Taking stock and looking ahead

White Paper: China Real Estate Market
February 2016
Long-term structural gains in property sector dynamics amid ongoing noise and idiosyncrasies

Summary
There are numerous existing narratives on China’s economy, most offering views on where it is headed, and whether a soft or a hard landing is looming. Over the recent years, various concerns with China’s economy have been touted as the straw that would finally break the camel’s back and lead to a financial implosion, which would have wide ranging global impacts.

The truth is, the economy is still grappling with chronic ailments that will take time to heal, and there is no silver bullet. Come 2015 and 2016, several key events have occurred which are probably still fresh on our minds. The Shanghai stock market rise and rout by June 2015 (and January 4, 2016) was accompanied by an unexpected devaluation of the RMB in August 2015 and on January 7, 2016. These events sent widespread chills across global markets and further entrenched the views that China’s economy was teetering on the edge of a cliff.

We believe that many of the ‘crisis’ events that have happened over the recent few years are significant aberrations that are bound to happen repeatedly during this transitional period. Sifting through the noise, the economic concerns that really matter in China’s current context for the next few years are namely: (i) Property sector slowdown; (ii) Leverage; and (iii) Overcapacity. These are key themes that plague China’s economy at the moment, especially as it attempts to transform and rebalance. Any unexpected deterioration in those areas could create spillover damage that would derail the whole reform process. And as most of these issues do not stand alone, that often deepens the level of intricacy expected of Beijing.

We are cognizant that the combination of a property sector slowdown, credit overhang and industrial overcapacity will continue to jeopardize the viability of China’s economy. And this is on top of the many economic and financial anomalies and events that have and will recur in the near term. Our view is that while the stakes appear high and risks are indeed very real, Beijing does have significant levers and tools to mitigate most concerns. Adding to that is a strong resolve to ensure that structural reforms succeed. It may not seem obvious to most, but the key is not whether China has the headroom and policy tools to react, but whether these existing tools can be put to use in an effective and timely manner.

Essentially, ‘different markets, different strokes’ is how we dissect China real estate, and that guides our thoughts amid an evolving landscape.

Our general views on the real estate market in the next three to five years are
- Sub-market and asset-level selection should have first order priority over top-down market selection;
- Reforms will drive the shifts in property sector dynamics going forward;
- In terms of sector preference, we generally prefer commercial over residential, although we believe residential development may have legs in some markets if one is keen to move up the risk spectrum;
- We are largely market agnostic as we believe that there are quality assets in most Chinese markets. But on a risk-adjusted basis, tier-one and gateway cities offer superior market depth and liquidity in the near term; and
- Distressed assets may appear on the market as weaker developers start to trim the fat off their balance sheets. However, most large local developers (which own prime assets in general), typically enjoy strong cash positions and access to capital markets, and are unlikely to face immediate financial stress.
1. The elephant in the room

One way, really, to describe China’s circumstances in the last few years, is to figuratively imagine a behemoth elephant attempting to twist and turn around in a tiny room. Each maneuver is an excruciating action and results in physical scrapes on the elephant (and the walls).

The last decade of exponential growth in China was driven mainly by cheap wages, credit growth, an investment glut and self-reinforcing expectations, all of which has resulted in an economy and the larger society used to the notion that economic progress is a given, however unsustainable that might be. Fast forward to 2013, the new political leadership made a strong decision to transform and underpin China’s economy on the pillars of services and consumption, and gradually wean China off its over-reliance on leverage and unproductive investments.

The elephant had, by then, over-binged. It was always going to be a painful transition.

1.1 Our narrative

There are numerous existing narratives on China’s economy, most offering views on where it is headed, and whether a soft or a hard landing is looming. In this report, we do not seek to gaze into the crystal ball or read the tea leaves to provide any precise forecast on the economic outlook for China. And we believe that the ever-changing structure of China’s economy means that its economic outlook will be difficult to get a handle on, and may be up perpetually for debate.

For the reader trying to become acquainted with, and remain up to speed with, the numerous underlying issues and developments in China, we hope to shed some light on what are the key issues to focus on amid the noise.

For those interested in the real estate landscape in China, our top-down analysis of the macroeconomic conditions and views on the reform agenda will complement our bottom-up views on where we see the key opportunities and battlefields in the coming years.
2. China data: Let’s agree to disagree

The legitimacy of China’s economic and financial data has always been a bone of contention among China watchers. In either case, be it the believers or the naysayers, there always were elements of evidence to justify coming out all guns blazing, whether in support or otherwise.

Somehow, and ironically, we have to agree to disagree:

− Indeed, there are valid reasons to doubt the black box that is China economic data. This is especially as ground checks and anecdotal feedback reveal weaker than quoted economic performance. That is to say, the real economy does not seem to agree that China is growing at a 7.0% p.a. pace, or whatever that magic figure might be. Or, as many economists will like to point out, proxy indicators such as electricity consumption figures for example, do not corroborate with the amount of industrial activities required to generate the official GDP growth in recent quarters. Something is a miss.

− Proponents of the reliability of China’s economic data would argue that general manipulation of data is unlikely, and discrepancies are more an operational issue of data collection given the massive scale and sheer numbers of local cities and regions. In a way, as some would argue, it is a tall order to get thousands of statisticians in China to collude and march together consistently in a crooked line, and for so many years.

− Given the lack of alternative datasets and the breadth of China’s industrial structure, it is near impossible for a reconstruction of the ‘true’ values of economic indicators at any point in time. Let us not become too hung up over this due to the many moving parts. Capturing activities relating to the industrial sector will not be as complete without robust services sector metrics, of which the weightage in the economy is shifting rapidly. There is no holy grail to pursue here.

− We believe that the magnitude and the absolute values of economic data do not matter as much as the trends and direction in which the data is pointing towards. On an absolute basis, does it really matter to you or me that China grew at 6.9% or 6.5% p.a. in recent quarters? These numbers, as argued by naysayers, can be any number plucked from the sky and subjected to data soothing. What is more important, in our opinion, is the delta and the rate at which we observe the deceleration (or acceleration) of the economy and other indicators. And China’s existing data sets (with a long history) would certainly provide the consistency we require to monitor such variances over time and watch out for early turning points.

− Notwithstanding, the paradox is that despite widespread disbelief in the reliability of official Chinese data, global markets flinch and gyrate at every single data point released by China, seemingly in a state of ‘Chicken Little’. This is of course also a consequence of China being the behemoth in the room, and literally on a global scale. We must acknowledge that in a typical ‘risk-aversion bias’ fashion, markets tend to believe and react to bad news more than good news. Official GDP growth that exceeds polled analyst expectations rarely raise any eyebrows, in contrast to markets plunging when China PMI numbers dip by a mere two basis points. What gives?

