

TRANSFORMATION IN CHINA HARBOURS RISKS

I. DIFFICULT TRANSFORMATION PROCESS

1. Economic growth with downsides
2. Present growth model not viable for the future
3. Will the transformation succeed?
4. Risks to the global economy

II. IMPLICATIONS FOR THE GERMAN ECONOMY

1. Export market China: losing momentum
2. China as a location for production and sales
3. Competition for Germany on international markets
4. China as an investor

III. CONCLUSION

A differing opinion

References

This is a translated version of the original German-language chapter "Transformation in China birgt Risiken", which is the sole authoritative text. Please cite the original German-language chapter if any reference is made to this text.

SUMMARY

Since the start of the new millennium, China has developed into one of Germany's **most important trading partners**. It has also become an important production location for German companies, particularly in the automobile industry, and the presence of Chinese investors as buyers of German corporations has been noted for some time now. China is facing a **difficult transformation process**. Economic growth, which had been in double digits for years, has slowed considerably. Considerable excess capacity has developed in major industrial sectors, and private investment growth has been declining for years. Foreign trade decreased in 2015, with only slight growth expected for this year. Debt, particularly in the corporate sector, is a cause for concern.

Chinese economic policy appears focussed on reaching growth targets at any price. Given the strong role played by the state, this is likely to be achievable at least in the short term. As is evident this year, public investment is increasingly being used to stabilise growth again, and the lending volume is rising more rapidly than gross domestic product. However, this means more **risks for the financial system**. It is generally assumed that the government would bail out the financial sector in the event of crisis, which it would likely be in a position to do thanks to the country's low level of foreign debt. But this may result in high real economic costs even in the case of a far-reaching bailout.

In the medium term, China faces the problem that its current policy is slowing the transformation to growth more heavily driven by private consumption and services. The country also faces the fundamental question of what role the state should play in the economic process. At present, China's leaders seem to favour state-owned enterprises again for infrastructure investments as well as for **industrial policy objectives**. Whether or not China can assert itself in the medium term as a competitive business location on the global market is questionable, not least given its limitations on civil liberties.

The transformation in China is affecting the German economy. **German exports to China** have barely increased since the very dramatic growth recorded from 2008 to 2012. This reflects the increasing importance of German car brands being produced in China in addition to less import-intensive growth there. And the impact on the German economy is far greater than the proportion of exports to China in relation to total exports, at a constant 6% for some years now.

Increasing Chinese investor activity in acquiring German companies is viewed sceptically by many. Free movement of capital is generally advantageous for all involved. However, even if there is a lack of reciprocity and a country acts in a protectionist manner, there is still an advantage for the open capital-importing economy. Germany would therefore be well advised to **unilaterally maintain its liberal foreign direct investment regime**, even if China remains a country that imposes restrictions on foreigners acquiring businesses and accessing the market.

I. DIFFICULT TRANSFORMATION PROCESS

918. Since the start of the new millennium, China has developed into one of Germany's most important trading partners. It has also become an important production location for German companies, particularly in the automobile industry. Furthermore, Chinese investors have become active as buyers of German corporations for some time now. In view of such **growing economic interdependence**, the economic problems now observable in China are reason for a more detailed analysis.
919. Numerous indicators signal that the country is in the midst of a **difficult transformation process**. Economic growth – which had been in double digits for years – has slowed considerably, as have advances in productivity. Considerable excess capacity has developed in major industrial sectors, and the corporate sector has accumulated worryingly high levels of debt in relation to GDP. Moreover, China's private investment growth slowed considerably in the first half of 2016, while foreign trade (in US dollars) is declining. The financial sector is marked by a growing shadow banking system. Stock prices temporarily took some sharp declines and the foreign exchange reserves of China's central bank have decreased by one fifth from the June 2014 high.

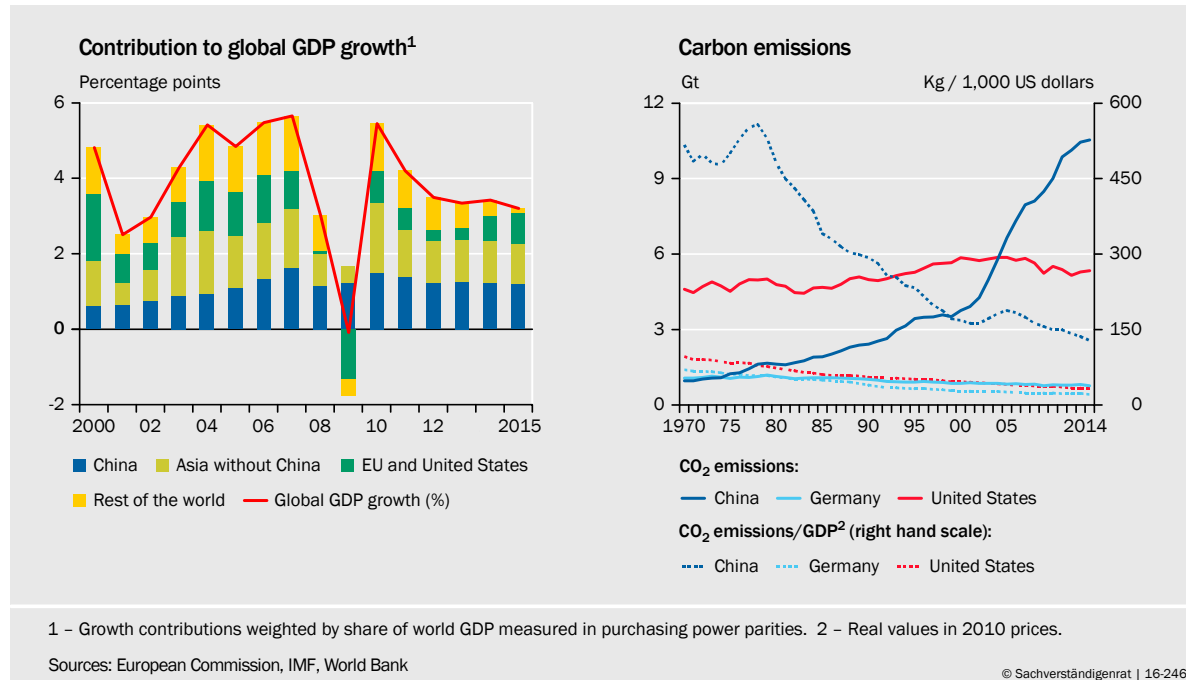
All in all, China's state-regulated transition to a “**new normal**”, as Chinese president Xi Jinping refers to the current phase with considerably slower growth, is accompanied by fundamental structural changes, which could have more serious repercussions for the global economy and thus also for Germany.

1. Economic growth with downsides

920. With around 1.4 billion people, or 19 % of the world's population, China is the most populous country on Earth. Its economy has increased by an average of 10 % over the past 25 years, since the 1980s, when its per capita income was among the world's lowest. This has turned the country into an increasingly important **global economic engine**. China has contributed three times as much to world economic growth over the past ten years as the European Union (EU) and the USA combined. [↘ CHART 124 LEFT](#) Measured by its gross domestic product (GDP) expressed in US dollars, China is now the second-largest economy in the world after the USA, even exceeding the US in terms of purchasing power parity.
921. The sustained high growth resulted in a heavy **decline in poverty** and was thus a key factor in achieving the first United Nations' global Millennium Development Goal. While two thirds of the Chinese population had less than US\$ 1.90 per day to spend in 1990 (based on 2011 purchasing power parity), that figure was only 11 % in 2010, or 600 million fewer people. This contributed considerably to a major reduction in global inequality. [↘ ITEM 788](#)

↘ CHART 124

China's contribution to global GDP growth and output of carbon emissions



Chinese **per capita income** measured in US dollars ranked between that of the EU states Bulgaria and Romania in 2015, although considerable differences still persist between China's regions (GCEE Annual Economic Report 2015 item 152). The wealthiest region Tianjin recorded per capita income of around US\$17,300 in 2015, while the poorest region Gansu recorded approximately US\$4,200.

922. The impressive economic growth contrasts with **serious problems**. For example, the political system as a whole lacks democratic legitimacy and parliamentary control. The related non-transparency of political processes and the important role that state-owned enterprises (SOEs) and public authorities play in the economy are accompanied by a high degree of **corruption** in the state apparatus. China scored in the last decile in a widely recognised ranking of the political and civil liberties of 195 countries (Freedom House, 2015). In its World Report 2016, Human Rights Watch also referred to China as an authoritarian state that systematically curtails human rights, above all freedom of expression, association, assembly and religion.



One example of such radical intervention in citizens' freedom was the **one-child policy**. This attempt to control population growth in combination with demographic change causes a large number of problems. On the basis of microdata, Choukhmane et al. (2013) demonstrate that the one-child policy can account for 30 % to 50 % of the rise in the household saving ratio from 1983 to 2011 – a very high rate on an international scale. The one-child policy has been gradually eased over the last few years. Furthermore, the “**hukou**” system has also had far-reaching consequences for the Chinese economy and society. This system assigns every Chinese person a permanent residence, determined by place of birth. Citizens only have access to certain social services and educational institutions at this place of residence. The large number of migrant workers who live and work outside their “hukou”, have inadequate access to social services and welfare.

923. Moreover, the rapid economic growth was also accompanied by a significant increase in the **inequality of income distribution**. The rising demand for labour during the years of particularly dramatic growth (from 1996 to 2006) was satisfied by a continuous inflow of rural migrant workers to the cities, which meant that no major wage pressure developed in urban areas (Garnaut et al., 2016; Ma et al., 2016). Although China exhibited a very low level of inequality in income distribution in 1990 as measured by a Gini coefficient of 0.33 (after tax and transfers), it was among those countries with a very high level of inequality in 2010, with a Gini coefficient of 0.54, a figure which has since been decreasing (Solt, 2016). Income disparity is the greatest between rural and urban areas. The average urban income in 2015 was 2.9 times the average rural income (compared with 1.8 times in 1983).
924. **Severe environmental damage** is one of the heavy prices being paid for the years of high growth. Today, China is by far the largest emitter of CO₂. ↘ CHART 124 RIGHT Its air quality – as measured by average level of fine particulate matter – is the worst in the world. This is especially true of the large cities, with annual averages of two to ten times, and 24-hour averages of ten to twenty times the WHO standard (US State Department, 2016). Moreover, there are serious problems reported in ground water quality. Insufficient environmental protection regulations allowed Chinese companies ample freedom in the past, while also offering foreign companies the opportunity to circumvent more stringent regulations in their own countries.

