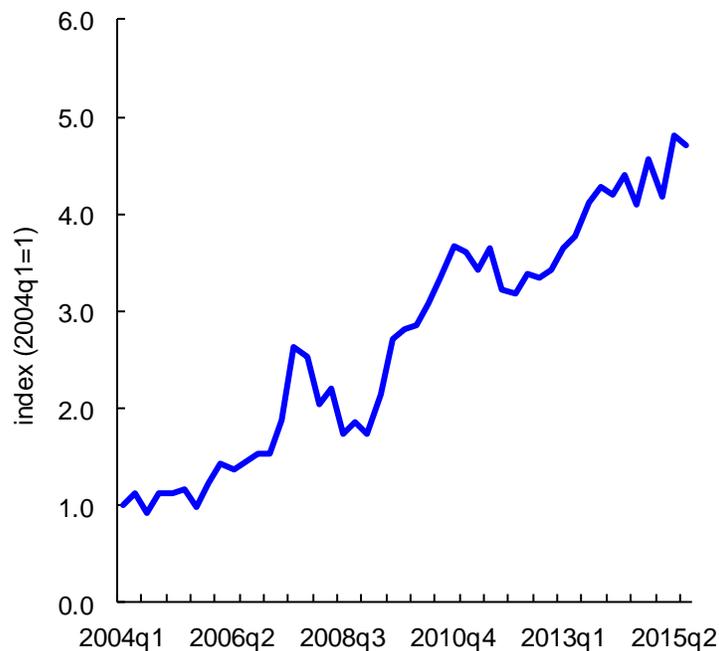
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Box 1: China's Housing Market: Defying the Odds?

In mid-2008, alarmed by a “spectacular tumble” in house prices in the city of Shenzhen, *The Economist* predicted that “[China's property bubble is about to burst](#).” But despite some reversals house prices in China have continued their long upward march (Chart 1). In mid-2014, *The Economist* again predicted a collapse, quoting a developer as saying that China's real estate sector “[will soon hit an iceberg](#).”

Chart 1: Chinese National Real Land Price Index
35 Markets, Constant Quality Series
(Quarterly: 2004q1 – 2015q3)



Source: Chinese Housing Markets: What We Know and What We Need to Know
by Yongheng Deng, Joe Gyourko & Jing Wu

Will house prices in China continue to defy the odds? A [conference](#) held last month in Shenzhen provided some answers. Organized by the IMF in cooperation with the Chinese University of Hong Kong (CUHK) and Princeton University, the conference spotlighted new data sets on China's housing markets painstakingly assembled by leading experts.

