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China – Exerting its influence over Asia

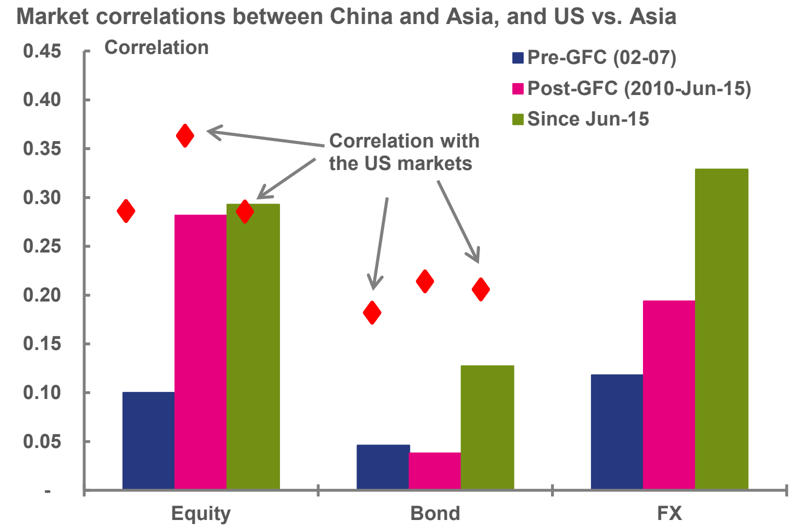
Assessing China's economic and financial spill-overs in the region

Key points:

- The economic and financial influence of China on the rest of Asia has grown in recent years, thanks to its rising economic power and growing trade and investment ties with other countries.
- Significant, albeit uneven, trade exposure means that Asia is vulnerable to China's economic slowdown. However, not every country stands to lose from China's economic rebalancing, given their different sector exposures.
- Financial market correlations between China and Asia have risen markedly, as the former liberalises the capital account. Our analysis revealed a significant and growing influence of China on other Asian markets since the liberalisation of the RMB (*Exhibit 1*).
- Aggregating economic and financial market linkages, we estimate that a 1 percentage point (pp) decline in China's GDP could lower Asia's growth by up to 0.4pp (*Exhibit 2*). The impact on developed-market economies is smaller but statistically significant for the US and EU.
- Results of this study mean that some of Trump's economic policies – on trade and FX (e.g. labelling China a currency manipulator) – could have a far-reaching impact on the rest of Asia, even if they are designed to affect only the Sino-US relations.

Exhibit 1

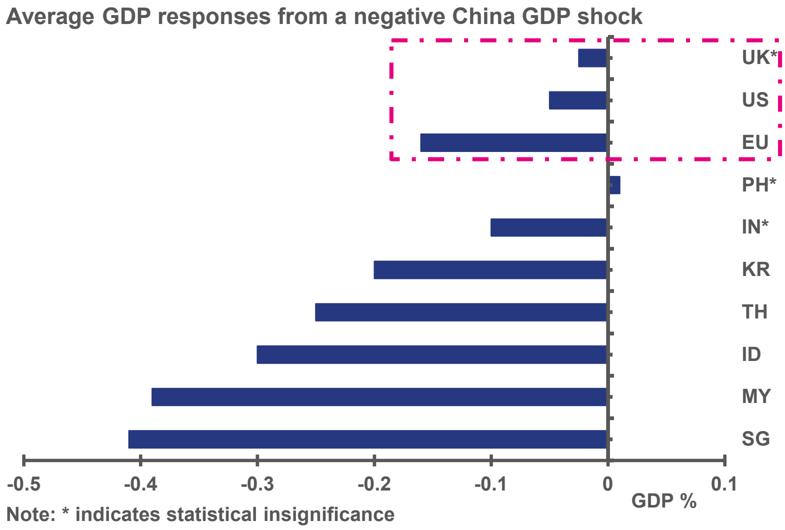
Capital market correlation rises sharply since mid-2015



