

# Asia Strategy

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## The Rooster Crows

Addressing key investor concerns over China

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- **Debt** – Rising debt is a function of high and growing savings. China's debt to GDP ratio is lower than most DMs and is consistent with its savings rate among EMs. China's listed companies actually have lower leverage ratios than peers, yet they trade at lower valuations, further re-rating is likely.
- **Property** – Real estate is an instrument of savings and is supported by continued growth in wealth and savings, particularly now with tighter capital controls. Stricter property policy aims to prevent bubble, but is unlikely to cause bust.
- **RMB** – Continued depreciation is still likely, but the market is already accustomed to it. The \$3tn in reserves is still a lot of ammunition to stabilize the currency for years to come.
- **Trade and US relationship** – China's dependence on exports to US is low compared to many DM and EM peers, particularly among listed firms. The "Pivot to Asia" already strained US-China relationship. Some new thinking may be welcome, even if less predictable.

Cyclical upswing and investor flows

- China's recovery has led to tighter policy, which may lead to some volatility. But the immediate direction of the economy and earnings growth is still pointing upward.
- Policymakers would prioritize stability ahead of the Party Congress, particularly in currency and debt, limiting risks of spill over.
- Earnings growth is likely to pick up on reflation and steadier macro, while investor flows still favour HK market.

## The Rooster Crows

Two months into the year of the rooster, a lot has been said, but markets have not gotten much additional details on President Trump's agenda on either fiscal policy or protectionism. However, what is clear is that the global economy is doing better, as evident in recent PMIs and other macro data across major economies. This is helping to digest the pressure from higher rates and USD.

China had contributed meaningfully to these macro improvements, which have been somewhat reflected in markets. But there remain a lot of concerns over China's structural challenges, in particular, debt (banks), property, the Renminbi (RMB), and the relationship with the US. We address these concerns here and also note the cyclical upswing and the investor flow support.

### Debt – Mirror of savings

- Rising debt is a function of high and growing savings. Households and government have room to lever up, as corporates de-lever.
- China's debt to GDP ratio is lower than most DMs and is consistent with its savings rate among EMs.
- China's listed companies actually have lower leverage ratios than peers, yet they trade at lower valuations, re-rating is likely.

By far the biggest China concern is debt. The usual worry is that the 256% of GDP in non-financial debt would inevitably cause a crisis. The Chinese authorities are well aware of the risks and have placed managing corporate leverage as a top priority at this year's National People's Congress. We believe that corporate deleveraging is taking place, while household and central government can use additional credit to cushion the impact on the economy.

First, high debt is a direct result of high savings. China's saves 46% of GDP, despite already fast growing consumption. The savings had to be either invested or exported. Before 2008, net exports were surging with commensurate rise in investments and eating up the extra savings. But net exports shrunk after the global financial crisis, implying that the excess savings had to be shouldered by investment. And the principle way to channel savings to investment is through debt via banks. Otherwise, it would have been large capital outflows, currency depreciation and bigger trade surplus, which China's government painstakingly delayed until 2014. For the US and most trading partners, this delay had been a good public service.

Still, even at the lofty level of 256% of GDP, China's overall debt level is comparable to peers, according to data from the Bank of International Settlements (BIS). Developed Markets (DM) overall boast 280% debt ratio and have far higher government and household leverage, where China's is mostly borne by corporates (Figure 1), which is where most observers point to as China's Achilles' Heel.

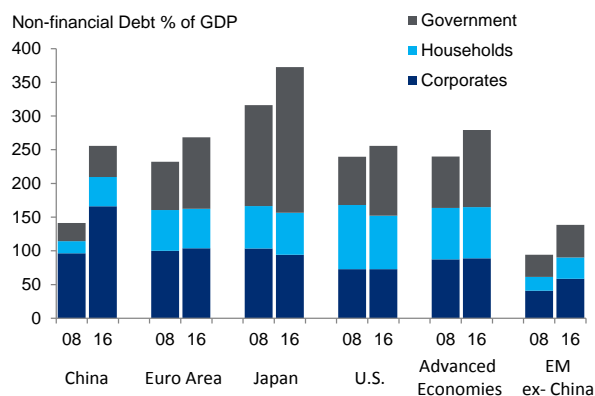
So how can China reduce corporate leverage? Let households and government borrow more. This may sound irresponsible, but is a path often travelled by EM economies moving towards DM, such as Korea and Japan. Indeed, China's corporate leverage ratio has begun to fall in 3Q 2016, the first since 2011 (Figure 2). And the household and government sectors picked up the slack, so that fuel for the economy is not completely lost.