Before we move on to other discussions in this paper, let us put this debate aside and agree on one thing.

China’s growth is slowing.

And the real challenge is, how would China pull off the Houdini Act of rebalancing the economy while juggling multiple reform goals without triggering a hard landing?
3. Our views on recent concerns

Over the recent years, various concerns with China’s economy have been touted as the straw that would finally break the camel’s back and lead to a financial implosion, which would have wide ranging global impacts.

– In 2013, the world was concerned that the debt overhang amid weak industrial performance would lead to widespread defaults and even a financial collapse by some local governments. The risks arising from the economy’s reliance on shadow banking was highlighted as media reports of trust and wealth management product (WMP) defaults took the headlines and local government financing vehicles (LGFVs) struggled to repay their shadow loans instalments, let alone refinance and roll over old debt.

– The spotlight was shone on the lethargic property sector in 2014, which was fast becoming a drag on the economy. It still is. Because of the tight linkages with traditional sectors such as construction and steel, and coming from a high base of real estate investment growth, China’s overall economy has been suffering from withdrawal symptoms arising from a slowdown in the real estate sector.

Figure 2: China’s rebalancing act

From Investment to Consumption

<table>
<thead>
<tr>
<th>Sustainable Growth</th>
<th>Financial Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Equity</td>
<td>Income Growth</td>
</tr>
</tbody>
</table>

Source: UBS Asset Management, Global Real Estate Research & Strategy

– Come 2015, several key events have occurred which are probably still fresh in our minds. The Shanghai stock market rise and rout by June 2015 (and January 4, 2016) was accompanied by an unexpected devaluation of the RMB in August 2015 and on January 7, 2016. These events sent widespread chills across global markets and further entrenched the views that China’s economy was teetering on the edge of a cliff. All hell was set to break loose.

In the instances of 2013 and 2014, external concerns came and were gone, almost totally forgotten. To Beijing’s credit, policy responses were forthcoming and reactive, helping to stem any further deterioration in negative expectations then.

The shadow banking debacle in 2013 was contained as the central government tightened its grip on the informal lending sector, and indirectly managed some orderly defaults to minimize possible contagion and systemic risks. In the case of the property slowdown in 2014, which was driven by slowing sales volumes of residential products, policy directives were issued to selectively reverse the draconian home purchase restrictions imposed just a year ago and to lower the restrictions on mortgage loans to selected consumers.

Figure 3: Growth of Shadow Banking in China

Source: Oxford Economics, November 2015
The question is, were these problems resolved or simply swept under the carpet? The truth is, the economy is still grappling with possible defaults and local government debt exposure, while the property sector remains bedridden. These are chronic ailments that will take time to heal, and there is no silver bullet. But the once heightened risks have, for the time being, definitely subsided.

Many economic and financial issues within China are interlinked. Beijing has to grapple with multiple conflicting objectives when troubleshooting any particular economic woe, which creates the impression that it appears to be kicking the can down the road each time. To the uninitiated, it can definitely appear that China is simply fire-fighting problems each time and not going down to the root cause of many issues; however, if we look at China through the China lens, we might just realize that things are much more complicated than the external world can imagine.

To illustrate, the transition towards lesser reliance on credit meant a general liquidity squeeze within China since early 2013, which ironically resulted in added dependence on shadow banking by corporates which were unable to fund their activities via formal bank lending, or roll over their debt as industrial profits became thinner. Yet due to its permeation, any immediate clampdown on shadow banking might just cripple the economy immediately, despite the fact that many borrowers were not creditworthy and were already on the verge of default.

On the local government end, the weak property market caused land prices to be depressed and affected the main source of revenue for many local governments, which had also borrowed heavily via LGFVs to fund social services and infrastructure advancements. It was a circular problem that had to be relieved gradually, first by making available other sources of funding (or guarantees) for local governments (e.g. municipal bonds) and through a better central-local fiscal arrangement, yet at the same time ensuring that the residential property sector cools down at a managed pace in order to normalize excessive fixed investment growth which runs contrary to reform objectives.

And while all these were happening, the equity market was bubbling on the sidelines in 2014. In order to create a deeper financial system to deleverage the economy, Beijing had to develop the bond and equity markets. The share of equity financing as proportion of aggregate financing in China is historically very low relative to bond financing and loans, and boosting the liquidity and volumes of the Shanghai stock exchange was seemingly one solution to create another funding platform for corporates. IPO issuances were reinstated in 2014 after a few years of stagnation, and the stock market surged thereafter. In part due to the weak property investment market and immature financial ecosystem, the Chinese had limited alternative investment channels, and many started to ‘punt’ the stock market. This led to the bubbling of the equity market since the second half of 2014, which was not supported by fundamental corporate earnings growth, and which, as we know, eventually came crashing down in August 2015. Again, on January 4, 2016, the Shanghai stock market fell by 7% upon commencement of trading, and that repeated itself on January 7, 2016. With roughly 85% of trading volume represented by retail investors, the Chinese stock market has definitely experienced a roller coaster start to the year.

Many questioned the motivation for the recent RMB devaluation, after the People’s Bank of China (PBoC) weakened the daily fixing rate by 1.9% in August 2015, the biggest single day move since 2005. It also announced a move towards a more market determined exchange rate by changing the process with which daily parity rates are fixed. On January 7, 2016, China again lowered its daily fixing rate by 0.5%, sparking global concerns that this was the beginning of a one-way weakening path. Many economic and financial issues within China are interlinked. Beijing has to grapple with multiple conflicting objectives when troubleshooting any particular economic woe, which creates the impression that it appears to be kicking the can down the road each time. To the uninitiated, it can definitely appear that China is simply fire-fighting problems each time and not going down to the root cause of many issues; however, if we look at China through the China lens, we might just realize that things are much more complicated than the external world can imagine.

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Figure 4: Share of equity financing as percentage of aggregate financing
(as % of aggregate financing)

Source: CEIC, 3Q15

Figure 5: RMB vs. USD
(RMB/USD)

Source: CEIC, January 2016
We do not believe that this is the beginning of a devaluation cycle, as frequent devaluations of the RMB may entrench self-fulfilling expectations and create a vicious spiral effect on capital outflows, which would then increase the need to further devalue the RMB to relieve the pent up pressure from capital flight.

- The RMB has appreciated significantly in the last few years, and export growth had definitely been affected, be it via a more expensive currency or just plain lethargic global demand. However it is unlikely to be the main reason for the recent RMB devaluations as the magnitude of the reference rate adjustments were too small to be deemed meaningful.

