No. 9 | April 2020

RISK&OPPORTUNITIES

SG Economics and Sector Studies

China's influence is tilting to demand

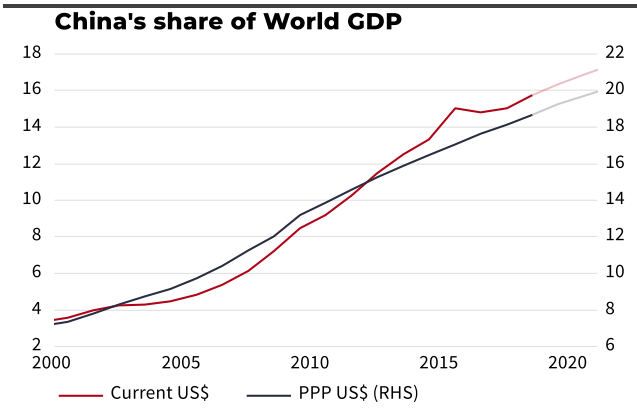
Michala MARCUSSEN
Group Chief Economist
Bei XU
Asia Economist
Olivier DENAGISCARDE
Sector Economist

In just two decades, China has moved from the world's 6th largest economy to the 2nd, more than quadrupling its share of global GDP and taking the title, the World's factory. While China remains a major source of supply to the global economy, both for intermediate and final goods, the more striking feature today is just how important China has become as a source of global demand; even surpassing the US for several major Asian economies. In the wake of the 2008/09 crisis, China, moreover, became the World's investor of last resort. As such, it is no surprise that news from China impacts global financial markets. China's large financial system nonetheless still has a low degree of international integration, albeit that funding from China has become more important, not least for a number of emerging economies.

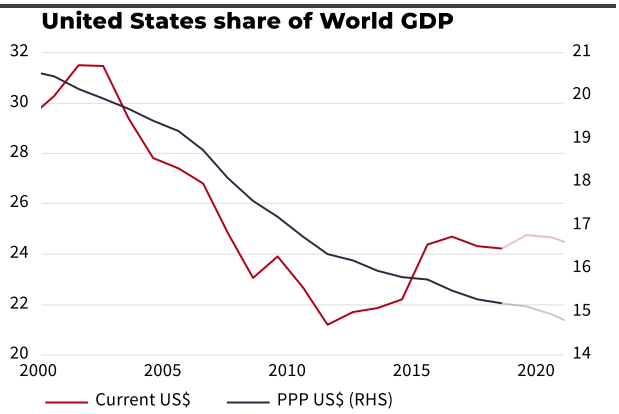
1. China 2020 = China 2000 x 4

China today ranks the second largest economy in the World, accounting for just over 16% of nominal World GDP in 2020 compared to just over 24% for the United States. On a purchasing power parity (ppp) basis, China already surpasses the United States. On a GDP per capita basis, China has also seen impressive growth and with GDP per capita of close to $10,000, the country is in the upper middle-income group as defined by the World Bank. Although China's growth rate has structurally slowed, as is commonplace when economies hit middle-income, its contribution to global growth has steadily increased; in recent years, China has contributed around one-third of World GDP growth as illustrated below on chart 1.4.

1.1 China's share has increased …



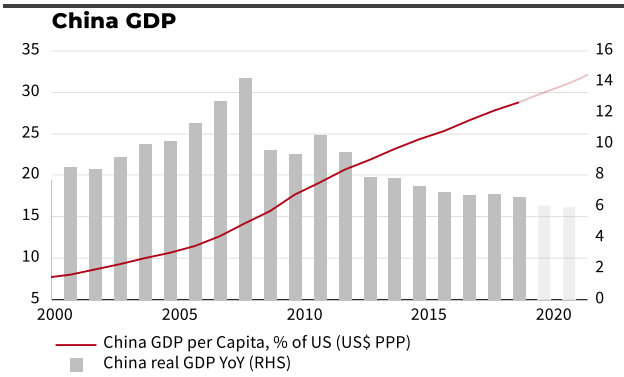
1.2… narrowing the gap to the US



IMF forecast for 2020.

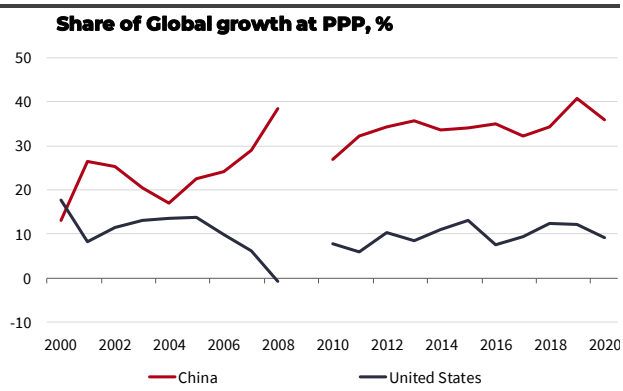
PPP US$ is the international dollars converted from local currency units using purchasing power parity exchange rate.
Source: IMF, Refinitiv, SG Economic and Sector Studies.

1.3 China's growth has slowed …



IMF forecast for 2020.

1.4 … but with a higher growth contribution

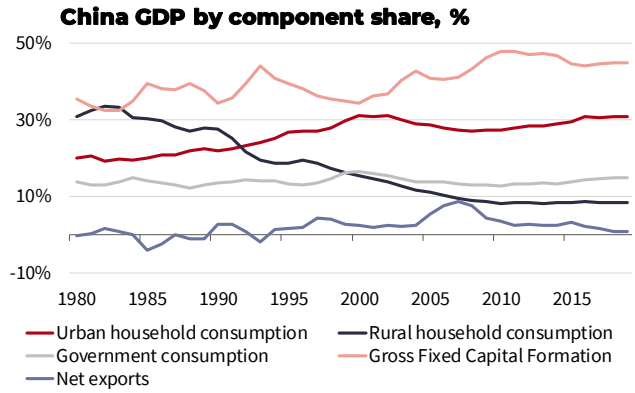


2009 omitted due to global GDP contraction in that year

Source: IMF, Refinitiv, SG Economic and Sector Studies

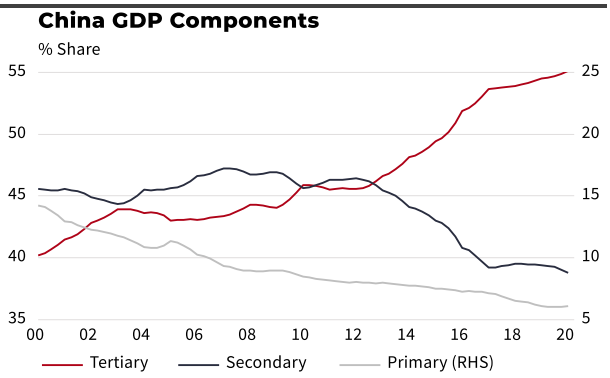
Zooming in on the composition of growth, the shift from agriculture, to manufacturing and more recently to services is clearly visible on the charts below, with the share of services now topping 55% of Chinese GDP. Investment remains a high share of GDP, but the role of the consumer as a growth driver is gaining ground, while net exports have declined. Also notable is the declining share of rural consumption, as urbanisation has advanced.