**High savings and the inability to further increase net exports necessitates debt financed investment**

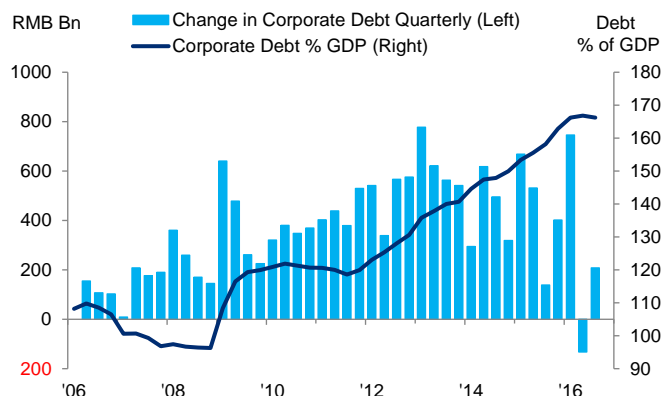
**China's debt to GDP ratio is lower than DM norms**

**Corporate deleveraging began in 2016**

**Households and government picked up the slack to cushion the overall economy**

**Figure 1: China's debt ratios are comparable or lower than most Advanced Economies**


Source: BIS, as of 3Q 2016

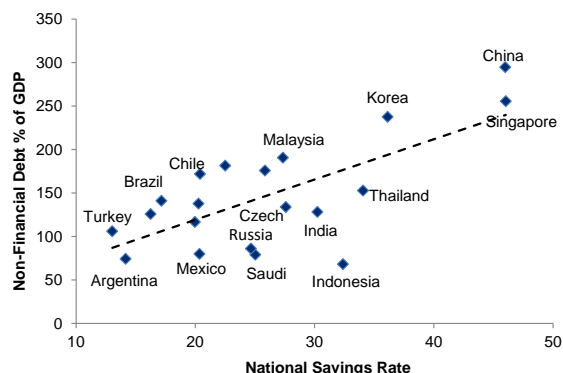
**Figure 2: Corporate debt accumulation slowed sharply in 2016**


Source: Haver Analytics, BIS, as of 3Q 2016

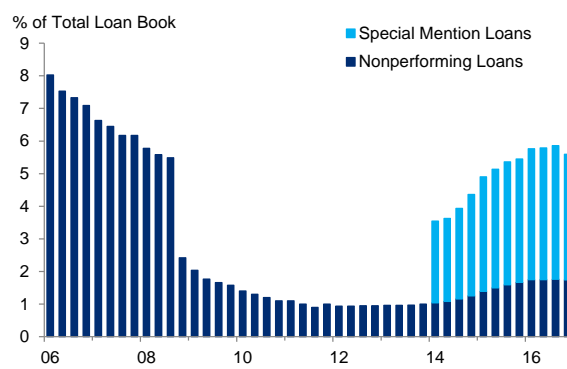
Compared to other Emerging Markets (EM), China's debt ratio does look high (Figure 1). But it is consistent with China's high savings rate, and not far from where one would predict based on the pattern among EMs (Figure 3). This comparison also shows that countries like Indonesia, with high savings and still low leverage, have tremendous potential to employ debt to fuel growth. Conversely, countries at the other end of the spectrum, like Turkey and Argentina, where both leverage and savings are low, aren't exactly formulae for success.

### China is managing its debt through extension, diversification and reflation

Managing debt can be achieved through a combination of extension, diversification and reflation. Among corporate debt, particularly those of state owned enterprises (SOEs), both borrowers and creditors (banks) are owned or controlled by the government. This allows for flexibility to manage the maturity schedule. Since 2014, regulators have pushed banks to move shadow activities on-book, while diversifying asset risks away to more investors, such as through distressed asset managers and the provincial bond swap. Recent reflation is also helping to reduce borrower credit risk and to widen bank margins, leading to reduction of problem loans (Figure 4).

**Figure 3: Among EM, China's debt ratio is consistent with its savings rate**


Source: BIS, as of 3Q 2016

**Figure 4: NPLs and Special Mention Loans have begun to fall relative to total loans**


Note: China Banking Regulatory Commission (CBRC) only started reporting special mention loans from 2014. Source: Haver Analytics, CBRC, as of 3Q 2016

**China's listed companies have comparable or lower leverage than peers, but also lower valuation**

Finally, China's listed companies' leverage is not particularly high compared to global peers, but they trade at lower valuation. We compared major stock indices in US, Europe and EM Asia with MSCI China and HK by sector. We used total debt to capital as the leverage measure and separated the sectors into high (>40%), medium (30-40%), and low (<30%). Chinese firms' ratios are lowest in the medium and low categories, and middle in the high leverage category (Figure 5). Yet, average valuations of these categories are also lower for Chinese firms (Figure 6). By contrast, US firms have the highest leverage, but also the highest valuations.

