DWELLING ON CHINA'S HOUSING RISKS

HIGHLIGHTS

- China's housing market generates a remarkable 19% of the country's economic output, and has been the subject of bubble worries.
- It merits close examination given stress testing that shows even a moderate housing correction would halt the country's economic progress.
- The near-term outlook is fairly benign, with the pace of home building arguably running slightly below steady-state demand.
- Medium-term risks are quite negative, revolving around the fact that 29% of China's housing stock is vacant.
- In contrast, long-term risks are more positive given what appears to be an inadequate number of homes relative to the number of urban households.
- Affordability is atrocious on the surface, but much more nuanced beneath it.
- Our broad conclusion is that Chinese housing is worthy of some concern, but less than we had initially feared.

Worthy of some concern, but less than initially feared

China now commands the world's attention, having transformed itself into an economic superpower after decades of remarkable growth. Recently, interest in China has ratcheted higher because of the country's decelerating growth and skittish financial markets. Despite this new attention, it is still a difficult country to properly evaluate, shrouded as it is in a mist of economic transformation, myriad risks and outright uncertainty.

In this *Economic Compass*, the first of a series that will address key Chinese macroeconomic issues, we focus on the sustainability of China's precarious-looking housing market. In it, we estimate the importance of China's housing market to the broader economy, evaluate whether home construction is outpacing demand and construct several scenarios to evaluate the vulnerability of China's housing market, among other analysis.

Getting to the truth on these matters is not an easy task, nor one that we can claim to have achieved with laser-like precision. The effort demands more guesswork, extrapolation and reliance on third-party estimates than would be ideal.

In the end, we emerge with a healthy respect for the importance of China's housing market and a number of worrying factors to monitor. Ultimately, however, our impression is that China's housing market is not as riddled with problems as we had expected (Exhibit 1).

Exhibit 1: Chinese housing scorecard

Housing issue	Worrying?	Weight
Centrality of housing contribution to GDP	Yes	10%
Pace of home construction vs. steady-state demand	No	15%
Short-term outlook (housing momentum)	No	5%
Medium-term scenario (high housing vacancies)	Yes	15%
Long-term scenario (too few homes vs. households)	No	15%
Housing affordability	Somewhat	15%
High and rising household debt	Somewhat	5%
Sustainability of artificial inducements to buy Chinese housing	Somewhat	10%
Linkage between housing and other China debt issues	Somewhat	10%
OVERALL	**Somewhat**	

Source: RBC GAM

The importance of Chinese housing

Residential construction is the single largest constituent of the housing market, representing 10.6% of China's overall economic output (Exhibit 2). But after 13 years of relentless growth, this contribution has begun to ebb.

Many activities are indelibly linked to the housing market. These include services provided by real estate agents, mortgage lenders and lawyers, as well as "related industries," such as cement and steel production, and the furniture and appliances sectors. These other activities loosely contribute another 7% of GDP. The housing wealth effect – additional consumer spending motivated by rising real estate wealth – provides another 1.3% of economic activity.

Together, these three factors provide a robust net housing market contribution of 19% of China's GDP.

Stress testing Chinese housing

If China's housing market faltered, would it trigger an economic collapse or merely turbulence?

The answer is not as simple as assuming that each 10% hit to Chinese housing subtracts 10% of the sector's GDP share. There are two complications.

First, the housing market "hit" needs to be better defined. We therefore undertook two stress tests:

- A 10% stress test that imagines residential investment and home prices both fall by 10% over the next year.
- A 20% stress test that assumes a 20% decline in both residential investment and home prices.

Second, and counterintuitively, the response of each housing input needs to be considered separately. To illustrate, the 10% stress test subtracts 16.25% from residential investment relative to the status quo, removing 1.8 percentage points from the next year's GDP growth rate.

In contrast, the "related industries" component would be unlikely to shrink to the same extent because of its more stable nature. We thus assume the GDP hit would be only 0.8% of GDP.

Finally, the housing wealth effect would transform from positive to negative. In the 10% stress test, that constitutes a huge 2.6-percentage-point reduction in the growth of economic demand.

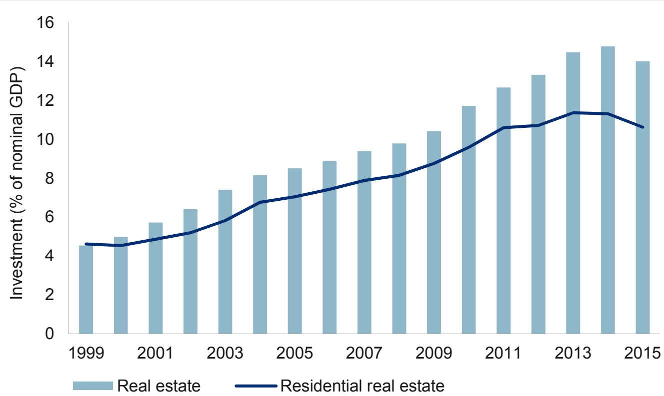
Combining these three drivers, the 10% stress test subtracts 5.2 percentage points from next year's GDP growth rate, whereas the 20% stress test subtracts 7.8 percentage points. Both thus constitute serious economic shocks, with the more aggressive scenario pushing the Chinese economy into outright decline (Exhibit 3).