2. Present growth model not viable for the future

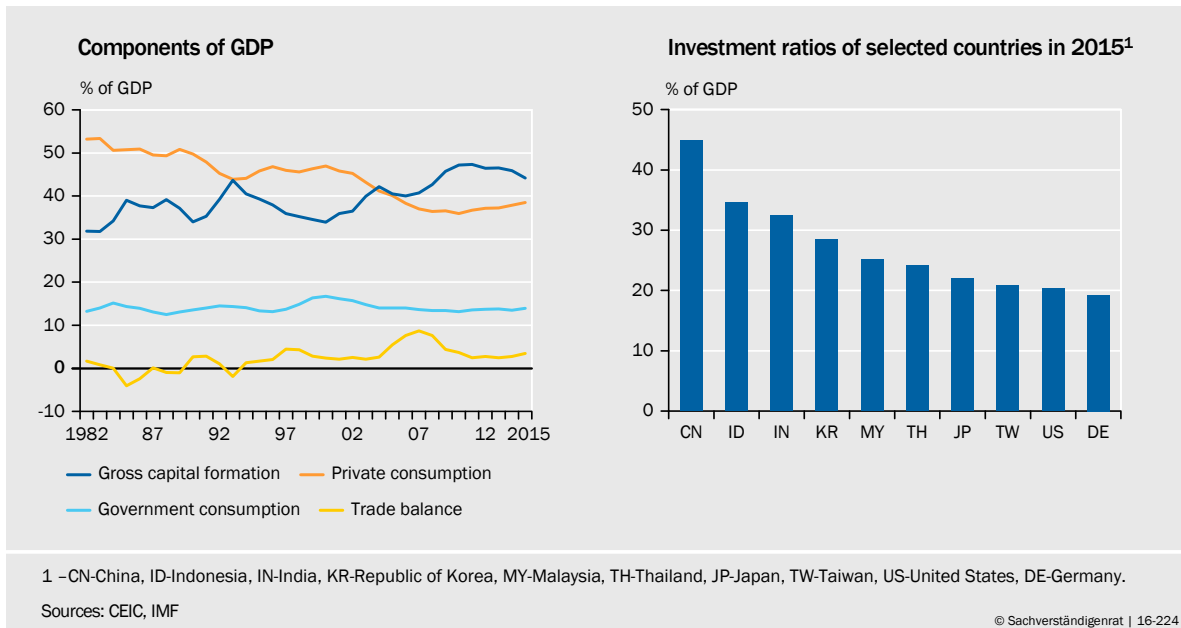
925. China's **economic growth** has slowed considerably in the recent past. While the Chinese economy was still growing at around 10 % annually at the start of the decade, only around 6.5 % growth is expected for 2016. This slowdown is a reflection of **deeper transition processes**;
- China's leaders have aimed their growth strategy at changing the **structure of growth** for a number of years now. On the demand side, policy focuses on reducing the high investment ratio in favour of private consumption. This process is reflected on the supply side in less growth in the manufacturing sector and more in the services sector.
 - The extraordinarily **sharp rise in lending volume** relative to economic output is a threat to financial system stability.
 - Moreover, the increasing efforts to **reduce pollution** are negatively impacting economic growth.



A closer look at China's official **national economic statistics** gives rise to doubt about their credibility and accuracy. GDP growth rate statistics are conspicuously close to the projected five-year plan figures. Statistically reported growth is not very volatile nor does it follow the development of other economic indicators, such as electricity consumption, cargo volume or lending. An alternative measure of China's GDP, the **Li Keqiang Index**, combines these three figures. The index showed rates of growth almost identical to officially reported GDP

↘ CHART 125

Components of China's GDP and comparison of investment ratios across countries

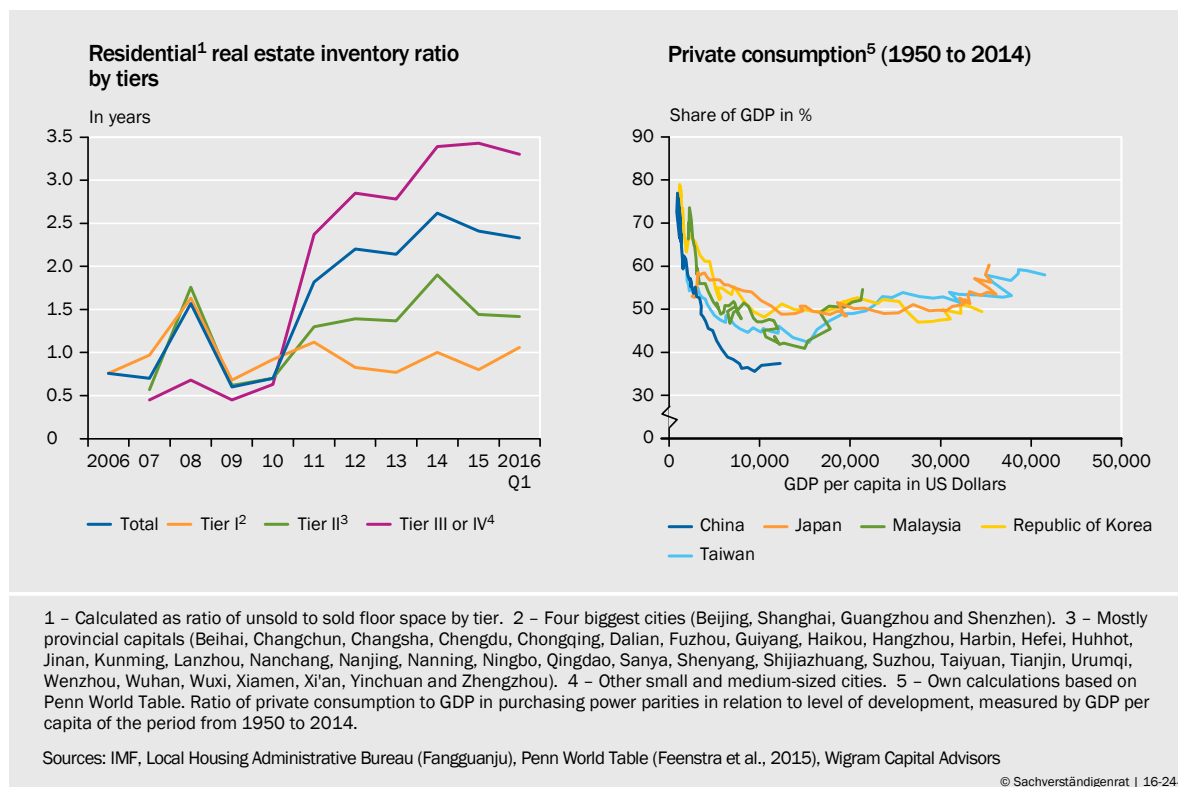


until the end of 2012. However, even this index no longer reflects current economic output due to the growing importance of services, which consume far fewer resources than industrial production. The German Council of Economic Experts thus uses the official Chinese figures as does a large portion of literature. Despite the fact that the figures do not sufficiently reflect actual levels, it is assumed that they do reflect the dynamics. The official data, particularly for comparison of levels, is, nonetheless, to be used with an element of caution.

926. The “Great Recession” of 2008/09 and the softer demand that ensued in advanced economies forced China to shift its focus from heavily export-driven growth to primarily **domestic growth**. ↘ CHART 125 LEFT This was accomplished by heavily increasing **capital formation**, above all in the basic materials industry, residential construction and infrastructure. The country's investment ratio, which was already high, thus rose further still, and remains – at a current 43 % – very high by international standards, despite a slight decrease since 2013. ↘ CHART 125 RIGHT This is also true when comparing it with investment ratios achieved by other countries in earlier stages of their growth processes.
927. The strong increase in past years in investments in real estate and the basic materials industry above all took a great toll on the Chinese economy's **efficiency**. Whereas it took three renminbi of investment capital to generate one additional renminbi of GDP in 2007, it took six in 2015; the incremental capital output ratio (ICOR) has thus risen markedly. As a result, the contribution of total factor productivity (TFP) to growth has declined. No further rise in TFP at all was noted for 2013 or 2014 (Garnaut, 2016).
928. The problems of the primarily investment-driven growth can be seen in the substantial **excess capacity** in important industrial sectors, particularly the steel industry (raw steel), where production capacity was expanded by 77 % in the period from 2008 to 2014 (European Union Chamber of Commerce in China,

↘ CHART 126

Inventory ratio for real estate in China and private consumption in selected countries



2016b). There are considerable problems, especially in the **real estate sector**. Although brisk housing demand continues in Beijing and Shanghai, a large stock of unsold properties has accumulated in the economically weaker cities (Tier III and Tier IV cities). ↘ CHART 126 LEFT