Investors should look at China's leverage agnostically, rather than based on pre-conceptions of impending disaster. As more macro improvements take place (see later section on "Cyclical Rebound and Investor Flows"), confidence may rebuild for China. The gap between leverage and valuations may appear widest for Financials (Figure 5 & Figure 6), which may also present the biggest re-rating potential.

Figure 5: China's listed companies have comparable or lower leverage ratio to global peers

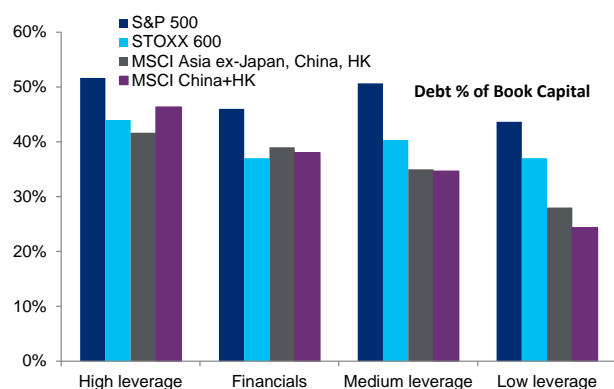
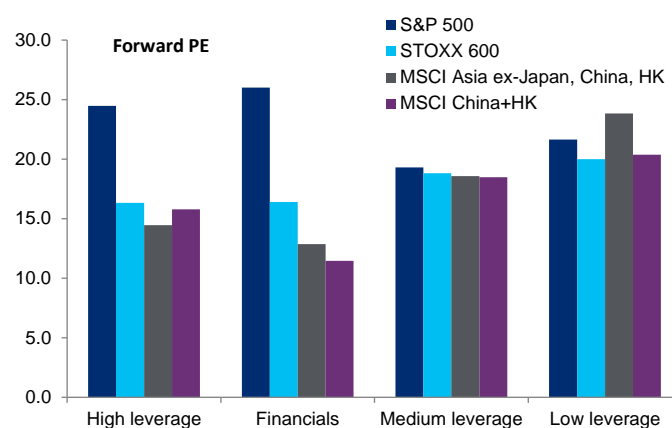


Figure 6: But China's valuations are generally lower



Note: High leverage sectors include Materials, Utilities and Energy. Medium leverage sectors include Staples, Industrials and Discretionary. Low leverage sectors include Telecom, Tech and Healthcare. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Source: Bloomberg, as of 7 March 2017

Source: Bloomberg, as of 7 March 2017

**Property – Instrument of Savings**

**Real estate is supported by wealth and savings**

China's real estate market often elicits dire predictions, but it is likely to remain sanguine in coming years. Property is a channel to store savings, in addition to a place of living. So, again, savings is the more important metric, rather than affordability by the average wage earner.

As noted earlier, China saves 46% of its GDP and still generates 8-10% per capita income growth. While interest rates are rising and capital account controls severely limit global asset allocation, real estate and equities are the only asset classes large enough to park captive wealth. Often, several generations of savings are committed to purchasing a property.

Since 4Q 2016, draconian purchase restrictions and mortgage curbs have been put in place. Higher interest rates are expected to slow down mortgage lending. It is

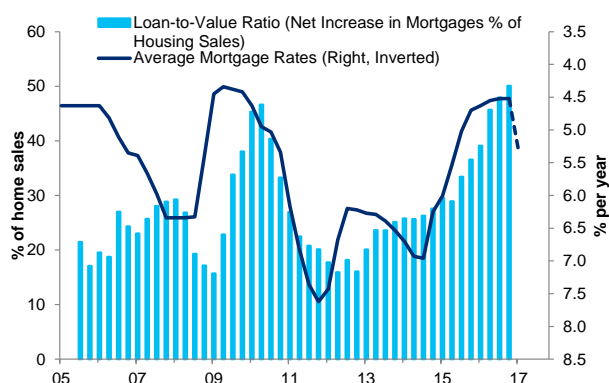
notable that the average loan to value ratio for new purchases has been rising as interest rates declined in recent years (Figure 7). As rates rebound, sales volume is likely to see further decline.

Still, property prices only flattened after a 10% rise in 2016, according to 70-city average price data. Meanwhile, construction starts lag and are likely to still pick up in 1Q 2017, possibly peaking in 2Q 2017 (Figure 8). This is likely to weigh on GDP in 2H, which is likely to cause some relaxation of policy by yearend.

### Tightening aims to stabilize prices and may weigh on growth in 2H

In this backdrop, prices are unlikely to make major moves either way, which is basically the policy objective. Top tier cities and others with growing populations may continue to see demand matching or exceeding supply. This is especially the case where local governments have begun to limit average selling price and land sales, such as in Shanghai. Lower tier cities with inventory glut are effectively out of the market. Under tighter policy, consolidation is likely to intensify among developers.