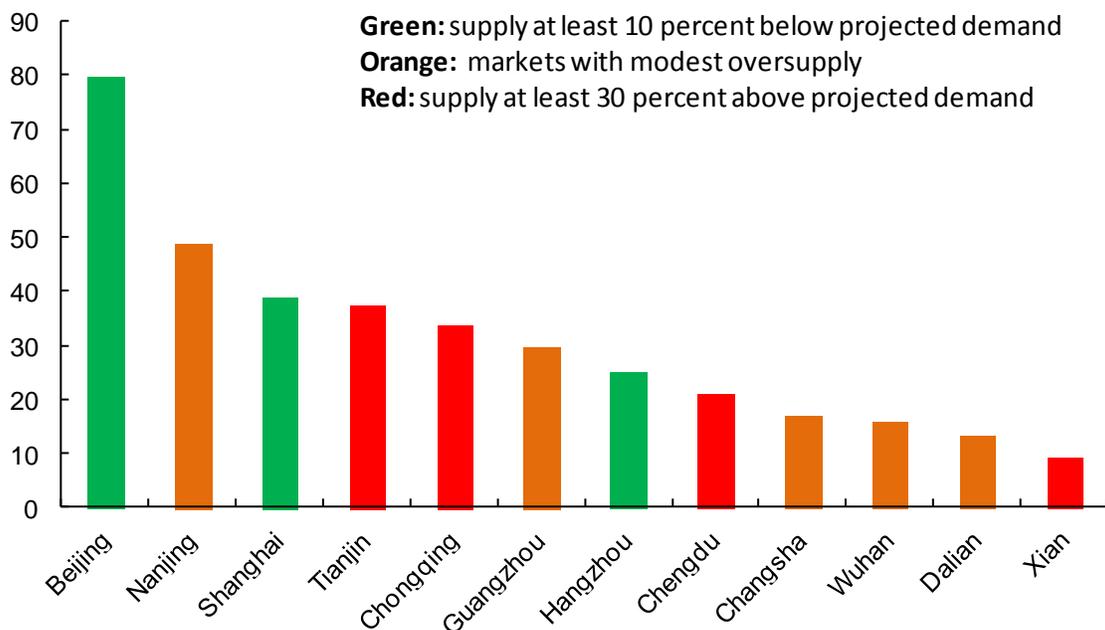
Demand and supply imbalances

While national level data sketch the overall trend in house prices, it is what happens at the city level that is key to understanding the housing sector in a large country like China. Beijing has

“experienced one of the greatest booms ever seen in housing markets,” according to real estate expert [Joe Gyourko](#) (University of Pennsylvania).

With his co-authors, Gyourko has constructed a residential land price index for 35 large cities in China based on government sales of land to private developers. While these land prices have increased in all cities, the extent varies considerably (Chart 2). Prices have increased in inflation-adjusted terms by about 80 percent a year in Beijing over the past decade but by only 10 percent a year in Xian.

Chart 2: Longer-Run Supply/Demand Trends
2001-2014



Source: Chinese Housing Markets: What We Know and What We Need to Know
by Yongheng Deng, Joe Gyourko & Jing Wu

Will this pattern of price increases continue? Not surprisingly, the answer depends in part on supply and demand. At the conference, Gyourko presented estimates of the balance between housing supply and demand in the 35 cities. He concluded that in 20 percent of the cities—among them major ones such as Beijing, Hangzhou, Shanghai and Shenzhen—supply remains “below our projected demand.” (In Chart 2 such cities are shown in green.) In contrast, in 40 percent of the cities, including Xian, supply is “at least 30 percent above projected demand” (shown in red in the chart). The remaining 40 percent of cities are “modestly over-supplied,” said Gyourko. Last year, an [IMF working paper](#), which used different data sources and methods, also reached the conclusion that “the oversupply problem is nationwide” and “particularly pronounced in smaller cities.”

Housing demand and incomes

So does this mean house prices in Beijing, and other big cities where oversupply does not appear to be a problem, are likely to keep increasing? Not necessarily, according to conference participants Wei Xiong (CUHK and Princeton University) and Hanming Fang (University of Pennsylvania). They have used a comprehensive data set of mortgage loans from 2003 to 2013 from a major bank to study the financial soundness of Chinese homeowners.

[Fang](#) said that, on the positive side, the Chinese housing boom has been accompanied by strong growth in income and by high down payments on mortgage loans. For a decade, household disposable income has grown annually by 9 percent. Homeowners also put a down payment of over 30 percent on mortgage loans.

Nevertheless, there are reasons for concern. The house price-to-income ratio—a commonly-used measure of housing affordability—is very high for low-income home buyers. The ratio is around eight in smaller cities and greater than ten in the largest cities, according to Fang. At such high ratios, even small changes in the profile of income growth for these households could spell trouble for their ability to stay current on their mortgage.

Short-run risks

Indeed, how financial markets respond to the slowing of Chinese growth remains a major short-term risk to housing markets, according to Xiong. As China attempts to rebalance demand from investment and exports towards domestic consumption, its growth is expected to slow. In principle, the growth—though slower in the short-term—should be more sustainable over the longer run. Since mortgage loans are typically long-term, the rebalancing should not affect the overall assessment of homeowners' incomes.

Whether financial markets will react in this manner, however, remains to be seen. Xiong cautioned that at the very high house price-to-income ratios in some segments of the housing market in China, “markets, such as Beijing, despite their strong measured fundamentals, should be considered somewhat risky” if markets over-react to the short-run slowdown in incomes or the government fails to communicate clearly its policy actions. [Richard Koss](#) (Global Housing Watch Initiative) contrasted the experience of U.S. and Chinese housing markets. “In the United States, the expectations that house prices could never fall turned out to be the fatal flaw,” said Koss. “In China, the risks could lie in markets having irrational expectations of short-run income growth.”

Another source of risk is the links between the housing market and local government debts.