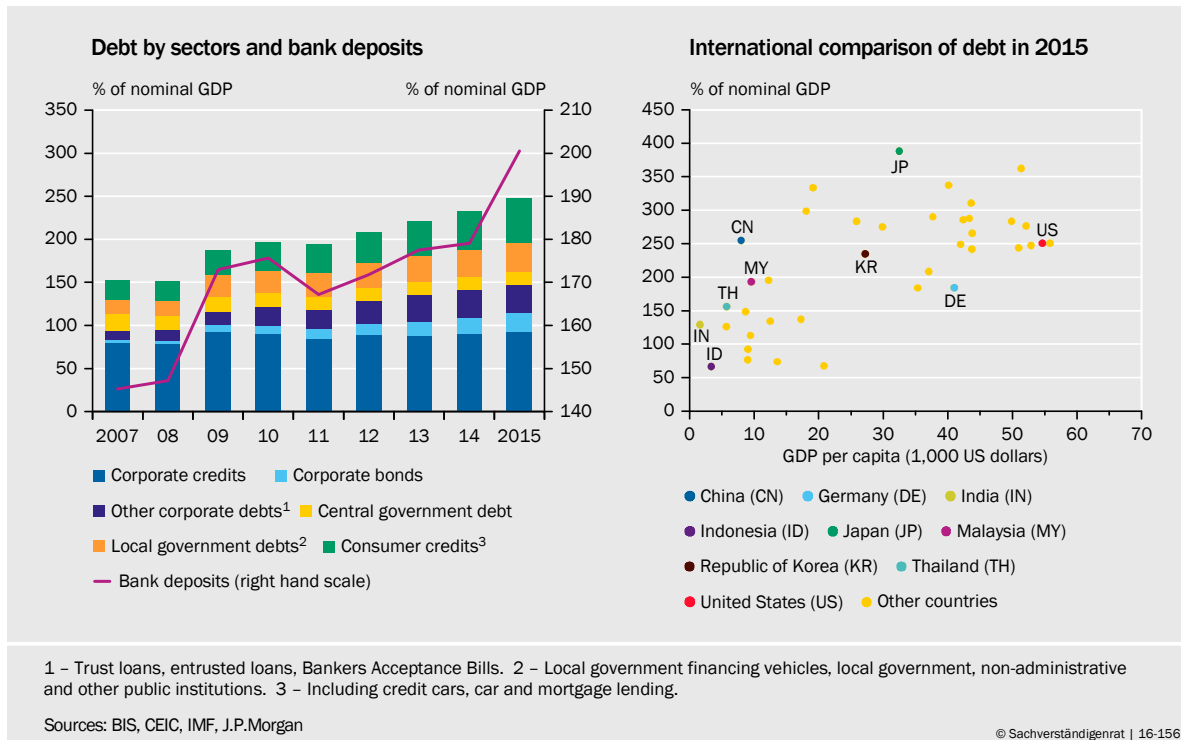
929. The **share of private consumption** in aggregate demand is unusually low. Despite a very high saving ratio of private households by international standards, the increase in final consumption expenditure lagged behind overall economic growth in the boom years. Chinese household consumption's share of GDP, which still stood at around 45 % in the 1990s, has decreased considerably in the past decade. At the latest figure of around 37 %, it lags far behind that of other emerging markets and almost all highly developed economies. ↘ CHART 126 RIGHT The low propensity to consume is reflected in a low share of the service sector in aggregate value added in an international comparison.

930. In addition to a one-sided focus on capital formation, China's growth is characterised by **unusually high lending growth** on an international scale. ↘ CHART 127 LEFT With total debt of some 250 % of GDP, China is among the particularly highly indebted countries compared to others at similar levels of development. ↘ CHART 127 RIGHT The **credit-to-GDP gap** calculated by the Bank for International Settlements (2016) is, at 30.1, significantly higher than the threshold value of 10 used as an early warning indicator for financial crises.

Private sector debt has increased, to **shadow banks** in particular. These were established mainly by banks, with the aim of circumventing deposit rate ceilings and regulatory requirements. Investor confidence in shadow bank products is likely based above all on the assumption that as the large state-owned banks are

↳ CHART 127

Debt and bank deposits in China



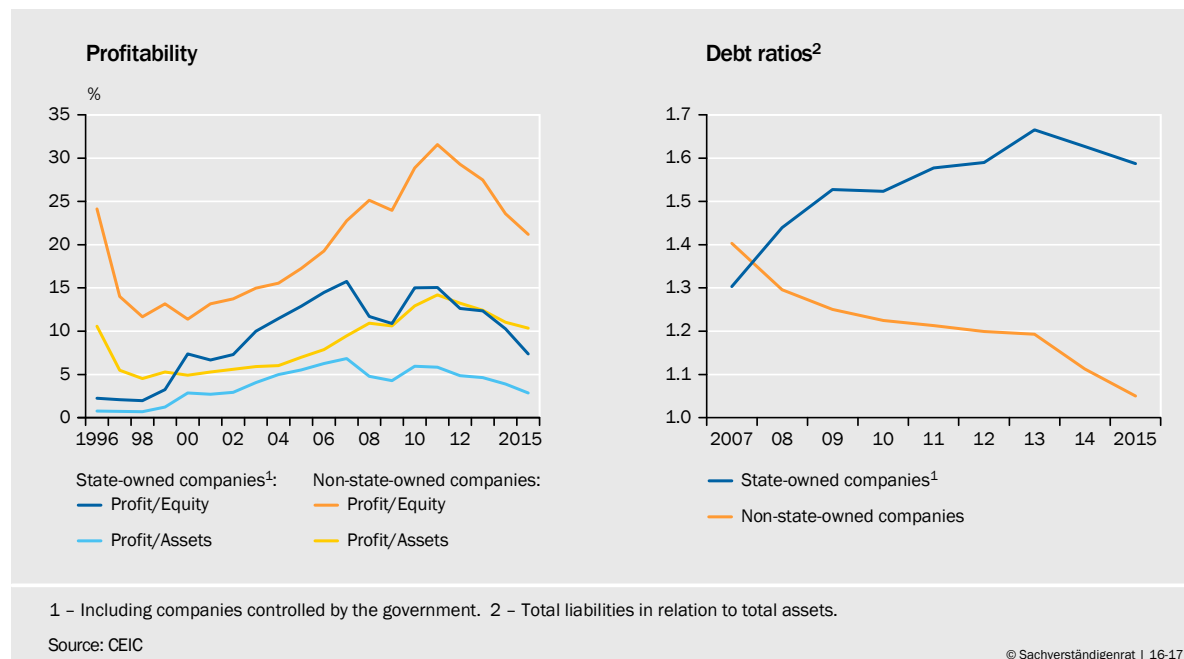
very active in this area, the government would offer a bailout in the event of a crisis (Dang et al., 2015).

931. The shadow banks are in turn an important funding source for **local government financing vehicles** (LGFVs), with which local governments can avoid the prescribed debt ceilings. The dramatic growth of this form of debt can be traced back to the Chinese government's strategy after the worldwide economic crisis in 2008. It attempted – quite successfully in principle – to overcome the global recession and resulting global economic slowdown by means of increased public investment. The central government, however, was not prepared to take primary charge of executing such projects itself and funding them accordingly via bonds. Instead, it left execution up to local governments, which could only raise funds by taking out loans and issuing securities via special purpose vehicles. The Chinese government is reforming the financing of local governments since 2014.
932. Other weaknesses in the Chinese economy include the persistently large share of **state-owned enterprises** (SOEs), which generate around 20 % of industry revenues. State-owned conglomerates constitute 45 of the top 50 companies in terms of revenue. SOEs dominate primarily in the service sector. They generate revenue contributions of over 60 % in the postal and telecommunications sector as well as in architecture and engineering services. Restraints on competition protect numerous areas of the economy and enable monopoly or oligopoly rents (OECD, 2015).

Government influence on the financial sector is particularly heavy. The Chinese state is the majority owner of the country's four largest banks, which are also among the world's biggest financial institutions. In addition, there are a

↘ CHART 128

Profitability and debt ratios of industrial companies in China



large number of local state-owned banks, which were particularly active in the lending business in past years (Jones, 2016).

933. SOEs are, on average, **less profitable** than private enterprises, but have higher levels of debt. ↘ CHART 128 According to calculations by the Unirule Institute of Economics (2015) based on around 18,000 state-owned enterprises and 335,000 private companies, the return on assets of SOEs is negative across the board once state subsidies are factored out. Likely reasons for their low profitability lie in the lack of competition and poor governance of these businesses, along with the provision of public goods and social welfare.
934. The Chinese economy is characterised by the **state's strong influence** on economic processes by way of its highly interventionary industrial policy. This is particularly evident in the great political importance of the five-year plans. These are no longer to be understood as plans in the sense of production control in a planned economy. Nevertheless, the 13th Five-Year Plan published in March 2016 for 2016 to 2020 contains very specific and detailed projects in the areas of infrastructure and technological innovation. For example, the plan comprises no fewer than 75 priority areas of technology for which specific technologies and products are named. China has more than 780 state-backed investment funds with which to achieve these targets, of which as many as 300 were formed in 2015 alone.

The prominent role of the state in the economic process should be viewed against the backdrop of a political system dominated by the **Communist Party**. The system therefore lacks the democratic legitimation and control of political decision-making processes. Shambaugh (2016) describes China's current political model as “hard authoritarianism”. In this environment, both state-owned and private enterprises depend on good relations with the state apparatus in or-

der to gain access to state-generated rents. The state's influence thus extends far beyond SOEs (Milhaupt and Zheng, 2016).

3. Will the transformation succeed?

935. The necessity of a transformation in the Chinese economy has long been under discussion. As far back as 2007, the then prime minister Wen Jiabao described Chinese economic growth as “unstable, unbalanced, uncoordinated and unsustainable”. Market-oriented economic reforms were called for at the third Plenary Session of the 18th Central Committee of the Communist Party of China (CPC) in the autumn of 2013. The 13th Five-Year Plan published in March 2016 once again focuses on efforts to reduce the importance of heavy industry and investment, instead promoting services, innovation, environmental protection and the social security network. The plan attaches great importance to “**supply-side economics**”, which for China means first and foremost measures to eliminate excess capacity in the industrial and real estate sectors.
936. However, the fundamental problem with the quite ambitious Five-Year Plan is that the **government** is unwilling to question its **strong role** in the economic process. For Kennedy and Johnson (2016), this is reflected in particular in the detailed requirements on technological innovation. The Chinese government targets SOEs to this end, encouraging them as “national champions” to bolster China's technological base and global position (Kroeber, 2016). Chinese President Xi recently highlighted the fact that the party's leadership in state-owned enterprises is a major political principle, and that that principle must be insisted on (New York Times, 2016).
937. In addition to the central government, the pending transformation measures also depend greatly on decision-makers at **provincial and local level**. China is anything but a monolith. In fact the country has five administrative divisions, with 31 provinces and autonomous regions, 334 prefectures, 2,852 counties and around 47,000 townships and villages.

The local governments have proved a major stumbling block for comprehensive reforms. They control the state-owned enterprises (SOEs) at this level and have their own local state banks. Their fundamental problem is that they are completely **underfunded** for the tasks they have been assigned. They are responsible for 80 % of public spending, but only receive 40 % of tax revenues (Lo, 2015).