Figure 7: Mortgage Loan-to-Value ratio vs. Mortgage rates



Source: Bloomberg, as of 7 March 2017

Figure 8: Policy tightening has reigned in prices and sales, while construction may start to slow mid-2017



Source: National Bureau of Statistics, PBOC, Bloomberg, as of February, 2017

So when will the property market run into real trouble? We see three possible scenarios, none of which are likely in the near term.

### True challenges for China's property market appear unlikely near term

- If property tax is levied annually as a percent of assessed value, which could force owners of multiple properties with low current income to sell. This was left out of the National People's Congress just concluded, likely in consideration for stability in this politically charged year. However, it may be high on the agenda for President Xi's second five-year term (2018-22) to sort out the interest groups opposed to this tax.
- If China fully opened its capital account, private savings may leave in large quantities, including selling property. But this is unlikely until the RMB is at a stable level, which we suspect could take several years.
- When population decline intensifies, there may be pressure to sell as too many properties get passed onto one generation. But that is not expected until well after 2030.

In sum, the supply and demand for property in China is still relatively healthy.

## RMB – \$3 trillion is still a lot of money in 2017 or 18 or 19...

**RMB depreciation may continue at 3-5% per year, tolerable for China's reserve managers and global markets**

The RMB may weaken further in 2017, but markets have gotten accustomed to this, so long as it is a gradual process. From March and December 2016, the RMB depreciated by 8% against the USD, far more than in 2015. But unlike in 2015, this weakening was expected by the market. Currently, market expectations are 3-5% depreciation in 2017 (Figure 9), which is likely if the USD strengthens further, but is also milder than last year.

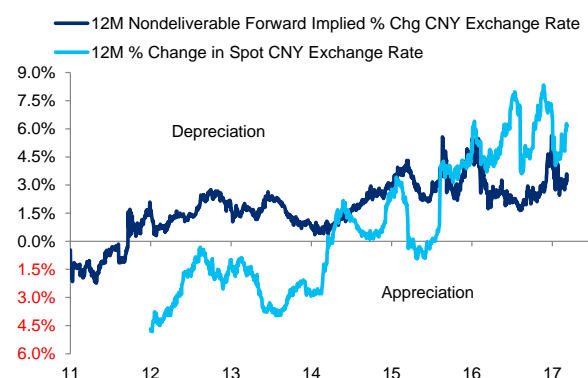
FX reserve erosion is ongoing and may continue to for several years, but the pace has become more manageable under strict capital controls. From mid-2014 to early 2016, the average monthly decline in FX reserves was about \$40bn. But since capital controls intensified early last year, the average pace of erosion has slowed down to \$16bn per month (Figure 10).

China's total external debt in foreign currency is about \$863bn as of 3Q 2016. Even if all of HK's external debt is added in, it would still be \$1.1tn. China's FX reserves of \$3.0tn can still amply cover external debt, not to mention China's \$210bn in current account surplus. This does not mean that depreciation is over, just that China's authorities have ample ammunition to stabilize the currency for years to come.

The other factor is of course the USD, which remains the most influential currency on the value of the RMB. The prospects for US fiscal stimulus, growth, inflation, and interest rates are going to be significant drivers of the RMB. Since Jan 2017, we've seen a stronger willingness by the PBOC to tighten monetary policy to restrain credit growth, and cause interest rates to rise. This will help to limit RMB depreciation as well. Stronger macro conditions and reflation are likely to keep the PBOC focused on maintaining RMB stability this year, particularly as we approach the 19<sup>th</sup> Party Congress.

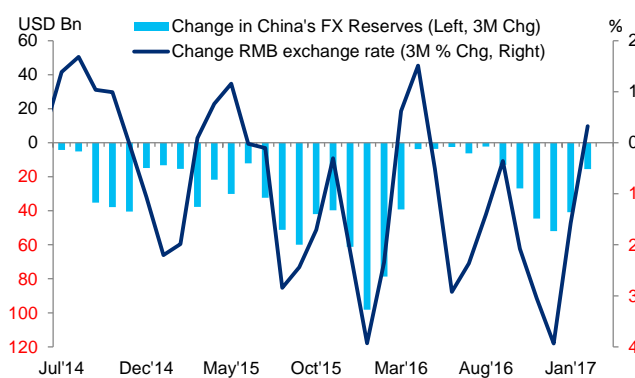
With that understanding, gradual currency adjustments would unlikely cause market upheaval, either in China or globally.

Figure 9: Continued depreciation is expected by the market, though less severe than in recent past



Source: Bloomberg, as of 7 March 2017

Figure 10: FX reserve erosion has slowed down under capital controls despite continued depreciation



Source: National Bureau of Statistics, PBOC, Bloomberg, as of January, 2017



## Trade & US Relationship – Limited exposure & “new thinking”

Closely related to the RMB is the relationship between the US and China. Significant saber rattling by candidate Trump against China on currency and trade had not translated into concrete action by President Trump. Moreover, China’s dependency on trade with the US, particularly for its listed companies, is not very large.

