

The realignment of the Chinese economy and its global implications

Over the past few decades, China has risen to become a global economic power, but this catching-up process has slowed significantly in recent years. An important reason for this is that the export-oriented growth model has reached its limits. Chinese companies used to be specialised in the production of labour-intensive consumer goods; the sales potential on the international markets is now largely exhausted. In addition, wages have risen sharply as a result of a growing shortage of labour, with the result that the cost advantages of Chinese exporters have diminished.

During the global financial and economic crisis and its aftermath, China pursued very expansionary fiscal and monetary policies in order to counter the slowdown in economic growth. This led to over-investment in various sectors and to a sharp rise in debt, particularly in the public sector and among state-owned enterprises. This is likely to have increased the vulnerability of the Chinese economy to crises.

In recent years, the Chinese government has therefore pursued moderate reforms. On the supply side, it is aiming to boost technological convergence in order to upgrade the country's export range, and progress appears to have been made on this front. On the demand side, the authorities are working to put an end to unprofitable investments, particularly from state-owned companies. At the same time, greater importance is being attached to private consumption. Household demand has already grown fairly dynamically over the past few years and, against this backdrop, services have become considerably more important in macroeconomic terms.

Due to China's extensive trade relations and the size of the country, the ongoing transformation of its economy is having a discernible global impact. The shift in demand from investment to consumption is dampening growth in Chinese imports. In the export sector, the structural change in China in the field of labour-intensive production is opening up opportunities for other Asian emerging market economies. By contrast, the shift to higher-end products could put exporters from advanced economies, including Germany in particular, under mounting competitive pressure.

Increased significance of China for the global economy ...

■ Introduction

The Chinese economy has experienced a remarkable rise since the reform and opening-up policy was launched 40 years ago. Once a developing country, it is now the second largest economy in the world.¹ One of the key factors in China's success has been its integration in the international division of labour. China has been the world's leading exporter of goods for several years and has gained an outright dominant position on the international markets for a whole swathe of consumer goods, in particular. The creation of an efficient capital stock necessary for China's catching-up process led to a massive expansion of investment in the country, from which the German economy, as a major provider of capital goods, has benefited greatly.

... with still considerable development potential

The absolute size of the Chinese economy, however, masks still significant untapped development potential. For example, the average per capita income on the basis of purchasing power parities last year stood at just over one-quarter of the equivalent US figure. China thus belongs to the group of middle-income economies playing catch up with the advanced economies.

Nevertheless, this catching-up process has slowed down markedly in recent years. Between 2007 and 2016, economic growth slowed almost continuously from year to year.² Negative external factors, such as the global financial and economic crisis and the recessions in some euro area countries, are likely to have temporarily curbed expansion. By contrast, the global economic environment has been rather favourable in recent years. Despite this, economic growth in China has languished far below its previous rates, stabilising at just under 7% per year. It is hence very likely that the underlying pace of growth has slowed even further.

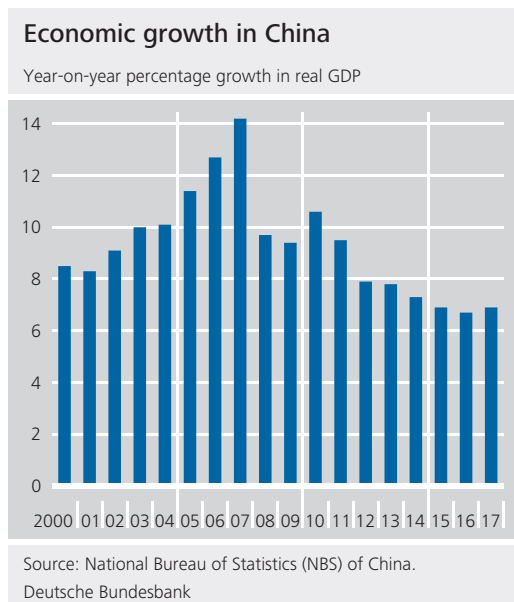
The slowdown in growth in recent years ...

In other Asian countries that experienced a rapid catching-up process in the past, economic growth slowed over time (see the box on pages 48 and 49). That said, the slowing of growth in China has been comparatively sharp. It is evident that the "natural" moderation of growth that accompanies rising per capita income is not the only factor at play here.

... has been significantly sharper than expected

■ Need for economic adjustment

One of the key reasons for the marked moderation of growth in the Chinese economy is likely to lie in the limits of the export-oriented economic model that prevailed in China in the past. Very expansionary monetary and fiscal policies, which were pursued until recently, caused additional problems.



¹ China's gross domestic product (GDP) on the basis of market exchange rates stood at US\$12 trillion in 2017, compared with just over US\$19 trillion for the United States. Measured in purchasing power parities, China's economic output has been higher than that of the United States since 2014.

² The slowdown in growth in China was an important factor – though not the only one – in the slowing of growth among the group of emerging market economies as a whole. See Deutsche Bundesbank, Slowdown in growth in the emerging market economies, Monthly Report, July 2015, pp 15-31.

Limits of export orientation

Sputtering export engine

For a long time, economic growth in China was driven largely by external demand. China's accession to the World Trade Organization (WTO) in 2001 gave Chinese exports of goods an additional boost. Between 2001 and 2013, China's share of global trade rose from 4% to 12%. However, in recent years the export engine has started to sputter, and the country has not seen any additional meaningful gains in market share.

Chinese exporters specialised in labour-intensive products

One of the factors behind the flattening of export growth is that China, given its wage cost advantage, used to specialise in labour-intensive production. Chinese exporters were quick to move away from simple products, such as clothing, and increasingly towards higher-end goods, especially electronics. However, companies usually only carried out the final stage of production, ie assembling the final product using imported parts and components. Although China was able to raise the share of its own value added in its exports somewhat, it has nevertheless essentially remained stuck in its role as a "workshop of the world".³

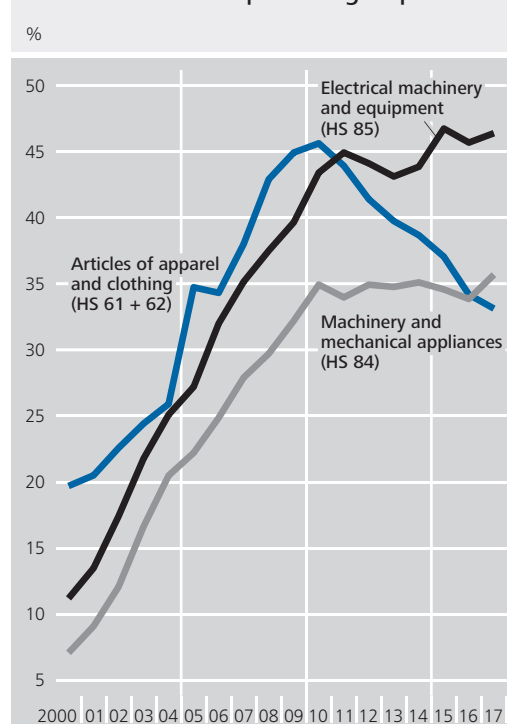
Export orientation has encountered demand-side limits

This export strategy appears to have reached demand-side limits in recent years. As China is a major economy, its export growth ultimately depends on the absorption capacity of the global market. For many of the products it exports, China has probably already largely exhausted its sales potential. For example, China has supplied just under half of all electronics imports to the European Union in recent years, and for certain products its share of imports has been very much higher still. The demand-side limits of an export-oriented growth strategy make themselves felt more quickly for a major economy than for small countries (see also the box on pages 48 and 49).

Tightening of the labour market ...

A second barrier to further Chinese export growth is linked to the supply side, namely an increasing shortage of labour in China. For example, the rural labour reserve, which was

China's share of imports to the European Union for selected product groups*



Source: Eurostat Comext. * Excluding intra-trade; product classification in accordance with the Harmonized Commodity Description and Coding System (HS).
 Deutsche Bundesbank

drawn on in the past to cover the rising demand for labour, has since been largely absorbed.⁴ As a result, wage growth accelerated markedly, and well above the rate of productivity gains.⁵

³ See HL Kee and H Tang (2016), Domestic value added in exports: Theory and firm evidence from China, *American Economic Review*, Vol 106(6), pp 1402-1436; and R Koopman, Z Wang and S-J Wei (2008), How much of Chinese exports is really made in China? Assessing domestic value-added when processing trade is pervasive, NBER Working Papers 14109.

