GLOBAL HOUSING WATCH

October 2014

GLOBAL HOUSING WATCH: QUARTERLY UPDATE (OCTOBER 2014)[1]

Developments in real estate markets have led to seemingly contradictory concerns about both overheating and slow recovery. This dichotomy reflects the fact that housing markets across the globe have broadly followed a two-speed pattern: in one group of countries, housing markets quickly rebounded after modest declines during the Great Recession, while in the other group, they are still recovering from much sharper declines.

Reflecting these divergent movements, the IMF's Global House Price Index—an average of real house prices in 50 countries—has barely budged during the past two years, after a sharp drop during the crisis (Figure 1, panel 1). The recovery in house prices has been particularly anemic relative to that in other financial assets; for example, global indices of stock markets have rebounded to precrisis levels, although stock prices have also been much more volatile than house prices (Figure 1, panel 2).

Figure 1. IMF Global House Price Index
(2008:Q4 = 100)

Sources: *Global Property Guide*; Haver Analytics; Organisation for Economic Co-operation and Development; and IMF staff calculations.

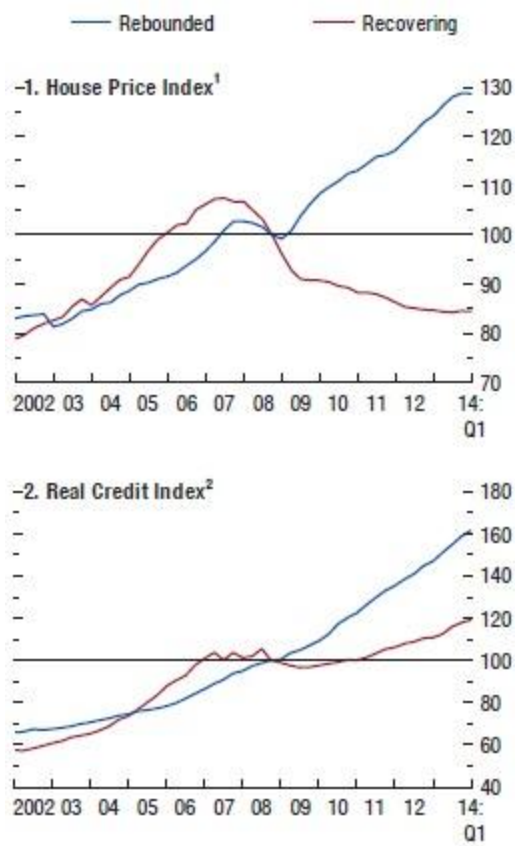
[1] The main authors of this update are Hites Ahir and Prakash Loungani, drawing on their ongoing work with Philippe Bracke (Bank of England), Ambrogio Cesa-Bianchi (Bank of England), and Alessandro Rebucci (Johns Hopkins University). We thank Deniz Igan and Heedon Kang for their assistance and the IMF Housing Market Group for their review of this document. This material also appears as Box 1.1 in the IMF's World Economic Outlook, October 2014.

However, the overall house price index masks the fact that economies fall into two clusters. The first cluster consists of 33 economies in which housing markets are still recovering: house prices in general dropped sharply at the onset of the Great Recession, and the subsequent recovery has been slow. The second cluster comprises 17 economies in which housing markets have rebounded: the drop in house prices in 2007–08 was more modest and was followed by a quick rebound (Figure 2, panel 1).[2] In the former group, real house prices are, on average, 20 percent lower than in 2008; in the latter group, they are about 25 percent higher. Credit has also expanded much more slowly in the former group than in the latter (Figure 2, panel 2).

In the economies in which house prices have rebounded, construction gross value added and real residential investment are both 15 percent higher than in 2008. In recovering economies, the two metrics began to show a small uptick only in the past year (Figure 3).

The placement of countries in the two groups has been influenced by a number of factors. The rebound economies, on average, had a smaller precrisis boom in house prices than did the recovering economies, and they were judged to have better prospects for a growth rebound when the crisis hit (see Box 1.2 of the October 2010 *World Economic Outlook*). Rebound economies have also turned out to have higher growth since the crisis: during the period 2008–13, the average annual growth in the rebound economies was 2.7 percent,

Figure 2. Two-Speed Recovery in Housing Markets
(2008:Q4 = 100)



Sources: Bank for International Settlements; *Global Property Guide;* Haver Analytics; Organisation for Economic Co-operation and Development; and IMF staff calculations.
[1]Rebounded = Australia, Austria, Brazil, Canada, China, Colombia, Germany, Hong Kong SAR, Israel, Luxembourg, Malaysia, New Zealand, Norway, Philippines, Singapore, Sweden, Switzerland. Recovering = Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Iceland, India, Indonesia, Ireland, Italy, Japan, Korea, Latvia, Lithuania, Malta, Mexico, Netherlands, Poland, Portugal, Russia, Slovak Republic, Slovenia, South Africa, Spain, Thailand, United Kingdom, United States.
[2]Rebounded = Australia, Brazil, China, Colombia, Hong Kong SAR, Malaysia, Philippines, Singapore, Switzerland. Recovering = Croatia, Iceland, India, Indonesia, Japan, Korea, Mexico, Russia, South Africa, Thailand, United Kingdom, United States.