According to calculations by the International Monetary Fund (IMF), local governments have been reporting a **deficit** of around 5 % of GDP for years. [↘ CHART 129 LEFT](#) In the past they funded this deficit through indirect loans via special purpose vehicles or from the proceeds from leasing land. Around a fifth of the income of local governments has come from these sources in recent years. The problem with regular income at county level is that a large share of it comes from taxes levied from local businesses. The revenue from value-added tax and income tax is much lower.

938. There is considerable **resistance to fundamental reforms** at local government level, primarily due to the insufficient funding. Given the high dependency on income from leasing land, local governments are keen to continue to heavily promote construction and property purchases. Moreover, the great importance of income from the taxation of local businesses means that the local governments do all they can to keep SOEs afloat. The state-owned local banks are a key tool in this regard, granting the businesses a **soft budget constraint**, as was evident during the years of the country's planned economy. Woo (2016) sees this as an important explanation for the high levels of excess capacity in heavy industry.

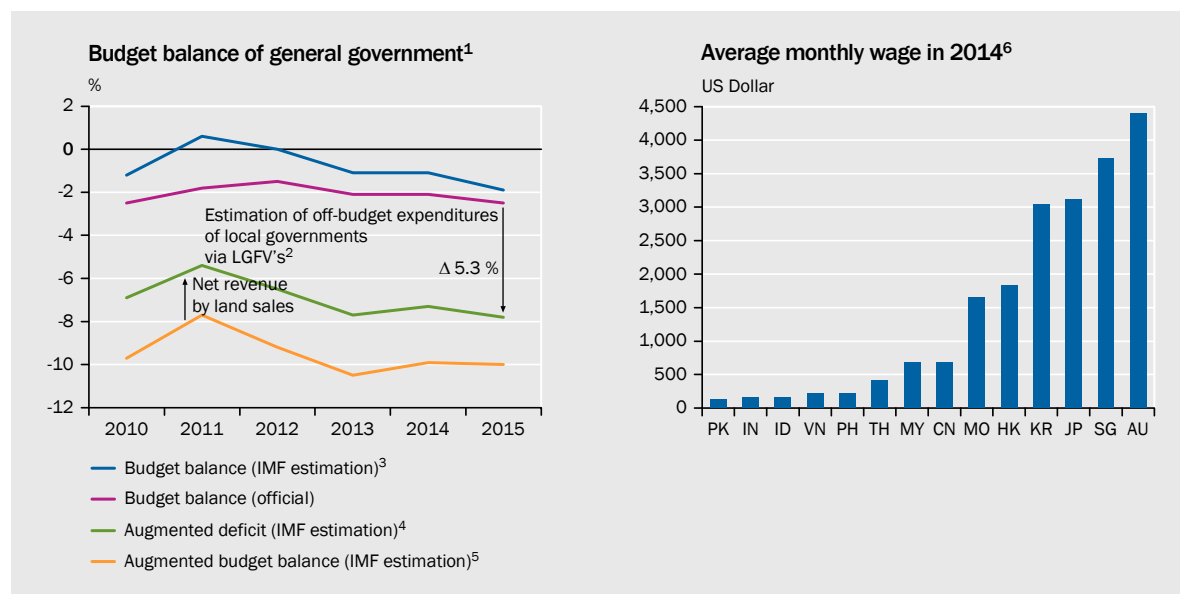
The lack of willingness of local governments to close unprofitable businesses is not least due to the fact that local officials are assessed based on the economic growth generated in their region, which is often easiest to achieve by way of loan-financed investments. The quality of the growth plays a secondary role here (Milhaupt and Zheng, 2016).

939. In addition, these incentive mechanisms and the insufficient funding for local governments result in **local protectionism** (European Union Chamber of Commerce, 2016a). The European Chamber of Commerce in China therefore asserts that China does not have a real single internal market, but rather a patchwork of regional markets with very specific and often informal trade and investment barriers.

940. In addition to the problem of implementing structural reforms in a quasi-federal system, there is the question of the extent to which consumption can even com-

▾ CHART 129

Augmented public balance in China and international comparison of monthly wages



1 – In percent of nominal GDP, including assets of state-owned companies managed by government and social security. 2 – Local Government Financing Vehicles. 3 – Revenues: official information + contributions to social insurance + transfers by state-controlled SOE funds – payments by stabilization funds; expenses: official information + revenues of social security + transfers to state-controlled SOE funds + adjustment of expenditures by local governments (estimation on bond issuance) – contributions to stabilization funds. 4 – Budget balance (IMF estimation) less expenditures of local governments (estimation based on land sales) and estimation of expenditures of local governments for infrastructure measures via LGFV's. 5 – Augmented budget balance (IMF estimation) plus net revenue by land sales. 6 – For India: 2013; PK-Pakistan, IN-India, ID-Indonesia, VN-Vietnam, PH-Philippines, TH-Thailand, MY-Malaysia, CN-China, MO-Macau (China), HK-Hong Kong (China), KR-Republic of Korea, JP-Japan, SG-Singapore, AU-Australia.

Sources: ILO, IMF

▾ TABLE 33

Government expenditure of selected countries in 2013

% of nominal GDP

	China	Middle income countries		Indonesia	Russia	South Africa
		upper middle	lower middle			
Total	29,3	33,1	36,1	19,6	42,2	57,3
social expenditures	12,4	16,2	15,4	4,4	20,6	17,4
health	0,9	3,3	3,1	0,9	3,4	4,8
education	3,9	3,9	5,4	3,2	4,2	7,6
social security	7,6	9,0	6,9	0,3	12,9	5,1
other expenditures	16,9	16,9	20,7	15,2	21,6	39,9

Sources: IMF, Lam and Wingender (2015) © Sachverständigenrat | 16-221

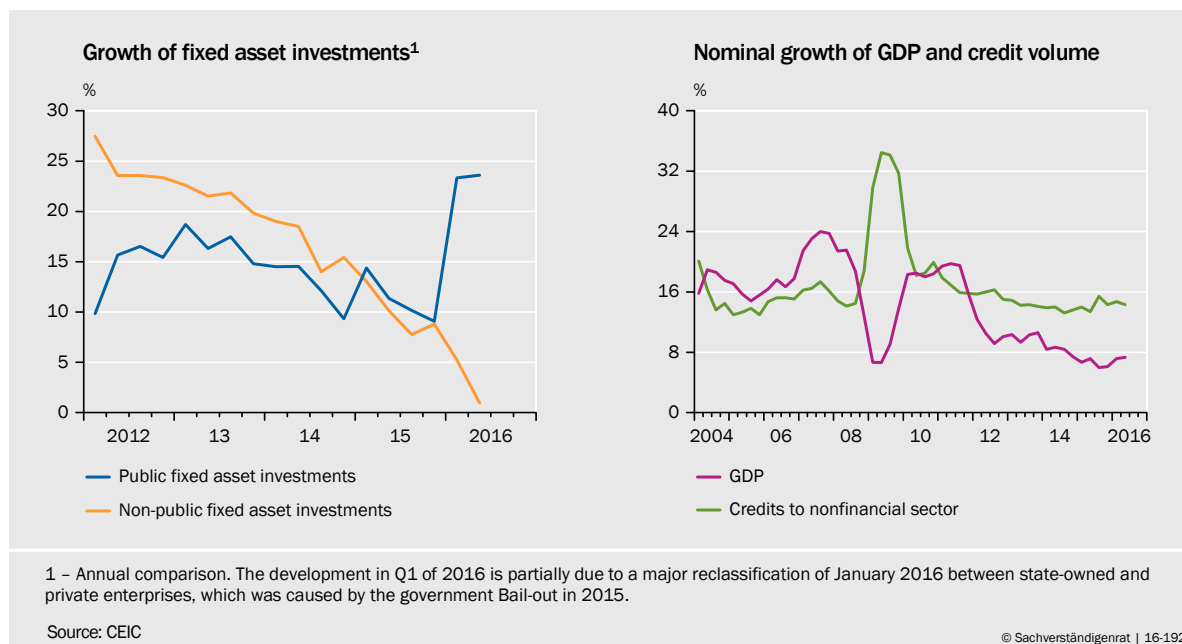
pensate for a decrease in the investment ratio without resulting in a noticeable slump in growth. A notable reduction in the investment ratio requires **disproportionately strong growth in private and state consumption**. If the government is to achieve its target annual growth rate of more than 6.5 % by 2020, a hypothetical decrease in the proportion of gross capital formation to GDP to 40 % would need – in terms of figures – an increase in the average consumption ratio to around 57 % in 2020. Consumption would therefore have to increase by about 9 % every year for the next few years, whereas investment could not increase by more than around 3.5 % annually (Wang and Zhou, 2016). An expansion of this scale in private consumption would require a combination of very high wage increases and a reduction of the private households' saving ratio.

- Real wages in China have risen substantially in recent years compared to other countries, putting its wage level far above that of other emerging markets in the Asia-Pacific. ▾ CHART 129 RIGHT Attempting to expand private consumption even further than GDP through significant wage increases would not be without consequences for China's **international competitiveness**.
- Private consumption could also be boosted through an improved **social security network**. This would reduce the need for retirement saving, which is particularly high in China given its demographic change shaped by the one-child policy. China is a long way behind middle-income countries (such as Russia and South Africa) in terms of spending on healthcare, education and social security in relation to GDP. ▾ TABLE 33

941. Higher government spending could be financed through a **reform of the tax system** (Lam and Wingender, 2015) The system is currently heavily dependent on value-added tax and social security contributions, with income tax playing a comparatively small role. The tax system provides few redistributive effects. The Gini coefficient of market income is almost identical to that of household income (Zhang, 2016). Improving the progressivity of income tax, including services in value-added tax, and introducing a property tax and an environmental tax would

↘ CHART 130

Growth of fixed asset investments and credit volume in China



significantly boost revenue for better state services according to Lam and Wingender (2015).