- These devaluations were perhaps also ‘lift the lid’ exercises to allow some steam to be released from China’s under-pressured foreign reserves holdings, given that capital outflows arising from economic concerns were exerting pressure on China’s foreign reserves if China were to continue to defend its currency. In fact over the month of December 2015, China’s foreign reserves fell by USD 108 billion, and hit a three-year low of USD 3.3 trillion at year end. It is definitely not a bottomless pit.

- By making the RMB more market oriented and determined, this is aligned with China’s exchange rate reform goal, which is a key pre-criterion for capital account opening.

Again, there are several interacting factors and a lot depends on China’s desired monetary policy and exchange rate regime. The oft-quoted ‘impossible trinity’ of finance is at play here. If China wants to maintain its monetary control over interest rates, and yet proceed with capital account liberalization, it cannot, theoretically, pursue a fixed (or very managed) exchange rate policy, as that would squeeze down domestic liquidity significantly through FX leakages.

Already, we would logically assume that China’s capital account is now semi-porous. With a flexible exchange rate transmission mechanism, capital outflows and depreciation pressures will be dictated more by market forces, and domestic liquidity will not have to be sacrificed to defend the currency. This helps to achieve the dual aims of ensuring sufficient domestic credit, and yet take another baby step towards full capital account liberalization.
4. What are the issues that matter, really?
We think many of the ‘crisis’ events that have happened over the recent few years are significant aberrations that are bound to happen during this transitional period.

Sifting through the noise, the economic concerns that really matter in China’s current context for the next few years are the following:

– Property sector slowdown;
– Leverage; and
– Overcapacity.

These are key themes that plague China’s economy at the moment, especially as it attempts to transform and rebalance. While a slowing economy exacerbates these economic concerns, they are endogenous in nature and in turn create a feedback loop on the economic softness of China, if not managed well. Any unexpected deterioration in those areas could create spillover financial damage that would derail the whole reform process. And as most of these issues do not stand alone, that often deepens the level of intricacy expected of Beijing.

There is a need to differentiate between issues that are terminal in nature, and those that can be resolved with the right policy prescriptions.

Given the complexity, we will not run through each issue in detail here, but provide an interlinked elaboration on why these are the issues we should pay attention to when we look at China now.

4.1 Real estate slowdown a drag on growth
A back of the envelope calculation reveals that contribution by the real estate sector to China’s GDP has been approximately 5.5% to 6.0% annually in recent years. If we include the construction sector, that would bring real estate’s direct and indirect contribution to GDP to approximately 13.0% since 2011. This may not be a precise number, but it does give us a sense of the importance of the property sector to China’s growth.

At this juncture, we probably need to remind the casual reader that real estate in China refers to more than just the residential sector, although we do acknowledge that the residential market remains the catalyst that sparked off the property boom (and gloom, of course), and continues to be a leading barometer of the state of the housing market.

Glancing back briefly at modern history, China’s property market made a late start in 1988, when the government embarked on preliminary reforms to open up the property sector. 1998 was the watershed year in which market participants were first allowed to buy and sell housing units. In less than twenty years, many property developers have moved on from being pure-play residential builders to dabbling in commercial property and even financial products. The local governments played a key role, no less, in the recent growth of the property sector in China. Stringent GDP targets and the need to provide for social services and infrastructure investments resulted in local governments selling vast amounts of residential land to generate revenue in order to fund headline growth.

Figure 7: Real estate floor space started and sold
(YoY, 3mma)

<table>
<thead>
<tr>
<th>Year</th>
<th>Commodity Building FS Started</th>
<th>Commodity Building FS Sold</th>
<th>Real Estate Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-40%</td>
<td>-20%</td>
<td>0%</td>
</tr>
<tr>
<td>2008</td>
<td>0%</td>
<td>20%</td>
<td>40%</td>
</tr>
<tr>
<td>2009</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>2010</td>
<td>120%</td>
<td>140%</td>
<td>160%</td>
</tr>
<tr>
<td>2011</td>
<td>180%</td>
<td>200%</td>
<td>220%</td>
</tr>
<tr>
<td>2012</td>
<td>240%</td>
<td>260%</td>
<td>280%</td>
</tr>
<tr>
<td>2013</td>
<td>300%</td>
<td>320%</td>
<td>340%</td>
</tr>
<tr>
<td>2014</td>
<td>360%</td>
<td>380%</td>
<td>400%</td>
</tr>
<tr>
<td>2015</td>
<td>420%</td>
<td>440%</td>
<td>460%</td>
</tr>
</tbody>
</table>

Source: CEIC, October 2015

Obviously, there was also latent demand for housing, both on the investment and the occupier ends, and land prices continued to soar alongside residential prices, especially as the RMB 4 trillion stimulus package introduced in the aftermath of the Global Financial Crisis (GFC) flushed the economy with liquidity.

The frothiness of the residential sector in key tier-one cities such as Shanghai and Beijing led to astronomical land prices (so called ‘land kings’ emerged every year), and residential developers subsequently moved on to lower-tier cities where land cost was relatively cheaper. This ‘buy and sell’ trading model of residential property created several colossal local developers and even more smaller developers all over China, many relying on the fundamental premise of ‘with flour, I can make bread’ and continued to land-bank in lower-tier cities. The price bubbles gradually moved on and started to form up across China.
As property prices soared beyond the reach of the common man, talks of an imminent property bubble were rampant, and Beijing embarked on a series of property cooling measures to normalize home prices in 2009. With the realization that the residential sector was prone to policy risks, developers had already gradually shifted their focus towards the commercial property sector.

Given the absence of a legitimate property tax system in China, local governments were, at the same time, vexing over how to generate recurrent tax revenues, in light of the cooling measures on the residential sector. Commercial land was the immediate solution, as the sales of commercial land often came with stapled commitments to generate employment and payment of recurrent business and income taxes. With that, the commercial sector started to develop rapidly, and many developers began to strata sell commercial property, resulting in the overbuilding of poorly managed office and retail space in most parts of China. Again, overzealous local government officials went to extremes, and poor urban planning have since resulted in multiple central business districts in many lower-tier cities, which can hardly be supported by the current level of business activities. To that end, ‘ghost towns’ and ‘zombie malls’ became fashionable phrases picked up by the media to describe desolate real estate space in China with almost no human traffic flow. The recent trend of decentralization is also partly a key result of the oversupply in commercial land, and which is now threatening to further exacerbate the slowdown in commercial real estate occupier dynamics in most parts of China.