[Yongheng Deng](#) (National University of Singapore) noted that, unlike local governments in many advanced economies, local Chinese governments are prevented from directly issuing debt to fund mandated capital projects. Therefore, local governments sell public land to raise funding. In fact, future land sales revenue is committed to repay the local government's debt and land parcels are the most widely-used collateral for local government debt.

Wensheng Peng (CITIC) argued that a key issue for China's real estate market is the financial implications of the housing cycle. Because of its unique role as a funding source for local governments, local Chinese housing markets have become intertwined with fiscal policy. In dealing with the potential financing risks of local government debt, Peng said that tax reforms may be necessary, and debt restructuring, or debt swaps, are options. However, further attention may also need to be paid to the structural implications of the housing cycle, including the distribution effects between the financial and non-financial sectors, between the real estate and emerging sectors, between old and young generations, and between wealthy and poor households.

Longer-term prospects

Conference participants also discussed the longer-term prospects for the Chinese housing market. [Haizhou Huang](#) (CICC) said that an important question for Chinese policymakers was whether China should "follow the European or Japanese model of a few cities that have a large share of the population" or develop more megacities sprinkled throughout the country. Huang expressed a preference for the latter model so as to relieve the pressure on the provision of housing and other amenities in the big cities.

[Xiaobo Zhang](#) (Peking University) talked about the impact on China's housing market from social norms. The "one child" policy had created a sex ratio imbalance in China, leading to many males having difficulty finding women to marry. "One in ten males remains unmarried for this reason," said Zhang. In the rural areas that Zhang has been studying, the competition among males to secure a bride means that "a new – and bigger -- home is a necessary condition for marriage." The reversal of the "one child" policy could correct the imbalance over time and lead to a scaling back of such competition, he added.

Box 2: Housing Supply Constraints in Sweden

A new IMF [paper](#) by Giang Ho looks at the role of supply constraints in driving prices of Swedish owner-occupied housing based on an empirical analysis using municipal-level data.

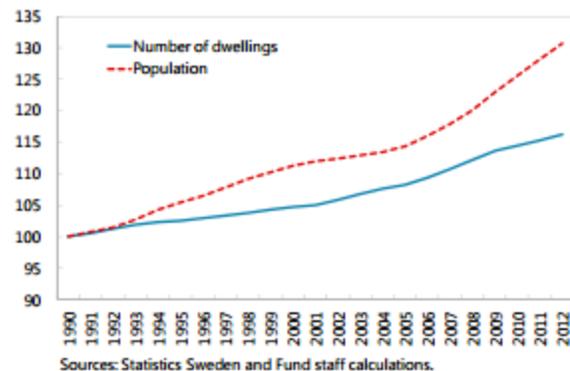
Introduction: House price booms in Sweden, as in many other countries, are a big city phenomenon. There is a large divergence between house prices in major urban areas such as Stockholm and Gothenburg and other parts of the country, suggesting that local factors play a large role in housing markets. Differences in housing supply conditions across cities contribute to such price divergences.

Main issues on the supply side of the housing market: Sweden is experiencing a growing housing shortage, especially in big cities. New construction has not kept pace with population growth, particularly in big cities; in all three major metropolitan areas, the increase in the number of finished residential properties was only one-fifth of the population increase (Housing Crisis Committee, 2014). Moreover, complex planning and zoning processes and inefficiencies in the construction sector explain the inadequate supply response. Also the shortage of rental properties puts further pressure on the owner-occupied market.

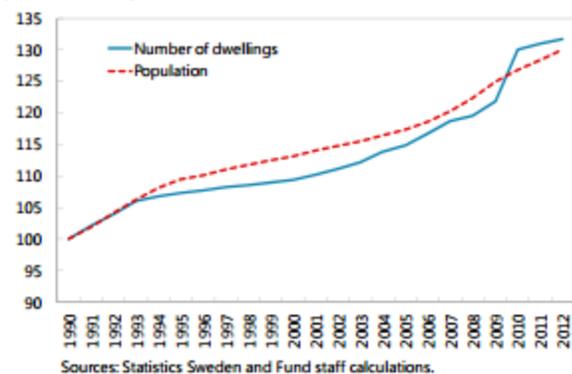
Impact of supply constraints on house prices: Subject to a reduction in the lending rate or an increase in disposable income, housing prices increase more strongly in cities with more severe supply constraints, as measured by higher population density, more intense land development, or lower supply elasticity. In other words, inelastic supply of housing contributes to magnifying the impact of shocks to housing demand.