942. The **transition of the Chinese economy** is likely to be a very drawn-out process based on previous experience. Naughton (2016) concludes that the economic reforms announced in November 2013 have failed to transform China into more of a market economy. Fears of negative short-term effects on economic growth have blocked the implementation of key reforms and actually further increased state influence over the economy.
943. This conclusion has been substantiated by the **developments seen this year**. The increase in private investment in the first eight months of 2016 was unusually low, which likely reflects the high uncertainty surrounding the country's economic prospects. **Public investment** was quickly expanded to counterbalance this. The increase was primarily attributable to an expansion of infrastructure projects and public-private partnerships for local and central government, but also dates back to a reclassification of non-state owned enterprises to SOEs in January 2016. ↘ CHART 130 LEFT

Again, this additional public demand was debt-financed. This means that the credit volume once again rose stronger than nominal GDP. ↘ CHART 130 RIGHT It is thus clear that aspiring to achieve growth objectives at any price does not solve the fundamental problems of the Chinese economy, but instead continues to postpone them.

944. The Chinese economy is therefore facing a difficult **challenge**. The government's target growth by 2020 is more than 6.5 % annually. If the saving and investment ratios remain high, it is likely that the disparity between production capacity and consumer demand will continue to grow and productivity will develop even more unfavourably than it has done to date (Wang and Zhou, 2016).

However, if high growth rates are to continue, a declining investment ratio will require a significant increase in productivity.

Shambaugh (2016) sees the problem here that the political and social systems might not be open enough to promote the **creativity and innovation processes** necessary for national economies to succeed in the 21st century. This applies in particular to schools and universities, where critical thinking is often undesired.

4. Risks to the global economy

945. Further development in China is accompanied by **considerable uncertainty** for the global economy. This applies firstly to the effects of the scarcely increasing trade with the rest of the world, particularly for commodity-exporting countries and the Asian region. Secondly, the unbridled credit growth and the highly opaque financial system could trigger shocks not only to the Chinese economy but to the global financial markets as well.

Decoupling of trade from economic growth

946. For the real economy the developments in China translated primarily into a marked decline in the **current account balance** for the world economy, initiated by the sharp fall in exports in 2009. While a record surplus of 10.0 % of GDP was achieved in 2007, 2015 saw a mere 2.7 %. This reflects the transition from what had been heavily export-driven growth to growth driven by the domestic market.

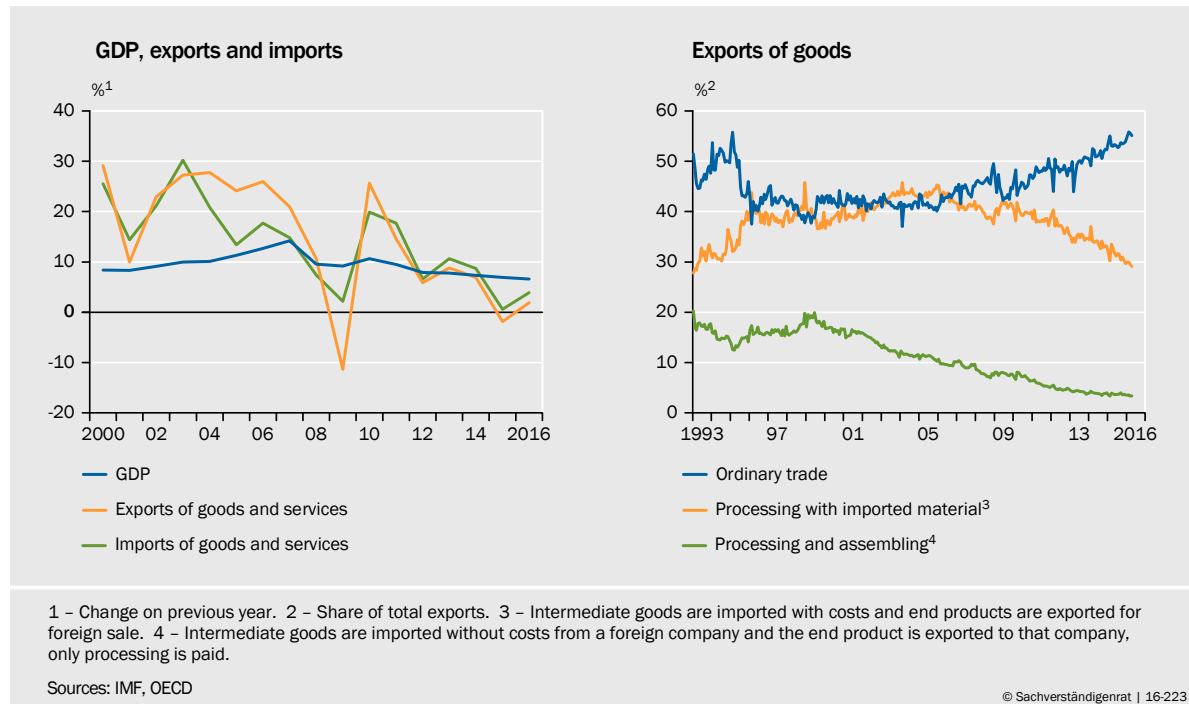
However, the demand effects emanating from this adjustment process for the world economy also have gradually diminished. Growth in real exports and imports of goods and services has lagged considerably behind the growth of the Chinese economy in the past two years. Exports actually declined in 2015. This has consequently resulted in a **decoupling** of foreign trade and economic growth in China. Asian countries and those exporting commodities have been the most affected. [↘ CHART 131 LEFT](#)

947. The weak foreign trade is likely due in part to the decrease in industry's contribution to GDP and the concurrent rise in that of the service sector. **Import intensity**, i.e. the import propensity of final demand, at 15 % for private consumption, is lower than for gross capital formation (24 %) or exports (23 %). [↘ CHART 132 LEFT](#)

Another explanation could be that China aspires to use more domestic intermediate goods in production. Calculations by the Organisation for Economic Cooperation and Development (OECD, 2016) show that the portion of imported intermediate goods has declined since 2005 for Chinese exports. [↘ CHART 131 RIGHT](#) Thus a **renationalisation of production** is taking place, along with a move up the value chain.

↘ CHART 131

Foreign trade and economic growth in China



948. Moreover, **significant barriers** to export persist with respect to China. China levies average customs duties of around 10 % on German products. However, the duty is considerably higher on some product categories. ↘ CHART 132 RIGHT Import duties on cars and automotive products range between 19 % and 25 %, and on food (wine and wheat) climb as high as 65 %. In addition to tariff barriers to trade, government regulations and legal uncertainty are further major obstacles to trade with China. In a survey by the German Chamber of Commerce in China (2015), approximately 60 % of European companies in China rate protectionism and legal uncertainty as the major risks in that country.

949. Consequently, there is only partial truth in the statement that China is the **world's major growth engine**. While China continues to drive global growth to a very large extent, the declining export and import volumes posted in 2015 and the feeble increases for this year mean that China's trading partners will experience only limited positive effects from the still high growth levels in that country.

Risks to the financial system

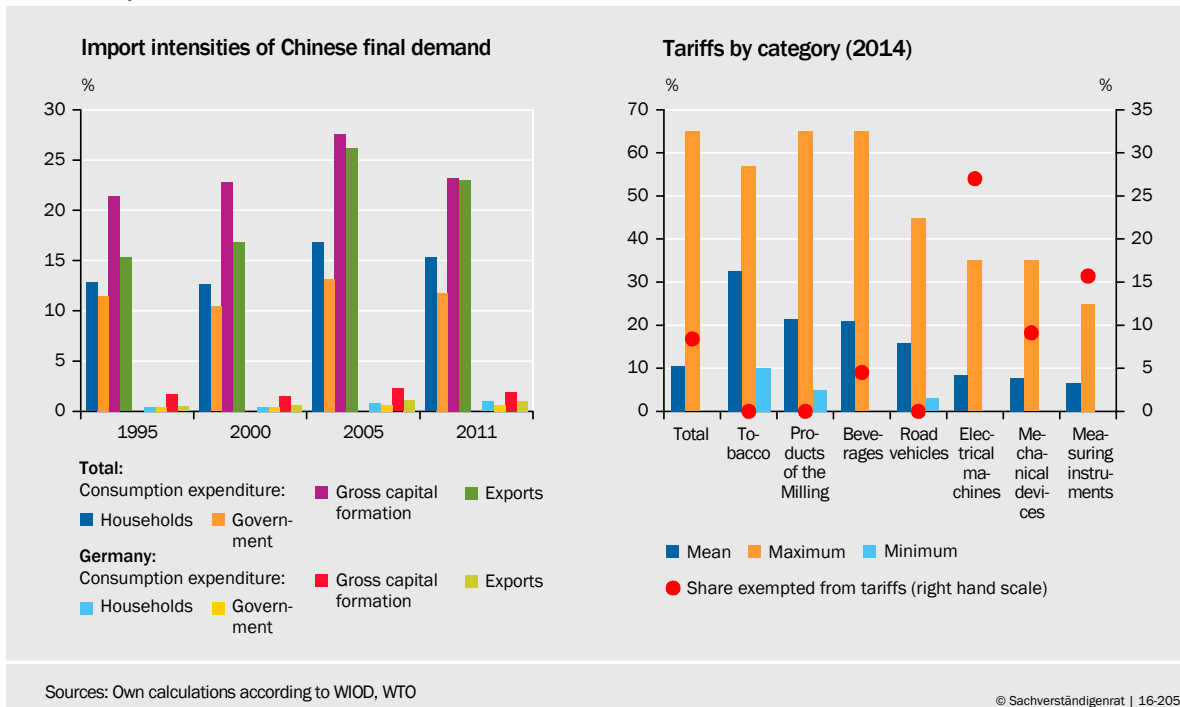
950. The **Chinese financial system** has grown at a proportionally higher rate than economic output; it has also become highly opaque with relationships between players becoming more intertwined. Concentration of lending exposure to the real estate sector and the transfer of bank loans to special purpose entities reveal parallels to the situation prior to the global financial crisis of 2007/08.



The volume of banks' **non-performing loans** (NPLs) has shot up to over 4.7 trillion renminbi in the past few years, but constitutes a mere 5.8 % of credit volume (including special

↘ CHART 132

Chinese import intensities and tariffs



mention loans) after the first two quarters of 2016. The global average excluding special mention loans (in China 1.8 %) stood at 4.3 % at the end of 2015 according to World Bank calculations. However, Chinese requirements for classifying NPLs are not very restrictive. If a bank can assume that it will not sustain any loss from a loan despite overdue payments, classification of such a loan as non-performing can be avoided (PWC, 2015). Moreover, banks strive to transfer non-performing loans to special purpose entities (Zhu, 2016).