Figure 8: Policy risks in China residential property (YoY)

Property prices have experienced several peaks and troughs since 2009, and were propped up by easy monetary and administrative policies. But in 2013, when the new leadership took on a steely approach to tame the property sector and reduce the property bubble that was forming and exerting spillover influence on over-investment and excessive domestic credit growth, these sparked the beginning of a multi-year decline in home prices and sales which we are still experiencing now. And the parallel slowdown in the economy further amplified its effects on the oversupplied commercial property space, creating a double whammy for the property sector, which ironically fed back viciously into the already ailing economy through falling investment growth and poor sentiments.

The impact of a slowdown in real estate extends beyond that transmitted through headline growth figures. On the financial end, many developers were and are still highly leveraged, and the sustained slowdown in property sales meant a disruption in their traditional model of churning and selling, which is affecting ability to meet loan and interest repayments (particularly so for pure-play residential builders). Coupled with a growing reliance on shadow banking, especially for
smaller developers with limited access to bank lending, this was a ticking time bomb waiting to explode.

As we elaborated earlier, local governments were not spared as many had collateralized land and infrastructure for off-balance sheet credit, which if under a mark-to-market system meant that many local governments were effectively in negative equity territory. Any high profile default would definitely ignite a domino series of liquidity pullbacks, possibly crippling the economy. And this is why a slowdown in the real estate sector extends its tentacles deeper than what we can perceive from the outside.

Figure 9: Residential floor space started and sold (YoY)

Such is the importance of the real estate sector to China.

So far, the slowdown in property has been gradual and managed, but it remains a drag on economic growth and a tail risk for the foreseeable future. (We talk more about the policy tools available to the Chinese leadership later in this report)

4.2 Leverage a poisoned chalice

Much has been said about China’s overleveraged economy, and many point to the fact that official and unofficial sources report China's leverage at easily more than 180% to 250% of GDP. Whichever the number, it is staggering for sure.

Let’s not take away any credit (no pun intended) from debt’s role in facilitating China’s exponential growth. There is no doubt that rapid credit growth in the past decade has helped China to ramp up its investment and consumption prowess, fuelling its growth and also building up its framework for domestic wealth creation. The world has largely benefitted from this huge consumer market and the strong trade flows that followed China’s boom. However, as we are seeing now, unwinding and deleveraging a complicated economy turbo-boosted by unsustainable credit is fast proving to be a herculean task, made even tougher by a softening economy and weakening industrial performance.

A media-heavy emphasis has always been placed on local government debt, and most people readily jump on the doomsday bandwagon without understanding the extent or implications of local government debt. As was mentioned in earlier sections, local government debt evolved as a means to plug the gap between fiscal revenue and expenditure of local governments, which were already auctioning limited land as a revenue source.

Under China’s legislative framework, local governments were not allowed to borrow from banks or tap the debt market directly. In order to circumvent this rule (as go-getting Chinese often do for many other rules), thousands of LGFVs were set up in the last few years, putting forward land and infrastructure projects as collateral in exchange for funding from informal sources. And to put things into context, at less than 40% of GDP, official local government debt is in fact considered low by international standards.

The key risk arising from LGFVs is that the market values of collaterals are often not appraised and most do not generate consistent cash flows. Given that the modus operandi was often the issuance of new debt to roll over old debt that appeared, prima facie, to resemble a Ponzi scheme. With pressure piling up on local governments and liquidity drying up as Beijing clamped down on shadow banking, the world
has been watching intently for any signs of a local
government default, which would mark the first of its kind
and potentially trigger off a domestic financial contagion.
Beijing is unlikely to allow any local government to default on
its debt outright, and this implicit guarantee from the central
government is a key assumption underlying why we do not
think a local government debt bust-up is on the cards.

Household debt is another part of China’s overall debt
structure that deserves a mention, not so much for its size or
risk, but really for its lack of scale. Just a few quick points on
this and we move on:

– Household debt is less than 35% of China’s GDP. In the
US, UK or South Korea, to name a few, that number is
easily in excess of 100%.
– In many economies, high household debt is often a
function of over-mortgaged households. In China’s case,
high minimum down payment for home purchases result in
low mortgage exposure. This is on top of China having one
of the highest savings rates in the world.
– The issue of affordability tends to draw the conclusion that
home buyers are overstretched relative to their incomes,
but that argument ignores the fact that low loan to values
and parental assistance often distort the affordability issue.
– China might have a property supply overhang situation, but
it does not have a housing credit bubble.

Figure 12: Comparison of household saving rates
(2014)

Figure 13: China’s outstanding debt
(As % of GDP)

The GFC showed that governments intervene and bail out
corporates and banks during periods of extreme stress by
buying their debts or providing guarantees. Beijing’s total
contingent liabilities are much higher than just government
debt for sure.

The real problem with credit is that it is a poisoned chalice. To
the extent that initial marginal returns from credit were sweet
on the lips, the debt ‘potion’ can turn toxic once the cost of
servicing runs ahead of the expected returns from productivity
gains. And by that, we refer to whether credit was put to
efficient usage to enhance corporate performance over the
period of extraordinary credit growth. Given that lending has
always been channeled mainly to the corporate sector, which
is dominated by state-owned enterprises (SOEs), the inefficient
allocation of credit resulted in credit-starved SMEs turning to
alternative sources of funding such as shadow banking. This
was happening even as SOEs continued to underperform
despite deep pockets and seemingly unlimited funding.

Even as the economy trended downwards, major SOEs
continued to soak up the already limited domestic liquidity
despite their inefficiencies and overcapacities, further
depriving the smaller domestic companies of much deserved funding. Industrial profits are continuing to diminish, and with credit getting harder to come by, many SOEs are effectively on life support now, barely being able to service existing debt with their earnings. If mass defaults of SOEs occur, it could pull the plug on the macro-financial fragility of China and trigger a liquidity crunch. In our minds, this is the key risk of China’s credit cycle and it ties in with our following discussion on over investment and overcapacity.

This section on China’s leverage problem is interlinked with the earlier segment on real estate slowdown. Bank lending to the real estate sector was approximately 22.0% of total outstanding loans as of September 2015. Given the high gearing ratios of most builders, compounded by a weaker RMB, both onshore and offshore debt servicing and repayment remains a significant challenge going forward. As we expounded earlier, the slowdown in real estate will definitely have an impact on the ability of developers to service their debts, and non-performance of loans could potentially lead to a domestic credit event.

There are case studies aplenty on why the paybacks from credit binges tend to be painful and prolonged. In the case of the US, unsustainable credit growth contributed to the global financial crisis in 2008, from which US has just managed to show signs of recovery. In Japan, despite most debt being held domestically, a protracted 20-year period of debt deflation was the agonizing outcome, and even now Japan continues to struggle with chronic after effects.