Implications for Sweden's housing policy: The analysis illustrates the important role of housing supply flexibility in cushioning the impact of demand pressures. This is particularly relevant in the current favorable economic growth and low interest rate environment in Sweden, in order to contain risks of misaligned housing prices and a further build-up of the already elevated level of household debt. Easing housing supply bottlenecks could be

Stockholm: Housing Stock and Population
(Index, 1990 = 100)



Uppsala: Housing Stock and Population
(Index, 1990 = 100)

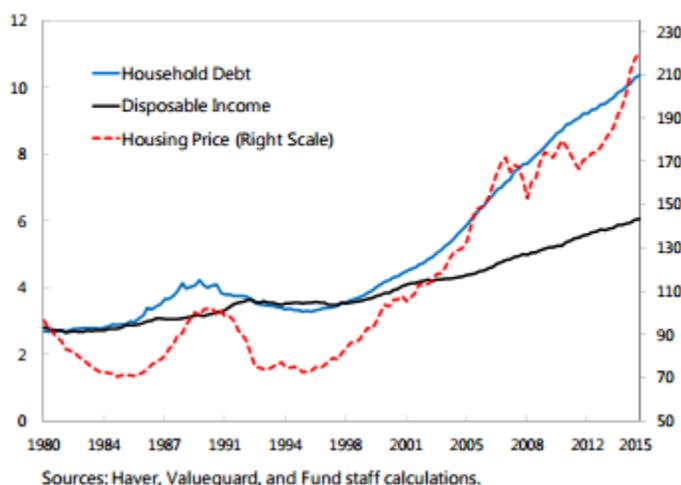


achieved not only through stimulating new construction but also by improving the efficiency of the utilization of the existing housing stock. Thus, policies to facilitate new residential construction need to go hand-in-hand with reform of the rental market; the problems are intertwined and so should be the solutions.

Box 3: Housing Price and Household Debt Interactions in Sweden

Sweden is experiencing double-digit housing price gains alongside rising household debt. A common interpretation is that mortgage lending boosted by expansionary monetary policy is driving up house prices. But theory suggests the value of housing collateral is also important for a household's capacity to borrow. A new [IMF working paper](#) by Rima A. Turk revisits linkages between the housing and household debt markets shedding light on the collateral channel. It explores the drivers of housing prices and household debt, investigates their short-run dynamics, and evaluates potential disequilibria in a low interest rate environment.

Real Housing Prices, Household Debt, and Disposable Income
(In SEK Billion; 1980=100)



Main findings: Using a three-equation model, Turk examines the interactions between housing prices and household debt and finds the following:

- Household borrowing impacts housing prices in the short-run, but the price of housing is the main driver of the secular trend in household debt over the long-run.
- Both housing prices and household debt are estimated to be moderately above their long-run equilibrium levels, but the adjustment toward equilibrium is not found to be rapid.
- Whereas low interest rates have contributed to the recent surge in housing prices, growth in incomes and financial assets play a larger role.

Implications for policy:

- Analysis of government plans to increase the housing stock suggest that their impact on housing prices would likely be small and gradual. Reaching the government's target implies a 1.3 percent addition to the housing stock, and it is estimated to reduce real housing prices by only 1.4 percent by 2020. Hence, the policy decision to alleviate housing supply constraints is not expected to produce a significant downside to housing prices.
- In Sweden, mortgage interest deductibility has been historically high. For mortgage interest costs up to 100,000 krona (in excess of capital income), borrowers can currently deduct 30 percent from their tax liability, with amounts over that deducted at a 21 percent rate. Tax deductibility currently costs about ½ percent of GDP annually and is likely to benefit richer households mostly. Reducing or phasing out mortgage interest deductibility would have a moderate effect on housing prices, in part reflecting low interest rates. The moderate effect is partly due to the current low level of interest rates, making this a good time to phase-out deductibility. Even at somewhat higher interest rates, the macroeconomic impact of phasing out deductibility would be manageable in the context of housing price trends due to rising income and net financial assets.