**China is responsible for nearly two thirds of the US trade deficit**

On trade dependency, the nominal numbers are impressive. In 2016, the US imported \$480bn of goods and services from China, nearly triple the \$170bn in exports to China. As a result, China accounted for 62% of total US trade deficit. From another angle, US accounted for 18.8% of China’s total exports, a share that has actually been slowly rising since the USD began to appreciate in 2011 (Figure 11), while China’s import share from the US has stalled at about 8.5% since 2015.

**But exports to US amounts to just 3.5% of China’s GDP, and less for listed firms’ revenue**

However, China’s direct exposure to trade with US is actually relatively small, particularly for listed firms. since peaking in 2007, China’s total exports’ share of GDP dropped by nearly one half to 18% in 2016, such that the 18.8% that went to the US amounted to just 3.5% of GDP. By comparison, Malaysia, Taiwan and Korea have exposures between 7 and 11% of GDP.

This comparison is even more striking when viewed at a firm level. Among the members of the MSCI China index, only 12% of revenues come from outside of China. If we assume the same share going to the US, then the revenue exposure would be just 2.2% (see Jason Sun, *Trump’s Trade and Tax Policy*, 18 Jan 2017).

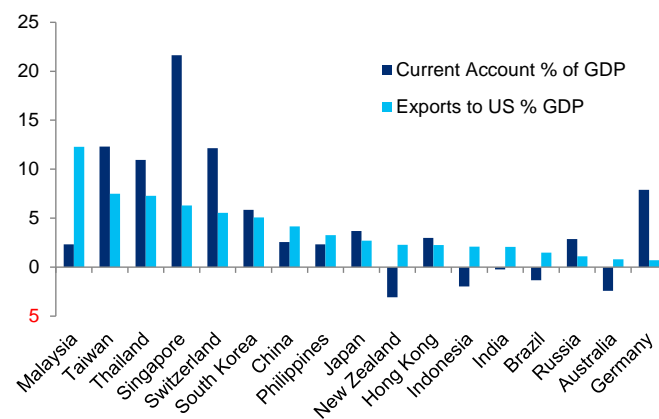
This may serve little comfort to US trade hawks, and the trade relationship with the US is still important, but it does mean that China’s listed companies can be resilient to moderate levels of protectionism. By contrast, smaller economies like Malaysia Taiwan and Korea may be more vulnerable to unfriendly trade actions by the US (Figure 12).

Figure 11: Exports to the US amounts to 18.8% of China’s total exports, and 3.5% of China’s GDP



Source: Bloomberg, as of Feb 2017

Figure 12: China’s exposure to trade with US is not particularly high compared to many EM and DM peers



Source: IMF, Haver Analytics, as of 3Q 2016

### The US-China relationship had been strained under “Pivot to Asia”

On the bilateral relationship, some “new thinking” might not be a bad thing. It is noteworthy that under President Obama, the main US policy was “Pivot to Asia”, which was initiated under Secretary Clinton. This policy involved broad support of countries that had territorial disputes with China and the Trans-Pacific Partnership (TPP). The TPP excluded China and presented difficulties for other trade negotiations that China promoted. Both were issues that stalled progress on other bilateral negotiations, such as the Bilateral Investment Treaty. Without making any political judgments, the pivot to Asia objectively strained the US-China relationship.

Ironically, US support did not seem to help with domestic sentiment. The Philippines, and now Korea, have seen domestic issues supersede the external in driving national politics. It remains to be seen how the upcoming election might change the course for the Korean Peninsula, but there may be more room for adjusting positions, with a new administration in Korea.

Other recent developments suggest that the new US administration’s position on China is more flexible than portrayed during the campaign. President Trump reaffirmed the US commitment to the “one-China” policy, which he had threatened to ignore just weeks earlier. The currency manipulator issue had been broadened to a long list of countries that have contributed to the US trade deficit (Figure 12), rather than focusing on China. And China recently approved a long list of trademark applications by businesses owned by Trump and his family.

Protectionism may still be forthcoming from the US, such as the Border Adjustment Tax (BAT). But the intention is as much to promote export growth as it is to punish imports. The BAT's potential lift on US inflation, reduction in US competitiveness and even job cuts at importers like retailers are strong arguments against such a tax. We would only expect a partial tax to be politically feasible.

In sum, we are well aware that US policy is less predictable, but in areas where the preceding policies have not produced great results, this is not necessarily a bad thing. Fiscal stimulus instead of monetary is one such example. Some new thinking in trade and diplomatic strategy in Asia might be another.