1.5 China GDP still tilted to investment …



Source: Bloomberg, Refinitiv, SG Economic and Sector Studies

1.6 … but service share has gained significantly



2009 omitted due to global GDP contraction in that year

2. China is highly integrated in GVCs

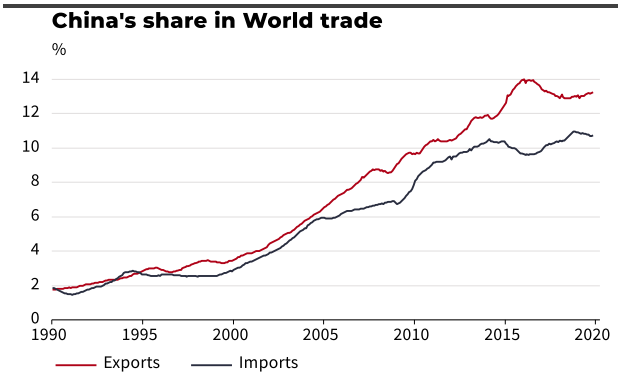
The narrative of a Chinese supply-side shock on the global economy in earnest took off after China joined the WTO back in 2001, with a boost both in terms of available labour and manufactured goods, driving down the price of both. In aggregate, this had a positive impact on the global economy, albeit differentiated across economies

and sectors. At the same time, China delivered a positive demand side effect on several major commodities, driving prices higher.

The charts below illustrate how China's role in global trade has changed over time. First, in terms global exports and imports, China's gain in market share has been nothing short of spectacular, albeit now flattening out. As detailed in the World Bank's study of global value chains, China's role in global trade has, moreover, expanded across all trade chains; be it traditional ones, where products are produced entirely domestically and only cross the external border once for consumption, simple global value chains (GVCs), which involve an intermediate good crossing borders once, and complex GVCs, with intermediate goods crossing international borders at least twice.

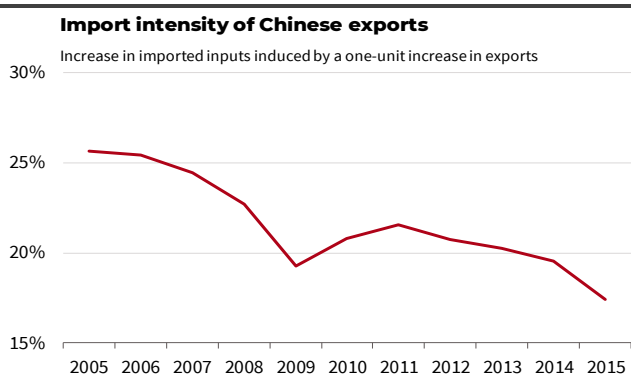
Input-output tables (cf. Box 1 below) offer a useful basis to understand the workings of GVCs. These tables are complex and accordingly only updated with a lag. We have used the OECD data in our analysis below drawing on latest available update from 2015. Chart 2.2 illustrates the import intensity of Chinese exports. Back in 2005, China imported just over 25% of the inputs needed to generate one unit of export; presently this number stans at just 17%, indicating that China now generates more domestic value added from one unit of export. In a nutshell, it has become more competitive to produce supplies in China rather than import them.

2.1 China's growing share of global trade …



Source: Bloomberg, Refinitiv, SG Economic and Sector Studies

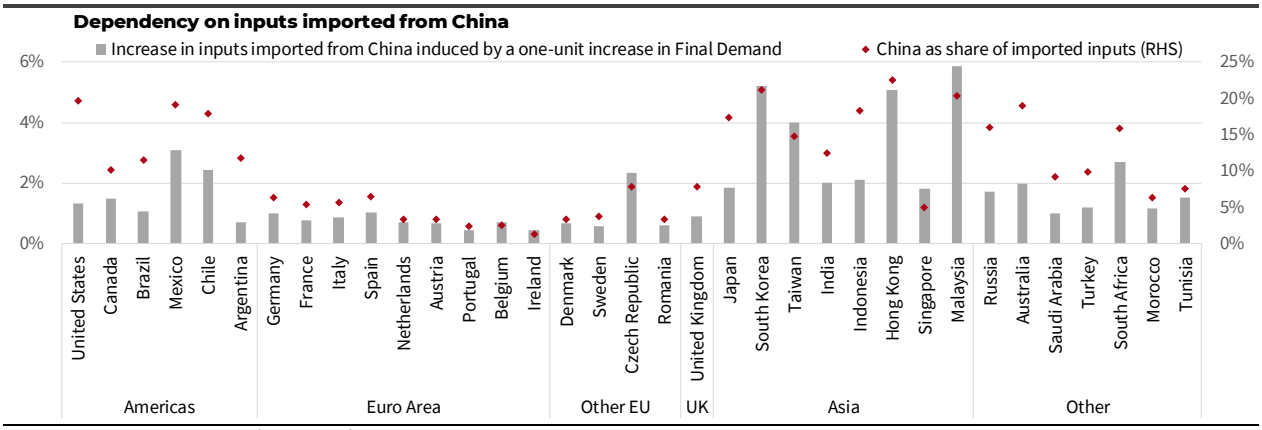
2.2 … but with lower foreign content



Source: OECD, SG Economic and Sector Studies

The increased competitiveness of Chinese suppliers and of producing supplies in China is also visible globally. As illustrated in Chart 2.3, intermediate inputs from China have become particularly important for Asia and some Latin American economies. Note also that the US generally sources more inputs from China than Europe.

2.3 High dependency of inputs from China



Source: OECD, SG Economic and Sector Studies

Nonetheless, a disruption to intermediate good production in China would thus have significant implications for GVCs, albeit that chart 2.3 says little about the availability of alternatives from competitors.

Looking ahead, we expect structurally tighter financial conditions compared to pre-2008, new technologies, such as 3D printing, concerns about free trade with the risk of tariffs or sanctions and climate change considerations to bring about important changes for how GVCs function, and it seems likely at present that GVCs over the coming decades will be simplified, with fewer intermediate goods making multiple border crossings.

3. China's shift from supply to demand

China's influence as a source of demand for global commodities is well known and was initially linked to its rapidly expanding export sector which ultimately depended on final demand in the rest of the world. Presently, China's commodity demand is increasingly linked to its own domestic demand as illustrated in chart 3.2. Globally, China today accounts for 6.2% of the non-Chinese raw materials sectors' value added (ranging from 2.7% for agricultural products to 13% for the mining and extraction of energy producing products). This observation also explains the fast-track recovery in commodity prices post the 2008/09 financial crisis as China engaged a massive build out of infra-structure in a bid to shield its domestic economy from the global downturn. At this time, China become the World's investor of last resort.