The near-term housing outlook

The near-term housing outlook is based primarily on our assessment of momentum.

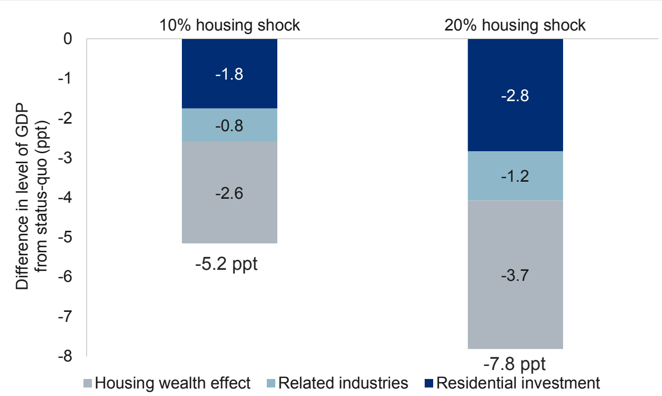
After considering the interconnected links of China's housing market supply chain, a generally tame picture reveals itself (Exhibit 4). Home prices, meanwhile, are rising at a robust but not extreme – by Chinese standards – rate of 9% per year, and on a slightly decelerating trajectory.

Exhibit 2: Chinese real estate investment has grown significantly



Source: Haver Analytics, RBC GAM

Exhibit 3: Stress testing Chinese housing



Note: Impact on level of Chinese GDP of a 10% and 20% decline in housing activities and home prices versus our status-quo scenario. Source: RBC GAM

These findings constitute mixed news. In the short term, a tame and slowing housing market promises less economic support. More importantly, the housing market is not obviously overheating or set for near-term trouble.

Too many homes?

Our medium- and long-run outlooks are grounded in the fundamental issue of whether China has too many homes relative to its needs.

International comparisons make for a concerning starting point. China is more dependent on residential investment than any of the major nations we examined.

Fortunately, three other factors justify at least part of China's construction boom:

- Private home ownership in China is still a recent phenomenon and after generations of prior underinvestment, there is a great deal of catch-up activity.
- China has become rapidly wealthier, creating the financial capacity for a significant amount of home upgrading.
- Urbanization remains a powerful force in China, rising at around 3% per year, a key driver of demand for builders.

These mitigating factors do not completely eliminate our concern that China is overinvesting in real estate, but they do help to temper it.

Sorting out Chinese housing supply/demand

We estimate China is completing 6.7 million new urban housing units per year. However, when this seemingly heady pace is adjusted for China's gargantuan population, China is producing around 30% more homes per person than the U.S., and slightly less than Canada.

Of course, the most important determinant is whether China is producing too many new homes relative to its steady-state demand. Surprisingly, we figure China actually needs around 9.0 million new urban housing units per year. If anything, the country is underbuilding (Exhibit 5).

While reassuring, this is hardly the end of the debate. Aligning the flow of housing supply and demand is one thing, but it does not eliminate the possibility of a persistent mismatch in the underlying level of housing supply and demand. Let us look at each in turn.

Bad news: housing inventories

Perhaps the single greatest threat in the Chinese housing system is the sheer number of unoccupied properties. At 75 million units, or 29% of the 2015 urban housing stock, the number is striking, and continues to rise.

This inventory glut could suddenly become a problem if property speculators were to flee or warm to other forms of investment, or if builders respond by curtailing construction.

China's high housing vacancy rate constitutes a key risk.

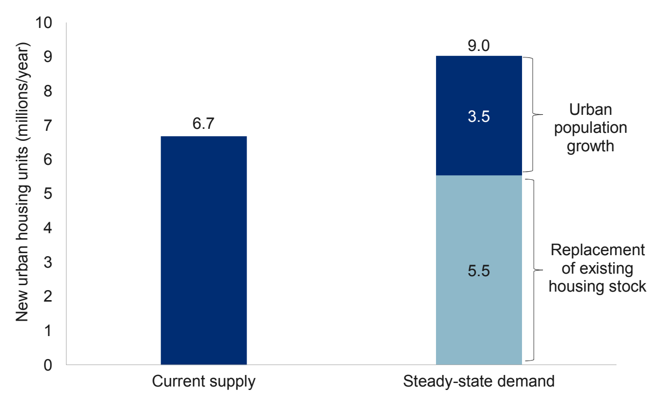
However, we see this as a mid-sized threat, rather than a large one. These elevated vacancies have endured for many years. Importantly, almost 70% of unoccupied homes are the most benign form of vacancy: purchased homes left vacant by their owners. Something would have to abruptly change the value proposition for those investors to upset the applecart.