Source: Bloomberg, and AXA IM Research

Exhibit 2

Overall impact of China shocks is large but uneven



Source: International Monetary Fund (IMF) and AXA IM Research

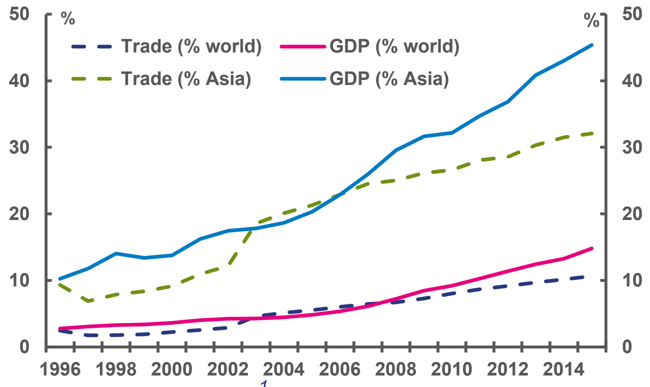
China – an emerging economic superpower

The rapid growth experienced by the Chinese economy has made it one of the greatest economic success stories of the past century. Its meteoric rise not only lifted hundreds of millions of people out of poverty, but the growth dividend also spread across the globe via trade and financial markets (particularly through commodity prices). Today, China is the world's second largest economy and trading nation, commanding 15% and 11% of global GDP and trade respectively. These shares were less than 3% some twenty years ago (*Exhibit 3*). In Asia, China's dominance is even more striking, reflected in its 32% and 45% shares in the region's trade and GDP.

Exhibit 3

China grows its economic clout

China's shares of world and Asia GDP and trade



Source: World Bank, CEIC[1], and AXA IM Research

Apart from its vast economic size, China has also become a key source of financial market volatility. This channel of influence has grown markedly post the global financial crisis (GFC), and particularly since mid-2015 following the liberalisation of the RMB. Today, the FX market is a powerful propagator of China risks, and any large moves in the RMB can generate sizable spill-overs across Asia and beyond.

To properly assess its influence, we examine the key channels of transmission of China shocks in emerging market (EM) Asia. Our analysis reveals a large but uneven influence from China via trade and financial markets, along with some interesting results on the potential winners and losers from its economic rebalancing. We conclude by highlighting policy and market implications, particularly in relation to the current tussle between China and the US, and how Asia may be impacted by contagion.

China dominates by trade

As Asia's largest export market, trade remains the dominant link connecting China and other countries. Gross exports to China accounted for almost 30% of Taiwan's GDP, followed by Malaysia at 18%, with Korea, Singapore and Thailand all shipping more than 10% of GDP worth of goods to the Middle Kingdom (*Exhibit 4*). But not all of these exports are consumed in China's domestic market, given its role in the global supply chain.

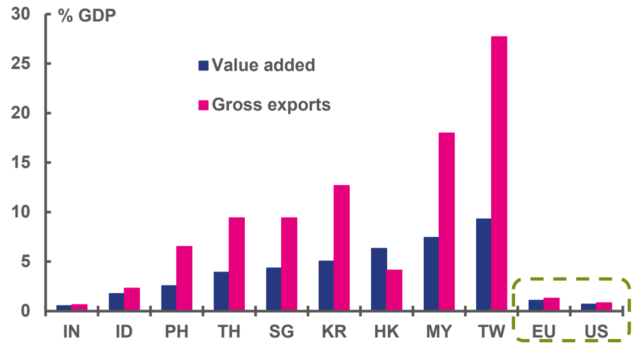
To derive China's final demand (for Asia's exports), we use the OECD[2]'s Trade in Value Added (TiVA) data[3] to isolate processing trade from total exports (*Exhibit 4*).

As expected, exports for China's final demand are generally smaller than gross exports (except for Hong Kong), but are still substantial as a percentage of GDP for the likes of Taiwan, Malaysia and Korea. Compared to the US and European Union, Asia's trade links with China are much larger but uneven, with exposures ranging from 0.5% of GDP for India to more than 9% for Taiwan.