⁴ According to official statistics, there are millions of people still employed in agriculture in China, and it is often assumed that they are in "hidden" unemployment. However, a large proportion of these people are already of an advanced age and may be reluctant or unable to work, for example, as an industrial worker far away from home. Moreover, the official household registration system (hukou) also restricts rural dwellers' mobility by preventing migrants from obtaining access to social welfare benefits and education services in the cities. See inter alia H Li, L Li, B Wu and Y Xiong (2012), The end of cheap Chinese labor, *Journal of Economic Perspectives*, Vol 26(4), pp 57-74.

⁵ The argument that a labour surplus is a drag on wage growth until the surplus has been completely absorbed is based on the "Lewis model". See WA Lewis (1954), Economic development with unlimited supplies of labour, *The Manchester School* 22(2), pp 139-191.

... and currency appreciation lead to strong rise in wages

Compared to other countries, there has been an additional rise in labour costs in China as a result of the renminbi's pronounced tendency to appreciate.⁶ Average monthly wages in manufacturing rose from the equivalent of US\$160 in 2005 to US\$800 in 2017. This increase in wage costs has placed a number of Chinese producers of export goods under considerable pressure. Particularly in the textiles sector, many enterprises moved abroad.

The consequences of a very expansionary economic policy

Government strategy long based on economic stimulus measures

Until recently, the Chinese government had pursued expansionary fiscal and monetary policies in order to counter the slowdown in economic growth. High GDP growth rates were considered necessary, particularly in order to satisfy the population's aspirations to secure and further improve their standard of living.

Over-investment in infrastructure

Fiscal policy was used heavily during the global financial and economic crisis. In order to cushion the sharp drop in exports, the Chinese government initiated a massive investment programme.⁷ Given the size of the programme and the haste with which it was implemented, long-term utility considerations are likely to have fallen by the wayside in many projects. In subsequent years, too, government investment remained exceptionally high, and it seems that this led to over-investment and misinvestment in public infrastructure.⁸ Government debt went up steeply as well.⁹

Expansionary monetary policy fuelled lending ...

The onset of the global financial and economic crisis marked the beginning of a phase of exceptionally expansionary monetary policy in China. This triggered a veritable credit boom: between 2008 and 2015, the commercial banking sector's outstanding loans measured as a share of nominal GDP rose from 94% to 136%.¹⁰ A particular problem was that loans flowed on a preferential basis to state-owned enterprises (SOEs) whose liabilities were implicitly guaranteed by the state. The productivity

of investments made by SOEs has, however, always been low.¹¹ As a result, significant overcapacity arose in many industrial sectors dominated by SOEs, such as steel production.

The expansionary monetary policy has resulted in low interest rates on bank deposits, prompting many households to invest some of their savings in property. This has contributed to a strong upturn in the real estate market, where – at least in some regions – there are likely to have also been price exaggerations and an excess of newly constructed housing.¹²

... and contributed to the boom in the residential property market

Overall, the already very strong investment activity in China increased again significantly in the wake of the country's extremely expansionary monetary and fiscal policy. From 2009 to 2014, the investment-to-GDP ratio stood at no less than 45%. At the same time, the product-

Lower productivity of capital overall

⁶ This tendency was ushered in by the abolition of the hard peg to the US dollar in 2005.

⁷ According to official data, the 27-month investment programme had a volume of 4 trillion yuan, corresponding to just under US\$600 billion. This equated to 12½% of Chinese GDP in 2008. In comparative terms, this stimulus was therefore the largest of any country in the world at the time. See C Wong (2011), The fiscal stimulus programme and public governance issues in China, OECD Journal on Budgeting, Vol 11/3, pp 53-73; and B Naughton (2009), Understanding the Chinese stimulus package, China Leadership Monitor 28.

⁸ See H Shi and S Huang (2014), How much infrastructure is too much? A new approach and evidence from China, World Development, Vol 56, pp 272-286; and A Ansar, B Flyvbjerg, A Budzier and D Lunn (2016), Does infrastructure investment lead to economic growth or economic fragility? Evidence from China, Oxford Review of Economic Policy, Vol 32(3), pp 360-390.

⁹ According to calculations by the International Monetary Fund (IMF), general government debt in China rose from just under 40% of GDP in 2007 to 62% in 2016. These figures take into account that Chinese provinces and local governments often financed their infrastructure investment outside of regular budgets. See IMF (2017), People's Republic of China – Staff Report 2017 for the Article IV Consultation, p 22.

¹⁰ On the impact of accommodative monetary policy on lending, see S Chen and JS Kang (2018), Credit booms – is China different?, IMF Working Paper, WP/18/2.

¹¹ See also C-T Hsieh and Z Song (2015), Grasp the large, let go of the small: The transformation of the state sector in China, Brookings Papers on Economic Activity, Vol 46(1), pp 295-366; and D Dollar and S-J Wei (2007), Das (Wasted) Kapital: Firm ownership and investment efficiency in China, IMF Working Paper, WP/07/9.

¹² See inter alia E Glaeser, W Huang, Y Ma and A Shleifer (2017), A real estate boom with Chinese characteristics, Journal of Economic Perspectives, Vol 31(1), pp 93-116.

ivity of capital fell significantly. According to our calculations, the aggregate return on capital fell from 18% in 2008 to 10% in 2015.¹³ Investment income has actually fallen short of investment expenditure of late. Furthermore, the falling productivity of capital is weighing on the sustainability of general government debt and corporate debt, leading to risks for the stability of the Chinese financial system (see the box on pages 44 to 46).

Chinese economy in a difficult transformation

Turnaround in economic policy underway

The challenges of realigning an export model based on labour-intensive consumer goods and the harmful side effects of the extremely expansionary macroeconomic policy led to a gradual adjustment of the economic policy stance after the political leadership change in 2012. The Chinese government is aiming to accelerate technological progress on the supply side, accompanied by a shift from investment to consumption on the demand side.

Acceleration of technological progress

Sharp increase in research and development ...

The intensification of technological progress played a key role in the successful convergence processes of other Asian economies in the past (see the box on pages 48 and 49). The Chinese government has also adopted such a strategy in recent years. To this end, it has improved the environment for innovation, for example by establishing patent courts,¹⁴ while also fostering research activities among enterprises. Against this backdrop, aggregate expenditure on research and development has increased significantly. With a share of just over 2% of GDP, it is now close to the average level for OECD countries.

... and massive investment in human capital

Furthermore, China has been investing heavily in human capital for quite some time now, sharply increasing the supply of highly skilled

Investment ratio and return on capital in China



Source: National Bureau of Statistics (NBS) of China and Bundesbank calculations. ¹ For more information on the calculation, see the explanations in the main text.
 Deutsche Bundesbank

workers. One of the key measures has been the expansion of universities, leading to a nearly threefold increase in the number of university students between 2003 and 2013.¹⁵ The pro-

¹³ For these calculations, the capital stock depreciation rate is deducted from the ratio of investment income to the capital stock. For the approximation of investment income that is not directly reported, we follow the approach taken by He et al (2007). According to this, employee compensation and net taxes on products (weighted by the share of employee compensation to gross value added) are deducted from nominal GDP. In order to estimate the capital stock, fixed investment (net of capital consumption) is cumulated. Following Ma et al (2017), the annual depreciation rate is set at 7%. See D He, W Zhang and J Shek (2007), How efficient has been China's investment? Empirical evidence from national and provincial data, Pacific Economic Review, Vol 12(5), pp 597-617; and G Ma, I Roberts and G Kelly (2017), Rebalancing China's Economy: Domestic and International Implications, China & World Economy, Vol 25(1), pp 1-31.