We take a balanced view here by highlighting the inherent risks with China’s credit cycle, but also note that most of China’s existing debt is domestic. To be sure, China’s external debt to GDP ratio was estimated at only 8.5% as at end 2014, which in comparison with Japan and US, makes China appear very safe.

Figure 14: Bank lending to real estate

![Bank lending to real estate](chart)

Source: CEC, 3Q15

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Corporate debt growth has been the main driver in China’s credit cycle, and we do believe it is reasonable to say that state-owned banks are essentially lending to state-owned companies, and that has been the case for a long time within the banking sector.

The differentiation between liquidity risk and credit risk is often intermingled, but we argue that the immediate concern with China should be credit risk, which is definitely not severe enough to warrant a financial collapse, however we look at it. Anecdotally, we estimate that more than 60% of financial institutions are controlled by the government, and that in itself means the odds of a Lehman-like liquidity pullback event is highly improbable, with Beijing pulling the strings.

Nonetheless, that is not to say that any fallout from China’s deleveraging process will be an easy affair; a systemic jolt and confidence shock is still no walk in the park for the nascent financial system, which is a critical component of China’s reform process.

4.3 Overcapacity may derail economic rebalancing

The problem of overcapacity manifests itself in many industries. In previously strategic sectors such as iron, steel, cement, glass and solar energy, the overcapacity rate has easily surpassed 25%. In the real estate sector, construction leading to a domestic credit event.

There was hardly any real incentive for SOEs operating in

- Depriving the smaller domestic companies of much deserved funding.
- Industrial profits are continuing to diminish, and with credit getting harder to come by, many SOEs are effectively on life support now.
- If mass defaults of SOEs occur, it could pull the plug on the macro-financial fragility of China and trigger a liquidity crunch.
- In our minds, this is the key risk of China’s credit cycle.
- This section is interlinked with the earlier segment on real estate slowdown.
- Bank lending to the real estate sector was approximately 22.0% of total outstanding loans as of September 2015.
- High gearing ratios of most builders, compounded by a weaker RMB, both onshore and offshore debt servicing and repayment remain a significant challenge.
- The slowdown in real estate will definitely have an impact on the ability of developers to service their debts, and non-performance of loans could potentially lead to a domestic credit event.

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There was hardly any real incentive for SOEs operating in
state-guided sectors to embark on true productivity gains, as near monopoly status naturally led to above average business performance and low costs of funding, which propped up profit margins artificially.

Figure 16: Excess capacity in selected key industries

From the early years of China’s opening up, until as recently as 2011, local governments were mainly appraised on their GDP growth performance. Eager to display ‘one-upmanship’ over peers, local governments offered substantial financial and tax subsidies to entice large companies to set up new manufacturing facilities and also build up the commercial property sector. And this competition happened not only between cities, but even within cities where district governments were generally not coordinated as a whole. More often than not, the frequent rotation of key party cadres and office holders led to nearsighted investment activities to extract the greatest political brownie points.

All these resulted in misaligned incentives to boost growth on paper, resulting in overinvestment and consequently overcapacity that is now a potential major precursor to huge non-performance of loans tied to the inefficient industries.

The good times lasted for as long as the economy was roaring and structural demand was consistently high across most sectors. It is a vastly different landscape now.

As we attempt to wrap our heads around the wastage and leakages arising from overinvestment and overcapacity, we estimate the Incremental Capital Output Ratio (ICOR) of China. The ICOR indicator measures the efficiency of gross investments and how that translates into GDP growth. Simply put, it refers to the extra unit of capital required to generate an additional unit of growth. In the seven-year period from 2001–2007 before China unleashed its RMB 4 trillion stimulus package in 2008, it essentially cost RMB 4.50 to generate one RMB of growth. Since 2008, that amount has increased by 35%; it now takes RMB 6.10 to generate the marginal one RMB worth of GDP growth.

Figure 17: Incremental capital output ratio

Figure 18: Industrial profits are stagnant (YoY)

Unless destocking happens rapidly and a restructuring of sclerotic industries and companies occurs smoothly, the drag will continue as resources continue to be allocated inefficiently, crimping the wider economy. And of parallel importance is the fear that underutilized industries trigger a series of financial defaults that would spill over from SOEs to many SMEs which may in turn become collateral damage.
5. Will the balls hit the ground?
We do not play down the key risks as described in the earlier section, and we are cognizant that the combination of a property sector slowdown, credit overhang and industrial overcapacity will continue to jeopardize the viability of China’s economy. And this is on top of the many economic and financial anomalies and events that have and will recur in the near term.

5.1 Significant policy headroom
Let’s not be surprised, China has a policy toolkit that is bursting at the seams. The key hurdle to Beijing unleashing a plethora of stimulating measures is that it is at the same time trying to navigate a concerted deleveraging of the economy. In 2008, during the GFC when more than RMB 4 trillion worth of credit was supplied to the market, it created a long tail of unintended economic effects which ultimately amplified the economic woes we are seeing today. The Chinese leadership is mindful that lessons must been gleaned, and it is now conscious not to over-extend its policy prowess.

Figure 19: Policy rates across major APAC economies

<table>
<thead>
<tr>
<th>Year</th>
<th>China</th>
<th>Australia</th>
<th>Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>8.0%</td>
<td>7.0%</td>
<td>6.0%</td>
</tr>
<tr>
<td>2002</td>
<td>7.5%</td>
<td>6.5%</td>
<td>5.5%</td>
</tr>
<tr>
<td>2003</td>
<td>7.0%</td>
<td>6.0%</td>
<td>5.0%</td>
</tr>
<tr>
<td>2004</td>
<td>6.5%</td>
<td>5.5%</td>
<td>4.5%</td>
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<tr>
<td>2005</td>
<td>6.0%</td>
<td>5.0%</td>
<td>4.0%</td>
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<tr>
<td>2006</td>
<td>5.5%</td>
<td>4.5%</td>
<td>3.5%</td>
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<tr>
<td>2007</td>
<td>5.0%</td>
<td>4.0%</td>
<td>3.0%</td>
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<tr>
<td>2008</td>
<td>4.5%</td>
<td>3.5%</td>
<td>2.5%</td>
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<td>2009</td>
<td>4.0%</td>
<td>3.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>2010</td>
<td>3.5%</td>
<td>2.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>2011</td>
<td>3.0%</td>
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<td>2012</td>
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<td>0.5%</td>
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<tr>
<td>2013</td>
<td>2.0%</td>
<td>1.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>2014</td>
<td>1.5%</td>
<td>0.5%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>2015</td>
<td>1.0%</td>
<td>0.0%</td>
<td>-1.0%</td>
</tr>
</tbody>
</table>

Source: CEIC, 3Q15; Oxford Economics, 3Q15

In the area of monetary policy, China has embarked on a series of monetary easing measures since late 2014. To date, there have been six policy rate cuts since November 2014, the most recent one being in October 2015. And notwithstanding that, one-year benchmark lending rates are currently at 4.35%, which if benchmarked against major economies’ existing policy rates, outlines China’s easing headroom. The required reserve ratio (RRR) has been at a high of 16% at the beginning of 2014, and has also been gradually reduced by the PBoC to ensure that sufficient credit continues to feed into the real economy, albeit at a managed manner. These targeted RRR cuts sought to ensure that credit is directed into sectors such as agriculture and infrastructure, rather than being misplaced into unproductive sectors.