Exhibit 4

China is an important source of final demand

Exports embedded in China's domestic demand



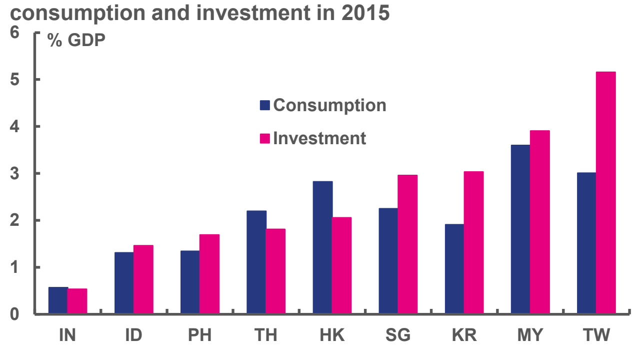
Source: IMF, OECD, TiVA, and AXA IM Research

In addition to the size of exposure, knowing where that final demand comes from matters. China is currently transitioning from an investment-driven economy to one led by consumption. Such a transformation will create winners and losers among its trading partners, depending on the parts of the economy to which they are exposed.[4] With the TiVA data, we can split the countries' trade linkages with China, into exposures to consumption and investment (*Exhibit 5*).[5]

Exhibit 5

Asia is more exposed to China's investment than consumption

Share of domestic value added used for China's consumption and investment in 2015



Source: IMF, OECD, TiVA, and AXA IM Research

In general, most countries have larger exposures to China's investment than consumption. This is unsurprising, as

[1] China Premium Database

[2] The organisation for Economic Co-operation and Development

[3] The value-added trade exposure to final demand embodies two parts: 1) direct exports to China, and 2) exports of intermediate goods to a third country, which are re-exported to China.

[4] Those, who linked to consumption, will stand to gain at the expense of those, who are exposed to investment.

[5] The data represents how a trading partner's exports are directed to specific sectors – investment and consumption – of final demand.

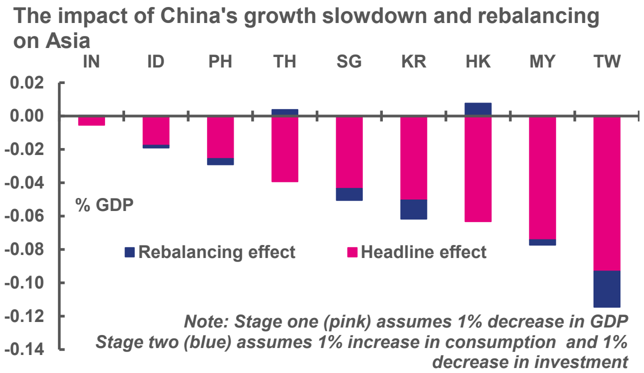
investment tends to be more import-intensive, and China has relied on its investment-driven growth for decades. For Taiwan and Korea, this investment-to-consumption gap can be as large as 2-3% of GDP, which make them vulnerable to China's economic rebalancing. At the other extreme, Hong Kong, Thailand and India are more exposed to consumption, suggesting potential gains from China's changing growth model.

Looking ahead, the Chinese economy will go through both an aggregate growth slowdown and a rebalancing. One can combine the analysis above to derive the *total impact of the two* on Asian economies. To keep the analysis simple, we assume a hypothetical 1pp decline in China's aggregate growth, combined with a 1pp shift in the shares of the economy from investment to consumption. The results are shown in *Exhibit 6*. Taiwan, Malaysia and Korea are hit the hardest under this "slowdown + rebalancing" scenario, losing 0.06-0.12pp of GDP. On the other hand, Hong Kong, Thailand and India are among the beneficiaries of economic rebalancing, which helps to offset the impact of slowing demand.[6] Indonesia and the Philippines suffer the least due to their limited trade exposures to China.

Overall, the results suggest that China's economic slowdown and rebalancing will have a tangible, but uneven, impact on EM Asia, depending on the size and nature of each country's exposures.

Exhibit 6

Asia is vulnerable to slowing China demand



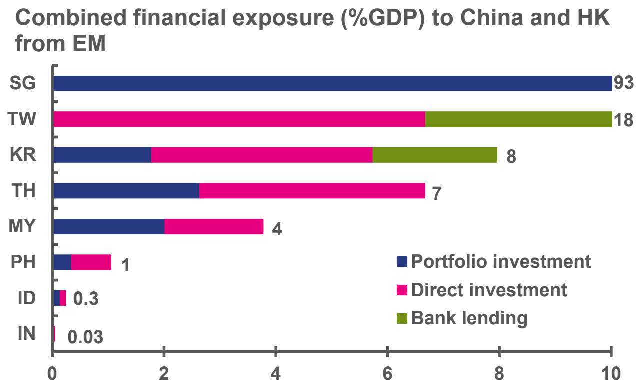
Source: IMF, OECD, TiVA, and AXA IM Research