[2] The determination of which group to place countries in is based on average real house price growth during the period 2007–14. Most countries clearly fall into one of the two groups, although a few are on the border. The results are not sensitive either to the placement of these countries or to their exclusion from the analysis. The results are also qualitatively similar if countries are weighted by GDP rather than weighted equally.

compared with 0.5 percent in the recovering economies. The slower growth in the recovering group may partly reflect the drag from household sector deleveraging: many economies in that group had a significant buildup in leverage during the boom period.

Cause for concern?

In countries where housing markets are still recovering, the policy challenge is to bring about a more robust recovery while addressing the underlying cause of the unsustainable booms that led to the crisis. For instance, in the United States, the resumption of mortgage lending to lower-rated borrowers has been slow, given the recognition that lending to such borrowers was one trigger for the crisis.[3]

Concerns about sustainability are greater in economies in which housing markets have rebounded, particularly for the emerging market economies in this group, for which growth prospects have been revised downward considerably in recent years. The most notable case is China, where the challenge is to allow for the necessary correction in real estate markets while preventing an excessively sharp slowdown. In large cities in China, house prices show signs of overvaluation relative to fundamentals, despite measures aimed at restricting speculative demand. In contrast, many smaller cities have experienced oversupply because local governments promoted large-scale development to boost growth and used land sales

Figure 3. Construction Gross Value Added and Residential Investment
(2008:Q4 = 100)

Sources: Haver Analytics; Organisation for Economic Co-operation and Development; and IMF staff calculations.
[1]Rebounded = Australia, Austria, Brazil, Canada, Colombia, Germany, Hong Kong SAR, Luxembourg, Malaysia, New Zealand, Norway, Philippines, Singapore, Sweden, Switzerland. Recovering = Belgium, Bulgaria, Croatia, Denmark, Estonia, Finland, France, Greece, Hungary, India, Indonesia, Ireland, Italy, Korea, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Russia, Slovak Republic, Slovenia, South Africa, Spain, Thailand, United Kingdom, United States.
[2]Rebounded = Australia, Austria, Canada, Germany, Israel, Luxembourg, New Zealand, Norway, Sweden. Recovering = Belgium, Czech Republic, Denmark, Estonia, Finland, France, Hungary, Ireland, Italy, Japan, Korea, Mexico, Netherlands, Portugal, Slovak Republic, Slovenia, Spain, United Kingdom, United States.

[3] The United Kingdom experienced a sharp decline in house prices during 2008–10, which is why it ends up being classified here in the recovering group. During the past year, U.K. house prices have risen substantially, particularly in the London market. The IMF's recent Selected Issues paper for the United Kingdom notes that "the increase in house prices in a context of weak credit growth suggests that cash transactions, in particular by foreigners, are playing an increasingly important role in the housing recovery" (IMF 2014d, 12). The report also points to tight housing supply constraints as another factor behind house price increases.

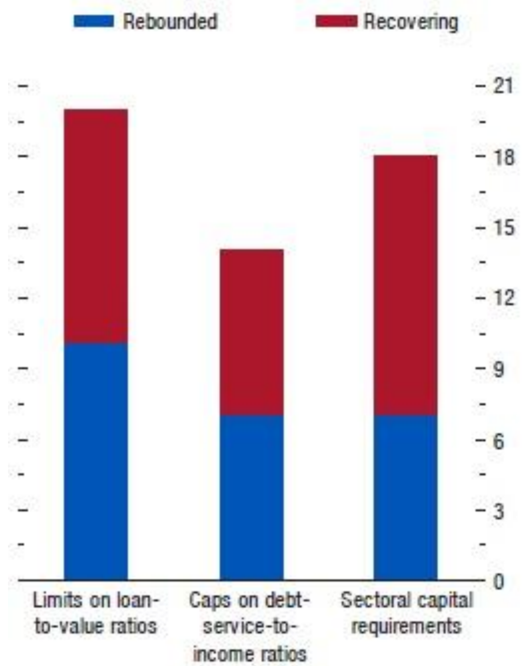
to finance local-government spending. In recent months, real estate markets in China appear to have entered a downturn. In Brazil, house prices and lending have increased sharply since 2009, and although the real-estate-loan-to-GDP ratio has tripled, it started from a very low base.

