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Special Commentary

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# Is Real Estate the Achilles' Heel of China?

## Executive Summary

The debt-to-GDP ratio in China has increased significantly over the past five years, and it appears that much of the increased leverage has occurred in the real estate sector. With property prices starting to move lower, some analysts worry that a debt-inspired collapse of the Chinese economy is at hand. A financial collapse in the world's second largest economy, should one occur, clearly would have negative implications for the rest of the world.

In our view, a collapse of the Chinese economy that begins in the real estate sector is not imminent. The Chinese real estate sector draws its financing from many different sources, including equity and down payments from end users, and the Chinese banking system does not appear to be overly exposed to real estate. Moreover, property prices would need to drop much further before the real estate sector was technically insolvent.

That said, the American experience of the past decade shows that the implosion of a house price bubble does not necessarily happen overnight, and the ultimate financial crisis may not occur until a few years after property prices begin to decline. Although we do not lose sleep at the present time worrying about a financial crisis in China, property price developments in that country certainly are on our radar screens. Stay tuned.

## Debt Build-Up in China Largely Concentrated in Business Sector

In a report we wrote about a year ago, we analyzed the debt build-up that has occurred in China since 2008. Some analysts have become concerned about the sharp rise in Chinese house prices over the past few years, so in an August 2014 report we discussed some possible implications of a potential house price collapse in China, not only for the Chinese economy but more broadly for the overall global economy.[1] In this report we extend our analysis of Chinese issues by highlighting specific sectors within the Chinese economy that may have the most risk of a debt-fueled crash.

***Chinese households do not appear to be overly leveraged.***

Figure 1 aggregates two charts that we used in our September 2013 report. The chart shows that the debt-to-GDP ratio for the Chinese household sector has doubled over the past five years. This run-up in consumer leverage since 2008 has been fueled by the doubling in the amount of consumer auto loans, by the trebling in residential mortgages and by the 11-fold increase in credit card debt outstanding. That said, these large percentage increases start from low bases in 2008. At only 35 percent at present, the household debt-to-GDP ratio in China is well below the comparable ratio in the United States. In our view, Chinese households are not overly leveraged at this point.

Similarly, we would not characterize the Chinese government as being overly leveraged either. The outstanding debt of the central government in Beijing is essentially miniscule at only 15 percent of GDP. If we include debt of the provincial and local governments, which stood at roughly 30 percent of GDP in June 2013, the total indebtedness of Chinese authorities would be

[1] **See "*Does China Have a Debt Problem?*" (September 20, 2013) and "*Implications of a House Price Collapse in China*" (August 28, 2014). Both reports are available upon request.**

***The debt of the central government in Beijing is very low.***

approximately 45 percent of GDP, which is entirely manageable.[2] The American ratio at present is nearly twice as high as the Chinese ratio, with the marketable debt of the U.S. federal government equivalent to about 70 percent of GDP and the debt of the state and local governments adding another 17 percentage points of GDP.

***Debt in the non-financial business sector has ballooned.***

Figure 1 reinforces the conclusion from our September 2013 report: "If there is a leverage problem in the Chinese economy at present, it would be concentrated in the non-financial business sector." Indeed, the debt-to-GDP ratio in that sector has ballooned to nearly 150 percent in 2013 from roughly 100 percent in 2008. The comparable ratio in the United States remained constant at approximately 80 percent between 2008 and 2013.

Because there does not appear to be a leverage problem at present in the Chinese household and government sectors, we will focus on the non-financial business sector in the remainder of our analysis. Before proceeding further, however, we should note some limitations of the following analysis. Detailed data on credit to different industries within the Chinese non-financial business sector are not readily available. Consequently, we were forced to use data on overall liabilities, rather than the narrower concept of credit, to measure leverage. Furthermore, data on liabilities were not available for all sectors. Therefore, readers should view the following analysis as more impressionistic of trends in leverage in the Chinese business sector rather than definitive.