Box 1: The concept of interdependencies

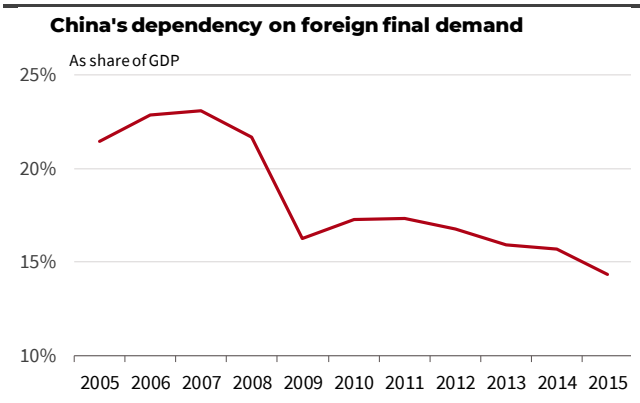
Input-output tables map the sale and purchases of goods and services across the various stages of production from intermediate to final consumption across individual sectors in the countries covered. We here use the input-output tables provided by the OECD. Calculations are made in the same spirit as Mori and Saski's publication but are carried out at the sectoral level for a better consideration of global value chains' composition.

Such tables are thus particularly useful for understanding interdependencies in terms of value added. Indeed, although not all companies produce final consumer goods or services, they all are dependent (in terms of income) on final demand as they contribute via the organisation of value chains to address it.

For example, an auto producer in Germany may need intermediate goods from suppliers in both Germany and abroad in producing its final product. When it comes to measuring Germany's value added, what has been supplied from abroad will logically not count towards Germany's value added. This idea is captured in chart 2.3, where we look at how dependent producers across a selection of countries are on imports of intermediate goods from China to produce their goods; i.e. **input dependency** on China. In the case of Germany, around 1% of intermediate goods stem from China, be it via direct exports hereof to Germany or indirectly transiting through other countries first.

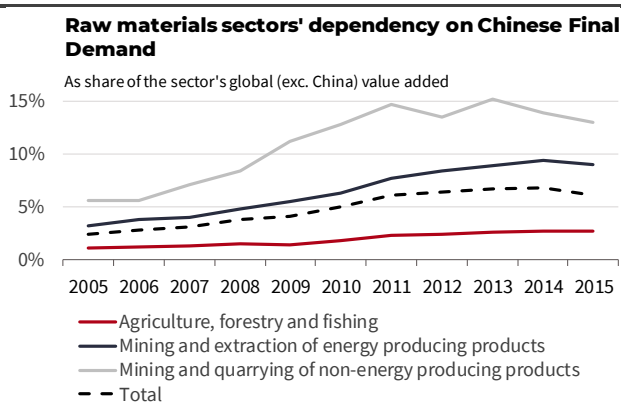
When it comes to selling cars, the German producer will likewise depend on demand from consumers from both domestic and international markets. As we are interested in understanding the extent to which the value added created domestically by the German auto sector depends on final demand from China, we need to use the value-added approach, afforded by input output tables, to measure **final demand dependency**. As shown in chart 3.8, the German auto industry's final demand dependency on China stood at 7.4% of the sectors gross value added (GVA) in 2015. As such, if demand in China were to slow by 1%, the sector in Germany would lose 0.074% of its value added. Adding up all sectors in the German economy, we find that the total final demand dependency on China stands at 2.8% of GVA, up by a factor of three over just one decade.

3.1 China depends more on China …



Source: OECD, SG Economic and Sector Studies

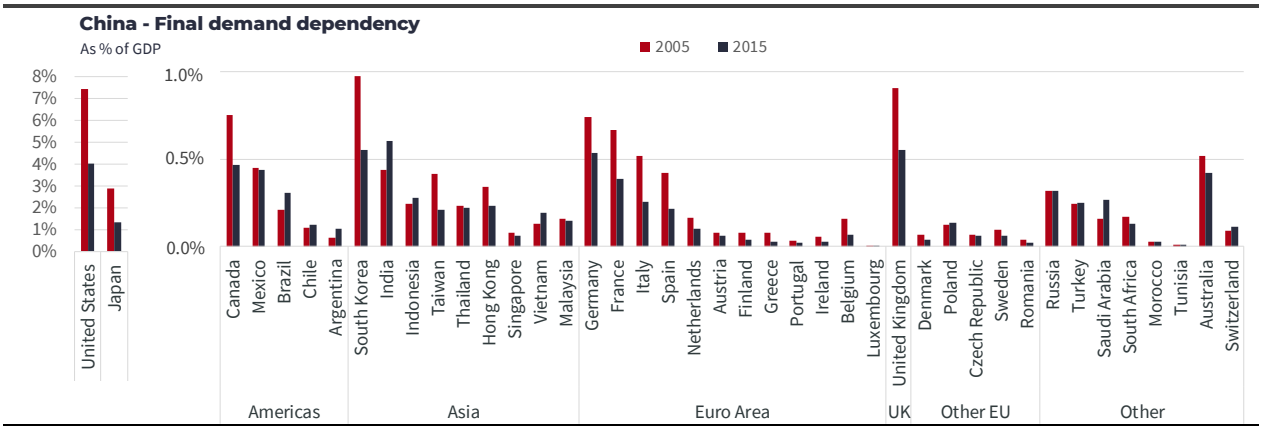
3.2 … as do commodity producers



Source: OECD, SG Economic and Sector Studies

Looking at China's total demand dependency, we note that foreign demand has fallen to below 15%, with a notable drop after the 2008/09 crisis. Zooming in on the Unites States, we note that back in 2005, China's final demand dependency on the US accounted for almost 8% of its GDP; by 2015 that number was almost halved.