### Cyclical rebound and investor flows

- China’s recovery has led to tighter policy, which may lead to some volatility. But the immediate direction of the economy is still pointing upward
- Policymakers would prioritize stability ahead of the Party Congress, particularly in currency and debt, limiting risks of spillover
- Earnings growth is likely to pick up on reflation and steadier macro, while investor flows still favor HK market

With the understanding on structural issues, it is not difficult to see the growth rebound over the past year. In fact, purchasing manager’s index (PMI) points to more upside in GDP growth in coming quarters (Figure 13), making it possible to keep growth at around the targeted 6.5% this year even if a slowdown takes place in second half.

At the same time, credit growth remained aggressive, with RMB4.9tn (USD 710B) of total new financing in Jan-Feb, which would contain refinancing risk from last year’s

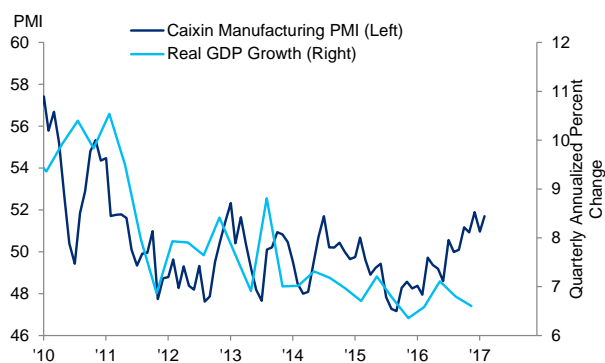
### Adjusting strategy may be welcomed, even if less predictable

### Growth may still pick up near term on credit boom and reflation



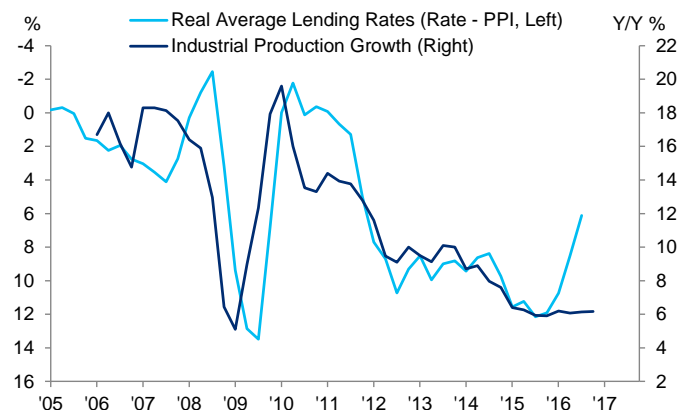
credit boom. Rising growth came with rising inflation, as commodity prices recovered and industrial deflation turned to inflation, with PPI rising from -5.4% y/y last January to 7.8% y/y this February. This is boon for corporate profits.

Figure 13: PMI points to further near term upside to economic growth



Source: Caixin, Bloomberg, as of February 2017

Figure 14: Reflation has helped to bring down real borrowing costs, which remains supportive of growth



Source: National Bureau of Statistics, PBOC, Bloomberg, as of February, 2017

**Despite initial tightening and higher rates, real borrowing costs remain supportive of growth**

With solid growth, the Peoples Bank of China (PBOC) has taken steps to tighten credit, even though it still officially holds policy stance at neutral. The rates on liquidity facilities were raised twice in two months, open market operations slowed, and the PBOC provided window guidance to banks to curb lending broadly. Just after the National People's Congress (NPC), the PBOC also marginally tightened capital requirements, particularly for smaller regional banks that have been aggressive in lending.

Still, real rates remain conducive to growth. Market rates have risen, with corporate bond yields at a two-year high. Still, with higher inflation, real lending rates remain consistent with higher growth (Figure 14). We would expect the tightening policy tilt to remain until growth momentum turns negative.

With the tightening tilt and the passage of the NPC, there may be some pressure on Chinese equities. The MSCI China index had already gained 12% year-to-date. Some shakeup might be due. But earnings growth is likely to support share prices beyond near term volatility.

**Reflation is helping to revive earnings growth**

Corporate earnings are growing again after years of lull. MSCI China EPS growth fell from 50% during the massive credit stimulus of 2009-10 to -30% last year amid industrial deflation. Now, reflation has already lifted earnings growth (Figure 15), while banks have expanded margins with higher rates and more diversified asset risks. EPS growth may top 10% in 2017 as a result.