951. The greatest weakness in the financial system are the **shadow banks** on whose credit quality little information is available. However, the high interest rates paid on investments at such institutions indicate that they are associated with very high risk (IMF, 2016). The volume of this sector's products has increased considerably, constituting 58 % of GDP in 2015. Complex interlinkages between the conventional banking sector and the shadow banking system are the consequence of banks themselves investing heavily in such products.

Shadow bank products enjoy such high popularity because they promise much higher returns than traditional bank deposits. As the shadow banks were often created by conventional banks in order to bypass **regulatory requirements** (interest rate ceilings, capital requirements and a mandatory loan to deposit ratio of 75 %), investors are likely to presume an **implicit guarantee** by state-owned banks (Zhu, 2016).

952. The Chinese government should be able to stabilise the Chinese financial system in the event of a **serious shock** in a manner similar to that employed by the United States and European countries following the Lehman Brothers collapse. The Chinese state has already demonstrated its willingness to intervene in support of the financial market. For example, after the stock market crash in the summer of 2015, a special fund was set up to directly purchase equities, together with banks, insurance companies and pension funds, under governmental influ-

ence. In the shadow banking sector, Anderlini and Wildau (2014) counted more than 60 documented cases of government bail-outs: the unreported figure is likely to be much higher.

953. Nonetheless, experience from financial crises shows that even a far-reaching bailout of creditors can result in serious **real economic consequences**, which can lead to underutilisation of capacities for years to come. The greatest potential risk lies in the **real estate market**, which is already characterised by significant overcapacities, at least in some regions of China. At 10.4 % in 2015, the ratio of housing investments to GDP was significantly above the highs many countries recorded in past real estate bubbles (IMF, 2015). If real estate prices were to plummet, private consumption would suffer considerable consequences due to the major importance of real estate as a store of value for private households.
954. The fact that China has a low level of **foreign debt** and hardly any foreign currency borrowings would help the Chinese authorities to stabilise the financial system in a potential crisis. This is a significant difference to the Asian crisis of 1997/98.

In the event of a crisis of confidence in the banking sector, investors might try to move their large holdings of liquid assets abroad. The Chinese government could counteract a self-reinforcing depreciation with its still large foreign currency reserves. There is also the possibility of halting capital flight if necessary by imposing additional **capital controls**. A currency crisis, i.e. a major devaluation of a country's currency as was seen in 1997/98 in the countries affected by the Asian crisis, is thus unlikely to occur.

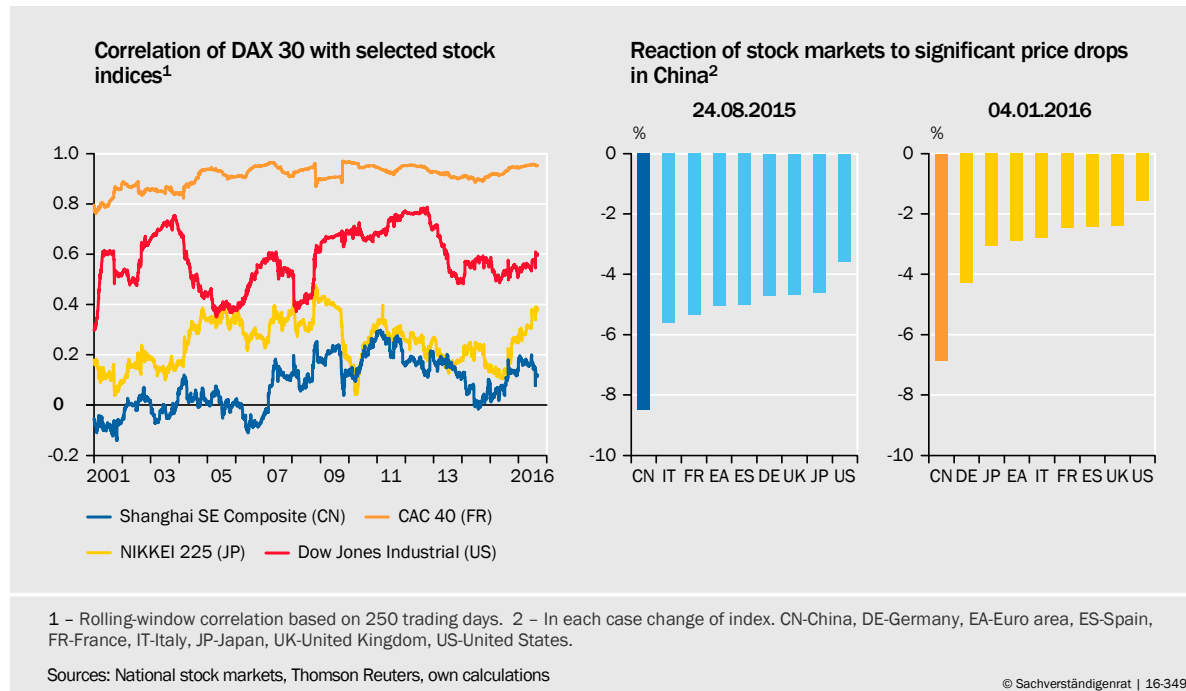
955. It is very difficult to judge the extent to which developments in the Chinese financial system could have global impacts. As China is still barely integrated into the global financial system, direct financial risks to the majority of countries are likely to be comparatively limited (FSC, 2016). Risks from **direct financial links** do not appear to be high in Germany's case. The German banking system's exposure to Chinese debt amounted to €30.9 trillion at the end of 2015, or 8 % of equity. However, further risks of second-round effects resulting from exposure to other countries cannot be ruled out (AFS, 2016).

Indirect financial links through asset prices also appear limited. Rolling correlations between Chinese and German equity indices based on 250 trading days were low in the past. This is especially true compared to equity markets in Europe and the United States. [↪ CHART 133 LEFT](#)

956. Contagion effects, however, are likely to be considerably more pronounced when there are **abrupt changes in stock prices**, as was seen in August 2015 and January 2016, when sharp price declines in China triggered equity market turbulence worldwide. [↪ CHART 133 RIGHT](#) [↪ ITEM 527](#) The IMF (2016) conducted a study to systematically examine how Asian region equity markets react to high Chinese market volatility. The study focused on Chinese equity market price changes greater than 5 % that were triggered in China, and revealed that Asian region equity markets have reacted more strongly to significant Chinese price move-

↪ CHART 133

International comparison of China's stock market



ments, particularly since June 2015. However, it must be borne in mind that at 30 identified days, the number of observations is very low.

Replicating the analysis for Germany, France, Italy, Spain, the UK, the United States and Japan also indicates an increase in sensitivity to significant declines in Chinese prices. Whether these findings provide sufficient evidence to support the conclusion that contagion risk has actually increased, is nevertheless doubtful. The low number of observations means that the results are based almost exclusively on the two periods of turbulence in August 2015 and January 2016.

957. Nevertheless, the possibility of China entering into a financial crisis cannot be ruled out, given the **strain in the real estate sector and (shadow) banking system**. Particularly because of the Chinese government's centralised economic policy, policy errors may result in far more serious negative consequences. The probability of such errors occurring might be very low, but the global economy would be hit all the harder if the Chinese government were unable to effectively contain a financial crisis. The consequences would be more indirect due to the low degree of international linkage. The great uncertainty that many investors currently complain about would likely increase sharply and global trade would decline. This development would affect Germany more than other countries.

II. IMPLICATIONS FOR THE GERMAN ECONOMY

958. The German economy is **interlinked with China in different ways**; the country is an important and dynamic sales market for German companies and also a major production location, particularly for the automobile industry. Chinese companies are gradually becoming Germany's competitors on the international markets, and Chinese investors have recently begun acquiring German corporations.

1. Export market China: losing momentum

959. As the world's second-largest economy and most populous country, China has served the German economy as a rapidly expanding sales market for many years. However, momentum has slowed considerably in recent years. German exports to China declined in 2015 for the first time. The **decoupling** of China's economic growth from its foreign trade trajectory, which can be seen at global level, is thus affecting Germany. [↘ CHART 131 LEFT](#)

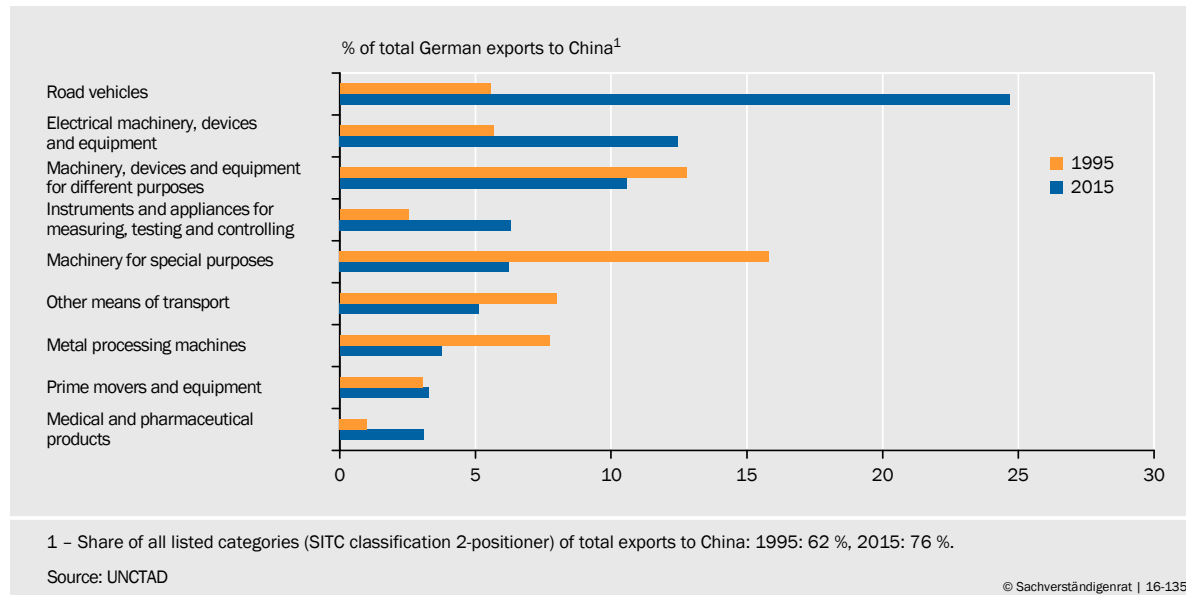
China's investment-driven growth and rising standard of living have had particularly positive effects on German exports. In 2014, motor vehicles and various types of machinery as well as measuring, testing and control instruments comprised more than two thirds of German export goods to China. [↘ CHART 134](#) However, China's import volume of **consumer goods** has been almost twice as high as that of capital goods for some years now. Germany's export of services to China plays a lesser role. Its share in total German exports to China amounted to only around 10 % in 2014.