3.3 China is today less dependent of final demand from the rest of the world

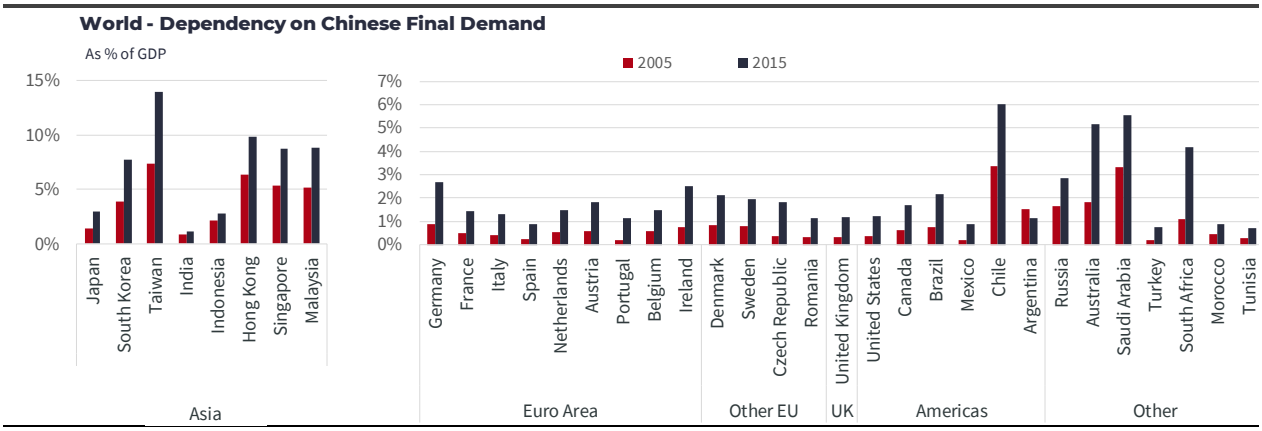


Source: OECD, SG Economic and Sector Studies

Returning to China's importance as a source of final demand for other economies, we note that this has also expanded significantly for non-commodity producers. As an example, in 2015, 14% of Taiwan's GDP depends on final demand from China. As such, the first order impact of a loss of 1% of Chinese demand would a loss of 0.14% for the Taiwanese economy. At the global level, the first order effect of a 1.0% decline in final Chinese demand adds up to -0.2% on World GDP. As all of China's trading partners lose demand there would be multiplier effects running throughout the global economy, increasing this initial effect. Drawing on analysis conducted on the NiGEM[1] model, we find that a simple 1pp decline to China's GDP driven by a decline in domestic demand causes a 0.4pp drop in World GDP in the first year, all else being equal. Of course, should such a shock be accompanied by additional shocks, such as a global stock market crash, then the effects would increase.

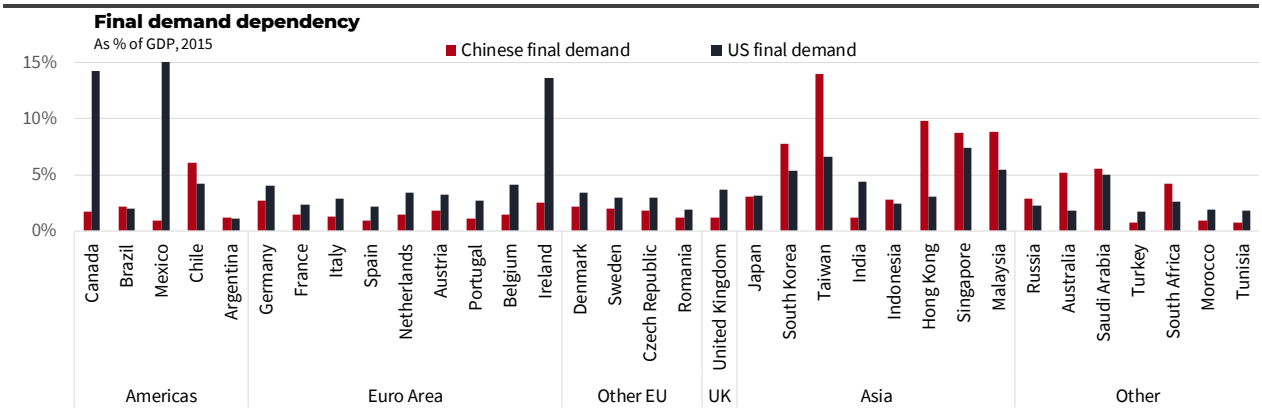
[1] *NiGEM model is developed by the British National Institute of Economic and Social Research, it is widely used by both policy makers and private sector. It uses a "New-Keynesian" framework in that agents are presumed to be forward-looking but nominal rigidities slow the process of adjustment to external events.*

3.4 China has becoming an important source of final demand…



Source: OECD, SG Economic and Sector Studies

3.5 … surpassing the US for many economies

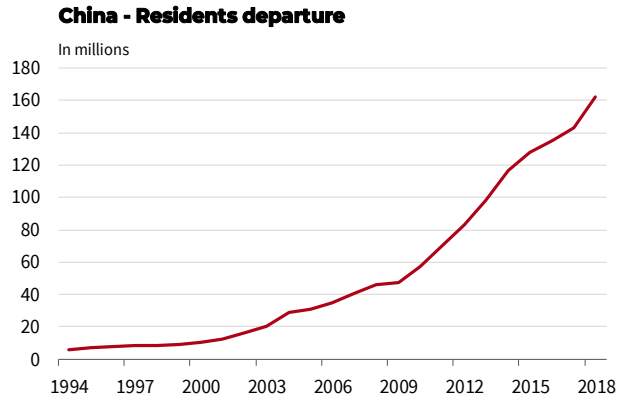


Source: OECD, SG Economic and Sector Studies

Zooming in on individual sectors, the three charts below (3.8 to 3.10) illustrate which specific sectors are most dependent on final demand from China. In each case, we set the cut off level at the sectors exposure to final Chinese demand at 5%. The charts also show the share of each of the relevant sectors in national GDP (red dots). Note that these charts do not offer information on the degree of value chain integration with China, focusing only on final demand dependency.

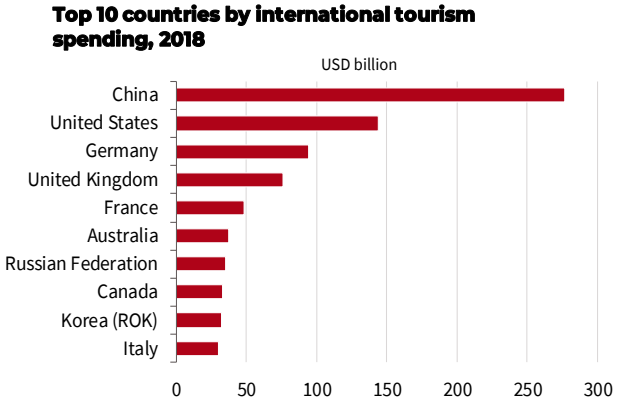
Turning first to the euro area, Germany is the most exposed of the four largest member states, both in terms of total final demand dependency, and the number of sectors exposed. Moreover, the sectors in question relate to a large extent to China's infrastructure cycle, offering a clue to the resilience of the German economy post-crisis. France also has significant exposure across several sectors, but these sectors make up a less important share of the overall economy and with surprising overlap with Germany. It is worth note that tourism is not defined in these tables as a stand-alone industry and the impact is thus spread across several of the sector definitions.