Financial linkages strengthen

Besides trade, China can also affect the rest of Asia via growing financial connections. *Exhibit 7* shows EM Asia's exposure to China via bank lending, direct investment and portfolio flows. Here, we combine the numbers of China and Hong Kong, as the latter often serves as an intermediary to facilitate transactions between China and other countries.[7] Singapore, being a financial hub, is heavily exposed to China through portfolio investment. Taiwan has been an early investor in mainland China, building a significant manufacturing base, and hence, its exposure via direct investment is sizable. The same goes for Korea, whose direct investment in China accounts for almost 4% of GDP. Thailand's absolute investment is small, at circa US$16bn, but relative to GDP, the share is almost as large as Korea's. India, Indonesia and the Philippines, in comparison, have relatively small financial connections with China.

Exhibit 7

Financial linkages vis-a-vis China have grown

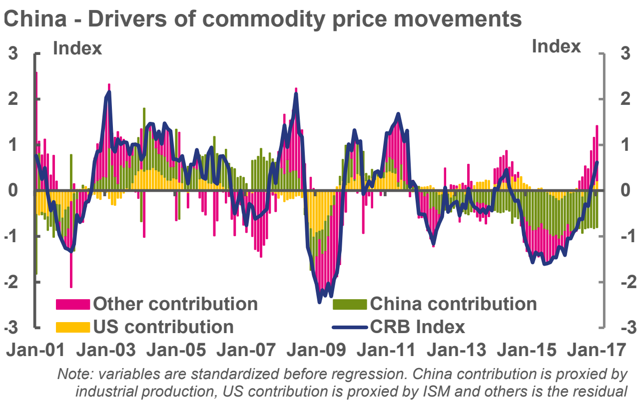


Source: IMF, OECD, and AXA IM Research

China's influence on global commodity prices can also impact EM Asia. China accounts for more than 50% of demand in some industrial metals and its economic slowdown in recent years have depressed the prices of these commodities. *Exhibit 8* decomposes the drivers of commodity price movements, based on their correlations with industrial activity in China and the US. The result confirms China's out-sized contribution (above 50%) to the market slump since 2014 (also see IMF)[8]. For Asia as a whole, lower commodity prices are net positive as they boost the region's current account and provide scope for monetary and fiscal easing. But for the few commodity exporters, such as Malaysia and Indonesia, falling commodity prices have only, until recently, added to their economic malaise.

Exhibit 8

China is a key driver of commodity prices



Source: Bloomberg, and AXA IM Research

[6] It will be a gross understatement to interpret these results as capturing the full impact of China's economic rebalancing. Exhibit 6 shows the impact of a hypothetical 1pp shift in investment and consumption shares of the economy. In reality, consumption only makes up 51% of the economy, comparing to a 85% share in the US. Hence, there is a long way to go in China's rebalancing process and its impact on trading partners will be multiple times larger than what's shown in *Exhibit 6*.

[7] Many investments made by Asian countries to HK are eventually targeted the mainland market.

[8] IMF (2016), "China's Evolving Trade with Advanced Upstream Economies and Commodity Exporters", Chapter 3, Regional Economic Outlook: Asia and Pacific, April 2016

Market contagion amplified by RMB

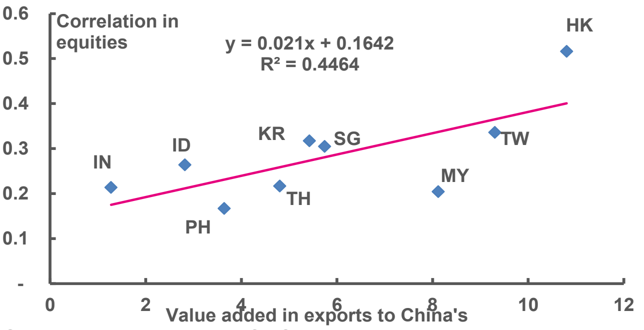
In capital markets, direct spill-overs from China have been modest globally due to its limited-open capital account. But in Asia, correlations in financial markets between China and other countries have strengthened noticeably since the GFC (*Exhibit 1*). This was particularly pronounced following China's equity market plunge and the RMB regime change in mid-2015. In equities, China's A-shares have already marched the US S&P500 in terms of its correlation with other Asian markets. But in bonds, Asia remains significantly exposed to the US, highlighting the importance of US Federal Reserve policy in the so-called "soft-dollar" block.