¹⁴ See World Economic Forum (2016), China's innovation ecosystem, White Paper; and OECD (2017), Economic Surveys: China, Chapter 1 – Boosting firm dynamism and performance, pp 61-96.

¹⁵ Relating to bachelor, master and doctoral degrees; data sourced from the UNESCO Institute for Statistics (UIS). More recent figures are available, but these are not comparable due to a methodological break.

Risks to the stability of the Chinese financial system

China's national financial system was of central importance in its strategy for economic ascendance. Key sectors of the economy were to be afforded a cheap supply of capital,¹ while market principles for the allocation of capital and liability for the assumed risks played only a secondary role.

Since the outbreak of the global financial and economic crisis, this strategy has been increasingly at odds with preserving financial stability. As a result of China's very expansionary monetary policy, the level of debt, especially in the corporate sector, has risen massively compared to gross domestic product (GDP). For example, total credit to the non-financial private sector over a ten-year period up to 2017 increased by over 90 percentage points to 209% of GDP.² In many other countries, such pronounced and protracted growth in credit has, in the past, led to a financial crisis or a major economic slowdown.³ An early

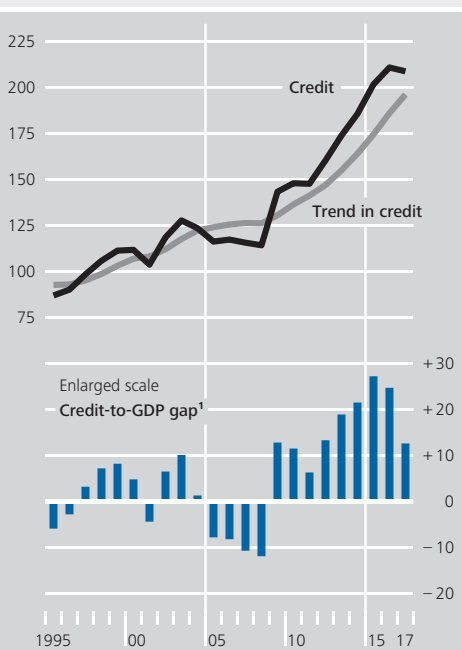
warning indicator commonly used to identify systemic risks in the banking sector, namely the extent to which the credit-to-GDP ratio exceeds its long-term trend, has already been signalling heightened risks since 2012.⁴

Another sign that there has been a build-up of financial risks as a result of deteriorating debt sustainability in parts of the corporate sector is the interest coverage ratio.⁵ In 2016, around 13% of corporate debt was originated by companies whose earnings were insufficient to cover their interest expenditure. So far, official figures do not show a significant rise in non-performing bank loans, which stood at a relatively low level of 1.7% of all outstanding bank loans in 2017.⁶ Nevertheless, these official figures may understate the true extent of problems concerning borrowers' creditworthiness.⁷

The credit boom was made possible by the rapid growth in the Chinese financial system,

Credit to the non-financial private sector in China and the credit-to-GDP ratio gap*

As a percentage of GDP



Source: BIS credit-to-GDP gap statistics. * Credit from all sectors. ¹ Difference between credit and the trend in credit.
 Deutsche Bundesbank

¹ See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 7.

² These data are based on calculations by the Bank for International Settlements (BIS) and include loans and debt securities from all sectors.

³ See S Chen and JS Kang (2018), Credit booms – is China different?, IMF Working Paper, WP/18/2.

⁴ The credit-to-GDP ratio expresses the relationship between credit to the non-financial private sector and nominal GDP. The credit-to-GDP gap measures the difference between the credit-to-GDP ratio and its long-term trend. Based on historical data, setting a threshold of 10 percentage points of divergence from the trend minimises the possibility of false alarms, provided that at least two-thirds of actual crises are predicted correctly over a time horizon of three years. See BIS (2017), 87th Annual Report, p 45 f.

⁵ The interest coverage ratio is calculated by dividing a company's earnings before interest, taxes, depreciation and amortisation (EBITDA) by its interest expenditure.

⁶ If "special-mention loans", ie loans that are overdue but not yet classed as non-performing, are included, the share of at-risk loans in 2017 was around 5%.

⁷ See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 45. In 2016, the rating agency Fitch estimated the share of non-performing loans in the Chinese financial system to be between 15% and 21%. See Fitch, China's rebalancing yet to address credit risks, press release of 22 September 2016.

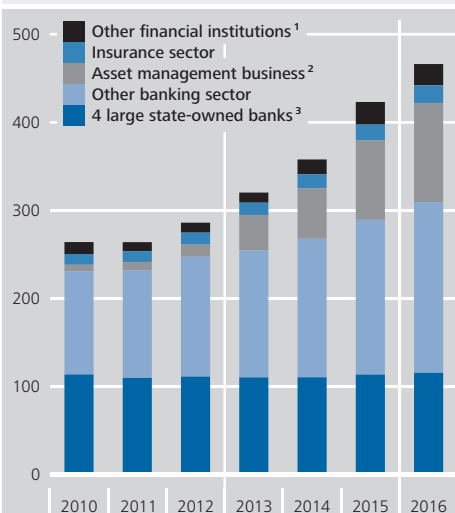
at the core of which lies the banking sector, whose total assets amount to just over three times the size of nominal GDP.⁸ This sector is dominated by four large state-owned banks, though the significance of small and medium-sized banks has increased considerably of late. Most of these smaller institutions are also subject to state control, usually from local government agencies. IMF stress tests indicate that there is a risk of insufficient capitalisation for many small and medium-sized banks, which could exacerbate the effects of a crisis in the event of an unfavourable macroeconomic development.⁹

The Chinese banking sector also played a major role in the dynamic growth of the shadow banking sector,¹⁰ with small and medium-sized credit institutions, in particular, issuing “shadow bank financing instruments” such as wealth management products (WMPs) or channelling funding to trust companies.¹¹ Between 2014 and 2016, around half of banking-sector lending to the non-financial private sector was made via these types of financing instruments. These largely off-balance-sheet transactions generally required less capital under the existing guidelines and lower risk provisioning on the part of banks compared to conventional lending.¹² This also made it possible to circumvent regulatory provisions restricting banks from lending to certain sectors.¹³ Although this practice did ultimately boost economic growth in the short term, it also increased overall economic credit risk and made the financial system more complex.

In recent years, the Chinese government has boosted its efforts to reduce risks to financial stability. In doing so, it is facing a difficult balancing act. There is a certain tension between significantly reducing risks arising from credit developments and short-term macroeconomic growth targets.¹⁴ Measures taken by authorities to lower risk in the financial system have recently focused on restricting shadow lending and limiting opportunities for regulatory arbitrage. Supervisory authorities now increasingly monitor banks’ off-balance-sheet activities and have tightened regulations for

Financial assets of Chinese financial institutions

As a percentage of GDP



Sources: IMF, People’s Republic of China Financial Stability Assessment, October 2017, and Bundesbank calculations. **1** Includes pension funds, public funds and securities companies. **2** Includes the assets under management of bank off-balance-sheet wealth management products, trust companies, specialised funds, securities companies, private equity companies and futures companies. **3** Industrial and Commercial Bank of China, China Construction Bank, Agricultural Bank of China and Bank of China.

Deutsche Bundesbank

8 The Chinese banking system is currently the largest in the world in terms of its assets. See E Cerutti and H Zhou (2018), The Chinese banking system: much more than a domestic giant, VoxEU (<https://voxeu.org/article/chinese-banking-system>).

9 See IMF (2017), People’s Republic of China – Financial System Stability Assessment, p 23 ff.

10 When compared internationally, China’s shadow banking sector was one of the fastest growing in the world between 2013 and 2016. See Financial Stability Board (2018), Global Shadow Banking Monitoring Report 2017, p 50 f.

11 WMPs are savings instruments which in many cases guarantee higher returns than traditional bank deposits and have an investment focus on bonds, money market instruments and bank deposits. See T Ehlers, S Kong and F Zhu (2018), Mapping shadow banking in China: structure and dynamics, BIS Working Papers No 701.