3.6 Residents departure from China has surged.



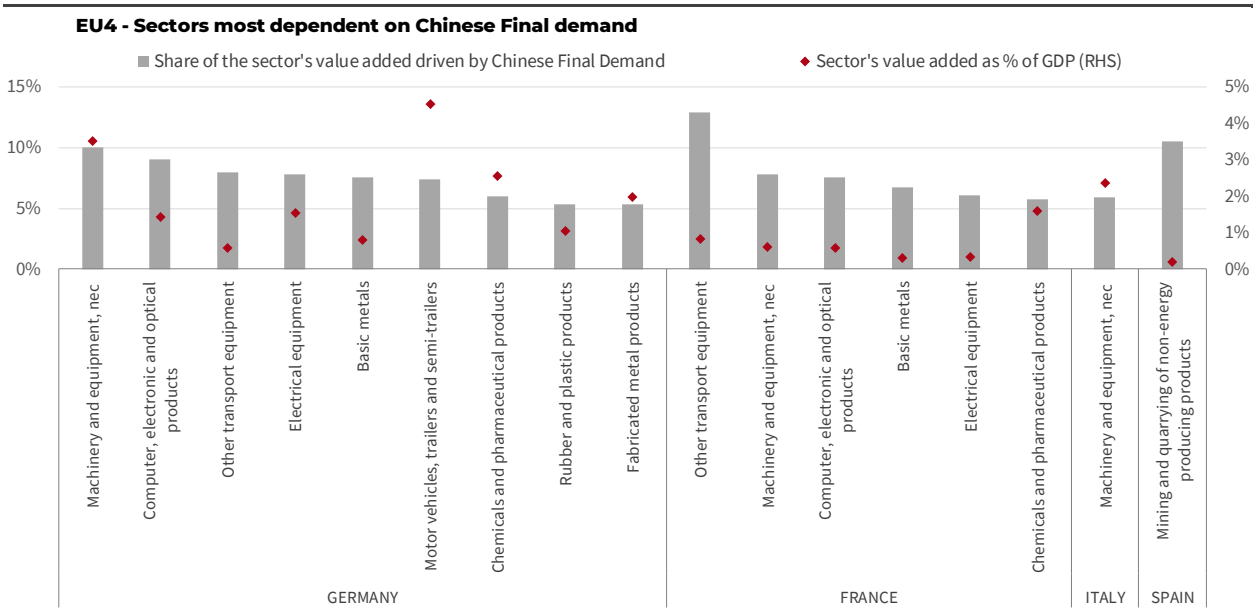
Source: Chinese Ministry of Culture and Tourism, SG Economic and Sector Studies

3.7 China has become the largest tourism spender.



Source: UNWTO, SG Economic and Sector Studies

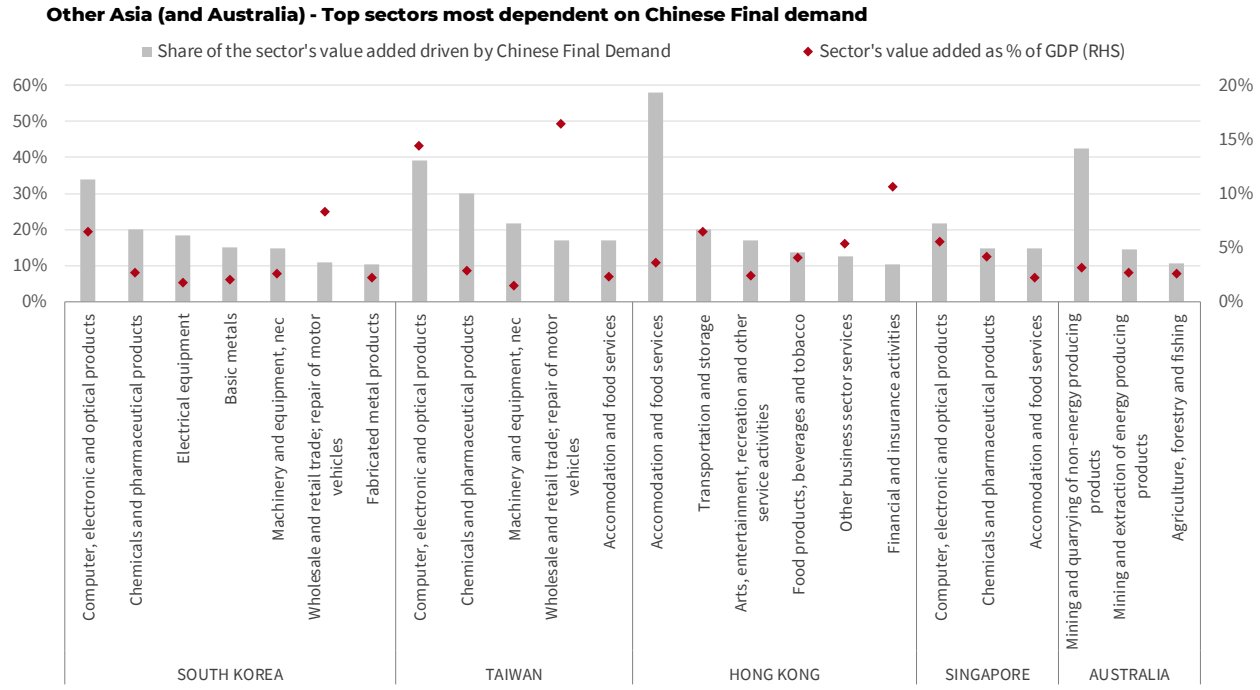
3.8 Numerous German sectors have high dependency on China.



Source: OECD, SG Economic and Sector Studies

A quick glance at Hong Kong nonetheless offers an illustration of just how important the influx of visitors from mainland China is, accounting for almost 60% of final demand for accommodation and food services, 17% for entertainment and recreation services and 14% for food, beverages and tobacco. Australia's role as a key commodity supplier is also clearly visible, while we note the importance of the electronics exports for South Korea, Taiwan and Japan.

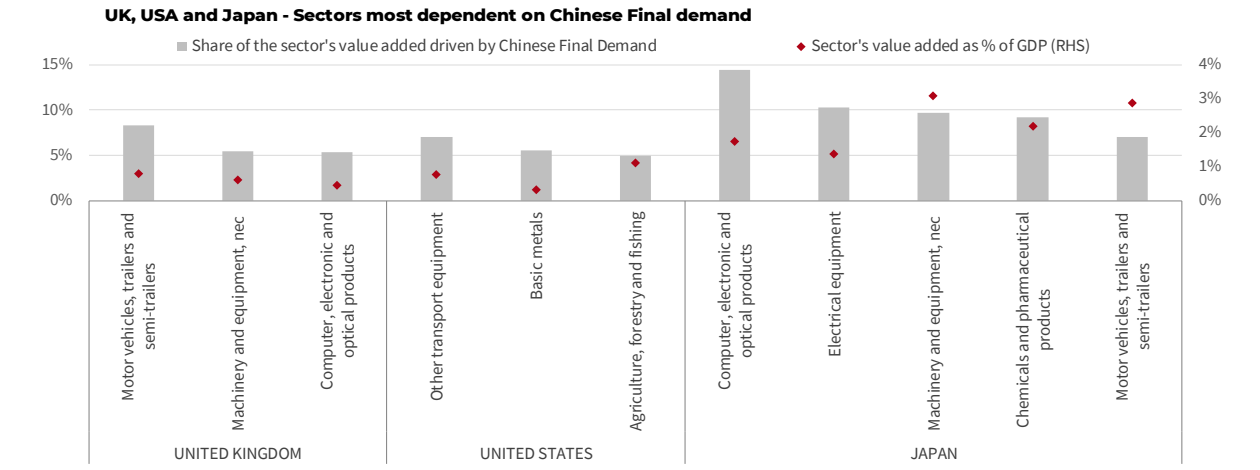
3.9 The China visitor effect is highly visible for Hong Kong



Source: OECD, SG Economic and Sector Studies

Turning finally to the US, we note the highly visible importance of China for US agriculture. As illustrated below, China's final demand dependency on the US remains significantly higher than the US final demand dependency on China. No doubt, this is part of the picture that the current White House aims to rebalance, allowing US companies a greater share in the growing Chinese market. Our concern remains that the Trump administration's favoured bilateral trade framework could see this development come at a loss to other exporters to China.