This increase in market correlations could be a result of many factors. Fundamentally, tighter market co-movements should be driven by strengthened economic ties. Indeed, *Exhibit 8* shows the stronger the trade relations between China and its trading partners, the larger the co-movements between the two equity markets. In addition, investors have been finding ways to express China views via proxy trades of Asian assets (BIS, 2015).[9] The latter, in our view, has helped to amplify contagion of the China-related market turmoil over the past two years.

Exhibit 9

Market correlation is influenced by economic linkage

Trade exposure and equity market correlation between China and Asia



Source: Bloomberg, IMF, OECD, and AXA IM Research

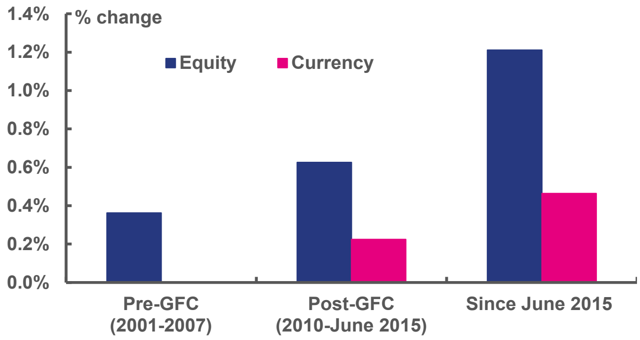
Correlation or causality – an event study

However, correlation does not necessarily mean causation – tight financial market co-movements in Asia could be a result of strong global influences. To separate the pure China shocks from global factors, we conduct an event study using the IMF's approach (2016).[10] We collect a sample of large daily movements in Chinese equities (+/-5%) and RMB (+/-0.5%) since 2001, and split them into pre and post crisis episodes, and since Jun-2015 (after the liberalisation of the RMB). To make sure that the sample represents "China specific shocks", we eliminate the observations of large moves in the US market on the prior day – i.e. those above one standard deviation in the S&P500 and USD. We then calculate the average reaction of Asian markets to these China shocks. *Exhibit 10* confirms that China's influence on Asian equity and FX markets has grown significantly over time.[11]

Exhibit 10

Spill-overs of China shocks have grown

Average daily response of Asian assets to large market shocks from China



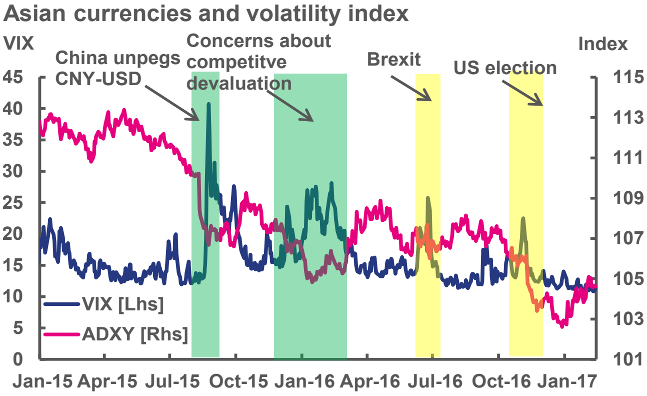
Source: Bloomberg, and AXA IM Research

Our analysis also reveals that the contagious effect can be amplified if the original shock from China causes a global panic. *Exhibit 11* shows that the depreciation of Asian currencies was greatest when China fears have driven up global volatility, proxied by the VIX[12]. August 2015 and January 2016 were two episodes of a double whammy for Asia, where the direct shock from China was compounded by the indirect feedback from the developed market (DM).

Exhibit 11

China spill-over can be amplified by global panics

Asian currencies and volatility index



Source: Bloomberg, and AXA IM Research

Putting the puzzles together

Our study above has examined China's spill-over effect via trade and financial markets separately. But in reality, the two are often inter-connected – variations in economic links can influence the size of financial market contagion, while the strength in financial ties can amplify real economic shocks. Aggregating the two is not easy and often requires sophisticated modelling to

[9] Shu et al (2015), "The influence of Chinese and US financial markets on Asia-Pacific", Bank of International Settlement Papers No. 82.