12 See IMF (2017), Global Financial Stability Report October 2017: is growth at risk?, p 38 f.

13 See IMF (2017), People’s Republic of China – Financial System Stability Assessment, p 17.

14 If the measures to reform the financial system are to succeed, it will therefore also be necessary to have accompanying reforms to reduce the economy’s vulnerability to a slowdown in credit growth. See IMF (2017), Global Financial Stability Report October 2017: is growth at risk?, p 40 f.

complex financial products.¹⁵ The newly established Financial Stability and Development Committee has been set up to ensure better collaboration between the various authorities responsible for regulating and supervising the financial system. To strengthen financial supervision, the National People's Congress also passed a resolution in March this year to bring its banking and insurance watchdogs under one roof.

Implicit guarantees are still a major challenge when it comes to ensuring financial stability in China. For example, investors can expect to be compensated by banks or the government in the event of losses arising from a wide range of financial products such as debt instruments issued by state-owned enterprises and investment products issued by banks.¹⁶ This hampers efforts to evaluate the true risk of financial assets and ultimately causes a misallocation of capital. Enacting policies that explicitly rule out these types of guarantees could put an end to the distorted incentives that arise from them.¹⁷

A crisis in the Chinese financial system could have a noticeable negative impact on other countries as China's importance as an international lender and borrower has risen significantly since the global financial crisis. The cross-border claims of Chinese banks stood at just under US\$1 trillion at the end of 2017.¹⁸ Emerging and developing countries in South-East Asia, Africa and Latin America in particular have borrowed heavily from Chinese banks in recent years and are therefore highly dependent on these capital providers.¹⁹ In 2017, China's foreign claims and liabilities totalled around US\$12 trillion or 100% of its national GDP. Closer financial integration increases the risk that a shock in China will spill over to the international financial system.²⁰

The German financial system would probably be affected mainly by indirect spillover effects in the event of a financial crisis in China.²¹ While the direct exposures of Germany's banking system and insurance companies to Chinese debtors has risen in recent years and stood at €42 billion overall at the end of 2017,

these exposures account for only 1.9% and 0.7%, respectively, of each financial sector's foreign assets.²² Direct investment accounts for the lion's share of Germany's direct financial exposure to China, and most recently amounted to around €80 billion. Resulting losses would initially be felt primarily in Germany's non-financial corporate sector, which holds over 90% of these assets.²³ There would only be reason to fear credit risk to the German financial system if losses arising from direct investment were to have a negative impact on companies' solvency.

15 See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 34.

16 The prevailing practice whereby banks usually fully compensate the losses that small investors suffer in capital investments such as WMPs reinforces this perception.

17 Such an approach, however, harbours the risk of investors changing their behaviour abruptly, potentially triggering destabilising effects on the financial system. Against this backdrop, the IMF recommends a series of reforms to accompany the dismantling of implicit guarantees. See IMF (2017), People's Republic of China – Financial System Stability Assessment, p 32 and p 36.

18 Source: BIS Locational banking statistics for mainland China excluding Hong Kong.

19 See E Cerutti and H Zhou (2018), op cit.

20 See Y Korniyenko, M Patnam, RM del Rio-Chanón and M Porter (2018), Evolution of the global financial network and contagion: a new approach, IMF Working Paper, WP/18/113. The international financial centre of Hong Kong would probably be most directly affected by a shock to the Chinese financial system, given its close financial ties.

21 For example, major price corrections on the Chinese equity market and fears of a potential economic slump in China in mid-2015 had a direct effect on global financial markets. See Deutsche Bundesbank, Financial Stability Review, November 2015, p 18. Risks could also spill over to the German financial system via second round effects from financial hubs such as the United Kingdom, whose banking system has close direct and indirect financial ties with China and Germany. For more details on the United Kingdom's financial linkages with China, see Bank of England (2018), From the Middle Kingdom to the United Kingdom: spillovers from China, Quarterly Bulletin 2018 Q2.

22 Data from the Bundesbank's credit register of loans of €1.0 million or more as at 31 December 2017.

23 According to international investment position as at 31 December 2017.

portion of science and engineering students is particularly high in China.

China's technological catch-up process has made significant progress of late

As a result of these policy efforts in innovation and education, China has since progressed noticeably in the technological catching-up process. For example, there has been a significant increase in the number and the quality of Chinese patent applications in the past few years.¹⁶ Furthermore, in the case of a number of technically sophisticated products, such as smartphones, Chinese manufacturers have become increasingly important internationally. These successes clearly should not belie the fact that China still lags noticeably behind the world leaders in many key technologies, such as semiconductors.

Guiding industrial policy aims to make China global leader in technology

The Chinese government is aiming to transform China into a global leader in technology over the medium term. With this in mind, it announced its "Made in China 2025" ten-year plan in 2015, which set out ambitious targets for the development of ten domestic industrial sectors, including information technologies, electric vehicles, and industrial robots. Alongside subsidies, the instruments of the plan also include holdings in foreign enterprises. In a number of partner countries – including Germany – this has stoked concerns of state-orchestrated transfers of technology to China.¹⁷ Furthermore, foreign enterprises operating in China fear that there will be increased pressure to surrender industrial expertise, in addition to other discriminatory measures.¹⁸

Shift of demand from investment to consumption

Chinese authorities tackling problem of over-investment

The second major adjustment taking place in the Chinese economy concerns the demand side. For around five years – and with increased effort in recent times – the Chinese government has been trying to put an end to over-investment. State-owned enterprises are a starting point. They are being pushed to pay more attention to putting their funds to more

productive use and limiting their debt. For individual industrial sectors with chronic overcapacity, such as coal and steel, the government even went as far as to announce investment bans. However, in order to ensure a sustainable solution to the problem of over-investment among state-owned enterprises, implicit state guarantees and other privileges will probably also need to be abolished.¹⁹ Moreover, the authorities are cracking down on speculative purchases in the property market. A certain degree of moderation in government investment in infrastructure can also be observed.²⁰ Against the backdrop of these efforts, growth in overall economic investment has weakened considerably in recent years.

Private consumption, meanwhile, has seen constantly buoyant growth, increasing its im-

¹⁶ The increased quality can be seen in the number of patent applications abroad or the number of foreign citations of patents. See S-J Wei, Z Xie and X Zhang (2017), From "Made in China" to "Innovated in China": necessity, prospect, and challenges, *Journal of Economic Perspectives*, Vol 31(1), pp 49-70.

¹⁷ The holdings of Chinese enterprises in German companies have risen significantly in recent years. A large portion of these can indeed be categorised under one of the ten key sectors covered by the "Made in China 2025" policy. See Bertelsmann Stiftung (2018), *Kauft China systematisch Schlüsseltechnologien auf? Chinesische Firmenbeteiligungen in Deutschland im Kontext von „Made in China 2025“*, GED study. For a discussion of the benefits and drawbacks of Chinese foreign direct investment in Germany, see Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung (2016), *Transformation in China birgt Risiken*, Jahresgutachten 2016/17, chapter 12, pp 464-501.

¹⁸ See European Union Chamber of Commerce in China (2017), *China Manufacturing 2025: Putting industrial policy ahead of market forces*, Report; as well as U.S. Chamber of Commerce (2017), *Made in China 2025: Global ambitions built on local protections*, Report.

¹⁹ Reorganising the SOE sector was indeed one of the Chinese government's main economic policy objectives in recent years. So far, however, increased participation of private capital donors in SOEs (known as "mixed-ownership reform"), rather than harmonising competitive conditions between SOEs and private companies, has been at the top of the reform agenda.

²⁰ Changing incentives seem to be playing a vital role in the rethink. In the past, the performance of local politicians was chiefly measured by the rate of economic growth in their respective jurisdictions, which greatly incentivised government investment. Since 2013, however, the respective debt situation has also been taken into account in the performance evaluation.

What conclusions for China can be drawn from other Asian countries' convergence processes?