3.10 The link between final demand in China and US agriculture is visible

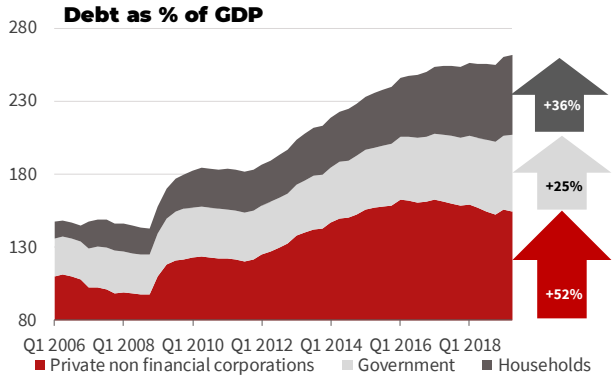


Source: OECD, SG Economic and Sector Studies

4. Still low financial integration, but significant impact on markets

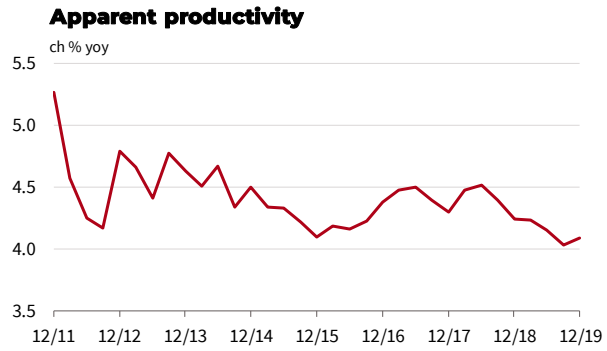
In this final section of our discussion on the linkages between China and the rest of the world, we zoom in on finance. China's spectacular growth is mirrored on the flipside by rapid credit expansion. While bank loans surged from 100% of GDP during the global financial crisis to current 150% of GDP, the total debt accounts for 260% of GDP compared to 150% during the GFC as illustrated in chart 4.1. High debt levels and troubled asset quality are an oft-quoted risk to financial stability, but as we discuss in Box 2, we believe the authorities retain sufficient tools to contain such risks for now. This reality, nonetheless, raises two concerns.

4.1 China's policy challenge of slowing debt …



Source: BIS, SG Economic and Sector Studies

4.2 … and boosting productivity



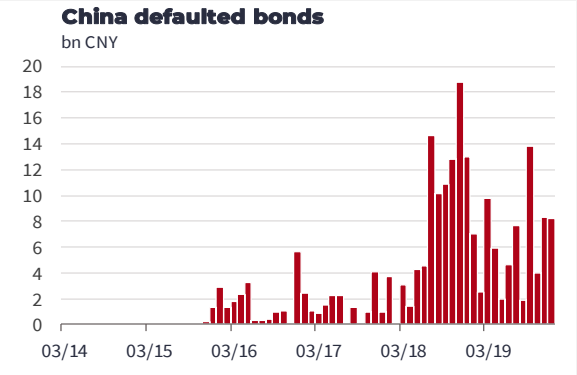
Source: NBS, SG Economic and Sector Studies

Box 2: China's financial system has several buffers

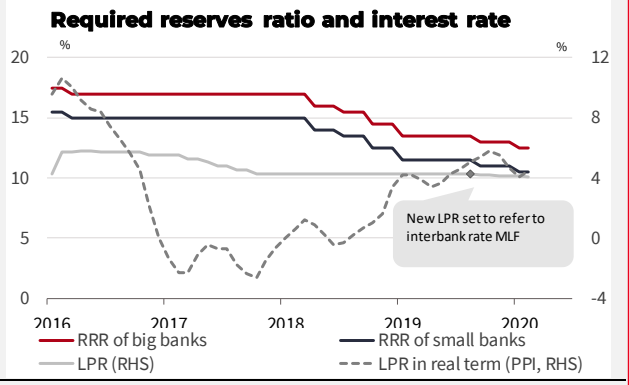
High debt levels and troubled asset quality are an oft-quoted risk to financial stability. Even though banks reported NPL ratios remain low (below 2%), corporate bond defaults mirror a surge in credit risk. However, the Chinese authorities retain several buffers to keep systemic risk at bay.

- Top of the list are tough capital account controls preventing large scale capital flight.
- Second, China has room to loosen liquidity conditions and boost credit, with required reserves of commercial banks standing at over 10% and the one-year prime lending rate at 4.05%. Moreover, the authorities also have the possibility to ease regulatory requirements; in a nutshell accept some level of forbearance. While such measures can help alleviate corporate balance sheets and keep the economy afloat short-term, the danger is that if such funds are not channelled to productive firms but just keep unproductive ones alive, trend growth would suffer, and further problems would build up down the road.
- Third, a direct government bailout is possible thanks to the central government's funding capacity and reserves, with a low debt ratio with low funding cost. For more detailed discussion, we refer to Who pays China's Bank restructuring bill?, CEPII, WP N°2006-04. Such solutions are of course only open if the economy enjoys a firm external position. China today enjoys a positive current account surplus (at 2% of GDP) and a positive net international investment position (15% of GDP). Capital controls are set to remain to guarantee those buffers.

