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Chinese Housing and Commodity Demand: Healthy Growth Despite Private Dip[1]

Commodities Research

Research Analysts

Ric Deverell
+44 20 7883 2523
ric.deverell@credit-suisse.com

Andrew Shaw
+65 6212 4244
andrew.shaw@credit-suisse.com

Ivan Szpakowski
+ 65 6212 3534
ivan.szpakowski@credit-suisse.com

Martin Yu
+ 44 20 7883 2150
martin.yu@credit-suisse.com

Over recent months many analysts have become concerned that the Chinese housing market is heading for a bust, which would derail global basic materials demand. While it is possible that the policy makers inadvertently crash the market, we think the risk is smaller than many think.

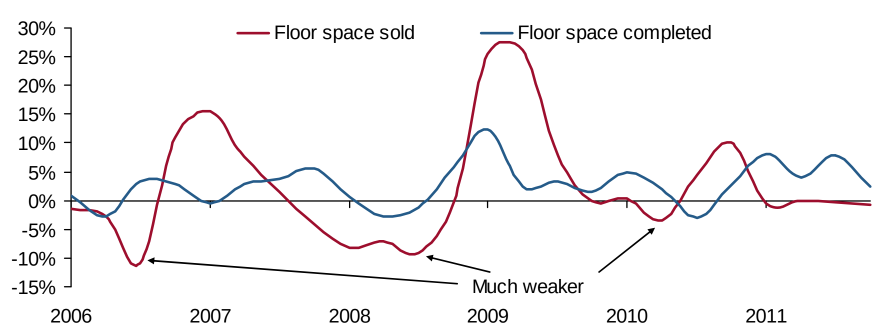
We expect total Chinese real estate construction to grow by 8% in 2012, despite a small fall in private housing construction. **More broadly we expect Chinese steel consumption to grow by 7% (from 9% in 2011) and copper consumption to grow by 8% (from 10% in 2011)** (as outlined in *From Fear Flows Opportunity*).

While important, Chinese housing construction accounts for a smaller share of global commodity consumption than many assume (12% of steel and 6% of copper). In addition, while private housing sales have been weak, history suggests that the impact on construction will be smaller than many fear, with the relationship between the two variables weak at best (Exhibit 1). Our modeling suggests that despite a small fall in private housing sales, social housing and commercial construction will provide a substantial offset.

- The fall in house prices has been policy driven (the authorities are rightly worried about the social consequences of housing affordability), rather than representing a deterioration in underlying demand. **We note that the macro-prudential policy tightening appears to have come to an end, and that broader monetary policy has already been eased (normalized), with M2 growth returning to its average pace.**
- While it is possible the government allows the market to soften further, we believe that in large part their objective of stabilizing prices has already been achieved, with much of the anxiety due to misplaced fears that China is repeating US mistakes, rather than reflecting actual developments in China.

Exhibit 1: Chinese Housing – Not Collapsing

QoQ trended, seasonally adjusted



Source: NBS, CEIC, Credit Suisse

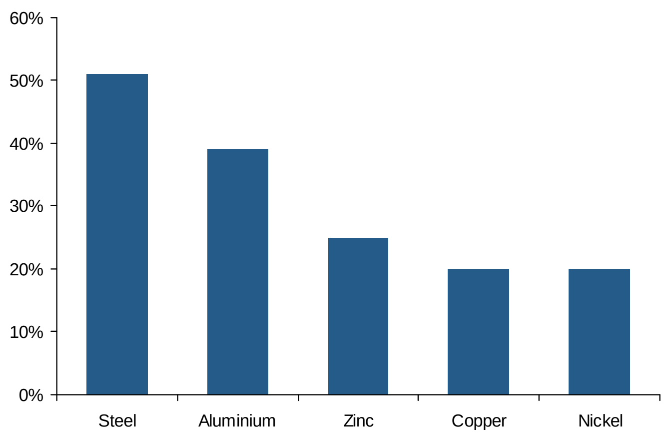
[1] Note the similarities with 2010- China's Housing Slowdown Won't Stop Commodities Demand

Chinese Housing a Smaller Share of Global Basic Material Demand Than Many Think

While construction is an important component of Chinese basic materials demand (Exhibit 2), housing construction (and particularly private housing) represents only a modest fraction of global consumption. We estimate that China's housing sector accounts for roughly 12% of global steel consumption, 10-11% for aluminium, 5-6% for copper and zinc, and 4% for nickel, and virtually zero for lead (Exhibit 3).

Exhibit 2: Construction is a major driver of Chinese commodity demand

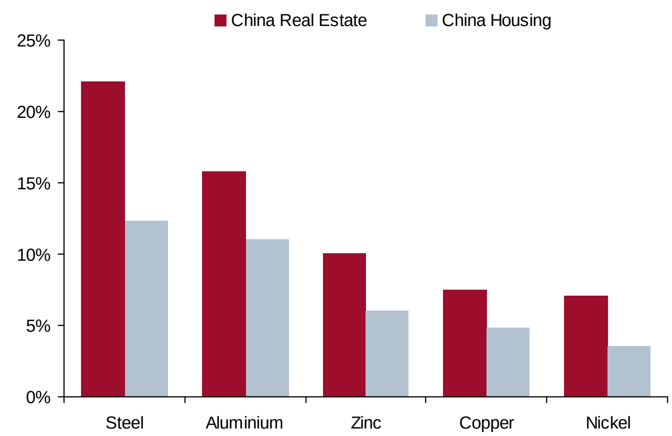
Construction (ex-infrastructure) share of Chinese commodity consumption



Source: World Steel, Brook Hunt, Credit Suisse

Exhibit 3: But the importance of Chinese housing on a global basis varies considerably by commodity

Share of global consumption



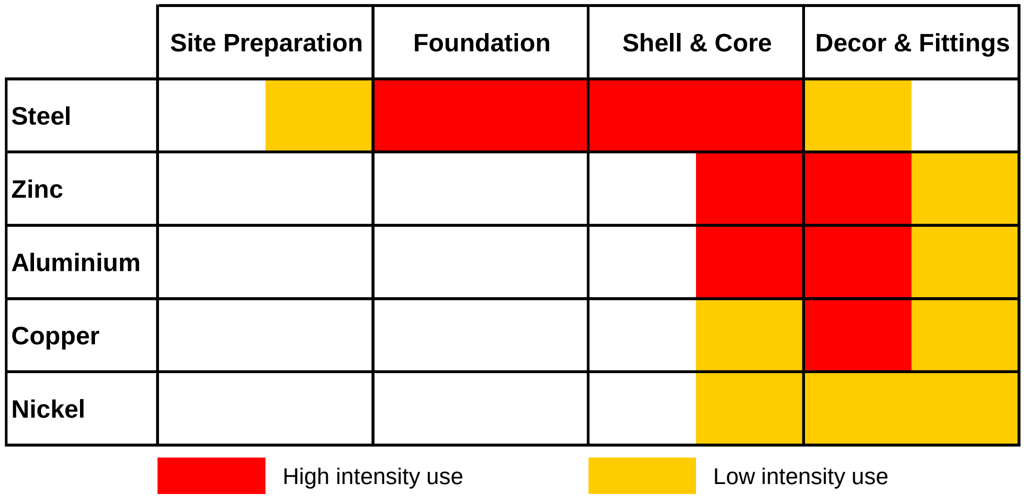
Source: World Steel, Brook Hunt, Credit Suisse

When assessing the impact on commodity demand of any housing slowdown, it is also worth noting that commodities are consumed at different points in the construction lifecycle – a point especially pertinent with respect to the social housing program (Exhibit 4).

Non-ferrous metals consumption concentrated in later stages of construction

- Steel, by far the most important metal in construction, is used across most of the construction process, with the most intense usage during the middle stages, when the majority of the building's physical bulk is constructed.
- Aluminium and zinc (in the form of galvanized steel) are consumed in later stages of construction, as exterior elements are completed and interior fittings installed. Nickel in stainless steel is consumed at similar stages, albeit in lower intensity and more concentrated in decorative elements in the last stages.
- Copper is used almost exclusively in the interior of buildings, making its consumption even more back-loaded than aluminium.

Exhibit 4: Commodity consumption along the construction timeframe



Source: Credit Suisse

The Outlook for Chinese Housing

Increasing bearishness in the market

Over the past six months, analysts have increasingly focused on the downside risks to Chinese housing, with many forecasting a "bust." Some in the marketplace have suggested that China has massively overbuilt, and that the day of reckoning is nigh. Even some of the more measured analysts have suggested that housing construction has increased too rapidly in recent years as the stimulus package has been implemented, and that 2012 will see very weak growth (or a fall) in Chinese basic material demand as these imbalances are worked off.