960. In terms of **import intensity** of Chinese final demand (including indirect effects via intermediate products), gross capital formation and exports contain a greater share of imports than private and public consumption. [↘ CHART 132 LEFT](#) The evaluation of 2011 input-output tables indicates that total Chinese consumption includes around 15 % of global and 1 % of German imports. For gross capital formation, the share is significantly higher at 24 % and 2 % respectively. A shift in the Chinese growth model to relying less on investment and more on consumption would thus have a negative impact on German exports, the structure of investment and consumption remaining equal.

That said, import intensity of capital formation for individual segments such as mechanical engineering (0.7 %), production of computer equipment and devices, electrical and optical equipment and automotive manufacturing (0.4 % each) is higher than, for instance, for production of textiles, clothing, leather goods and shoes (0.002 %) or in construction (0.01 %).

↘ CHART 134

Important German goods categories for export to China in 1995 and 2015



961. However, the import intensities only reflect the **direct trading effects** of a change in Chinese demand including effects on trading partners. Such a change would prompt **secondary effects** around the world, as it would alter demand in other countries. Different models can be used to estimate such consequences. These basically fall under econometric, general equilibrium, and input-output models.
962. **Econometric models** analyse interdependencies between macroeconomic time series such as GDP, inflation and exchange rates. Based on a panel regression of 63 countries, Duval et al. (2014) find that a temporary decline in Chinese growth of one percentage point is accompanied by a decline in growth of 0.3 percentage points in Asian and 0.15 percentage points in non-Asian countries. Ahuja and Nabar (2012) used an augmented VAR model and came up with similar results; a temporary decline in Chinese investment of 1 % would generate a decline in German GDP of between 0.11 % and 0.24 %. Studies by Cesa-Bianchi et al. (2011) and Cashin et al. (2016) make estimates using global VAR models (GVAR). In these models, a permanent decline in Chinese GDP of 1 % results in a maximum decline in euro area GDP of 0.06 % to 0.23 %.
963. A second class of estimates is based on **general equilibrium models**, which use a micro-based approach to capture macroeconomic transmission mechanisms. Using a World Bank model, Zhai and Morgan (2016) estimate that a permanent decline in Chinese investment of 3 % would result within four years in a GDP decline of 0.19 % for the EU and 0.42 % for the world. Based on an IMF model, Dizoli et al. (2016) estimate that a permanent decline in Chinese investment of 1 % would result in a short-term GDP decline of 0.38 % for Malaysia and 0.1 % for the world (excluding China).
964. **Input-output models** analyse trade interdependencies based on input and output data at country and sector levels. Kireyev and Leonidov (2015, 2016) set up an input-output model based on global export and import data and estimate that in the event of a permanent 10 % decline in German exports to China, Ger-

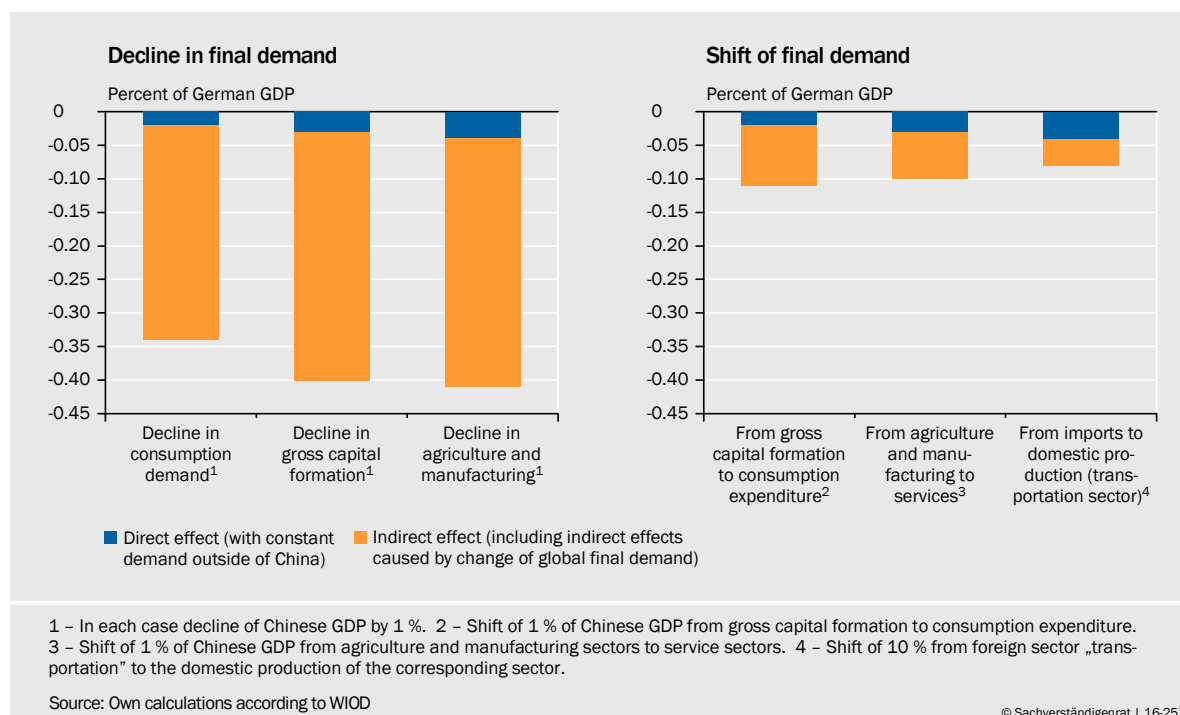
man GDP would decline by 4.8 % within a four-year period, as compared to a baseline scenario. Simola (2015) calculated that in the event of a complete stall in Chinese growth, i.e. a decline in growth of eight percentage points, and propensity to consume were to rise from 50 % to 55 %, euro area GDP would decline by around 5 %.

These input-output analyses are either based only on aggregate exports and imports or they ignore **indirect effects** via second-round effects on global demand. In order to quantify these effects, own calculations (Andritzky et al., 2016) have identified the indirect effects, using global input-output data for 40 countries with 35 economic sectors each. This data enables the inclusion of indirect effects from China's trade relations with other trading partners of Germany. These calculations take account of the fact that a slowdown in China's growth also impacts the German economy through changes in demand from other countries.

However, the limits of the model should be borne in mind when interpreting results. It only analyses the trade channel; it does not include any other adjustment effects. Since input-output models exclude adjustment and substitution effects, they generally indicate a considerably stronger effect than econometric and equilibrium models.

- 965. This model is used to calculate direct and indirect effects of change in Chinese demand on Germany, for different scenarios. [↪ CHART 135 LEFT](#) Indirect effects on Germany are 9 to 14 times stronger than direct effects in case of a **decline in demand** in China. This is because the proportion of exports to China is only relatively small, although China has, nonetheless, a **major impact on the**

↪ CHART 135
Indirect effects of a change in Chinese final demand on Germany



global economy, which consequently results in less demand from all German trading partners.

A decline in China's demand by 1 % of Chinese GDP equally distributed across all economic sectors would result in a 0.34 % decline in German GDP, taking indirect effects into account. Due to the linearity of the model, this would equally amount to 1 % less growth than forecast. A similar decline only affecting China's investment spending or its agricultural and industrial sectors would result in a somewhat larger decline in German GDP of 0.40 %/0.41 % respectively.

966. Even if Chinese demand remains constant, a **change in demand structure** could also have direct and indirect effects on the German economy, although they would be considerably smaller. [↘ CHART 135 RIGHT](#) A 1 % shift in Chinese GDP volume from investment to consumption spending would result in a 0.11 % decline in German GDP. A shift in Chinese demand from the primary and secondary to the tertiary sector would have a similar effect on the German economy. Substituting imports with domestic production, for example, by Chinese competitors taking away market share from German automobile manufacturers, would result in relatively strong direct effects on Germany, while indirect effects felt via the global economy would, in contrast, be relatively weak.

2. China as a location for production and sales

967. China was considered an attractive business location in the past, primarily due to its low labour costs and comparatively good infrastructure. Given the fact that the wage level has since risen considerably, the incentive to produce in China is largely found in the **sales opportunities** in Chinese markets, which continue to expand at a fast pace. Only one third of German companies in China now cite lower production costs as the reason for their presence in China (German Chamber of Commerce in China, 2015). This response also reflects the rising costs due to higher energy prices. The average price of electricity rose by approximately 40 % (in domestic currency) from 2001 to 2011 (China Energy Group, 2014) and is likely to rise further in future due to environmental problems. The BCG cost index (2015) indicates a loss in international competitiveness due to higher costs. [↘ CHART 136 LOWER RIGHT](#)



Although unskilled Chinese workers still earn considerably lower wages than their counterparts in Europe, the **wage level** for skilled professionals and managers, at least in major Chinese cities, is already comparable to that in Europe. In comparison to other Asian countries, wages in China have risen sharply relative to productivity. [↘ CHART 136 LOWER LEFT](#) This explains the shift in labour-intensive production to other Southeast Asian countries. There are strong regional wage differences, even within China. [↘ ITEM 921](#) For this reason, some companies relocate their production further into the interior of China, where, however, productivity is lower due to a poorer infrastructure and lower level of education.