China's per capita income, measured in purchasing power parities, has now reached one-quarter of that of the United States. In the coming decades, China is aiming to join the ranks of the advanced economies. This is a leap which, in past decades, only few countries have accomplished. Some Asian countries that have made the leap are Japan, Taiwan and South Korea.¹ Japan in the late 1950s had a similar status to that of China today, as did Taiwan in the mid-1970s and South Korea in the mid-1980s. In the course of their further ascent, all three countries saw their very rapid initial rates of economic growth diminish gradually,² and the patterns of their growth changed.

In many respects, China's economic convergence process thus far is similar to that of Japan, Taiwan and South Korea. Those economies, too, followed an export-driven growth model in the past.³ Taiwan and South Korea managed to increase their exports-to-gross domestic product (GDP) ratio considerably even after having already achieved middle-income status. However, their shares of global exports were small, which meant that they did not hit absorption constraints. As a large economy, however, Japan attained an 8% share of global exports in the 1970s. For some product groups, this figure was much higher still. Later on, its global market share only rose slowly. Since the mid-1980s, it has actually been trending downward.⁴ For China, an even larger economy whose global market share has recently already hit 13%, this indicates that exports will not be able to drive the convergence process indefinitely.⁵

What this means going forward is that Chinese growth will be based to an increasing extent on domestic demand. In the relatively recent past, it already grew very sharply. Up until recently, its key determinant was the boom in investment, especially in infrastructure and other construction. The investment-to-GDP ratio ran up to nearly 50% in the past

few years. In Japan, Taiwan and South Korea, investment likewise rose sharply during the development process. However, in none of those countries did the aggregate investment ratio rise quite as sharply as in China.⁶ This observation strengthens the case for believing that China may have witnessed certain exaggerations (see the explanation in the main text beginning on page 42).

In later stages of their convergence processes, Japan, Taiwan and South Korea saw their investment ratio diminish, with consumption acquiring greater macroeconomic importance. During that period, economic growth was increasingly being driven on the supply side by technological progress. Emerging economies can achieve this to a certain extent by adopting foreign technology. However, as they approach the technological frontier, home-grown innovation becomes more im-

¹ The other two successful examples are Singapore and Hong Kong, though as city states their stories are not fully comparable with the Chinese case. In fact, there is no generally accepted definition of the income threshold above which a country is considered an "advanced" (or "developed") economy. Since 1989, the World Bank has published an annual classification of countries into four income categories. On this basis, South Korea was first classified as belonging to the highest category – "high-income countries" – in 1995.

² This observation is consistent with neoclassical growth theory, according to which a country's per capita income converges to a long-run equilibrium path. The further a country's starting position is from the long-run equilibrium, the faster the convergence process will be.

³ See inter alia P W Kuznets (1988), *An east Asian model of economic development: Japan, Taiwan, and South Korea*, Economic Development and Cultural Change, Vol 36, No 3, Supplement, pp 11-43.

⁴ See K Guo and P N'Diaya (2012), *Is China's export-oriented growth sustainable?*, IMF Working Paper, WWP/09/172.

⁵ See Deutsche Bundesbank, *The catching-up process of major emerging market economies and its implications for global trade – an analysis using the gravity model*, Monthly Report, March 2016, pp 27-30.

⁶ Housing construction investment, in particular, seems to be extremely high in China relative to other Asian countries. See Deutsche Bundesbank, *The potential effects of a downturn in the Chinese housing market on the real economy*, Monthly Report, August 2014, pp 17-19.

portant.⁷ Japan, Taiwan and South Korea made efforts early on towards this objective, creating a suitable environment for innovation by, for instance, enhancing the protection of intellectual property rights and investing in human capital. Moreover, they gave financial incentives to private sector companies to engage in research and development. Over time, these countries accomplished key inventions and technological breakthroughs.⁸

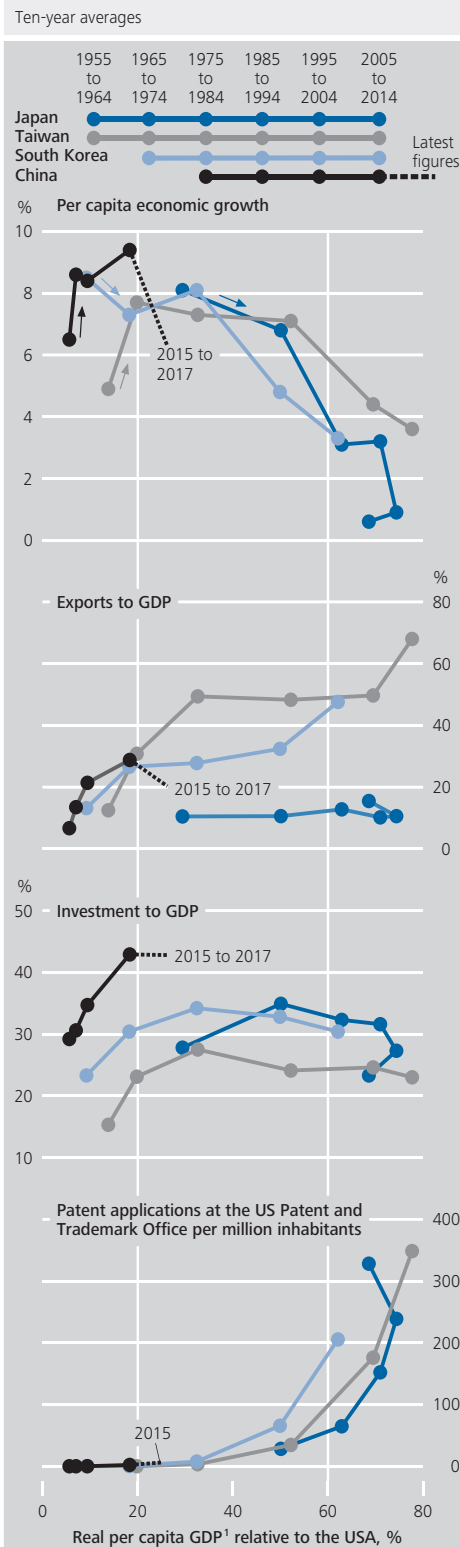
China, too, took a technology-driven path in the past few years. However – like the other countries in the region – it cannot simply build up innovative capacity overnight. It is therefore not surprising that, despite a distinct increase recently, China is still lagging far behind in international patent applications relative to its size.⁹ In 2015, the US Patent and Trademark Office registered only six Chinese patents per million inhabitants, whereas Japan, Taiwan and South Korea each posted more than 300 applications per million inhabitants. However, if China’s development status is taken into account, the recently achieved figure is quite considerable. Should China successfully navigate the transition from an investment-based to an innovation-driven growth model, it will likely have good prospects for emulating the other Asian countries’ growth track.

⁷ See inter alia D Acemoglu, P Aghion and F Zilibotti (2006), Distance to frontier, selection, and economic growth, *Journal of the European Association*, Vol 4(1), pp 37-74; and Asian Development Bank, *Transcending the middle-income challenge*, Asian Development Outlook 2017.

⁸ See inter alia World Bank (2012), *China 2030: Building a modern, harmonious, and creative high-income society*, Conference Edition, p 167; and PR Agénor, O Canuto and M Jelenic (2012), *Avoiding middle-income growth traps*, Economic Premise No 98.

⁹ Domestic patent applications, however, are a problematic benchmark since each national authority applies its own standards to patent applications. The benchmark used from here on will be applications registered by the US Patent and Trademark Office as its time series go significantly further back than, for instance, those of the European Patent Office.

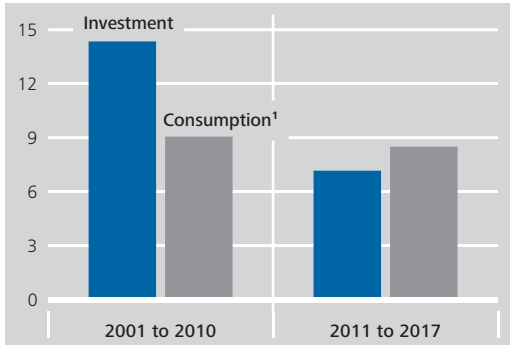
Economic metrics of Asian countries during their convergence processes



Sources: Penn World Tables 9.0, World Bank (World Development Indicators), US Patent and Trademark Office, national statistics and Bundesbank calculations. ¹ Based on purchasing power parities.
 Deutsche Bundesbank

Growth in investment and consumption in China*

Average growth per year, %, price adjusted



Source: National Bureau of Statistics (NBS) of China and Bundesbank calculations. * Calculations based on officially reported growth contributions and each component's share of nominal GDP. ¹ Including public consumption.