In essence, the broad consensus among analysts in recent months has been that China has experienced a US/Japan style housing bubble, which is in the process of bursting and will act as a large drag on basic material demand for some time.

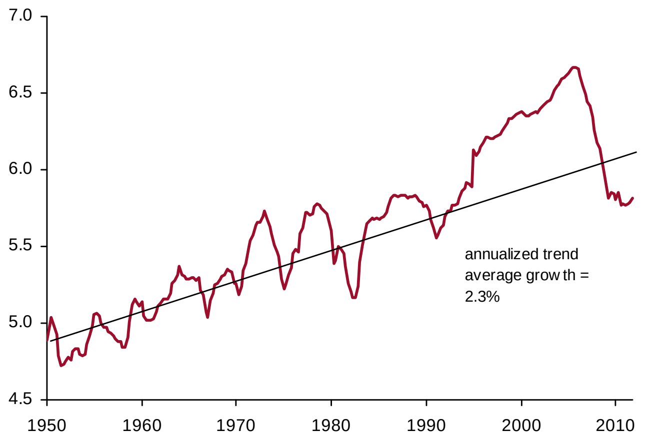
We do not agree with this prognosis for several reasons.

- While the level of US housing construction clearly ran well ahead of its longer term trend in the mid-2000s (Exhibit 5), there is no evidence that China has experienced a similar overbuild. Indeed, as shown in Exhibit 6, Chinese construction continues to track close to the longer run trend[2].

[2] Note that a real private housing market has only existed in China since 1998, so it is not possible to look at longer run comparisons. Given the market is so new, the pace of urbanization, and the need to replace poor quality legacy housing, we do not believe the trend has been overly aggressive, though at some point the underlying rate of growth will slow as the market matures.

Exhibit 5: The US bubble was a clear deviation from trend

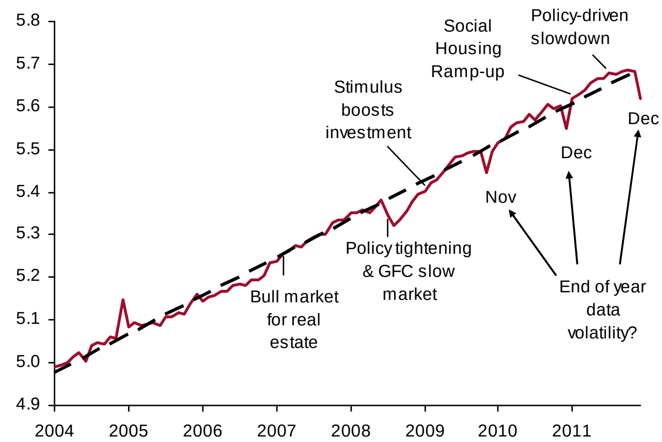
Real, log (USD billions), seasonally adjusted



Source: the BLOOMBERG PROFESSIONAL™ service

Exhibit 6: In contrast, there is little evidence that real estate investment has run too hard

Real, log (RMB millions), seasonally adjusted

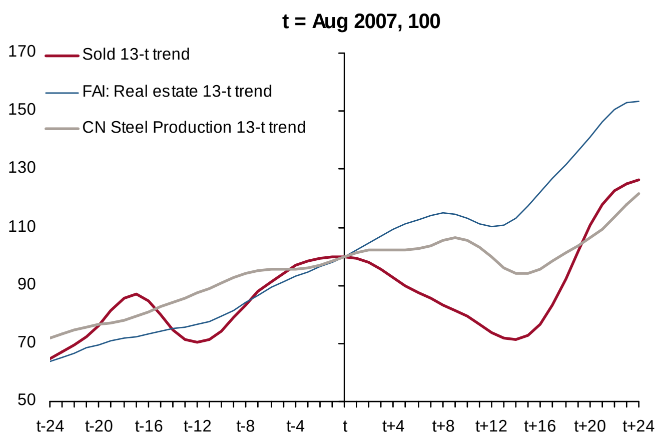


Source: NBS, CEIC, Credit Suisse

Note: Data only available since 2004; private market only dates to 1998

- The relationship between sales and construction is loose at best. While sales have clearly slowed (as the government has tightened housing policies), there is little evidence that the scale of the sales correction will flow through to a significant fall in private housing construction.
- The current sales correction is also smaller than seen in the previous two housing corrections (2008 and 2010). Moreover, even in 2008 actual construction (and thereby basic material consumption) dipped only modestly – with the fall in sales far more pronounced (Exhibit 7).

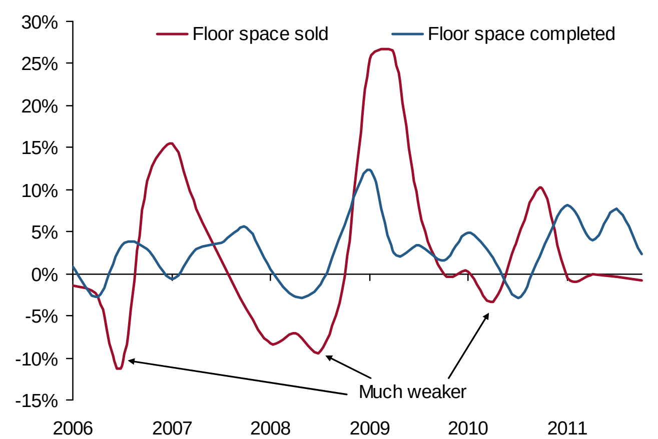
Exhibit 7: Even in 2008, the dip in real estate investment was small



Source: NBS, CEIC, Credit Suisse

Exhibit 8: Sales have not been as weak as in 08 and 10 – suggesting a bust in construction unlikely

QoQ trended, seasonally adjusted



Source: NBS, CEIC, Credit Suisse

Rather, we believe the current slowdown in the private housing market has been largely policy-driven. The primary motivation for government tightening measures has been concern that rising house prices in major cities have made housing unaffordable to middle class workers. Policy has thus not been aimed at reducing general housing construction,

Slowdown is policy driven, focused on prices, not construction

and in fact includes measures designed to increase the supply of new affordable housing – primarily through the social housing program, but also by shifting the composition of private housing under development away from luxury condos and towards middle and lower market apartments.

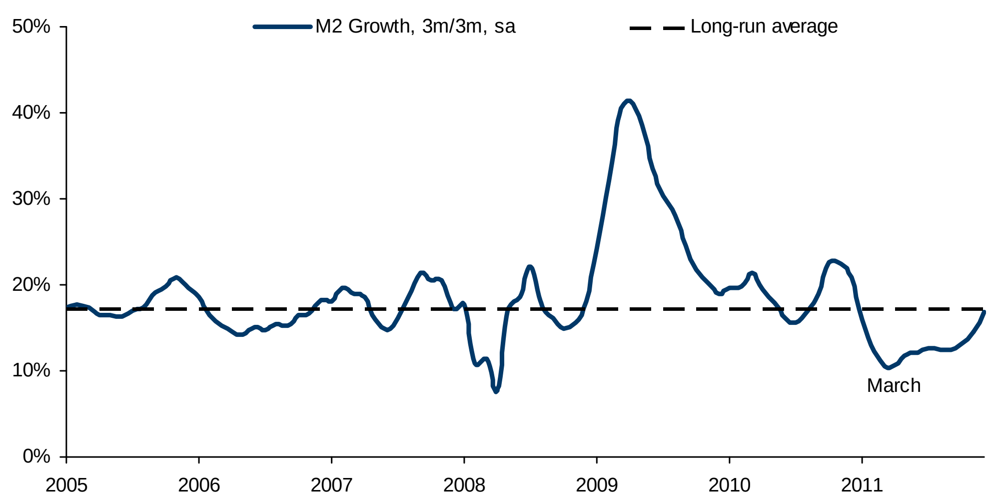
Chinese policy makers remain acutely aware of the fact that they over-tightened in 2008, and as such are likely to adjust macro prudential restrictions on the sector over coming months to ensure that the sector does not experience a downturn comparable to that seen in 2008 (many forget that China was already in the midst of a self-induced slowdown before the Lehman Brothers bankruptcy).

However, when policy restrictions were eased in both 2008 and 2010, prices and construction rebounded very strongly. Policy makers feel this was a mistake and are unlikely to move to outright stimulus anytime soon unless activity weakens significantly further than we currently expect.

Beyond housing specific measures, it is significant that monetary policy has already loosened, with M2 growth returning to around its average pace in recent months.[3]

Exhibit 9: Chinese monetary policy has already normalized

Percent, 3m/3m seasonally adjusted



Source: PBoC, the BLOOMBERG PROFESSIONAL™ service, Credit Suisse

8% Forecast Growth in 2012 Real Estate Construction

When considering the outlook for the Chinese real estate sector in 2012, we find it useful to break activity into three components: private housing, social housing, and non-residential.