In other countries where housing markets have rebounded, IMF assessments point to modest overvaluations in Canada and Israel and more substantial overvaluations in Norway and Sweden (Table 1).[4] In many cases, the house price booms are restricted to particular cities (in Australia and Germany, for example) or are amplified by supply constraints (New Zealand for example).[5]

Active use of macroprudential tools

Many countries—particularly those in the rebound group—have been actively using macroprudential tools to manage house price booms (Figure 4). The main macroprudential tools employed for this purpose are limits on loan-to-value ratios and debt-service-to-income ratios and sectoral capital requirements.[6] Such limits have long been in use in some economies,

Figure 4. Use of Macroprudential Tools to Manage Housing Booms
(Number of countries adopting the tool)



Source: IMF staff calculations.
Note: Rebounded = Australia, Austria, Brazil, Canada, China, Colombia, Hong Kong SAR, Israel, Malaysia, New Zealand, Norway, Singapore, Sweden, Switzerland. Recovering = Bulgaria, Croatia, Estonia, Finland, Hungary, India, Indonesia, Ireland, Korea, Latvia, Mexico, Netherlands, Poland, Russia, Slovak Republic, Spain, Thailand, United Kingdom, United States.

[4] Table 1.1.1 also notes the dates on which these assessments were published. It is important to keep these in mind, because some adjustments in prices may have taken place since these dates. The assessments are based on different methods but broadly relate developments in house prices to a set of fundamentals such as GDP growth, interest rates, and rents. (See Igan and Loungani 2012 for typical results from regressions of house prices on fundamentals.)

[5] In the United Arab Emirates, rapid increases in some segments of the real estate market have prompted concerns about possible excessive risk taking. The IMF staff has advised that additional measures—such as macroprudential tightening and setting higher fees for reselling within a short time—are warranted, especially if real estate prices and lending continue to rise (IMF 2014c).

[6] Limits on loan-to-value ratios cap the size of a mortgage loan relative to the value of the property associated with the loan, in essence imposing a minimum down payment. Limits on debt-service-to-income ratios restrict the size of a debt service payment to a fixed share of household income, containing unaffordable increases in household debt. Sectoral capital requirements force lenders to hold extra capital against loans to a specific sector, such as real estate, discouraging heavy exposures to the sector. See IMF 2013 for a fuller discussion of the role of macroprudential policies as part of the tool kit for managing house price booms.

particularly in Asia (see Chapter 4 of the April 2014 *Regional Economic Outlook: Asia and Pacific*). For example, Hong Kong SAR has had a loan-to-value cap in place since the early 1990s and introduced a debt-service-to-income cap in 1994. In Korea, loan-to-value limits were introduced in 2002, followed by debt-service-to-income limits in 2005. Recently, many other advanced and emerging market economies have followed the example of Hong Kong SAR and Korea. In some countries, such as Bulgaria, Malaysia, and Switzerland, higher risk weights or additional capital requirements have been imposed on mortgage loans with high loan-to-value ratios.[7] Empirical studies thus far suggest that limits on loan-to-value and debt-service-to-income ratios have effectively cooled off both house price and credit growth in the short term.[8]

Implementation of these tools has costs as well as benefits, so each needs to be designed carefully to target risky segments of mortgage loans and minimize unintended side effects. For instance, stricter loan-to-value limits can be applied to differentiate speculators with multiple mortgage loans from first-time home buyers (as in, for example, Israel and Singapore) or to target regions or cities with exuberant house price appreciation (as in, for example, Korea). Regulators also should monitor whether credit operations move toward unregulated or loosely regulated entities and should expand the regulatory perimeter to address the leakages if necessary. For example, when sectoral macroprudential instruments are used to limit mortgage loans from domestic banks, they can be circumvented through a move to nonbanks (as in, for example, Korea) or foreign banks or branches (as in, for example, Bulgaria and Serbia).

Macroprudential tools may also not be effective for targeting house price booms that are driven by increased demand from foreign cash inflows that bypass domestic credit intermediation. In such cases, other tools are needed. For instance, stamp duties have been imposed to cool down rising house prices in Hong Kong SAR and Singapore. Evidence shows that this measure has reduced house demand from foreigners, who were outside the loan-to-value and debt-service-to-income regulatory perimeters.[9] In other instances, high house prices could reflect supply bottlenecks, which would need to be addressed through structural policies such as urban planning measures.