Exhibit 4: Chinese housing activity appears tame

	Versus sustainable demand	Momentum
A) Land acquisition	Slightly below	Slowing
B) New construction	Slightly above	Slowing
C) Completed homes	Below	Slowing
D) Home sales	Below	Steady
Overall	**Slightly below**	**Slowing**

Note: Land acquisition is for all forms of construction, not just residential. Home sales is for both new and existing units. Momentum colour coding is based on whether momentum is taking activity toward sustainable demand or away from it. Source: Haver Analytics, RBC GAM

Exhibit 5: China is not overbuilding relative to steady-state demand



Note: RBC GAM estimate of urban housing supply and demand in China. Source: Haver Analytics, RBC GAM

Good news: underserved households

Optimists, however, will note that China's cities have far fewer occupied homes (181 million) than there are households (269 million). This housing mismatch is probably not sustainable indefinitely.

As China grows wealthier, the incidence of multiple families per dwelling and the phenomenon of dormitory living by many manufacturing employees should fade.

Accordingly, our long-term scenario presumes that China's housing vacancy rate shrinks to a more normal level and also that more urban households secure their own dwelling over the next decade. This turns out to almost perfectly offset the hit from housing vacancies: residential construction needs to come in at just under 9 million units per year for a decade to achieve this – higher than the current rate of 6.7 million.

Summarizing China's housing supply and demand

These medium- and long-term scenarios can best be thought of as pessimistic and optimistic possibilities for China's housing outlook, not as base-case forecasts. In the near term, the fact that new residential construction is moderately underpacing steady-state housing demand suggests no great problems are imminent.

Are Chinese home prices too high?

Chinese home prices are unquestionably high, but it is necessary to chip away at the veneer of the subject for a proper assessment.

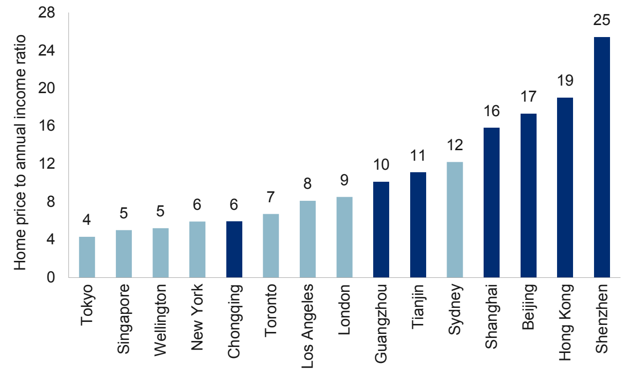
The standard – and indisputably most exciting – approach to China's housing affordability examines the home price-to-income ratios for the country's largest cities. These are off the charts relative to other countries (Exhibit 6).

Similarly, Chinese household debt has increased significantly over the past decade, and is now 13% higher than the U.S. as a share of income.

The toxic combination of poor affordability, high household leverage, and significant speculation points toward the undeniable possibility of a Chinese housing bubble. But several additional considerations dial back our affordability worries somewhat.

First, some cities have exceedingly high home price-to-income ratios, but the national average is a much lower, though hardly low, 8.6 times income.

Exhibit 6: Chinese home price-to-income tops charts



Note: Dec 2015 data for Chinese cities, Q3 2015 data for all others.
Source: Economist Intelligence Unit, Demographia International Housing Affordability Survey, RBC GAM

Second and crucially, Chinese households allocate a smaller share of their budget to dwelling costs than American households. Our own Chinese affordability index estimates that affordability has improved in recent years rather than deteriorated.

Third, Chinese households are renowned for saving nearly 40% of their after-tax income, enabling them to make hefty home down payments, and even to purchase properties with cash. Consequently, the carrying cost of a home is much cheaper than in other countries.

Fourth, Chinese household incomes continue to rise, and can sustain higher initial debt-to-income ratios.

We believe that Chinese property is more expensive than it should be, but the affordability story is nuanced and not as bad as it first looks.

Why is housing so popular in China?

China's housing market is resilient in the face of several challenges because of several allures:

- the government maintains significant control over Chinese capital flows, meaning that the bulk of China's wealth must be invested domestically,
- Chinese savers remain distrustful of and underwhelmed by other investment options,
- houses are cheap to hold in China, as property taxes are a rarity in China,
- the Chinese government has repeatedly backstopped the housing market whenever it begins to sputter and tightened the market when it begins to overheat.

A possible reversal

China's property market risks losing some of the special support that has contributed to its great popularity for a variety of reasons:

- China has made halting progress in reducing the capital controls bracketing the country, and aspires to more over the medium term. This stands to increase the universe of international investment alternatives.
- Chinese investors will eventually become more familiar with other forms of investment.
- The carrying cost of houses may become more expensive as the government looks at imposing property taxes and other measures to combat speculation.
- The government is increasingly cognizant of the cost of supporting the economy and the housing market, as evidenced by recent regulatory tweaks that have begun to tend toward tighter housing policies.

There are also fears that China's smaller cities could be on less stable ground given their smaller pool of luxury buyers and less interest among Chinese migrants in moving to these cities.

The bottom line

Our broad conclusion is that Chinese housing is worthy of some concern, but less than we had initially feared.

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