**Diversification needs of mainland investors are fueling inflows to HK**

Moreover, the growing need for diversification from mainland investors boosted fund inflows to Hong Kong despite lackluster flows from other global investors. The amount of inflows to Hong Kong via the Shanghai and Shenzhen equity connect programs amounted to HKD2.5bn per day after Chinese New Year. The turnover

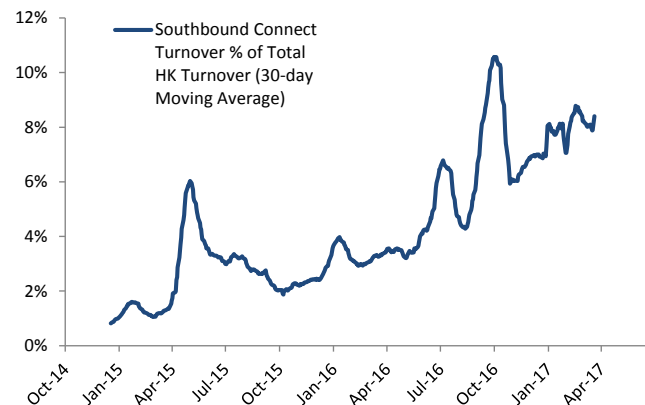
now accounts for over 8% of total HK turnover, higher than even the 2015 bubble period (Figure 16). This trend is likely to continue as the connect programs are the only legal and freely usable channels for mainland investors, particularly insurance and pension managers, to diversify from RMB risk.

Figure 15: Earnings growth may have begun to turn around under reflation



Source: MSCI, Bloomberg, National Bureau of Statistics, as of 28 February 2017. Indices are unmanaged. An investor cannot invest directly in an index. They are shown for illustrative purposes only. Past performance is no guarantee of future returns. Real results may vary.

Figure 16: Inflows from mainland account for rising share of HK turnover



Source: Bloomberg, as of 9 Mar 2017

## Strategy Bulletins – Previous Publications

Title	Publication Date
U.S. Tax Cuts, De-Regulation and Yes, Border Adjustment	March 01 2017
Same Fed, Different Reaction? Reallocating to Rate Risk	December 16 2016
How Much US Growth Potential Is There and How Fast Can Trump Fill It?	December 01 2016
"Brexit Playbook" for Investing Amid US Political Shock	November 09 2016
New Era of U.S. Policy Uncertainty	November 09 2016
European Bank Woes Don't Signal Repeat of 2008	October 03 2016
Global Bond Market "Taper Tantrum" Likely to Be Self-Limiting	September 12 2016
Yellen Advocates Activist Monetary Policy, Leaves Negative Rates Out of Her Toolkit	August 26 2016
What's up with LIBOR?	August 17 2016
The U.S. Labor Market's "Inconvenient" Outperformance	August 05 2016
Divided UK Public Holds Key to World Markets Outlook Near-Term	June 13 2016
Up What? U.S. Employment Data Remind us of Huge Capacity to Surprise. Now Fed Can Wait	June 03 2016
FOMC Minutes Comment: Tiny Rate Hikes = Huge Uncertainties	May 18 2016
Bond Market Monthly – It's Never Easy	May 06 2016
Japan and US: Foiled Again By Great Expectations	April 28 2016
Markets Roiled By Sudden Policy Shifts	April 08 2016
U.S. Labor Market Shows Both Growth and Growth Potential; Is Fed Policy Now a Pro-Cyclical Risk?	April 01 2016
ECB Goes Big after December Sputter. Be Patient for Market's True Verdict	March 10 2016
Risky "Brexit" is not our base case	February 26 2016
World Markets Gripped in Circular Growth Panic	February 09 2016
Surprise, Stumble, Fall, Not "Doomsday" Revisited	January 21 2016
China Risks Reloaded	January 15 2016
2016 Asia Outlook - Treading Water	January 11 2016
China Revives the Risk that Drove August Swoon	January 6 2016

## Quadrant – Previous Publications

Title	Publication Date
Fast and Furious	February 21 2017
Now, About Those Promises...	January 27 2017
Reflation and Uncertainty	November 18 2016
World Bond Market Exhales	October 21 2016
Is it Risk or Reality?	September 26 2016
Converging on Zero	August 19 2016
US Elections, Risk and Reward	July 25 2016
Six Continents, Only One Brexit	July 06 2016
Hedge or Brave it Out	May 23, 2016
Central Banker Fears = Market Cheers	April 22, 2016
Seek Compensation for Volatility	March 21 2016
Oil: Tail that Wags the Dog	February 26 2016
China Risks Reloaded	January 15 2016
Tragedy and Triumph	November 23 2015

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## Asset allocation definitions