The world has generally been living in a low inflationary environment for last few years, not helped by weak global demand and lethargic growth. Inflation within China has been very limited, especially as weak producer prices continue to exert deflationary pressure on prices. Again, this low inflationary environment is conducive to further policy rate cuts.

If we look at Japan, while inflation has been rather subdued, it has probably reached its policy rate floor and is unable to use this monetary lever effectively anymore (short of embarking on negative interest rates which the Bank of Japan has just introduced on January 29, 2016). Quantitative easing has resulted in a weak currency and that is perhaps the only real monetary tool that Japan has now. In the case of Australia, while there is still room for downward adjustments in benchmark policy rates, policymakers face the issues of further stoking house price inflation and exacerbating financial risks within the banking sector.

On the fiscal front, long-term reforms such as urbanization and infrastructure development will ensure that sufficient investment growth feeds into the economy through productive investments in public housing and railways.

5.2 Reforms will drive long-term gains
Reforms: the most convenient reason put forth by China bulls on why the economy will come through unscathed and continue to prosper indefinitely. This is an overly used and mis-quoted term, which may have roots in the frequency with which it has been widely used by the Chinese leadership in all mass propaganda.

The truth is, reforms are not just simply about urbanization or consumption, or anti-corruption measures, as most of us would have already heard of for the last few years. Instead, the entire China reform agenda spans several areas, mainly across the administrative, social, fiscal and financial aspects, and is likely to take at least five to ten years to see fruition. The unseen issue with reforms is that the agenda is complicated, copious and rather conflicting, and many reforms goals are long-term moving targets that will not solve China’s immediate problems. In addition, implementing structural reforms remains extremely difficult since the losers from structural reforms can be clearly identified, whereas the gains are spread over large groups of people. As such, those that lose from reforms tend to have a significant incentive to delay or hinder reform changes. More importantly, the unwavering political will to slay sacred cows is central to China’s restructuring success, and less so the pomposity of reforms, which are often hidden behind ambiguous wordings and uncertain timelines.
Figure 20: China’s reform agenda
(Selective reforms)

Figure 21: Reforms are interlinked and complicated

Source: Figure 20 National Development and Reform Commission (NDRC) of China, 12th Five Year Plan (2011-2015) & 13th Five Year Plan (2016-2020); UBS Asset Management, Global Real Estate Research & Strategy

Figure 21 UBS Asset Management, Global Real Estate Research & Strategy
Our view is that reforms are baby steps that will gradually alter China’s socio economic fundamentals, and overcome inertia to rebalance the economy amid urgent domestic financial concerns. Reforms are not a silver bullet. Over the next three years, some reforms will be more urgent with others less so. The ability to juggle multiple reforms is more essential than ever. If China can resolve problems in the property sector, debt overhang and industrial overcapacity, and yet not lose track of its long-term overarching goals, it can then create a solid framework for a balanced and healthy economy.

As we operate within the real estate space, we continue to pay attention to the ongoing progress of reforms, not so much for short-term arbitrage windows, but to constantly recalibrate our strategy against where we see the best opportunities arising from long term reform benefits and changes in socio-demographics.

We believe that reforms, if successful, will drive the long-term economic sustainability of China. If major reform success is not achieved under the watch of President Xi by year 2022, China is unlikely to break through the middle income trap and will continue to grapple with socio economic imbalances and a start-stop economy, notwithstanding that it will undoubtedly maintain its status as one of the largest economies.

5.3 Consumption to pick up some slack
Much have been said about China transitioning into a consumption based economy and indeed, consumption’s share of GDP growth has exceeded that of gross investments in the last few years.

![Figure 22: Consumption’s share of GDP](image)

Even so, weak PMI survey releases still hog the monthly headlines, as naysayers point to soft industrial sentiments as the leading indicator of an economic Armageddon. We think that the market is focusing too much on just one of the many indicators that can take the pulse of China’s economy. The fact that consumption and services now make up a larger portion of the economy means that using the PMI survey as the key economic barometer is no longer appropriate.

Retail sales have been growing faster than that of GDP, and household disposable income growth have also been very robust. To be sure, consumption is unlikely to be the lynchpin of China’s economy in the immediate future. Retail spending has continued to outstrip GDP growth but has slowed in recent years alongside the broader economy. However, we do take comfort that consumption has risen to the occasion and become a key economic pillar amid the general economic weakness.

![Figure 23: China retail sales growth vs. GDP](image)

Source: CEIC, Oxford Economics, December 2015

5.4. Liquidity risk is ring fenced
There have been many comparisons between China’s current debt situation and that of the US during the GFC in 2008. Again, what happened in the US, and subsequently prompted a financial contagion worldwide, was a classic case of unsustainable leverage built upon layers of sophisticated financial instruments and mis-valued underlying assets, of which the footprint had extended across wider parts of the global markets. Triggered by credit events in some global financial institutions, most notably Lehman Brothers and Bear Stearns, that quickly erupted into a worldwide liquidity pullback. The rest we know.

Is China any different this time? Yes and no.

To the extent that the Chinese economy has seemingly over cranked the debt machine in its bid for growth, and coupled with tepid global demand and overwhelming industrial overcapacity, we definitely do not dismiss the possibility of multiple credit events occurring in China within the next three to five years. Even now, there are already many reports of Chinese companies defaulting on loans and bond repayments, which is surely a sign of the festering credit weakness within.