Social housing construction to increase by 40-50%

The social housing sector is poised to see explosive growth as actual construction activity ramps-up following the surge in starts seen in 2010 and 2011 (note that “starts” can simply represent ground preparation). The government has pledged a 40% increase in funding, and we expect construction activity to increase by slightly more as money is funneled more into construction and completion of units rather than new starts (the target for which was decreased to 7 million in 2012 compared to over 10 million started in 2011).

[3] Note that contrary to much of the market discussion, credit in China continues to be rationed primarily through quantitative measures. Monetary conditions are therefore best assessed through monetary aggregates, such as M2 and PBoC social financing data, rather than interest rates (reserve requirement changes are also not ideal as these are primarily driven by FX sterilization).

Non-residential not targeted in policy-driven cooldown

The non-residential sector has so far remained healthy as government measures impeding housing demand have not affected commercial property. Developers have also favored this sector as the private housing market has encountered difficulties and many tier 2 and 3 cities are in the midst of ambitious multi-year build-outs of new commercial districts. Nevertheless, some developers are likely to encounter cash flow difficulties due to spillover from the private housing sector and prices for commercial real estate have softened as well in response to housing market difficulties. We thus project slower, but still positive growth of 5% for the non-residential construction sector.

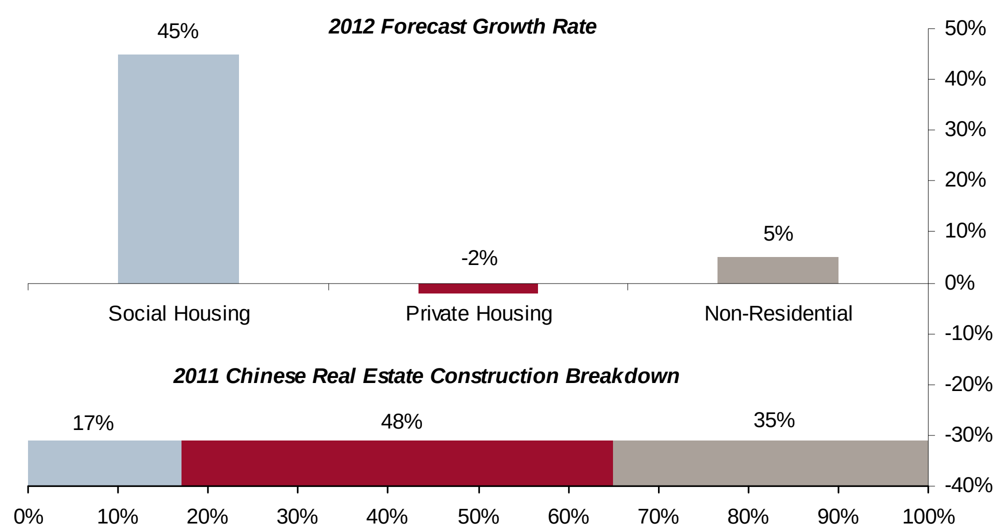
Private housing construction under pressure, but should stabilize

Finally, the private housing sector is clearly under the greatest stress. The first quarter is likely to see significantly depressed construction activity as developers suffer from cash flow difficulties due to depressed sales and lingering monetary tightness from early 2011. However, as prices eventually stabilize, sales are likely to recover and combined with the impact of the PBOC's current selective easing program, construction activity should recover. We thus expect only a modest -2% year-on-year decline in private housing construction activity in 2012.

Weighting these three components by their relative shares of 2011 construction yields an 8% forecast for real estate construction growth in 2012.

Exhibit 10: Anatomy of 8% 2012 real estate construction growth forecast

Percent



Source: NBS, Credit Suisse

The Impact on Chinese Basic Materials Demand

Commodity intensity of construction declining, but only modestly

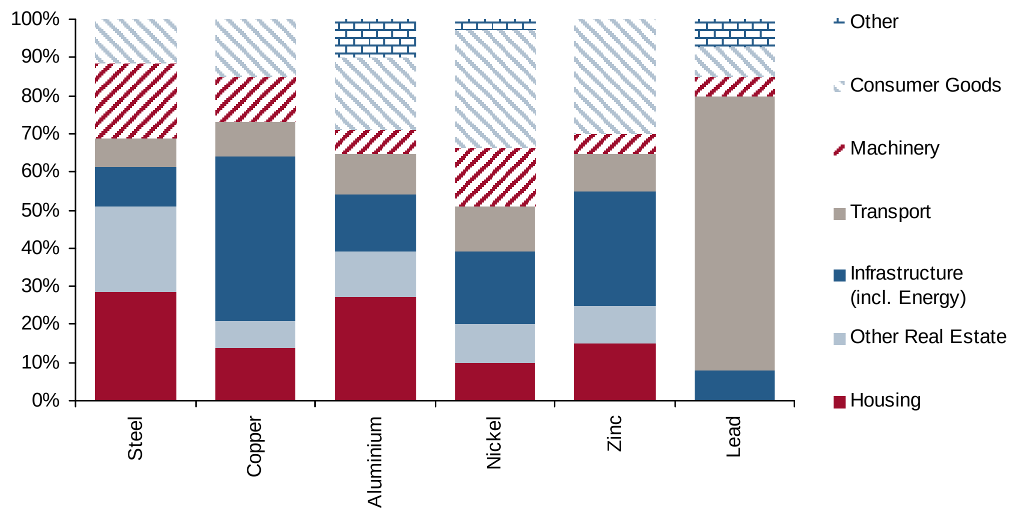
Beyond volume of construction, the changing composition of construction also has some impact on commodity demand. Social and other lower-market housing is generally less commodity intensive than luxury housing, particularly for copper and nickel, due to fewer fixtures, amenities, and decorations. On the other hand, an increasing share of housing for real occupation rather than investment increases the positive impact on appliance demand, as investment property in China are typically left barren.

Steel most leveraged to Chinese construction; lead least so

Exhibit 11 details Chinese end-use demand by metal. The breakdown is quite variable, with steel more leveraged to real estate, copper more to infrastructure (specifically the energy sector), and lead to transportation. Thus, while demand for industrial metals generally tracks economic growth, growth rates can differ materially based on developments in specific sectors.

Exhibit 11: Breakdown of Chinese metals end-use demand

Percent

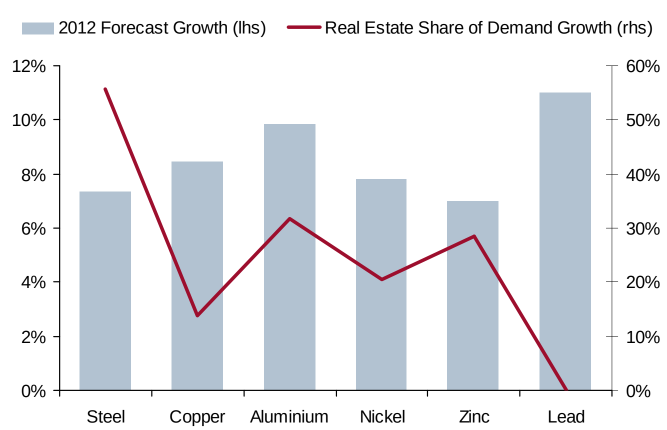


Source: Brook Hunt, Heinz Pariser, CNMIA, Antaike, BGRIMM, Credit Suisse

Honing in on real estate, an 8% increase in Chinese real estate construction in 2012 would translate into roughly 27 Mt of incremental steel consumption, 90 kt of copper, 600 kt of aluminium, 10 kt of nickel, and 100 kt of zinc. For perspective, these increases are equivalent to 29% of global consumption growth for steel in 2011, 10% for copper, 15% for aluminium, 11% for nickel, and 13% for zinc.

Exhibit 12: 2012 Chinese metals demand growth forecasts

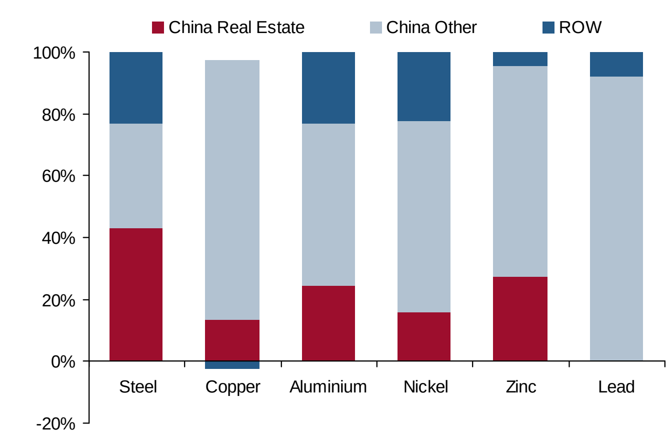
Percent



Source: Credit Suisse

Exhibit 13: 2012 Global demand growth breakdown

Percent



Source: Credit Suisse

7-8% Chinese demand growth for industrial metals

More broadly, we expect 2012 Chinese demand growth for most industrial metals to be in the 7-8% range (Exhibit 12), including for steel, copper, nickel, and zinc. We expect somewhat stronger growth for aluminium and lead, the latter having virtually no exposure to real estate and benefitting from very favorable base effects.