**Figure 1**

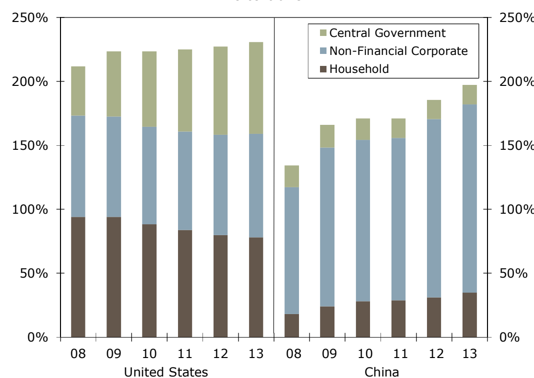
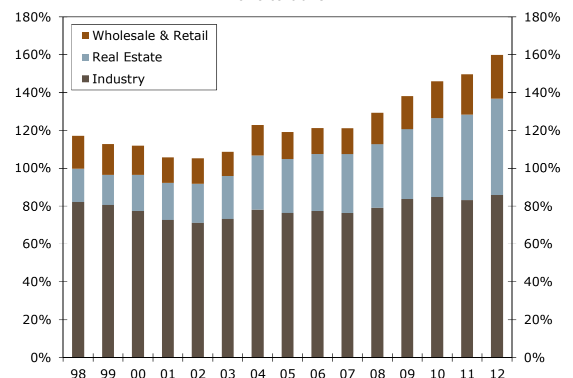



**Figure 2**




**Source: CEIC, Bank for International Settlements, IHS Global Insight and Wells Fargo Securities, LLC**

## Real Estate Sector is the Main Culprit

So where exactly in the non-financial business sector has the build-up in leverage occurred over the past few years? Figure 2 shows the liabilities of some major sectors within the non-financial business sector when measured as a percent of overall GDP. One takeaway from the chart is that the industrial sector accounts for the largest amount of non-financial business liabilities when viewed from the perspective of individual sectors. In addition, the absolute amount of liabilities in the industrial sector doubled in only 5 years (i.e., from 2008 to 2013), although this growth in liabilities is not readily apparent in the graph.

That said, we are not overly alarmed about the amount of debt in the industrial sector. For starters, the industrial sector is the largest individual sector within the Chinese economy, accounting for nearly 40 percent of the economy's value added. Therefore, its large liabilities-to-GDP ratio relative to other sectors should not be surprising. Second, growth in nominal GDP in China essentially kept pace with growth in liabilities, so the liabilities-to-GDP ratio of this sector only edged up from 79 percent to 86 percent during that period. Interest expense in the overall sector was equivalent to only 1 percent of revenues in 2013, which was unchanged from 2008, and the 10.7 percent profit growth that the sector achieved in 2013 suggests that most enterprises

[2] **We do not include state and local government debt in Figure 1, because we do not have a time series going back to 2008 for China.**

within the sector remain profitable. The rise in the liabilities-to-GDP ratio for the wholesale and retail sector was in line with the modest increase in the ratio that was registered in the industrial sector.

***Liabilities in the real estate sector have shot up significantly in recent years.***

However, the liabilities-to-debt ratio for the real estate sector shot up from about 30 percent in 2008 to more than 50 percent in 2012, and it likely climbed further last year (data for the real estate sector for 2013 have not been released yet). Adding the liabilities of the construction sector to Figure 2 would lift the liabilities-to-GDP ratio of the overall non-financial business sector by an additional 14 percentage points in 2013, although that ratio edged up by only 1 percentage point between 2011 and 2013.[3] Therefore, any analysis regarding the rising leverage of the non-financial business sector in China really needs to begin with the real estate sector.

Figure 3 shows that the trebling of the absolute amount of liabilities in the real estate sector between 2007 and 2012 (latest available data) went hand in hand with a nearly similar increase in the value of that sector's assets. Because nominal GDP in China "only" doubled between 2007 and 2012, the liabilities-to-GDP ratio of the sector—conversely the assets-to-GDP ratio—rose during that period. Not only did the building boom of the past few years significantly increase the stock of residential and commercial properties, but the significant rise in real estate prices that occurred over that period also helped to push up the value of assets and, with it, the value of the sector's capital.[4]

***A 25 percent drop in property prices would wipe out the capital of the real estate sector.***

However, liabilities in the real estate sector grew a bit faster than the value of assets, causing the capital-to-asset ratio to edge down from 28 percent in 2008 to 25 percent in 2012. Given the recent decline in property prices, which we discuss in more detail below, the capital-to-asset ratio of the real estate sector likely has receded a bit further since 2012. In other words, a 25 percent decline in Chinese property prices would wipe out the capital of the real estate sector. We are not forecasting a 25 percent drop in Chinese property prices, but a decline of that order does not seem to be totally inconceivable to us either.