Intensified credit events on bond market

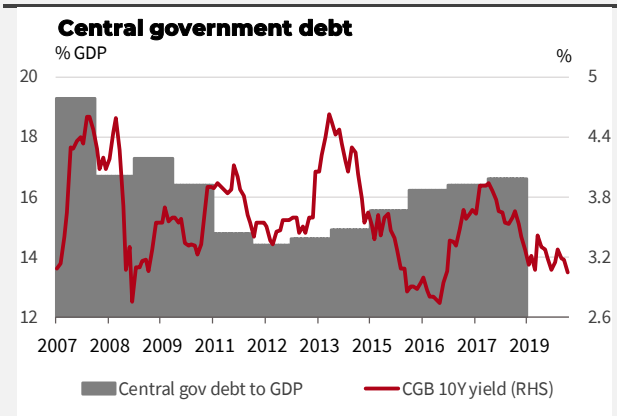


Room to loosen liquidity conditions

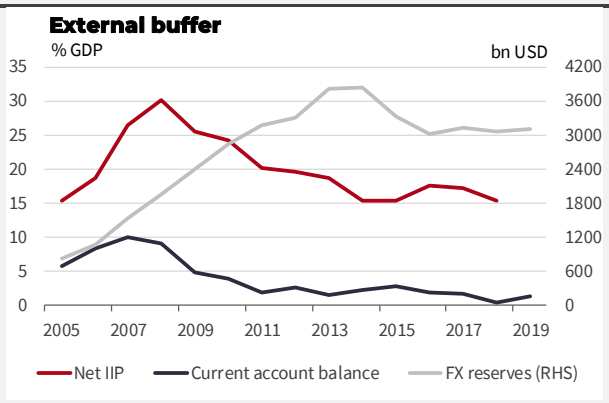


Source: Bloomberg, PBoC, Refinitiv, SG Economic and Sector Studies

Central government has funding capacity



Decent external buffer



Source: Ministry of Finance, PBoC, Refinitiv, SG Economic and Sector Studies

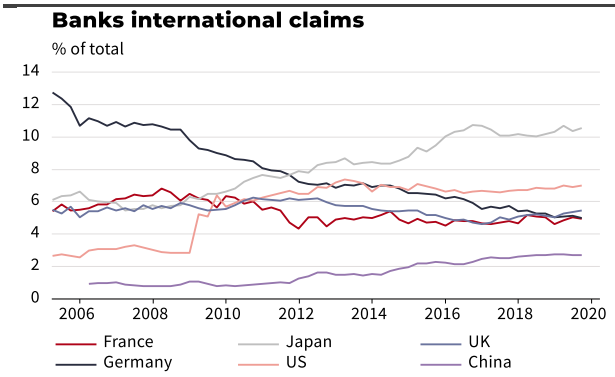
First, with assets of doubtful quality on balance sheets, China's financial system has its hands tied to fully finance productive projects. The more important are NPLs or loans to zombies are, the less new risk banks are able to take to finance what should ideally be more productive investment.

Second, banks restructuring cost. If the NPLs ratio rose by 10pp of the total loans (acounting for 150% GDP), with regulatory standard provision rate of 120%-150%, China's banking system would need an equivalent of 18%-22.5% of GDP to recapitalise banks (assuming banks all meet exactly capital requirement). As of today, banks' provisions are higher than regulatory standards (covering 168% of NPLs[2]); as a result, recapitalisation need may be 2pp lower than the estimate above, a substantial amount to finance though.

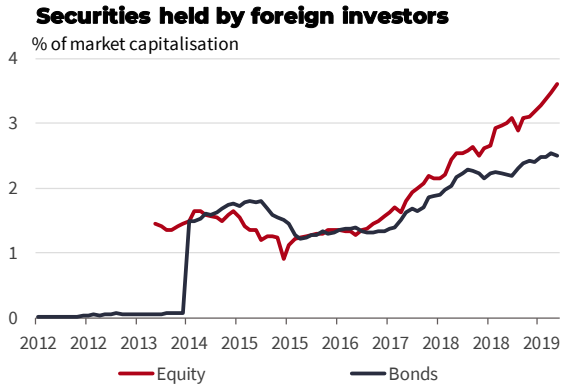
Chinese policy makers today thus face a twin challenge of slowing the expansion of debt-to-GDP, while at the same time making sure that there is enough room on balance sheets to be able to channel new debt to the most productive sectors and reverse the trend of ever slower productivity.

Returning to our discussion on China's financial linkages, we observed that after a quick expansion of banking activities, five Chinese banks rank top amongst the world's ten largest banks in terms of market capitalisation. Banking assets accounted for 290% of GDP in 2019 surging from 200% in 2008. Although Chinese banks have begun to develop international financing activities, their market share compared to other global banks remains timid as shown in the chart below.

4.3 China's share is still timid in global financing



4.4 Foreign holding of Chinese securities is low



Source: BIS, PBoC, CBRC, Refinitiv, SG Economic and Sector Studies

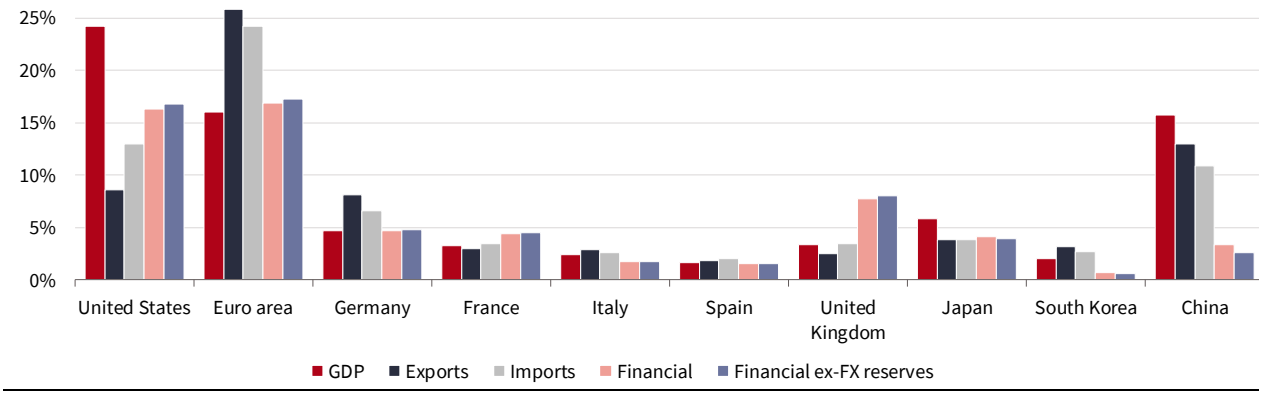
Similarly, access of foreign financial institutions to Chinese domestic market, while improving due to measures announced in recent years, remains low albeit increasing. Foreign holdings now account for 3.5% and 2.5%, respectively, of equity

[2] *With some contrast between Large commercial banks (234%) and shareholding banks (190%) on one hand; city banks (153%) and rural banks (128%) on the other.*

and bond market as shown in chart above. Foreign holding of equities and bonds is close to 17% and 9% in Japan, 33% and 6% in South Korea, 35% and 28% in the US and 16% and 3% in India. Likewise, foreign banks' assets remain under 1% of the total banking assets. Note that China has only recently announced measures to remove foreign ownership caps on financial institutions and banks remain subject to restrictions.

Chart 4.5 illustrates China's share of global financial markets compared to its share of global GDP and trade. The financial metric sums foreign assets and foreign liabilities as the share of the World's total assets and liabilities. We show the metric both including and excluding foreign exchange reserves.