Deutsche Bundesbank

Private consumption gaining in importance

importance to the economy as a whole.²¹ Strong wage growth was a key contributing factor to the rise in significance of consumption. In addition, households markedly reduced their rates of saving. At just under 40%, the saving rate measured as a percentage of disposable income was nevertheless exceptionally high even recently.²² The sharp increase in consumer demand in recent years was accompanied by a considerable shift in the pattern of expenditure. Higher-end goods, such as cars, have gained substantially in importance. In this regard, the rising number of middle-class households plays a vital role. The share of spending on services also grew, which resulted in the Chinese services sector experiencing a boom. Value added in the services sector is now almost 30% higher than in the production industry; up until a few years ago, both economic sectors were still more or less equally significant.²³

Obstacles remain on path to "rebalanced" demand structure

Similar to the transition to innovation-based growth, China is only just taking its first steps on the path to a "rebalanced" overall economic demand structure. In order to further strengthen the role of private consumption, Chinese households would have to reduce their rates of saving, which – to a large extent, seemingly for precautionary reasons – continue to be extraordinarily high. An additional expansion of the social safety net could also contribute to this.²⁴

International impact of the realignment of China's growth model

China is deeply integrated into the global economy. It is not only the world's leading exporter, but also the second largest importer of goods. The transformation of the Chinese economy that is now underway, with its supply-side and demand-side aspects, is likely to bring about major changes to China's role in international markets. There could also be a marked impact on the Germany economy, which is closely intertwined with China via foreign trade. China is now the third largest sales market for German goods, and even ranks first in terms of imports.

Transformation likely to change China's role in international markets

China as a sales market

The distinct slowdown in Chinese economic growth in recent years was accompanied by an even more significant levelling-off in the country's import activities.²⁵ One major factor behind the sharp slowdown in Chinese imports was that, as a result of the decreased momentum in Chinese exports described above, the

Clear levelling-off in import growth

²¹ On the expenditure side, consumption (including public consumption, which is not reported separately), has already been the largest contributor to Chinese economic growth in arithmetical terms every year since 2014.

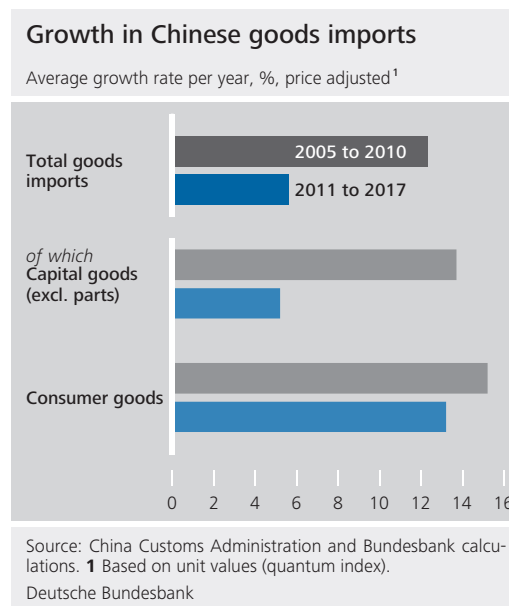
²² These data are based on the financial accounts, which are available up to 2015.

²³ In addition, the services sector proved to be a driving force for job creation. Between 2010 and 2016, the number of persons employed in that sector rose by more than 70 million.

²⁴ See IMF (2017), China's high savings: drivers, prospects, and policies, IMF Country Report No 17/248, pp 4-16.

²⁵ The slower rate of growth in Chinese goods imports also plays a key role in explaining the sluggish growth in global trade in recent years. See Deutsche Bundesbank, On the weakness of global trade, Monthly Report, March 2016, pp 13-35. It should also be noted that, in contrast to developments in goods trade, Chinese imports of services have risen very sharply in recent years. This is due, in particular, to booming foreign travel. See Deutsche Bundesbank, Driving forces behind the Chinese current account, Monthly Report, January 2015, pp 20-22.

need for foreign intermediate goods fell.²⁶ However, the realignment of China's growth model was an additional significant factor. In light of various technological breakthroughs, it is likely that this has enabled China to successfully replace some of its imports with domestic production. The aforementioned shift of emphasis within Chinese domestic demand probably had an even greater impact. As investment has a higher import content than private consumption, such a shift in demand will, in and of itself, lead to a reduction in imports.²⁷



German exports to China also see weaker growth ...

German exporters are already feeling the effects of weaker import growth in China. Average growth in export earnings (in euro terms) from bilateral trade declined from 19% in the 2000s to 7% between 2011 and 2017. If the general price index for goods exports to non-euro area countries is used as a basis, there was an average increase of 6% in real terms over the past seven years, which was broadly in line with the growth of price-adjusted Chinese imports overall. This allowed Germany to keep its market share in China more or less stable.²⁸

... coupled with shift in sectoral structure

This development is noteworthy since capital goods rank high among Germany's exports. In 2010, almost 30% of Germany's total earnings from goods exports to China were accounted for by machinery alone. In recent years, those exports have risen only slightly, which reflects the slowdown in investment growth in China. By contrast, however, there was robust growth in exports of automobiles and automotive parts.²⁹ In this regard, the shift in demand in China was beneficial for German exporters.³⁰ Another category of goods that has also made gains in recent years is data processing units and electronic and optical products. This includes a number of high-end intermediate goods, such as semiconductors, which China has so far been unable to produce itself.

Moderate growth in German exports to China likely in the future

The ongoing transformation of the Chinese economy is likely dampen the growth of Chinese imports even further. In particular, it is expected that the slowdown in capital goods im-

ports will continue. In this regard, the lower capital intensity of the emergent services sector could have an impact alongside efforts to reduce inefficient investment. Due to their range of high-end goods, German exporters should greatly benefit from the prospective moderate growth in Chinese imports in the future, too.³¹

The outlook for an ongoing, successful realignment of the Chinese economy is, however, not

²⁶ According to one estimate, nearly half of the slowdown in Chinese imports in recent years was due to the loss of momentum in export growth. See JS Kang and W Liao (2016), Chinese imports: what's behind the slowdown?, IMF Working Paper, WP/16/106.

²⁷ According to an evaluation of the World Input-Output Database (WIOD), investment in China comprised just under 18% of foreign value added in 2014. At around 12%, the import content of private consumption was markedly lower.

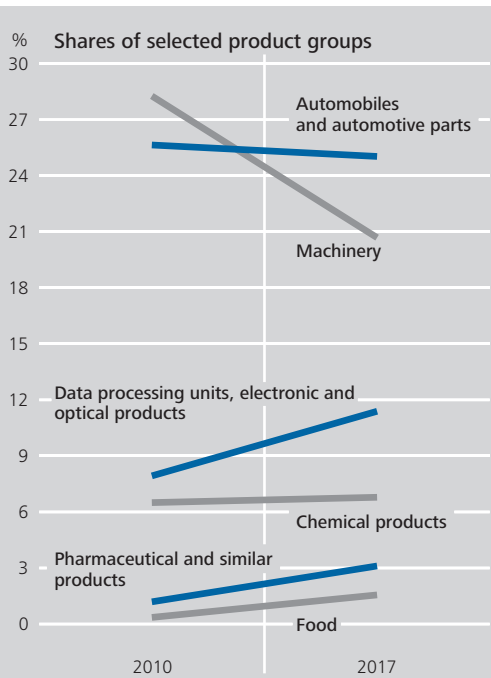
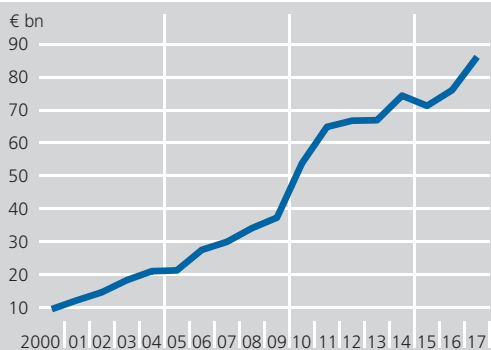
²⁸ Measured in terms of total Chinese expenditure on non-commodity imports, Germany's market share in recent years amounted to an average of 7½%.