**Figure 3**

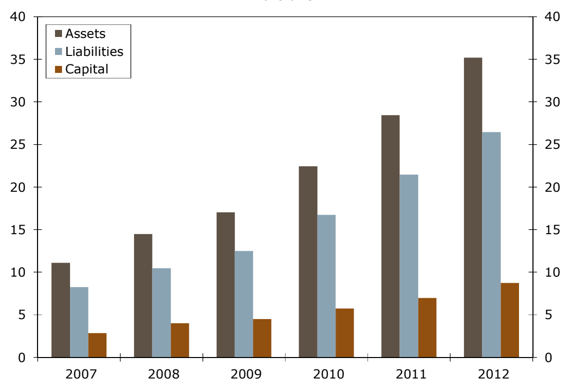
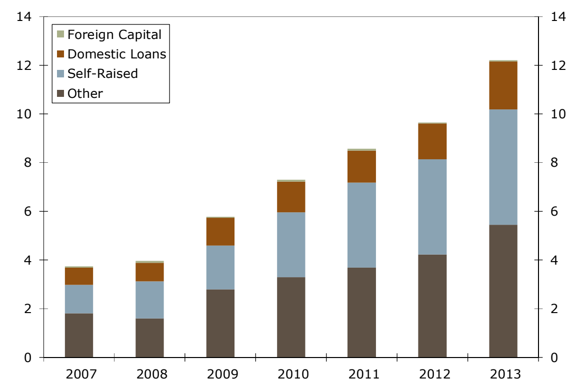



**Figure 4**




**Source: CEIC and Wells Fargo Securities, LLC**

## Who Would Be Hurt by a Real Estate Bust?

Which parts of the Chinese financial sector would be most exposed to a wave of bankruptcies in the real estate sector? Would a real estate bust lead to a generalized financial crisis in China? Unfortunately, a detailed breakdown of the real estate sector's liabilities is not available. However,

**[3] The real estate sector includes property developers and managers while the construction sector is limited to the firms that do the actual construction. We do not include the ratio for the construction sector in Figure 2 because data on the liabilities of that sector only begin in 2011.**
**[4] Adding capital to liabilities in any given year in Figure 3 would equal the value of assets in that year, as dictated by the accounting identity.**

data on the flow of new funding to the sector offers some clues on the identity of the real estate sector's creditors.

Figure 4 shows that domestic loans accounted for only CNY 2 trillion of the CNY 12 trillion of new funding for the real estate sector in 2013. Nearly 40 percent of the sector's new funding in 2013 came from "self-raised" sources, which would include equity financing but it also could include lending from the so-called "shadow banking" sector that is beyond traditional banking channels. Finally, more than 40 percent of the new funding came from "other" sources. Drilling down further shows that "deposits and advanced payments" (e.g., down payments on properties) account for the majority of this category.

***The Chinese banking system does not appear to be overly exposed to real estate.***

In sum, the Chinese real estate sector appears to raise funds from different sources. Some of the new financing may come via equity and some may come via down payments by the users of the real estate investment. New lending via traditional banking sources clearly plays a role in financing property development, but it does not appear to be an outsized role. This low reliance of the real estate sector on domestic loans as a source of new funding accords with the finding, which we discussed in our August 2014 report on the potential implications of a property price collapse in China, that the Chinese banking system does not appear to be overly exposed to real estate.

## Are Cracks Beginning to Appear in the Real Estate Sector?

As we also wrote in our August 2014 report "we are under no illusion that a major property market downturn would be an insignificant event for the Chinese economy." A property bust would cause the Chinese economy to slow sharply, if not go into reverse. The rest of the world would not remain unscathed either, although as we also wrote in our August report "the effects on the global economy of a property market downturn in China probably would not be as cataclysmic as the U.S. housing market bust a few years ago." Are there any signs that the Chinese real estate sector is about to become unglued?