However, there are three points here which can support our postulation as to why any credit fallout in China will not necessarily lead to a liquidity squeeze, as widely feared by the external world.
One, the huge proportion of debt is held domestically by domestic creditors, which ring fences a severe contagion impact. Next, there will be limited unforeseen unwinding of liquidity positions should there be a credit event, as the immature capital markets of China have not fostered the growth of financial derivatives and sophisticated financial products over the past decade. Thirdly, and most importantly, we estimate that more than 60% of financial institutions are directly and indirectly controlled by the central government, which will definitely not sit back and watch any credit implosion unravel, as that would challenge its political mandate. The combination of these three factors effectively limits, at the minimum, systemic risks associated with a credit bust within China.

To that end, the phrase ‘soft on the inside, hard on the outside’ is how we would describe what could potentially happen domestically and globally should a financial event occur in China. Inside China, there would likely be a ‘soft’ impact; but outside of China, external economies should most definitely feel the ‘hard’ pain arising from a sudden confidence crisis, as global financial and capital markets are bound to take a tailspin.

As the outside world continues to speculate on possible hard landing scenarios for China, our view is that while the stakes appear high and risks are indeed very real, Beijing does have significant levers and tools to mitigate most concerns. It may not seem obvious to most, but the key is not whether China has the headroom and policy tools to react, but whether these existing tools can be put to use in an effective and timely manner.
6. China real estate – Key views
As we formulate our views on the Chinese real estate space, we constantly remind ourselves that China is not a single market and the sheer size and number of regions and cities mean that multi-tier and multi-speed property markets are inevitable. Much of the country’s growth has been driven by local initiatives and developments over the years rather than by Beijing. There is an obvious heterogeneity amongst provinces, cities municipalities and counties, from the cultural aspects to the administrative features. Furthermore, despite China being a rather centrally commanded economy, the actual implementations of local policies and urban planning objectives are often not coordinated (even internally within a city) and may not necessary be fully aligned with the central government.

Essentially, ‘different markets, different strokes’ is how we dissect China real estate, and that guides our thoughts amidst an evolving landscape.

As is the case with industrial overcapacity, property markets across most major sectors and cities in China are dogged by oversupply concerns, and that will continue to be a key theme for the next three to five years at least, as destocking continues. International investors have noticeably become guarded in mobilizing capital towards China, even as domestic stakeholders continue to plough their resources into the domestic property markets, despite widespread concerns on oversupply and weak inventory digestion in both the residential and commercial sectors.

Our discussion does not seek to provide an answer on whether Chinese real estate is attractive (now and future) in terms of relative pricing and risk-adjusted yields, as that would entail a global comparison across key property markets. And as Europe and the US continue on their recovery paths, inadvertently, real estate investments in Asia Pacific, especially China, look to be unappealing in the short term. However, in taking a long term view on China’s market size and the upside potential of 1.3 billion real estate users – as well as businesses and property investors wanting to diversify their global exposure or entrench a solid presence in China – we will have to continuously cast our radar over Chinese real estate markets in order to build up core competency and know-how.

We remain fairly confident and optimistic on the long-term economic prospects of China. Undoubtedly, the economic cycles, capital cycles and occupier cycles in most Chinese property markets look to continue diverging in the near term, and this clearly impedes strategy formulation based primarily on a top-down approach.

Our investment belief is that in any lackluster market, there remain pockets of opportunities for the discerning. And this is especially so for China, where this rapid overbuilding phenomenon in the last decade has resulted in vast volumes of assets sitting across the nation, albeit on a very disparate quality spectrum. As much as there are scatterings of old and inferior grade buildings in the more developed tier-one cities, it is also not surprising to find institutional grade assets in most secondary Chinese markets.

As the services sector takes its place as a key driver of China’s economy, property markets in cities with strong services sectors will be the initial beneficiaries, as higher wages, stronger employment and demand for commercial space boost overall real estate demand.

### Figure 24: Breakdown of China’s administrative divisions

<table>
<thead>
<tr>
<th>Level</th>
<th>Municipalities (4)</th>
<th>Provinces (23)</th>
<th>Autonomous Regions (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prefecture</td>
<td>Sub-Provincial cities (15)</td>
<td>Other Prefecture level cities (276)</td>
<td></td>
</tr>
<tr>
<td>County</td>
<td>County-level cities (2,852)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Town</td>
<td>Towns (More than 40,000)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village</td>
<td>Villages (More than 700,000)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Republic of China (Taiwan) has been excluded from this Chart
Source: www.china.org.cn, August 2015; UBS Asset Management

Essentially, ‘different markets, different strokes’ is how we dissect China real estate, and that guides our thoughts amidst an evolving landscape.

While we also do not rely solely on a bottom-up methodology in China, we hold the view that in the next three to five years:

- **Sub-market and asset level selection should have first order priority over top-down market selection**;
- **Reforms will drive the shifts in property sector dynamics** (see Appendix)
- **In terms of sector preference, we generally prefer commercial over residential**, although we believe residential development may have legs in some markets if one is keen to move up the risk spectrum;
− We are largely market agnostic, as we believe that there are quality assets in most Chinese cities. But on a risk-adjusted basis, tier-one and gateway cities offer superior market depth and liquidity in the near term; and
− Distressed assets may appear on the market as smaller developers start to trim the fat off their balance sheets. However, most large local developers (which own prime assets in general), typically enjoy strong cash positions and access to capital markets, and are unlikely to face immediate financial stress.

6.1 Office sector
The legacy of uneven economic development means that coastal regions in China gained an edge over many northern or inland cities; consequently, office markets are more defined in coastal gateway cities. In lower tiered Chinese cities, construction of multiple CBDs in recent years has resulted in an overbuilt environment, which is hardly aligned with the density of business activities required to support short-term office absorption.

China faces an ageing issue and one of Beijing’s key reform goals is to intensify labor productivity, akin to what Japan has done in the last two decades to counteract its demographic deficit. Even so, Japan’s productivity growth has so far been limited to the manufacturing sector. There is still significant inefficiency in Japan’s services sector which constrains productivity growth.

And as the services sector gradually opens up, one crucial ingredient required for any office market to take off is an educated and skilled labor pool. Beijing, Shanghai and Guangzhou have the highest concentration of the top tertiary education institutions in China, and that is one of the reasons why the office sector in these cities have raced ahead of other cities.

Figure 26: Number of tertiary education institutions

![Number of tertiary education institutions graph]

Source: Ministry of Education, China, July 2014

Our views on the office sector are:
− We think that financial and professional services will drive office space demand in cities with strong educational resources and deep talent pools such as Shanghai, Wuhan and Xi’an among others;
− The decentralization theme (and supply glut) is likely to dampen office space demand and occupancy, especially in lower tier cities. It is therefore important to look at sub-markets, especially in Shanghai and Beijing, where sub-markets such as Little Lujiazui enjoy tight vacancy rates below 4%; and
− Given that office space is more homogenous than not, we generally do not encourage a value-add strategy in any over supplied office market. However, within key office sub-markets of tier-one cities such as Shanghai, new development land is almost non-existent and that creates opportunities for the refurbishment of ageing assets.