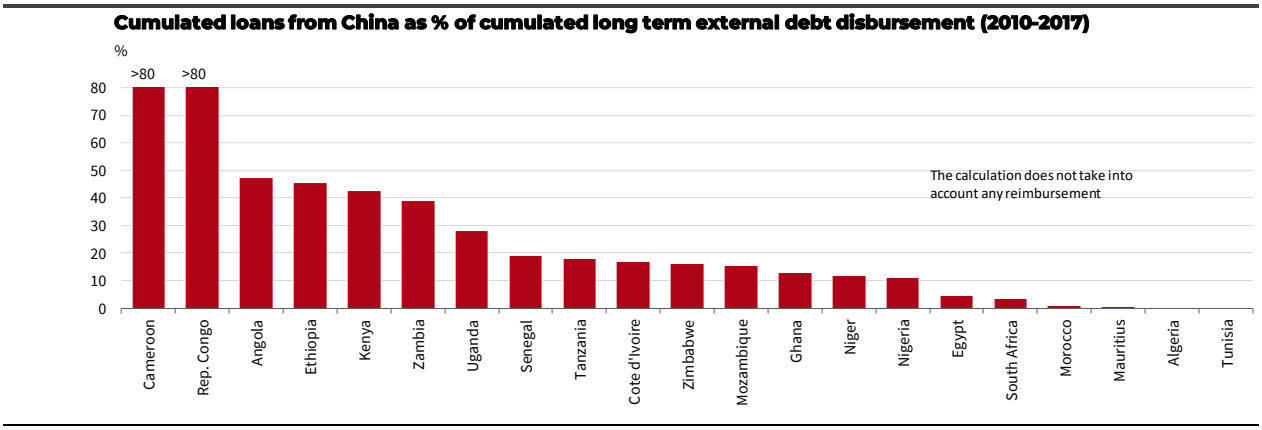
4.5 China still punches below its weight on financial integration (2018)



Source: Bloomberg, Refinitiv, SG Economic and Sector Studies

Although China's financial integration to global markets remains low, in some regions notably in Africa, China's financial role has become more dominant (chart 4.6). It has been an important source of external debt to Cameroon (rated B), Republic of Congo (rated B-), Angola (rated B-), Ethiopia (rated B), Kenya (rated B+) and Zambia (rated CCC). This is a twofold concern that (1) pressure on the Chinese financial system could create a financing squeeze in the recipient country and (2) that debt sustainability concerns in the recipient countries could spill back to China. Given that several of the countries are the subject of such concerns, as mirrored in their respective credit ratings, this is something that the Chinese authorities are monitoring.

4.6 China has become an important source for some economies, not least in Africa



Source: China Africa Research Initiative, World Bank, SG Economic and Sector Studies

While direct financial linkages are generally low, China's weight in the real global economy nonetheless entails that news from China has a very real impact on the global markets. Back in August 2015, fears on RMB depreciation (following a surprise 2% devaluation of the PBoC) and a loss in China's growth momentum provoked global market turmoil, sending the S&P 500 down by -10% and Eurostoxx 500 by -12% in just one week from mid-August. The introduction of tight capital controls by the Chinese authorities combined with a number of other policy measures brought the stress under control but left a dent in terms of global confidence in the financial system and the ability of China to one day open its capital account.

Conclusion

Summarising our discussion above, China's role in the global economy has changed markedly over the past two decades since joining the WTO. At first, China delivered a supply-side shock, both in terms of global labour supply and in terms of manufactured goods. Since then, China has become more integrated in global value chains, but more importantly also increasingly become an important source of final demand for foreign exporters. Interestingly, the Chinese economy has also become more dependent on its own domestic economy as a driver of demand.

The one area of the Chinese economy that remains less integrated is the financial sector, albeit that some areas are opening. News flow from China nonetheless matters for global financial markets.

CONTACTS

Michala MARCUSSEN
Group Chief Economist
+33 1 42 13 00 34
michala.marcussen@socgen.com

Olivier de BOYSSON
Emerging Markets Chief Economist
+33 1 42 14 41 46
olivier.de-boysson@socgen.com

Marie-Hélène DUPRAT
Senior Advisor to the Chief Economist
+33 1 42 14 16 04
marie-helene.duprat@socgen.com

Ariel EMIRIAN
Macroeconomic analysis
+33 1 42 13 08 49
ariel.emirian@socgen.com

François LETONDU
Macro-sector and macro-finance analysis
+33 1 57 29 18 43
francois.letondu@socgen.com

Constance BOUBLIL-GROH
Central and Eastern Europe, Russia
+33 1 58 98 98 69
constance.boublil-groh@socgen.com

Olivier DENAGISCARDE
Macro-sectoral analysis
+33 1 58 98 74 22
olivier.denagiscarde@socgen.com

Juan Carlos DIAZ MENDOZA
Americas
+33 1 57 29 61 77
juan-carlos.diaz-mendoza@socgen.com

Clément GILLET
Africa
+33 1 42 14 31 43
clement.gillet@socgen.com

Alan LEMANGNEN
Euro area, France, Germany
+33 1 42 14 72 88
alan.lemangnen@socgen.com

Simon RAY
Macro-finance analysis, UK
+33 1 4213 70 80
simon.ray@socgen.com

Danielle SCHWEISGUTH
Western Europe
+33 1 57 29 63 99
danielle.schweisguth@socgen.com

Edgardo TORIJA ZANE
Middle East, Turkey and Central Asia
+33 1 42 14 92 87
edgardo.torija-zane@socgen.com

Bei XU
Asia
+33 1 58 98 23 14
bei.xu@socgen.com

Yolande NARJOU
Assistant
+33 1 42 14 83 29
yolande.narjou@socgen.com

Société Générale | SG Economics and Sector Studies | 75886 PARIS CEDEX 18

Subscribe to the Economic studies series:

https://www.societegenerale.com/en/news-and-media/economic-studies/our-economic-research

DISCLAIMER

This publication reflects the opinion of Societe Generale S. A.'s Economic and Sector Research department at the date of publication. This opinion is subject to change at any time without notice. It is provided for information purposes only, and does not constitute an investment recommendation or an investment advice within the meaning of current regulations. This publication has no contractual value.

Neither the information contained in, nor the analyses expressed therein constitute in any way an offer to sell or a solicitation to offer to subscribe, purchase, sell a product or execute a transaction and shall not engage the liability of Société Générale S. A. or any of its entities, in compliance with current regulations. Then, should a retail or a professional client, or eligible counterparty obtain this publication, they should not base any investment decisions solely on the basis of this publication, and must seek independent financial advice.

The accuracy, completeness or relevance of information derived from external sources is not warranted, even if it comes from sources reasonably believed to be reliable. Subject to the current regulations, Societe Generale S. A. does not accept any liability in this respect. The economic information mentioned in this document is based on data valid at a given time, and may therefore change at any time.

Societe Generale S. A. is a French credit institution authorized and supervised by the Autorité de Contrôle Prudentiel et de Resolution ("ACPR"), regulated by the Autorité des Marchés Financiers ("AMF") and under the prudential supervision of the European Central Bank ("ECB").

Societe Generale S.A. is also authorized by the Prudential Regulation Authority and subject to limited regulation by the Financial Conduct Authority and Prudential Regulation Authority. Details about the extent of our authorization and regulation by the Prudential Regulation Authority, and regulation by the Financial Conduct Authority are available from us on request.

Notice to US Investors: this document is issued by non-US SG economic analysts or affiliates on economic studies are issued solely to major US institutional investors pursuant to SEC Rule 15a-6. Any US person wishing to discuss this report or effect transactions should do so with or through SG Americas Securities, LLC. SG Americas Securities LLC has its registered office at 1221 Avenue of the Americas, New York, NY, 10020. (212) 278-6000.

Notice to Asian investors: this document is prepared for and intended to be distributed in Asia solely to sophisticated and professional clients. You should therefore be appropriately qualified as a professional, accredited, wholesale, expert or institutional investor (however defined in your local jurisdiction).