As shown in Figure 5, return on equity in the Chinese real estate sector, which we measure as the sector's operating profits as a percent of shareholder equity, peaked in 2010 before trending lower in 2011 and 2012 (latest available data). And it appears that the sector's profitability has been eroded further as prices of newly constructed housing, which would be a better proxy than existing home prices for sales revenue of real estate developers, has trended lower over the past few months (Figure 6).[5]

***The real estate sector does not appear to be in imminent danger of bankruptcy.***

As noted above, however, it would take a decline in property prices on the order of roughly 25 percent to wipe out the equity in the Chinese real estate sector. Although property prices are beginning to move lower, the price declines that have been registered to date do not yet come close to that threshold. Therefore, the real estate sector does not appear to be in danger of bankruptcy, at least not in the near term. Moreover, the rally in the Chinese stock market in recent weeks is not consistent with an imminent collapse of economic activity in China.[6]

That said, we will be watching property developments in China closely. The Case-Shiller index of U.S. house prices peaked in July 2006, a year before credit markets in the United States started to freeze and more than two years before the financial collapse of autumn 2008. Just because China has not experienced a financial crisis to date due to falling property prices does not necessarily mean that it won't at some point over the next year or two. Further declines in property prices would obviously raise the probability that the Chinese real estate sector and, more broadly, the Chinese economy, begins to experience financial difficulties. Stay tuned.

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**[5] We constructed the national index that is shown in Figure 6 by calculating the arithmetic average of the individual indices of the 70 largest cities in China. Ideally, we would like to calculate a weighted-average index, but population data for these 70 cities are not readily available.**

**[6] The Shanghai Composite index is up about 13 percent since mid-July, rising to its highest level in more than a year. The Shenzhen Composite Index is up about 17 percent over the same period, reaching its highest level since early 2011.**

**Figure 5**

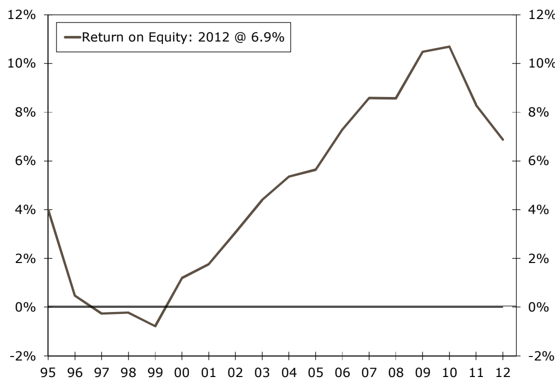
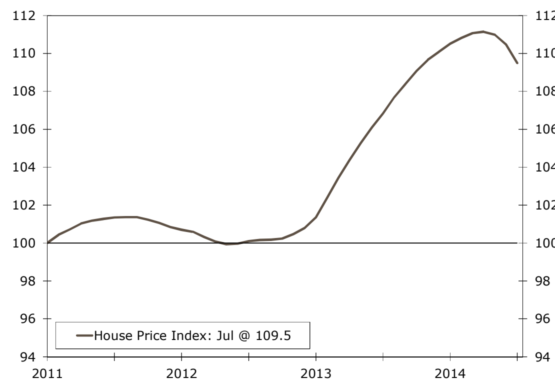



**Figure 6**




**Source: CEIC and Wells Fargo Securities, LLC**

## Conclusion

The debt-to-GDP ratio of the non-financial sector in China shot up from roughly 150 percent in 2008 to more than 200 percent in 2013. This build-up in leverage has largely occurred in the non-financial business sector, especially in the real estate sector where the liabilities-to-GDP ratio has risen by about 20 percentage points over that period. Although property prices have declined modestly in recent months, a debt-inspired collapse in the Chinese economy that starts in the real estate sector does not appear to be imminent. The sector draws its funding from many different sources, and the banking system, which has been the main supplier of credit to the Chinese economy, does not appear to be overly exposed to real estate. Moreover, property prices would need to drop much further before the real estate sector was technically insolvent.

That said, the American experience of the past decade shows that the implosion of a house price bubble does not necessarily happen overnight, and the ultimate financial crisis may not occur until a few years after property prices begin to decline. Although we do not lose sleep at the present time worrying about a financial crisis in China, property price developments in that country certainly are on our radar screens. Readers should expect to receive more reports from us about this subject in the months ahead as this story continues to play out.

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