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[7] In Norway, higher risk weights have been assigned to all mortgage loans from banks using the Basel 2 internal ratings-based (IRB) approach to capital requirements, not just those with high loan-to-value ratios.

[8] See, for example, Zhang and Zoli 2014 on the evidence for Asian countries and also Claessens, Ghosh, and Mihet 2014 and Lim and others 2011.

[9] Higher transaction taxes may not be the desired policy response in all cases. Taxes based on property values may be less distortionary. Moreover, financial stability risks may be lower if houses are bought with cash rather than credit, taking away some of the need for a policy response. See Crowe and others 2011 for a discussion of the effectiveness of various policies to manage real estate booms, including the difficulties of calibrating many of the macroprudential tools (for example, because of circumvention) and political economy considerations.

Table 1. IMF Assessments of Housing Market Developments in Rebound Economies

Country (date of assessment)	Assessment
Australia (February 2014)	The rise in prices is concentrated in Sydney, Melbourne, and Perth. It has not been accompanied by an overall increase in leverage. Credit growth is moderate, and many households continue to pay down debt.
Austria (September 2013)	The housing market has experienced strong price growth, but from low levels. From a medium-term perspective, the real price increase appears modest: a cumulative 40 percent over 10 years in Vienna and about 5 percent elsewhere.
Brazil (October 2013)	Since the global financial crisis, Brazil has experienced a rapid expansion in real estate loans and housing prices. During 2009–12, the real-estate-loan-to-GDP ratio increased to 6.9 percent from 2.3 percent.
Canada (February 2014)	House prices are high relative to both income and rents. The IMF staff estimates that real average house prices in Canada are about 10 percent higher than fundamental values, with most of the gap coming from the markets in Ontario and Quebec.
China (July 2014)	In large cities in China, house prices show signs of overvaluation relative to fundamentals, despite measures aimed at restricting speculative demand. In contrast, many smaller cities have experienced oversupply because local governments have promoted large-scale development to boost growth and used land sales to finance local-government spending.
Colombia (June 2014)	Real house prices have nearly doubled during the past decade, driven mainly by prices in the capital and two other cities.
Germany (July 2014)	Recent house price inflation has been stronger in cities such as Hamburg and Munich. Bundesbank analysis suggests that prices in Germany as a whole are close to fundamental values, but apartment prices in large cities may be overvalued by about 25 percent.
Hong Kong SAR (May 2014)	Property prices have increased some 300 percent from their trough in 2003. Although prices have leveled off more recently, estimates from IMF staff models indicate that they could be higher than suggested by fundamentals.
Israel (February 2014)	Property prices are currently about 25 percent higher than their equilibrium value, owing largely to low mortgage interest rates and supply shortages. Price-to-income and price-to-rent ratios are also well above their equilibrium values.
Luxembourg (May 2014)	Relatively high prices reflect both upward pressure from strong demand and supply bottlenecks. Although households' financial positions appear relatively sound, rising real estate exposures in domestically oriented banks warrant close monitoring.
Malaysia (March 2014)	House prices have increased rapidly, outpacing income and rental growth. Strong demand for residential property loans has been driven by a robust labor market and falling lending rates. However, underwriting standards do not appear to have deteriorated.
New Zealand (June 2014)	From historical and international comparisons and by some measures of affordability, house prices appear elevated, in part reflecting limited housing stock caused by low housing investment and geographical constraints preventing a rapid housing supply response.
Norway (August 2014)	Various factors have been contributing to rising house prices, including high income and wage growth, immigrant inflows, and supply constraints. Nevertheless, there are signs of overvaluation with a sustained increase in the price to income ratio and a large deviation in the price-to-rent ratio from its historical average.
Philippines (August 2014)	House price increases have been modest compared with those in many other countries in Asia. The price-to-rent ratio has declined modestly since 2010 and does not signal price misalignment.
Singapore (November 2013)	After having risen more than 50 percent from their mid-2009 trough, house prices stabilized, and have recently started to fall, on intensive application of macroprudential policies. Indicators on the quantity side also indicate a softening of the market.

Sweden (June 2014)	Real house prices increased by about 50 percent between 2005 and May 2014, with the annual increase averaging about 7 percent since 2012. Standard indicators suggest house prices are 20 percent higher than those suggested by fundamentals.
Switzerland (May 2014)	With monetary conditions remaining accommodative and housing prices growing faster than incomes, measures to curb mortgage demand, especially from the more vulnerable households, need to be strengthened.

Source: IMF staff compilation.
Note: Rows shaded in blue indicate economies in which assessments have been made since the April 2014 *World Economic Outlook*.

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