Globally, industrial metals demand is expected to increase by 3-5%, with growth fastest in aluminium and lead thanks to strong Chinese demand. Growth is expected to continue to be driven overwhelmingly by China (Exhibit 13), as has been the case for the past decade. Chinese real estate construction is expected to play the most important role in steel demand growth (over 40% of global demand growth), but much less so for copper and nickel, and virtually no role for lead.

Appendices

Composition of China's Real Estate Sector

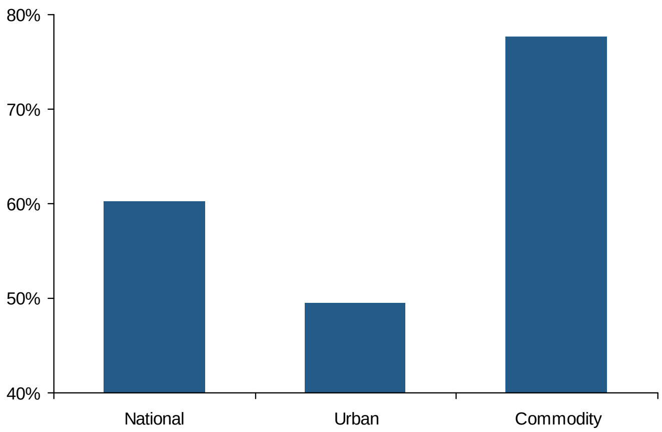
Housing is largest component

China's real estate sector can be divided into several subsectors: residential, commercial, industrial, and public (hospitals, post offices, etc.). Housing is by far the most important of these, though its exact share is difficult to estimate – it accounts for 80% of commodity construction (market-based real estate most closely monitored by NBS), but significantly smaller shares of other government construction data series (Exhibit 14; see also section on data).

While China's largest cities, most notably Beijing and Shanghai, are important real estate markets – particularly for publicly listed private developers – the national market is overwhelmingly driven by smaller cities (Exhibit 15).

Exhibit 14: Housing is the largest portion of real estate construction, but its exact share is unclear

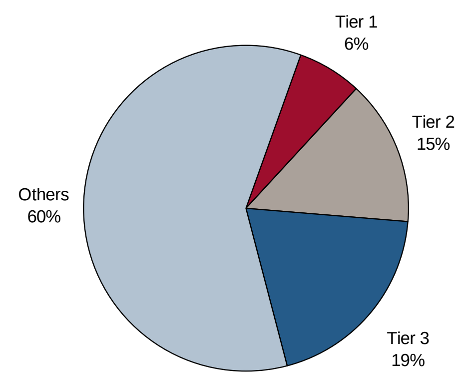
Residential share of total floor space completed; 2010



Source: NBS, CEIC, Credit Suisse

Exhibit 15: Smaller cities and towns represent the majority of the housing market

Share of commodity floor space completed; 2010



Source: CEIC, Credit Suisse

China's housing sector can be further divided into three categories: legacy housing, private housing, and "social housing." The first refers primarily to housing provided by urban residents' work units (*danwei*), which continue to represent the largest fraction of China's installed housing base. Private housing refers to normal units sold on the open market, while the last refers to a variety of policy-driven housing projects which the government has continued to provide following the dissolution of the work unit housing system. Social housing is further divided into five subcategories:

"Social housing" is a broad category

- "Economic housing" (经济适用房): Newly built housing sold to low income residents, designed to continue providing housing to income groups who could not afford to buy housing on the private market following the 1998 reforms.
- "Price Controlled Housing" (限价房): A category rolled out in 2007 in which the government sets the price of land sold to the developer and in-turn sets the retail price of the housing. This housing is more expensive than "economic housing," but cheaper than normal private housing and is intended for first time homebuyers who did not benefit from the privatization of work unit housing.
- "Low Rent Housing" (廉租房): A general term for government subsidized rental housing. Such housing includes newly constructed, renovated, and previously vacant buildings

- "Public Rental Housing" (公共租赁房): A new category, dating only to 2009, designed for temporary rental to groups that cannot afford to purchase "economic housing" but are not as disadvantaged as those living in "low rent housing," such as new workers and legal migrants.
- "Slum Redevelopment" (棚户区改造房): Not traditionally considered "social housing" as it simply refers to the replacing of poor housing districts designated as "slums" with modern housing. However, since 2010 it has come to be included in "social housing" statistics.

Demand Drivers

Housing demand in China can be divided into three categories:

Investment demand partly driven by lack of investment alternatives

- **Investment Demand** is driven in part by a lack of investment alternatives. Due to capital controls and a still underdeveloped domestic financial system, mainland residents are effectively limited to three primary investment alternatives: bank deposits and savings products, domestic equity markets, and real estate. Real deposit rates remain negative and domestic equities have steadily declined since peaking in August 2009. This has pushed investment into real estate and trust products,[4] with the latter also heavily exposed to the real estate sector. Investment demand is driven by 1) expected relative return on real estate investment (after-taxes) compared to available alternative investments; 2) savings rate; 3) money supply growth.

Urbanization drives new demand for occupancy

- **New Housing Demand for Occupancy** stems from organic growth of the urban populace and from urbanization (half the population still resides in the countryside). Urbanization rates are influenced heavily by government policies including rural land reform and agricultural subsidies; reform of the household registration system (hukou); provision of social services to urban migrants; and growth rates of manufacturing and services sectors.

Replacement demand is a large component, but price sensitive

- **Replacement Housing Demand** accounts for a significant portion of residential construction. Most of China's urban residents still live in old tenement style housing distributed by the government under the pre-1999 system, which is of poor quality, lacks modern facilities and is almost universally on the docket for demolition and reconstruction within the next few years. Even China's more recent private housing is often not built to last the lengths of time seen in the West, and much of this will be rebuilt – higher and more modern – within the coming years. The speed of replacement construction is driven largely by two factors: 1) relative growth rates of disposable income compared to housing prices; and 2) availability and cost of mortgages.

Commodity intensity of construction is increasing

In addition to the above three components of housing demand, commodities consumption is also influenced by the intensity of construction. As the average height of new buildings increases, the commodity intensity of construction for a given quantity of floor space likewise increases. This contribution can be quite significant, as buildings of 16 to 35 stories in height require around 1/3 more steel per square meter than buildings 7 to 15 stories in height. Buildings over 35 stories in height are in general twice as steel intensive as those in the 7 to 15 story range.

Increasing commodity intensity of construction is primarily driven by the rising height of building, due to growing average city size and restrictions on urban land footprints. Real income growth also contributes, especially for non-ferrous metals, as increased appliances and decorations consume more metal (particularly copper and nickel).

[4] Securitized products marketed to retail investors, typically offering fixed rates with income derived from debt and equity investment in real estate, infrastructure, and other sectors.

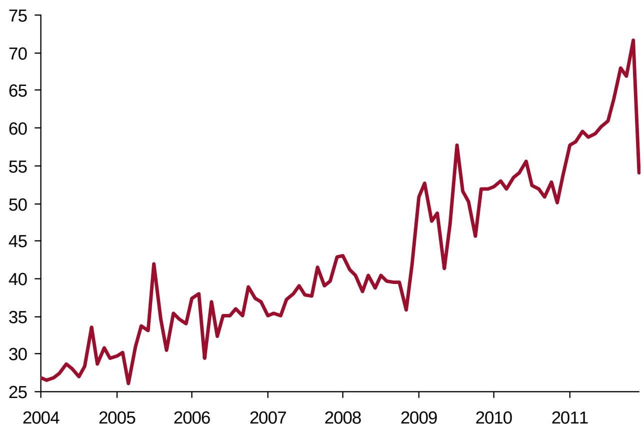
Private Housing

The private housing market is at the core of the debate about China's real estate market, and represents the largest share of the real estate sector, as well as one of the most volatile portions of the economy.