6.2 Retail sector
On the retail front, a deluge of decentralized retail space is expected to be completed across major cities in China. We believe that robust income growth and a high propensity to consume (rising middle class and material aspirations) will cushion the resilient leasing demand for retail space despite the surge in decentralized retail space and the recent austerity drive by the government.

Differentiated performances among retail sub-markets and assets are likely to become a key theme as mall operations become increasingly critical in the face of e-commerce retailing and supply overhang. This means that multi-speed investment and leasing markets will surface across China and even among sub-markets, with well-located and managed retail assets commanding huge capital values and rental premiums over their lesser counterparts.

Our views on the retail sector are:
− Investors with retail know-how will find solid opportunities in a fragmented market. We believe that in China, there are currently less than twenty developer-operators with a lifetime track record of building and managing more than 10 malls;
− Especially in lower tier cities, a significant proportion of retail malls are poorly designed (e.g. above 100,000 square metres in gross floor area), with lacklustre management. Although it exacerbates the oversupply situation, the majority of this supply is not meaningful; and
− Despite general retail over-supply, well-located and managed malls can still cater to middle class aspirations in key gateway cities. The next wave of retail opportunity will be in the decentralized areas where infrastructure connectivity is high and residential catchment is strong arising from urbanization.

6.3 Logistics sector
The logistics sector has a shorter development cycle than other real estate segments such as retail and office. In China, it takes only around 18 to 24 months from the point of land acquisition to first income generation. However in recent years, falling land supply and speculative development have
jacked up the development cost of industrial space and pushed down total returns, especially in tier-one cities. Despite slower growth prospects in China, we expect modern logistics space to continue expanding in the coming years on the back of e-commerce growth, rising outsourcing and expansion of organized chain retail.

Robust wage growth and a rising middle class are supporting the growth of consumer markets across China. There is now greater emphasis on efficiency in retailers supply chains and third-party logistics operators, a trend which is driving demand for modern logistics developments and networks across the region.

Property consultants such as JLL point out that at almost 30 million square meters, China’s quality grade logistics stock is at least five times smaller than that of the US. This means that there is still a structural under-provision of high quality logistics space in China, despite recent years of supply influx.

Our views on the logistics sector are:
– There is limited new industrial land in primary logistics hubs such as Shanghai, Guangzhou and Tianjin. Industrial land has never been revenue generating for local governments and investors with access to development land are able to scale up and offer customized products;
– Asset and location selection is more important than just randomly jumping onto the logistics bandwagon. Building to match real demand in locations near to ports and transport links will offer better returns;
– Operators with strong tenant networks and national scale will outperform. Operating one or two logistics facilities will not be operationally efficient as many chain stores require country-wide networks. And penetration is hard as the sector is dominated by a few major players such as GLP;
– We like specialized logistics sub-sectors such as road ports, bonded warehouses and in particular, cold chain storage. For one, the growth of the middle class has increased demand for fresh produce and dairy products. Also, the ongoing liberalization of the healthcare industry is expected to bring about huge investments into the pharmaceutical sector, of which cold storage logistics play a huge role in.

6.4 Residential sector
The short-term prospects for residential property in China continue to be dragged down by concerns, particularly for the lower tiered cities. To that end, the central and local governments have gradually relaxed restrictions on home purchases and loans in a bid to prop up residential demand. There appear to be some green shoots in this segment, but we believe that inventory destocking will take time.
In the first half of 2015, residential sales volumes in tier-one and tier-two cities reported their first positive year-on-year growths since 2013, and this theme has continued into the third quarter. Home prices have also seemingly bottomed out since May 2015 in many Chinese cities.

Our views on the residential sector are:

- Cyclical factors such as oversupply will continue to weaken sector outlook. Given the huge oversupply and homogeneity of residential property, structural factors such as urbanization will take longer to have an impact in the next five years. Cyclical opportunities do exist in tier-one cities, albeit at a riskier entry point on the development cycle; and

- We believe that home prices and sales volumes in tier-one cities are expected to turn the corner first with the renewed return of investment interest amid the relaxation of administrative measures.
## Appendix: Major reforms and impact on real estate

<table>
<thead>
<tr>
<th>Selected reforms</th>
<th>At a glance</th>
<th>Impact on real estate</th>
</tr>
</thead>
<tbody>
<tr>
<td>One child policy</td>
<td>Legacy policy from 1978 officially ended on January 1, 2016, allowing all married couples to have two children</td>
<td>• Residential - Limited immediate impact on property as the middle class may not necessarily choose to have more children due to current lack of healthcare and educational resources</td>
</tr>
</tbody>
</table>
| Household registration system (hukou)| Relax residency restrictions under hukou system and grant hukou to existing undocumented migrants | • Residential – Lower tier cities expected to support influx of new migrants  
• Retail and logistics – Better access to social security benefits will increase household consumption |
| Property tax                          | Fiscal reform to legislate nationwide property tax. Currently taxes are levied only on transactions, and not on a recurrent basis | • Additional source of income for local governments, which will cool down excessive sale of land  
• Will normalize oversupply issues across all property sectors in China |
| Rural land reform                     | Create rural land markets and give rural landowners property rights to sell land at market prices and migrate to urban areas | • In the longer term, the enhanced wealth of rural land owners, with hukou reform, will benefit urbanization and home demand in lower tier cities - Boost for inventory destocking |
| Bond market development               | Integrate China’s capital markets into global financial system; Deepen debt market; Development of municipal bond market | • Improve allocation of resources to bring down borrowing costs for corporates and local governments  
• Ensures that credit continues to be fed into the property sector according to market forces |
| IPO registration system               | Registration-based system for IPOs in place of the current approval-based system will speed up time to market and allow market forces to allocate resources | • Alternative access to capital will allow property sector to tide over period of instability amidst slowdown  
• Promotes the development of a REIT market, which will benefit the commercial property sector most |
| Liberalization of service sector      | Opening up of previously state-controlled sectors such as transport, finance, communications and healthcare | • Improve employment, incomes and spur consumption and real estate demand  
• Alternative real estate sectors such as healthcare real estate and pharmaceutical storage logistics will be huge beneficiaries |
| Infrastructure connectivity           | Expand current network of road, rail and air transport linkages within China | • Regional network of roads and railways will support development of logistic sector, especially in the western and inland regions  
• Better linkages will ensure orderly expansion of cities and real estate demand |