Asset classes	Benchmarked against
Global equities	MSCI All Country World Index, which represents 48 developed and emerging equity markets. Index components are weighted by market capitalization.
Global bonds	Bloomberg Barclays Capital Multiverse (Hedged) Index, which contains the government -related portion of the Multiverse Index, and accounts for approximately 14% of the larger index.
Hedge funds	HFRX Global Hedge Fund Index, which is designed to be representative of the overall composition of the hedge fund universe. It comprises all eligible hedge fund strategies; including but not limited to convertible arbitrage, distressed securities, equity hedge, equity market neutral, event driven, macro, merger arbitrage and relative value arbitrage. The strategies are asset-weighted based on the distribution of assets in the hedge fund industry.
Commodities	Dow Jones-UBS Commodity Index, which is composed of futures contracts on physical commodities traded on US exchanges, with the exception of aluminum, nickel and zinc, which trade on the London Metal Exchange (LME). The major commodity sectors are represented including energy, petroleum, precious metals, industrial metals, grains, livestock, softs, agriculture and ex-energy.
Cash	Three-month LIBOR, which is the interest rates that banks charge each other in the international inter -bank market for three-month loans (usually denominated in Eurodollars).
Equities	
Developed market large cap	MSCI World Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the equity market performance of the large cap stocks in 23 developed markets. Large cap is defined as stocks representing roughly 70% of each market's capitalization.
US	Standard & Poor's 500 Index, which is a capitalization -weighted index that includes a representative sample of 500 leading companies in leading industries of the US economy. Although the S&P 500 focuses on the large cap segment of the market, with over 80% coverage of US equities, it is also an ideal proxy for the total market.
Europe ex UK	MSCI Europe ex UK Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in each of Europe's developed markets, except for the UK.
STOXX 600	The STOXX Europe 600 Index has a fixed number of 600 components, representing large, mid and small capitalization companies across 18 countries of the European region.
Japan	MSCI Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure large cap stock performance in Japan.
Asia Pacific ex Japan	MSCI Asia Pacific ex Japan Large Cap Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure the performance of large cap stocks in Australia, Hong Kong, New Zealand and Singapore.
China & HK	The MSCI China Index is a free-float weighted equity index, representing Chinese companies listed in Hong Kong, as well as American Depository Receipts listed in the US. MSCI HK Index is a free-float weighted equity index, representing HK companies listed in HK.
Emerging market	MSCI Emerging Markets Index, which is free-float adjusted and weighted by market capitalization. The index is designed to measure equity market performance of 22 emerging markets.
Bonds	
Developed sovereign	Citi World Government Bond Index (WGBI), which consists of the major global investment grade government bond markets and is composed of sovereign debt, denominated in the domestic currency. To join the WGBI, the market must satisfy size, credit and barriers-to-entry requirements. In order to ensure that the WGBI remains an investment grade benchmark, a minimum credit quality of BBB-/Baa3 by either S&P or Moody's is imposed. The index is rebalanced monthly.
Emerging sovereign	Citi Emerging Market Sovereign Bond Index (ESBI), which includes Brady bonds and US dollar -denominated emerging market sovereign debt issued in the global, Yankee and Eurodollar markets, excluding loans. It is composed of debt in Africa, Asia, Europe and Latin America. We classify an emerging market as a sovereign with a maximum foreign debt rating of BBB+/Baa1 by S&P or Moody's. Defaulted issues are excluded.
Supranationals	Citi World Broad Investment Grade Index (WBIG)—Government Related, which is a subsector of the WBIG. The index includes fixed rate investment grade agency, supranational and regional government debt, denominated in the domestic currency. The index is rebalanced monthly.
Corporate investment grade	Citi World Broad Investment Grade Index (WBIG)—Corporate, which is a subsector of the WBIG. The index includes fixed rate global investment grade corporate debt within the finance, industrial and utility sectors, denominated in the domestic currency. The index is rebalanced monthly.
Corporate high yield	Bloomberg Barclays Global High Yield Corporate Index. Provides a broad-based measure of the global high yield fixed income markets. It is also a component of the Multiverse Index and the Global Aggregate Index.
Securitized	Citi World Broad Investment Grade Index (WBIG)—Securitized, which is a subsector of the WBIG. The index includes global investment grade collateralized debt denominated in the domestic currency, including mortgage -backed securities, covered bonds (Pfandbriefe) and asset -backed securities. The index is rebalanced monthly.

## Asset allocation definitions

Indices	
CFETS RMB Basket Index	The China Foreign Exchange Trade System (CFETS) RMB currency basket measures the RMB versus foreign exchange currency pairs listed on CFETS. This index refers to the currency basket accepted by CFETS and the 13 currencies which make up the basket were selected based upon international trade-weights with adjustment of re-export trade factors.
DXY Dollar Index	The U.S. Dollar Index (USDIX) indicates the general international value of the USD. The USDIX does this by averaging the exchange rates between the USD and major world currencies. The ICE US computes this by using the rates supplied by some 500 banks.
iBoxx Asian US dollar Bond Index	Markit is a global index provider which is involved in designing, administering and calculating this index that covers USD segments of Asian fixed income markets.
CRB Industrial Commodities Price Index	A Thomson Reuters/CoreCommodity Excess Return Index which uses an arithmetic average of commodity futures prices with monthly rebalancing.

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