There is no doubt that the market is prone to volatile swings and overheating, which occurred both in 2007-2008 and in 2009-2010. This volatility is due to a combination of dramatic policy swings, strong influence of price expectations (leading to alternating accelerated and deferred demand), and the role of investment demand (due to a lack of investment alternatives).

Exhibit 16: Floor space of completed residential construction

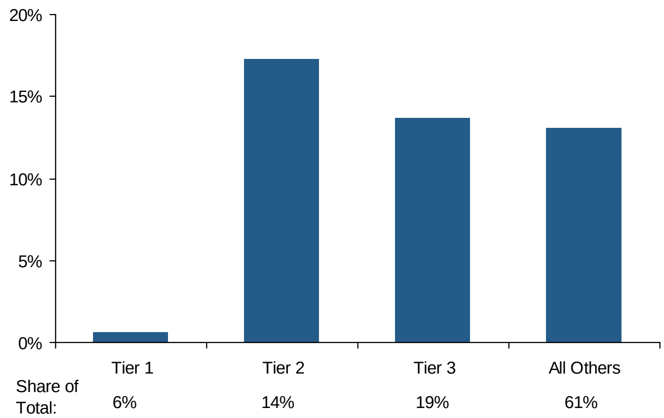
Millions of square meters; seasonally adjusted; commodity housing



Source: CEIC, Credit Suisse

Exhibit 17: Tier 1 cities are not representative

Commodity housing floor space completed; 2011 YoY



Source: CEIC, Credit Suisse

Construction has been driven by smaller markets

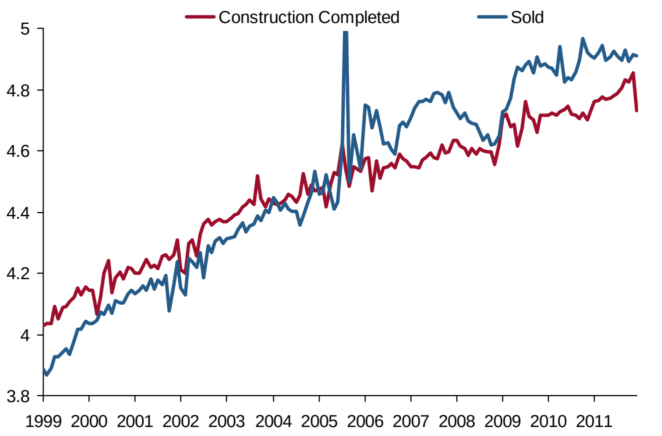
Until December, construction activity had remained robust, with residential construction maintaining strong growth rates throughout 2011 (Exhibit 16). Developers with stronger balance sheets have generally maintained construction activity in anticipation that market conditions will improve, with the most common time frame cited being H2 2012. Developers are also being supported by strong revenues from commercial property sales.

Moreover, while much of the media attention has focused on declining market conditions in tier 1 cities such as Beijing and Shanghai, conditions are much stronger in smaller cities, which represent the bulk of the national market (Exhibit 17). The slowdown in housing sales also represents a convergence with construction activity, as sales had rapidly outpaced actual construction during both the 2007-2008 and 2009-2010 housing booms (Exhibit 18).

Others have pointed to the growing gap between commodity floor space started and completed, and while we believe this is not especially meaningful considering data quality issues (see section on data), the two series have nevertheless seen a convergence in recent months (Exhibit 19). The government also recently released a draft measure to spur construction activity on developers' land banks. While the immediate impact is minimal, it reflects the government's attempt to maintain supply growth (and thus construction activity) despite a slowdown in land purchases.

Exhibit 18: Housing sales and construction are converging

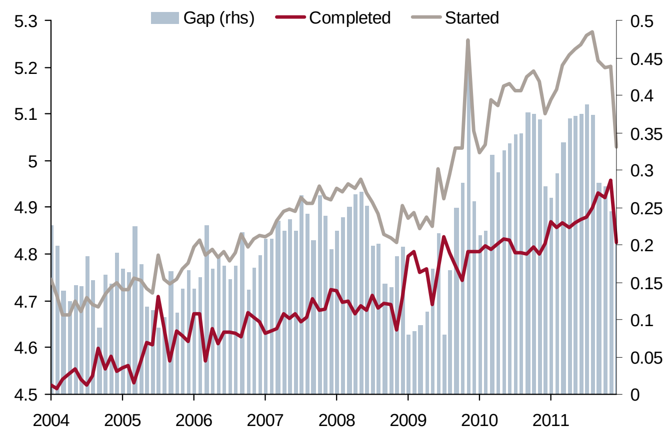
Log (thousands of square meters); seasonally adjusted; commodity housing



Source: CEIC, Credit Suisse

Exhibit 19: And the gap between construction started and completed has begun to moderate

Log (thousands of square meters); seasonally adjusted; commodity building



Source: CEIC, Credit Suisse

Note: Data is for overall construction as residential specific floor space started lacks historical data

Private housing construction slow in short term

Nevertheless, the short-term outlook is less rosy, as private developers face pressure from low sales volumes and difficulty obtaining financing. While more financially stable developers will likely slow activity levels only modestly, less secure developers have already slowed construction more significantly, particularly on new projects, due to cash flow difficulties. This was seen dramatically in the fall in construction activity in December, though the extent of the drop-off was likely partially volatility and a slowdown in social housing activity as local governments had already met 2011 targets.

Activity will likely remain depressed in the short term, but should pick-up once prices stabilize and sales recover, and as the PBoC's selective monetary easing program helps to relieve pressure on financing.

Social Housing

Policy Priority

Social housing elevated in 2010; definition broadened

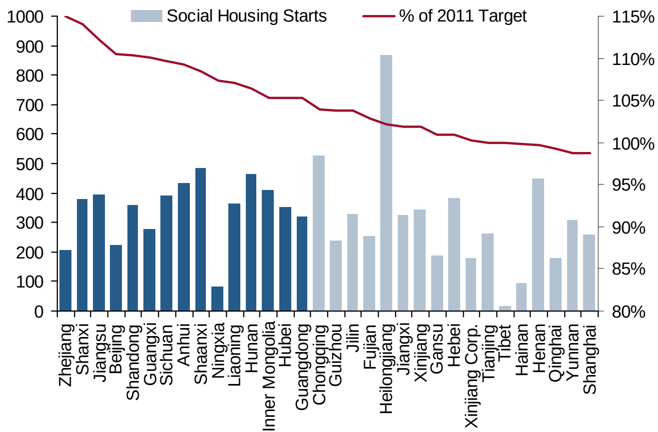
While "social housing" of one sort or another (see section on policy background and historical perspective) has existed in China for decades, the current increased focus dates to the State Council's annual economic work report delivered by Premier Wen Jiabao on March 5, 2010. The report called for "the construction of 3 million units of social housing and 2.8 million units of slum redevelopment housing…All levels of government will conscientiously fulfill their responsibilities, strictly enact the annual plan, and ensure that land, funds, and preferential policies are sufficiently realized."[5] Despite this seemingly strong statement, the media did not emphasize this aspect of the report and it was not until the summer that social housing construction truly started to accelerate.

A similar phenomenon was observed in 2011. China's 12th Five Year Plan was unveiled in March, which included a call for the construction of 36 million units of social housing over 2011-2015, and for 10 million units to be started in 2011. For the first time, slum

[5] 建设保障性住房 300 万套，各类棚户区改造住房 280 万套...各级政府要切实负起责任，严格执行年度建设计划，确保土地、资金和优惠政策落实到位。

Exhibit 20: Social housing starts reached the government's 2011 goal in October

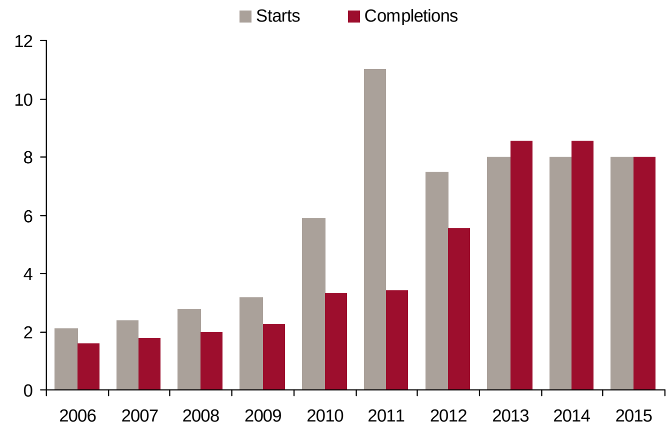
Thousands of units; through October; provinces in dark blue had already met 2011 targets



Source: China Ministry of Housing and Urban-Rural Development, Credit Suisse

Exhibit 21: Social housing starts are initially outpacing completions, but these should catch up within a couple of years

Millions of units



Source: National People's Congress, Ministry of Housing and Urban-Rural Development, Xinhua, Credit Suisse

redevelopment housing was lumped into general social housing targets, a pattern that has been maintained in subsequent central government announcements. Following a slight lag, social housing starts ramped-up over the summer and surpassed the government's 2011 target in October (Exhibit 20).