²⁹ The 6½% per year average growth in exports of automobiles and automotive parts recorded over the past seven years is largely due to growth spikes in 2011 and 2012. It is likely that the subsequent subdued growth was linked to German manufacturers significantly expanding car production in China. See Deutsche Bundesbank, Reasons for the recent slump in German goods exports to China, Monthly Report, November 2013, pp 47-49.

³⁰ Other examples are food and medicines. The corresponding earnings from exports to China rose sharply from 2011 to 2017, by an average of 32% and 23% per year respectively.

³¹ Another reason is the significant reductions in import tariffs on automobiles and automotive parts introduced by China on 1 July 2018, which are likely to be especially favourable to German companies.

German goods exports to China



Source: Federal Statistical Office and Bundesbank calculations.
 Deutsche Bundesbank

Successful transition scenario, but with downside risks

without risk. For instance, debt has risen sharply, which poses a risk to the financial system and economic growth. With regard to China's global significance, an abrupt downturn would have international spillover effects – not least for the German economy, which shares close trade interlinkages with China (see box on pages 53 and 54).

China as a supplier and competitor

The transformation of the Chinese economy will likely change the country's role in the inter-

national division of labour, too. Consumers in industrial countries have greatly benefited from China's specialisation in labour-intensive products thus far. According to various studies, consumer price inflation was dampened by the availability of cheap imports from China and other emerging market economies.³²

Consumers in industrial countries benefited from cheap Chinese imports in the past

The strong wage growth in China raises the question of whether these disinflationary effects have now petered out or even reversed themselves.³³ There is no evidence for the latter, at least. That is partly because there are other countries in the region that still have very low wage costs – labour-intensive production in China was able to migrate to these countries. Accordingly, China's share of labour-intensive products imported into the European Union (excluding intra-EU trade) has fallen considerably in recent years, while Asia's share as a whole has remained practically unchanged. It is unclear to what extent countries such as Vietnam and Bangladesh will continue to have sufficient capacity to absorb labour-intensive industrial sectors pulling out of China in the future.

Have the disinflationary effects now reversed themselves?

For advanced economies, the realignment of Chinese industry could raise the degree of competition. Even in the last few years, Chinese companies have increasingly been coming into competition with suppliers from industrial

Competitive pressure from China in third markets ...

³² An earlier study found that, due to cheap imports from Asian emerging market economies, consumer price inflation in the euro area was suppressed by an average of 0.3 percentage point per year between 2001 and 2005. A more recent paper concerning the effects of cheap imports from low-wage countries on France estimates this figure to be 0.2 percentage point for the 1994 to 2014 period. See N Pain, I Koske and M Sollie (2006), Globalisation and inflation in the OECD economies, OECD Working Paper 524; and J Carluccio, E Gautier and S Guilloux-Nefussi (2018), Dissecting the impact of imports from low-wage countries on French consumer prices, Banque de France Working Paper Series No 672. In the overall picture for consumers, however, it must be acknowledged that China's upswing has contributed to higher commodity prices. See, for example, S Eickmeier and M Kühnlenz (2016), China's role in global inflation dynamics, Macroeconomic Dynamics, Vol 22(2), pp 225-254.

³³ See also Deutsche Bundesbank, The development of labour costs in China and their impact on consumer prices in the industrial countries, Monthly Report, May 2013, pp 13-15.

The international spillover effects of a sharp economic downturn in China

The outlook for the Chinese economy remains generally upbeat, with the International Monetary Fund's baseline scenario in the April 2018 World Economic Outlook projecting that GDP growth will slow just gradually to 5½% in 2023. But the sharp rise in debt, particularly in the corporate sector, and opaque interlinkages in the financial system entail not inconsiderable risks which cannot be ignored (see the box on pages 44 to 46).

The international spillover effects of a potential sharp downturn in China triggered by a crisis in the country's financial system have already been analysed in numerous studies. There are also macroeconomic model-based studies looking at the repercussions specifically for Germany and for the euro area.¹ These tend to investigate the consequences of a general demand shock in China. In the past, in other countries where periods of excessive credit growth have culminated in financial crises, it has been investment activity which has taken a particular hit, however. Investment growth in the affected countries dropped by an average of 12 percentage points, whereas private consumption growth slowed by an average of 3 percentage points.²

The fact that investment and consumption react differently is important in terms of external knock-on effects since, in general, investment is characterised by a higher import intensity than private consumption – and this holds true in the case of China, too.³ As a result, a decline in investment would be channelled to foreign markets to a greater degree than the same size drop in private consumption. Studies positing simply a generalised reduction in domestic demand in China are therefore likely to underestimate spillover to other countries.

In the NiGEM global economic model,⁴ which will be used for the following simula-

tions, imports are influenced by a country's aggregate demand. It therefore makes no difference whether a shock affects certain demand components to different degrees. It is only by adapting the model that differences in the import content of the individual expenditure components can be factored in.⁵ The respective (country-specific) import intensities were estimated on the basis of data from the World Input-Output Database (WIOD).⁶

1 These include Deutsche Bundesbank, The international ripple effects of a severe economic slowdown in China, Monthly Report, July 2015, pp 29-30 and A Dieppe, R Gilhooly, J Han, I Korhonen and D Lodge (2018), The transition of China to sustainable growth – implications for the global economy and the euro area, ECB Occasional Paper No 206.

2 Based on a sample of 35 periods of excessive debt build-up in emerging markets and advanced economies between 1960 and 2010, identified using a country-specific threshold factoring in the variance of the normal credit cycle. See A Abiad, M Lee, M Pundit and A Ramayandi (2016), Moderating growth and structural change in the People's Republic of China: implications for developing Asia and beyond, ADB Briefs No 53, and E Mendoza and M Terrones (2012), An anatomy of credit booms and their demise, NBER Working Paper 18379.

3 See M Bussière, G Callegari, F Ghironi, G Sestieri and N Yamano (2013), Estimating trade elasticities: demand composition and the trade collapse of 2008-2009, American Economic Journal: Macroeconomics, 2013, 5(3), pp 118-151.

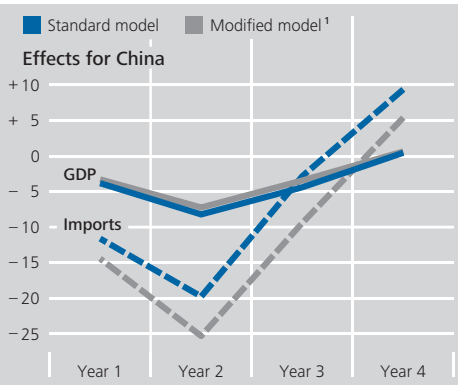
4 NiGEM is a macroeconometric model developed by the UK-based National Institute of Economic and Social Research (NIESR). It includes most of the OECD countries as well as important emerging economies. International linkages are modelled through foreign trade and the interest rate-exchange rate nexus. For further information on the model structure, see <https://nimodel.niesr.ac.uk>

5 See M Jorra, A Esser and U Slopek (2018), The import content of expenditure components and the size of international spillovers, National Institute Economic Review, 244, pp R21-R29.