[10] Arslanalp et al (2016), "China's Growing Influence on Asian Financial Markets", IMF Working Paper, WP/16/73

[11] Since many of Asia's currencies are not "free float", some countries might have intervened in the FX market to level the moves of their currencies with that of the RMB in order to maintain competitiveness. These actions could lead to increased FX correlations, particularly since mid-2015.

[12] Chicago Board Options Exchange volatility index

accomplish. Cashin et al (2016)[13] runs a Global VAR[14] model, which is supposed to capture all possible channels of impact from a China slowdown – real and financial, direct and indirect, observed and unobserved effects via common factors.

Exhibit 2 (on the cover page) replicates their results on EM Asia. Consistent with our partial analysis above, countries with large trade and financial exposures to China rank highly on the vulnerability scale. Singapore and Malaysia for example stand to lose 0.4pp of GDP after one year from a 1pp slowdown in the Chinese economy. Interestingly, Indonesia also suffers badly despite its small "direct" trade exposures. This could be because it is very connected to the hard commodity market and close to 60% of its exports go to other EMs – both of these could transmit China's influence indirectly. The Philippines and India are the only countries in Asia for which a China slowdown has a statistically insignificant impact. In comparison, the negative shock to DM economies is generally smaller in size but statistically significant for the US and EU.

Overall, these results are in line with other studies suggesting that a 1pp slowdown in China could cut global growth by 0.1-0.2pp, with Asia bearing the brunt of the shock.[15]

Policy and market implications

In conclusion, China's influence on the rest of Asia has risen substantially, thanks to its growing economic size and strengthened trade and financial-market ties. If China can accomplish an orderly economic rebalancing, coupled with successful reforms, the end result will likely benefit Asia and the world at large. On the flipside, a slow and bumpy transition could halt China's economic convergence and create vulnerabilities for local and global financial markets. How China manages its transition, and how its trading partners adapt to the changes, could bear the key for the future outlook of Asia.

Putting the results of this study in the current context, our analysis can offer a new angle to assess the impact of some policies proposed (or threatened) by the Trump administration. For example, rising trade protectionism, even if it is kept bilaterally between the US and China, could spell trouble for Asia. A fully-pledged trade war, as discussed recently,[16] will have a harmful impact on the US and Chinese economies, and in turn hurt the rest of Asia via trade, investment and supply-chain effects. In addition, the financial market could react to such a scenario more immediately, with declines in the RMB and Chinese equities propagating shocks across the region. Asia, in other words, will not be immune from a US-CN trade conflict.

A final and general remark on the financial market. As asset prices become more correlated between China and the rest of Asia, the dominance of the US will gradually give away to a dual influence, whereby both the US and China exert their appropriate weights on the Asian market. For a DM investor, this has two implications. First, avoiding China will become increasingly difficult, as pure non-China trades will be hard to find. Understanding China will become a necessity for investing in Asia (and beyond). Second, as the Asian market gradually "decouples" from the US, and "couples" with China, the diversification benefit for a DM investor will rise.[17] Because of the latter and its good economic fundamentals, we continue to hold a constructive view on Asia over the long run, provided that investors keep a selective mind-set.

Country codes used in the text

UK: United Kingdom; US: United States; EU: European union; PH: Philippines; CN: China; IN: India; KR: South Korea; TH: Thailand; ID: Indonesia; MY: Malaysia; SG: Singapore; TW: Taiwan, HK: Hong Kong

[13] Cashin, P., Mohaddes, K, and Raissi, M. (2016), "China's Slowdown and Global Financial Market Volatility: Is World Growth Losing Out?", IMF Working Paper, WP/16/63

[14] Vector autoregression

[15] For a comprehensive summary, see IMF (2016) "Spillovers from China's Transition and from Migration" Chapter 4, World Economic Outlook, October 2014.

[16] Yao, A., Shen, S. and Page, D., "Protection will lead to great prosperity", AXA IM Research, 10 February 2017

[17] For more details, see our 2017 Outlook – "The EM investment case is still strong", Page 31, AXA IM Research, 1 December 2017.

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