In August, reports appeared that China's target for social housing starts in 2012 would be lowered from 10 million to 8 million (see *Changes to Chinese Rail and Housing Policy Will Not Have a Large Impact on Basic Material Demand*). More recently, it was announced that the 2012 target would actually be 7 million, while the target for completions would be 5 million (compared to a reported 3.3 million in 2010 and a slightly higher estimated figure for 2011).

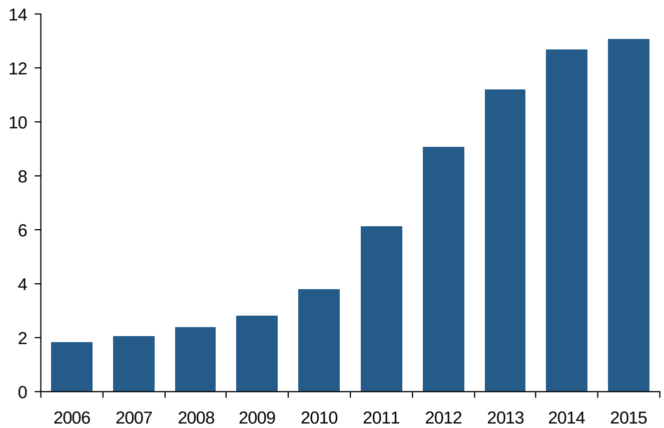
Driving Construction Demand

Given the government's target of 36 million units completed over 5 years, it was not surprising that starts will ease from the 10+ million seen in 2011. However, the low figure of 7 million in 2012 makes it likely that the government will need to resort to alternative forms of social housing to meet the 36 million goal.

This was hinted at in statements by Executive Vice-Premier Li Keqiang, indicating that ordinary commodity housing purchased by local governments for social housing purposes would be counted towards the 36 million completion goal. Such purchases are likely to account for an increasing share of the total in 2013-2015, since given the time lags involved in developing new social housing from scratch (estimated by the Housing Ministry at 2.5 years on a historical basis), starts in these later years would mostly not contribute to the Five Year Plan total. This also fits with the Ministry of Housing's objective of moving towards monetary subsidies as the primary means of providing social housing, rather than separate, specialized construction.

Exhibit 22: Actual construction activity for social housing should continue to increase rapidly

Millions of unit equivalents

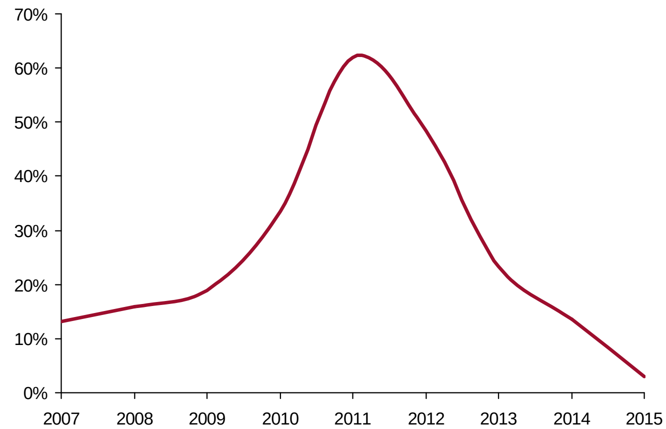


Source: National People's Congress, Ministry of Housing and Urban-Rural Development, Xinhua, Credit Suisse

Note: A unit equivalent is defined as the construction activity required to fully construct a unit of housing from start to finish

Exhibit 23: Though growth rates are likely peaking

Annual growth rate of social housing construction activity



Source: National People's Congress, Ministry of Housing and Urban-Rural Development, Xinhua, Credit Suisse

Strong demand growth in 2012 and 2013

Nevertheless, 2012 and 2013 should continue to see rapid growth in social housing construction activity. Given the lag involved between construction being classified as 'started' and 'completed,' social housing completions should catch-up with levels of starts within the next two years (Exhibit 21).[6] Moreover, estimating the actual share of each unit's construction actually undertaken per year yields a picture of continued increases in social housing construction activity over the coming years (Exhibit 22). In percentage terms, demand growth from social housing construction is likely peaking, but is expected to remain in double digits for the next few years (Exhibit 23).

Social Housing vs. Private Housing Demand

Social housing accelerates future private housing demand

An important question for commodity demand is the degree to which social housing replaces private housing construction rather than representing incremental demand. The short answer is that the direct replacement impact is minimal, but there is a significant acceleration of future demand.

To answer the question in more depth, it is worth examining the impact of each of the five types of social housing:

- Economic housing is newly built housing limited to buyers with relatively low incomes, most of whom would otherwise be unable to purchase housing on the private market, though there is a small fraction that would have (primarily in smaller cities). This housing thus replaces some private rental housing (though others would have lived with families).
- Price controlled housing is sold to relatively higher earning families, and many of these would likely otherwise be seeking to purchase low-end housing on the private market, though such demand would likely be deferred until greater savings were achieved. Such housing therefore accelerates some future housing demand.
- Low rent housing is rented to very low income individuals who would have no hope of buying a private house and be able to afford only minimal private rental housing. It thus has a very minimal dampening impact on private construction demand.

[6] Note that these forecasts have total social housing completions at only 34 million over 2011-2015, meaning that at least 2 million units would need to be purchased from regular commodity housing in order to meet the government's 36 million target.

- Public rental housing is temporary rental housing and as such does not take away from construction demand for permanent domiciles.
- Slum redevelopment is simply accelerated private housing redevelopment demand.

In summary, the impact on private housing demand primarily comes from: 1) price controlled housing accelerating new housing demand; 2) slum redevelopment accelerating redevelopment demand; 3) economic housing replacing and accelerating a small portion of private housing demand.

Much of social housing already included in construction data

Another important point is that housing construction data, such as “commodity building,” already incorporates much of social housing construction. “Economic housing” for instance is a subcategory of “commodity building,” which is broken out by NBS. Slum redevelopment is also already included in housing construction data and thus should not be double counted. Portions of the other three categories are also likely already included in the data, while some of these are merely remodeled or repurposed existing buildings and do not represent truly new construction. However, it is also worth noting that the “commodity building” data series does not include a significant portion of total construction activity (see section on data).

Financing: Key Challenge

Lack of financing is key impediment to social housing

The primary impediment to the social housing program – and the reason for the reduction in 2012 targets – has been financing, given the massive expansion of the program at a time in which credit has been tightened, as well as the lower margins afforded to developers compared to high-end housing projects. The Housing Ministry estimates that social housing construction consumed over RMB 1.3 trillion in funding in 2011, and that 2012 will require over RMB 1.8 trillion (an increase of nearly 40%).

The government’s financing strategy has been to rely on a variety of sources (Exhibit 21). In 2011, the government’s plan called for central and local governments to directly provide around 1/3 of the funds, the banking sector to provide an additional 1/4, and the remainder to be supplied by companies and individuals.

While spreading responsibilities has avoided concentrating the burden, all three sources have faced challenges. Local governments have been under pressure due to increased scrutiny of local government debt, as well as lower revenues from land sales. Banks have become increasingly capital constrained due to stricter deposit-to-loan requirements combined with struggles to attract deposits, and RRR hikes combined with an expansion of the scope of deposits against which banks must hold reserves. Companies and individuals have had difficulty obtaining credit in the face of banks’ tightening and increased scrutiny of the informal lending sector.

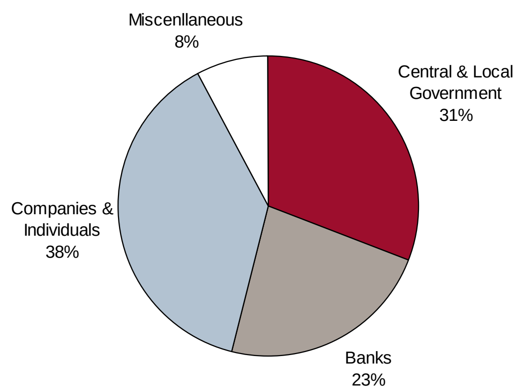
Securing financing for the social housing program thus represents the program’s greatest challenge going forward and the primary drag on construction activity. However, 2012 is likely to see an easing of some of the monetary constraints that plagued 2011, as monetary policy has entered a period of “selective adjustment.”