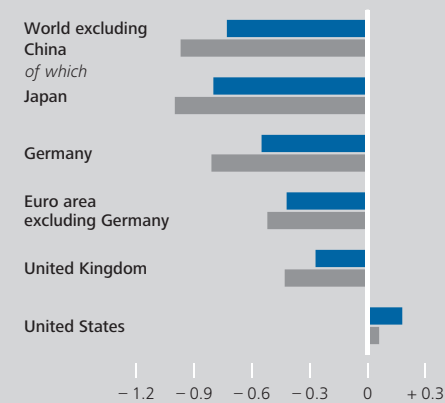
6 The WIOD datasets allow intermediate inputs to be captured across national borders and individual sectors' supply to be broken down by end-use categories. In this way, an import share can be determined for each expenditure component. Calculations are based on the 2016 release available at www.wiod.org. See M Timmer, E Dietzenbacher, B Los, R Stehrer and G de Vries (2015), An illustrated user guide to the World Input-Output Database: the case of global automotive production, Review of International Economics, 23(3), pp 575-605.

Impact of an abrupt economic downturn in China according to NiGEM simulations*

Deviation from the baseline, %



Spillover effects on GDP for a selection of China's trading partners



Source: Bundesbank calculations using NiGEM (Version 4.17).
 * Shocks to growth rates of Chinese investment (-12 percentage points) and private consumption (-3 percentage points) persisting for two years. Rules-based monetary policy assumed.
 1 Modified model takes into account differences in the import content of the individual expenditure components.
 Deutsche Bundesbank

For a simulation with the adjusted model, the analysis uses shocks to investment and private consumption in China corresponding to the above-mentioned historical values for other countries with financial crises.⁷ It is assumed that, in the medium run, both variables return to the path originally laid out. In the simulation, the Chinese economy therefore experiences a substantial slowdown in growth. In the first two years of the shock, real gross domestic product (GDP) growth contracts to an average of just 2%. This means that China's economic output undershoots the baseline by 7% in the second year. In the same period, China's import volume falls short of

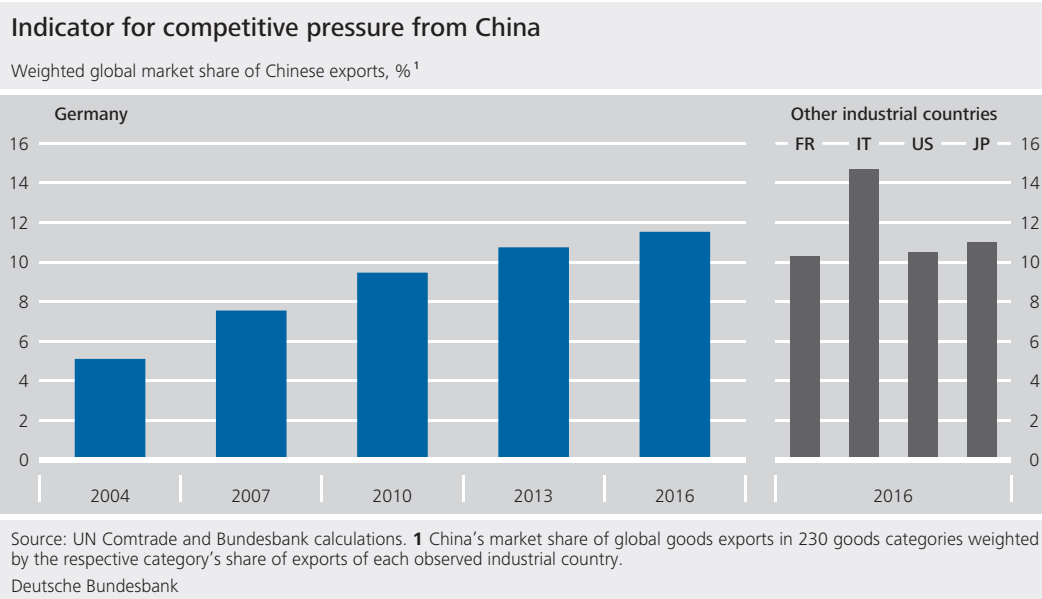
the baseline by as much as one-quarter. The relatively high sensitivity of imports to the downturn in investment is a key factor here: in a simulation using the standard version of NiGEM, imports decline by just one-fifth.

Using the adapted model, this simulation thus yields spillover effects which – averaged across all trading partners – are around one-third higher. Germany's real GDP drops markedly against the baseline, by 0.8% after two years, compared with just under 0.6% in the standard model. Both variants of the model show Germany experiencing greater output losses than other euro area countries. This is due, in particular, to the German economy's very high degree of export exposure to China.⁸

It should be noted that even the adapted model could still underestimate international spillover. The simulations assume a practically stable Chinese currency throughout the downturn, yet if such a situation were to see a significant depreciation of the renminbi, the repercussions for China's trading partners would probably be even greater. Likewise, the simulation does not account for a global loss of confidence among economic agents, in particular in the financial markets, triggered by a crisis in China.

⁷ However, there are certain circumstances applying to the Chinese economy that make it conceivable that a crisis might have milder effects than those observed in other countries. For instance, the Chinese authorities could well have at their disposal more effective means for stimulating demand than other emerging markets.

⁸ As a percentage of nominal GDP, Germany's goods exports to China last year amounted to 2.6%, compared to an average of 1% for other euro area countries.



countries in third markets. A simple metric can be used to systematically capture the competitive pressure exerted by China on the exporters of individual countries. China's global market share of exports in 230 goods categories is calculated³⁴ and weighted by the respective category's share of exports of the observed industrial country. In all of the industrial countries surveyed, the degree of competition measured using this method has risen continuously since 2004. According to the indicator, competitive pressure on Germany from China in 2016 was at a similar level to other industrial countries.

ports of electric vehicles from China may also be expected.

Conclusion

With China's previous growth model increasingly hitting its limits, the Chinese government is aiming to create a new foundation for the country's economic catching-up process. On the supply side, the transformation is being accompanied by improving technology in industry and a growing significance of the services sector. On the demand side, forces are shifting from exports and investment to consumption.

Realignment of growth model has begun ...

... could rise over coming years for Germany in particular

Competitive pressure from China could rise over the coming years for the German economy in particular.³⁵ This is due in part to the fact that current Chinese industrial policy is largely focusing on sectors in which German companies have a strong global market presence. In the automotive sector in particular, there could be considerably more friction between German and Chinese companies. So far, China has only reached a global market share of 4½% for such exports (mainly automotive parts). As part of the "Made in China 2025" action plan, however, the development of the electric vehicle sector is being massively promoted. The domestic market is seeing strong growth and is already dominated by Chinese models.³⁶ In the medium term, large-scale ex-

³⁴ The goods categories used correspond to the chapters (two-digit) of the United Nations Harmonized Commodity Description and Coding System (HS). The two most significant chapters for Chinese exports – 84 (machinery and mechanical appliances) and 85 (electrical machinery and equipment) – were broken down even further.

³⁵ German enterprises operating in China are already reporting significantly increased competitive pressure from Chinese companies in recent times. See German Chamber of Commerce in China (2017), German Business in China – Business Confidence Survey 2017/18.

³⁶ Around half of the 1.2 million electric vehicles sold worldwide in 2017 were sold in China. Of those, the share of foreign models is, at 4%, extremely low. See Germany Trade and Invest, Elektromobilität VR China: Die Weichen sind gestellt, <https://www.gtai.de/GTAI/Navigation/DE/Trade/Maerkte/suche,t=elektromobilitaet-vr-china-die-weichen-sind-gestellt,did=1883192.html>

... but some aspects could lead to conflict

In order to support the structural change, the Chinese authorities are already implementing important reforms in a number of areas. Partner countries have been critical of certain political measures, particularly in industrial policy, with some, such as the United States, also using them as justification for their own trade policy measures. Against this backdrop, further improving the general environment for innovation as well as continuing to push the Chinese economy to open up to foreign investment – something that has been neglected in recent years – would be less contentious and also

probably more beneficial from a macroeconomic standpoint.

For the German economy, the transformation in China is likely to have wide-ranging implications. If a realignment of the growth model is successful and China continues to catch up at a rapid pace, German exporters may be presented with excellent market opportunities in the future, too. At the same time, however, it is expected that competitive pressure from China will also rise. In the coming years, it is precisely German enterprises that could feel the effects.

Transformation in China presents opportunities and risks for German economy