2012: increased central government subsidies and new targeted financing

The government is also pursuing targeted measures to increase financing for social housing specifically, with the government pledging to “significantly” increase subsidies from the central government in 2012. In addition, the government is likely to permit the issuance of bonds whose funds are specifically designated for social housing projects. Numerous banks have been granted permission to use this mechanism to support lending to SMEs, and banks, developers, and/or local governments could be granted similar approval for social housing construction.

Exhibit 24: 2011 Social housing financing by source

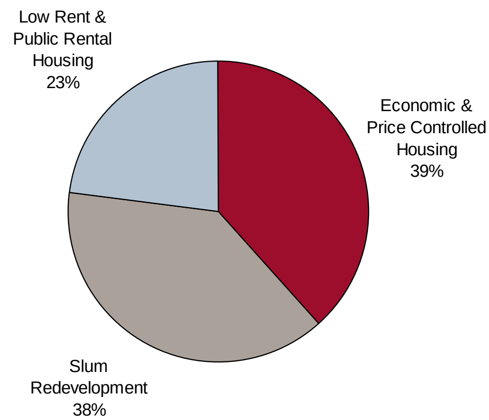
Percent



Source: Ministry of Housing and Urban-Rural Development, Xinhua, Credit Suisse

Exhibit 25: By housing type

Percent



Source: Ministry of Housing and Urban-Rural Development, Xinhua, Credit Suisse

Commercial Property

Unlike housing, the commercial real estate market has remained strong (Exhibit 26). China's commercial property market experienced a significant downturn in 2008, with office markets in top tier cities plagued with overcapacity. However, with this overhang having been worked through, rents and sales for commercial property have both risen over the course of 2011 (Exhibit 27).

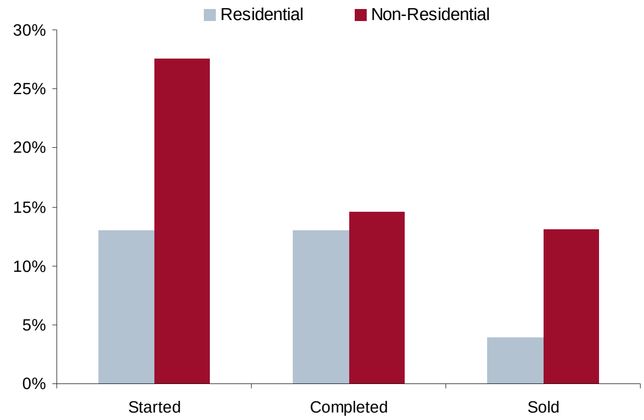
Commercial property construction and sales still strong

Many of China's tier 2 and 3 cities have embarked on ambitious multi-year plans to build new commercial centers. This is driven in large part by a shortage of land in the historic city centers of these cities. Much like Paris turned to La Defense and London turned to Canary Wharf, these cities are embarking on massive construction projects to build new central business districts. These multi-year projects, along with the necessary accompanying infrastructure construction, will support commodities consumption for several years to come.

Despite these ambitious build-outs, such construction has not dampened existing commercial property markets, primarily because the office space in these new developments are generally not yet ready for occupation. Businesses are hesitant to move into these new developments in their early stages due to a lack of infrastructure and less convenient locations. However, the appetite for new floor space remains given the rising cost of prime commercial real estate, and the growing needs of China's expanding corporate sector.

Exhibit 26: Commercial property has held up better than the housing market

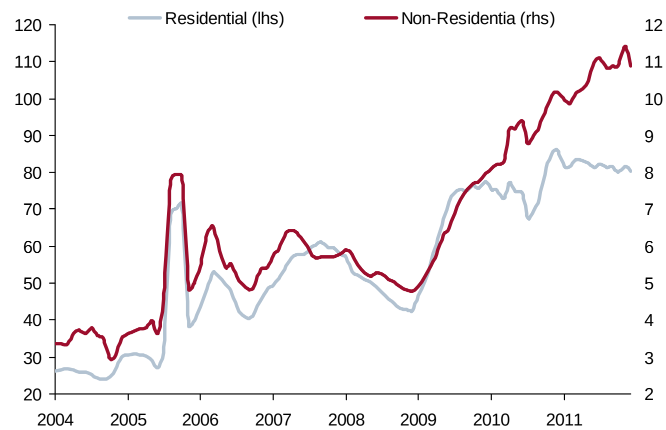
2011 percentage increase; commodity building



Source: NBS, CEIC, Credit Suisse

Exhibit 27: With the most noticeable divergence in sales, which have maintained steady growth in the non-residential market

Millions of square meters; seasonally adjusted; 3 month moving average; commodity building



Source: NBS, CEIC, Credit Suisse

Policy Background & Historical Perspective

China's modern private housing market dates to 1998, when the central government proclaimed an end to the public work unit (*danwei*) provided housing system. Effective ownership of such housing was transferred to occupants, in which buildings the majority of China's urban population still resides.

China's housing market is young and still evolving

Over the past five years, China's still new and evolving housing market has gone through a series of booms and slowdowns, with the government playing an active role. In 2007 and into 2008, China's real estate market was enjoying the strongest boom in its short history. However, the government became concerned that rapidly rising home prices were pricing much of the population out of the market. In late 2007 and 2008, the government clamped down on the real estate sector (at the same time the PBoC was tightening monetary policy), including instructing banks to tighten mortgage lending conditions and implementing measures designed to curb purchases of houses by investors.

Over-tightening in 2008 crashed the market

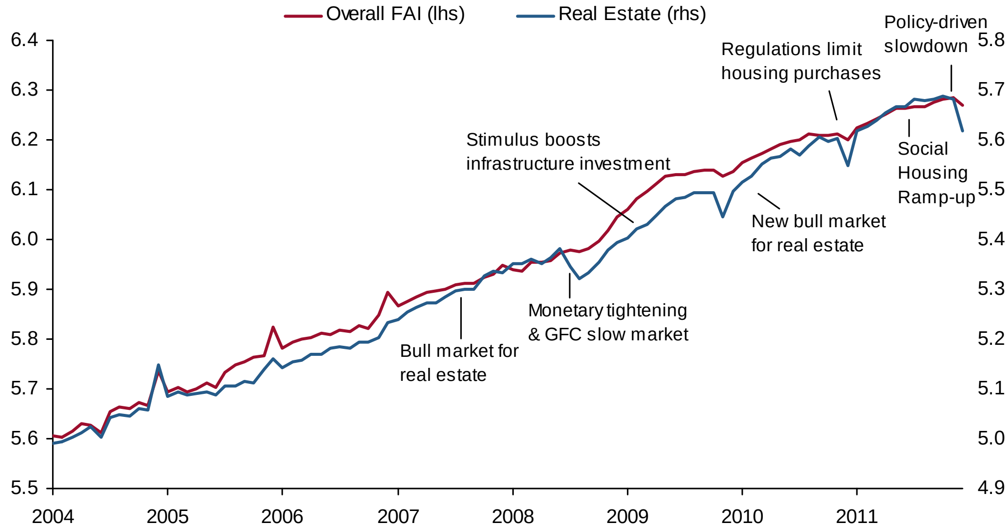
However, when the financial crisis hit, an already cooling market turned into a downward plunge. The government was forced to rapidly reverse course, rescinding measures implemented only months before and encouraging banks into a now famous (or infamous) lending spree. On the back of the government stimulus and resilient economic growth, the market bounced back faster than expected in 2009.

Stronger-than-expected rebounds in 2009 and late 2010

Faced with skyrocketing housing prices and widespread speculation in the housing market, the government instituted a series of new restrictions in Spring 2010 (including some that had been first tested in 2007 and 2008). However, by the summer, with the real estate market seemingly slowing and wary of repeating the mistake of 2008, the government took its foot off the pedal, only to see prices pick back up.

Exhibit 28: Government policy initiatives have had large impacts on real estate FAI

Log (RMB millions), PPI deflated, seasonally adjusted



Source: CEIC, Credit Suisse

This prompted the government to counter with successive rounds of new restrictions in late 2010 and H1 2011. These rounds culminated in broad-reaching home purchase bans across most upper tier cities, as well as prohibiting purchases of second homes and even first homes by people without local residency permits (or historical local social security tax payments). While there were no significant tightening measures implemented in H2 2011, despite a dramatic drying up of housing transactions and declines in housing prices, the government has not relaxed previously implemented restrictions. To the contrary, Premier Wen Jiabao has been adamant that housing controls must stay in place until prices "return to reasonable levels."

Nevertheless, concern over repeating the mistake of 2008 has been a prime motivation behind the expansion of the social housing program. This program seeks to fulfill a variety of objectives, including directly providing affordable housing to low income families, increasing supply in the mass-market segment of the housing market, and stimulating the economy in the face of a policy induced slowing of the private housing sector.

Fear of early relaxation trumping fear of over-tightening

The government in many respects continues to struggle with the legacy of past policy failures, with the current dominant interpretation that the principal mistakes were over-stimulating the market in 2008-2009 and hesitating in cooling the market in mid-2010. This has resulted in a determination not to be swayed by short-term weakness in the property market into relaxing policy restrictions. However, there is another camp that fears recreating the pain of 2008, when domestic monetary tightening (also seen in late 2010 and in 2011) and a clampdown on the real estate sector weakened the economy just as China was hit by a massive external shock. The government will attempt to walk the tightrope between these two pitfalls in 2012.

Handling Chinese Data

There are three series of real estate construction data released by the Chinese government.

- **"Commodity Building"** [7] attracts by far the most attention and is released monthly, including a breakout of housing and several other subsectors. This is the most narrowly defined series, and while it includes a portion of social housing, it primarily consists of market based housing by private developers.
- **"Urban Areas"** is a broader series that is also released monthly and includes a break-out for housing, though not for all the subcategories of "commodity building."
- **"Whole Country"** is the broadest of all, and while it includes a housing breakout (the housing component of "commodity building" is explicitly defined by NBS as a subset of this series), it is only released annually.

Definitions should not be taken at face value

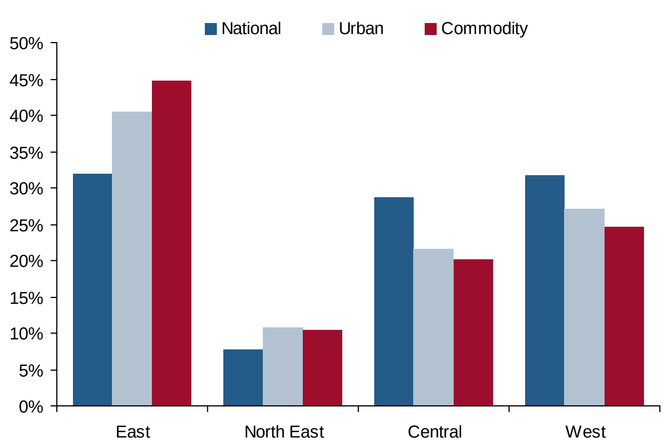
Given these descriptions, it would seem logical to track "urban area" data on a monthly basis and "whole country" data on an annual basis. However, vague definitions and implausible implications make such simple usage dangerous. For example, "urban area" floor space completed represents less than half of "whole country" floor space completed; and has decreased as a share over the past 5 years despite increasing urbanization (50% of China's populace now lives in cities).

But have been broadly consistent in recent years

Early and mid 2000s growth rates for floor space completed are also implausibly low for certain data series, most notably "whole country" residential (negative over the 1999 to 2006 period). However, the three series have tracked each other more closely in recent years (Exhibit 30). There can still be large divergences in growth rates for specific years, but these are generally offset the following year (e.g. if the commodity building growth rate is slower than the national series in one year, the relationship will generally be reversed the following year).

Exhibit 29: Commodity housing data emphasizes more developed regions and understates faster developing inland provinces

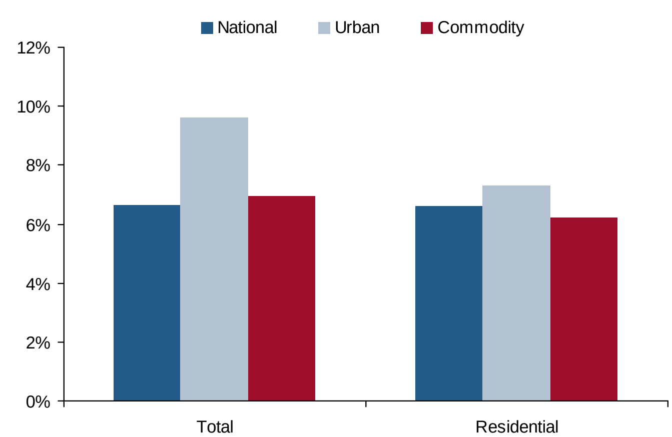
Share of total completed floor space; 2009



Source: NBS, Credit Suisse

Exhibit 30: Growth rates for all three series have been similar in recent years

2004-2010 CAGR; floor space completed

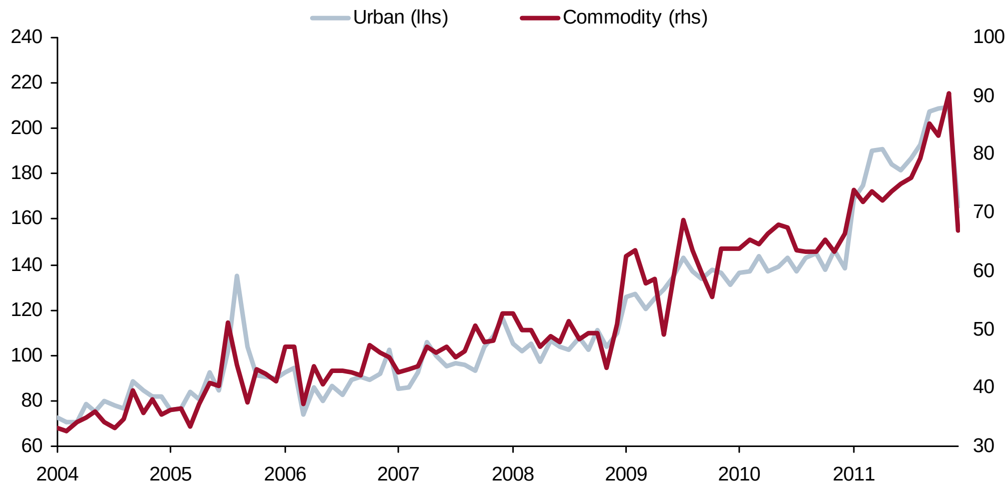


Source: NBS, CEIC, Credit Suisse

[7] Also known as "commercialized" or "marketized."

Exhibit 31: Monthly construction data are similar for both commodity building and the broader urban areas data series

Millions of square meters; seasonally adjusted; floor space completed



Source: CEIC, Credit Suisse

Moreover, the monthly floor space completed data for both “commodity building” and the broader “urban areas” follow very similar trends (Exhibit 31). It should also be pointed out, however, that NBS revises its annual data series as new data becomes available, but generally does not do so for its monthly data, leaving some inconsistencies between the two and making annual data the more reliable indicator.

Finally, it should be noted that the NBS de-emphasizes “floor space started” data. Such data are not independently verified, and rely on self-reporting by developers, which can be motivated by a variety of factors to report inaccurate figures (including efforts to win new contracts and posturing with respect to tax reporting and auditing requirements).

Floor space completed is preferred construction indicator

Data for “floor space under construction” has several drawbacks. One is that it includes all floor space that was under construction at some point during the period, regardless of whether it was started, completed, in-progress, or suspended during the timeframe. Another is variation in construction speeds, including property that remains in this category once original construction plans are postponed or even canceled.

While “floor space completed” data are hardly perfect, they are subject to independent verification and do signify the actual construction of physical buildings.

GLOBAL COMMODITIES RESEARCH

Ric Deverell, Managing Director
Global Head of Commodities Research
+44 20 7883 2523
ric.deverell@credit-suisse.com

Eric Miller, Managing Director
Global Head of Fixed Income and Economic Research
+1 212 538 6480
eric.miller.3@credit-suisse.com

LONDON

One Cabot Square, London E14 4QJ, United Kingdom

Tom Kendall, Director
Head of Precious Metals Research
+44 20 7883 2432
tom.kendall@credit-suisse.com

Marcus Garvey, Analyst
+44 20 7883 4787
marcus.garvey@credit-suisse.com

Martin Yu, Analyst
+44 20 7883 2150
martin.yu@credit-suisse.com

TECHNICAL ANALYSIS

Cilline Bain, Associate
+44 20 7888 7174
cilline.bain@credit-suisse.com

NEW YORK

11 Madison Avenue, New York, NY 10010

Jan Stuart, Managing Director
Head of Energy Research
+1 212 325 1013
jan.stuart@credit-suisse.com

Joachim Azria, Associate
+1 212 325 4556
joachim.azria@credit-suisse.com

Stefan Revielle, Associate
+1 212 538 6802
stefan.revielle@credit-suisse.com

SINGAPORE

One Raffles Link, Singapore 039393

Andrew Shaw, Director
Head of Base Metals & Bulks Research
+65 6212 4244
andrew.shaw@credit-suisse.com

Ivan Szpakowski, Associate
+65 6212 3534
ivan.szpakowski@credit-suisse.com

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