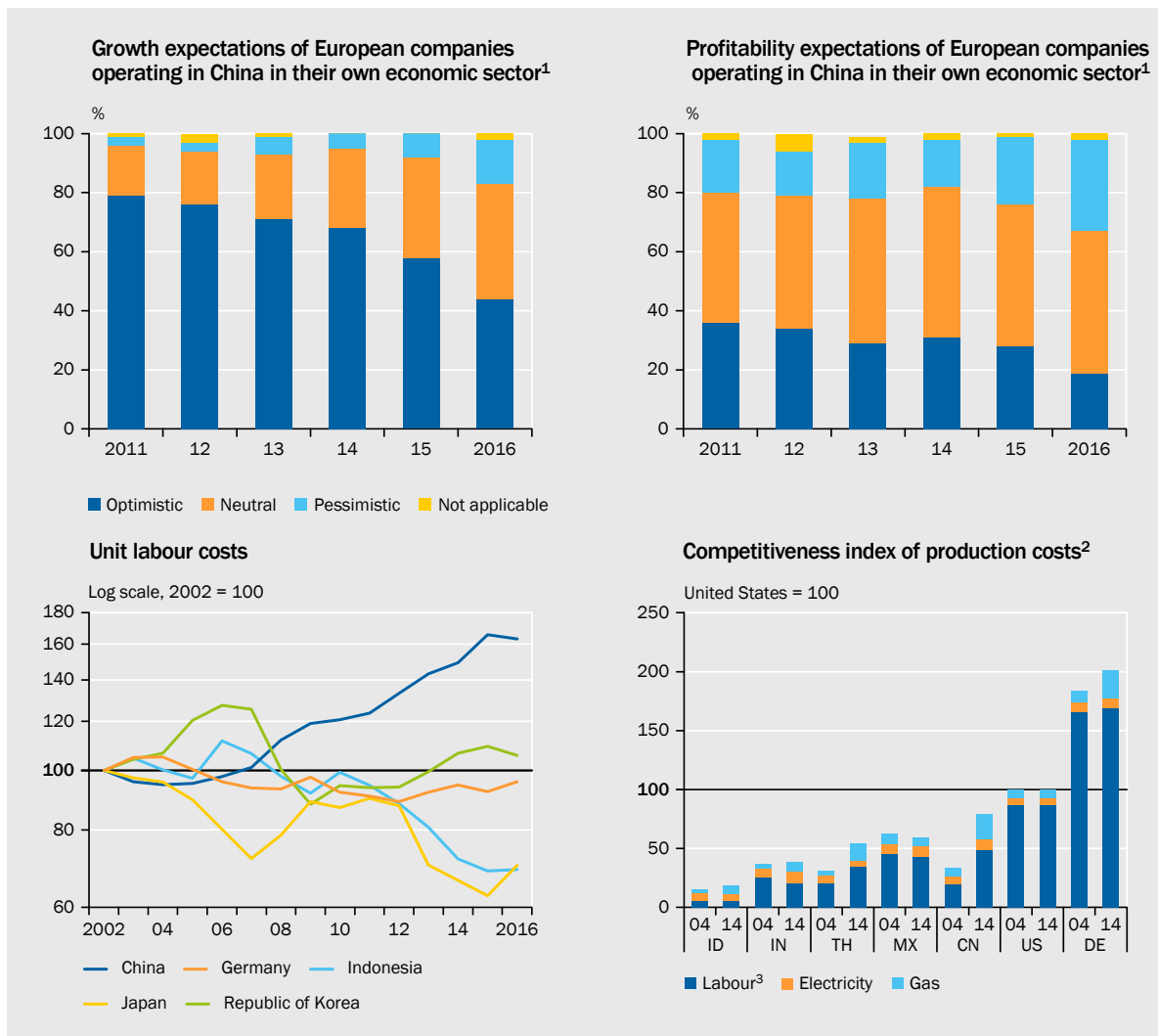
968. With rising production costs, the **regulatory framework** (ease of doing business) remains a fundamental problem with China as a location; it still remains

very unfavourable despite some improvements. The World Bank has ranked China 84th of a total of 189 countries, based on this factor. It scored particularly poorly in terms of “protecting minority investors” and “starting a business”.

969. The general uncertainty about the Chinese economy's prospects has markedly affected European companies' **expectations** of their growth opportunities and their earnings outlook. In 2011, nearly 80 % of companies surveyed still expressed optimism about growth in their economic sectors in China; in 2016, just half of that figure held such an optimistic outlook. [↪ CHART 136 UPPER LEFT AND RIGHT](#) More than 50 % of the European companies surveyed complained that they are disadvantaged in China compared to domestic competitors.

970. A **more cautious assessment of opportunities in China** can also be seen in German companies' direct investments there. After strong expansion in the past two decades, these have recently stagnated. At 4.4 %, direct investment in

↪ CHART 136
Competitiveness indicators for China



1 – Expectations for the development of economic growth in the next two years. EUCC Business Confidence Survey 2016. 2 – Weighted average production costs compared to an industry mix of the United States based on labour costs (adjusted by productivity), energy costs and exchange rates. No differences are assumed for other cost categories. Therefore, the category "others" is not shown and the rest is standardized such that United States = 100. ID-Indonesia, IN-India, TH-Thailand, MX-Mexico, CN-Canada, US-United States, DE-Germany. 3 – Adjusted by productivity.

Sources: BCG, EUCC, OECD

China comprises only a relatively small proportion of Germany's foreign direct investment. A large portion of German companies' investments likely stem from reinvested profits from their current Chinese business.

971. Investment restrictions require the creation of **joint ventures** in many sectors; the share of foreign capital in such companies may not exceed 50 %. One major requirement for market entry in these cases is access to foreign technology (“quid pro quo”; Holmes et al., 2015). Consequently, one of the main problems of joint ventures is that **protection of intellectual property** in China is inadequate (Bosshard et al., 2010). In the 2016 International Property Rights Index ranking, China placed 56th among 128 countries in terms of intellectual property rights, with patent protection scoring particularly poorly.

From “Made in China” to “Created in China”

972. It is already obvious today that China will produce an ever larger share of value-added domestically. Thus, the country will continue to move up the value chain. The new motive is “**Created in China**”, rather than “Made in China”. ↘ [ITEM 947](#)

As is already evident in the slowdown in German exports to China, China's move up the global **value chain** is likely to particularly affect final products from Germany, which constitute approximately half of German exports to that country. The automotive, pharmaceuticals and rubber and plastic goods sectors, above all, still export a large number of final products.

973. These processes can easily be seen in the **automotive sector**. ↘ [BOX 33](#) The share of finished passenger cars in total German exports to China fell from 17 % to 14 % between 2010 and 2015, whereas the share of parts and accessories in this sector rose from 7 % to 11 % during the same period. This is largely due to the sharp increase in German automobile manufacturers' local production. However, according to the German Association of the Automotive Industry (VDA), it is also due in part to an increasing shift in Chinese automobile manufacturers' demand for higher quality components from German manufacturers.

↘ [BOX 33](#)

China's automobile market

China is the **largest and fastest-growing automobile market**, as well as the most important automobile manufacturer. The number of passenger cars sold in China increased more than six-fold from 2005 to 2015 (EY, 2016b). The potential for growth remains high; whereas Germany has 552 cars for every 1,000 residents, China has only 103 (Federal Statistical Office, CEIC). According to the VDA, sales of 21 million new cars are expected for 2016. ↘ [CHART 137 LEFT](#) China has become the most important sales market for German automobile manufacturers. In 2015, sales to China comprised around 20 % of total global sales for BMW and Mercedes-Benz and around 35 % for Volkswagen. The market share of German cars in China rose continuously for quite some time. However, slower sales in 2015 resulted in a decline from 20 % to 18.9 %. ↘ [CHART 138 LEFT](#)

For years, cars, car parts and accessories constitute the most important German export product group by far at a constant figure of around 25 %. Due to even greater **outsourcing of vehicle produc-**

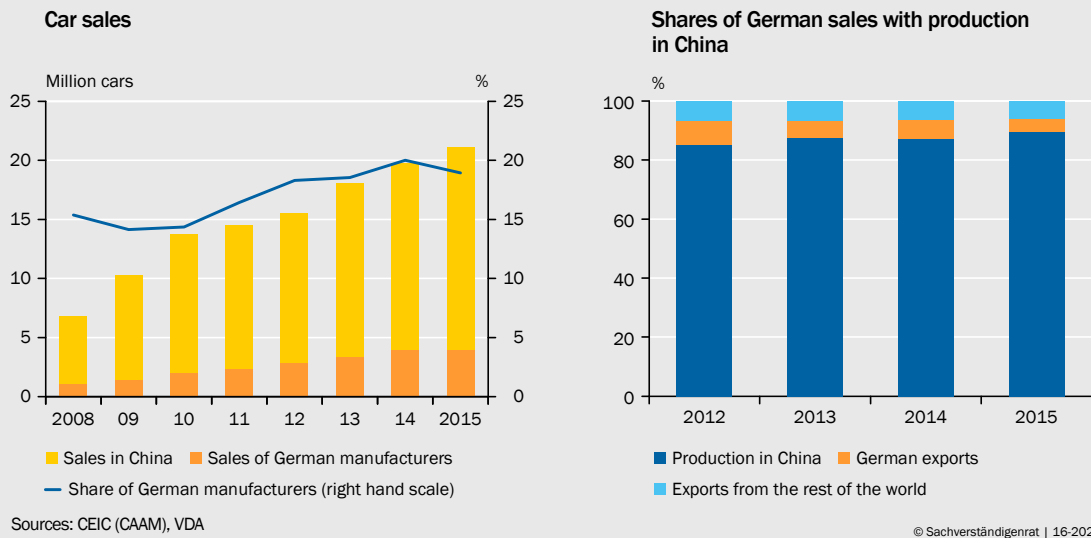
tion to China, however, German car exports have been decreasing for several years.

↳ CHART 137 RIGHT

The Chinese regulatory framework only permits German manufacturers to operate in China in the form of joint ventures with Chinese companies. The Chinese government aims to further increase the **domestic share of production** by means of its local content requirements. According to CEIC, 98.7 % of cars sold in China in 2015 were manufactured there as well. Production in China focuses mainly on small cars and imports of medium-sized and luxury vehicles as well as SUVs. Sales of premium car manufacturers are particularly disadvantaged through import duties and taxes.

↳ CHART 137

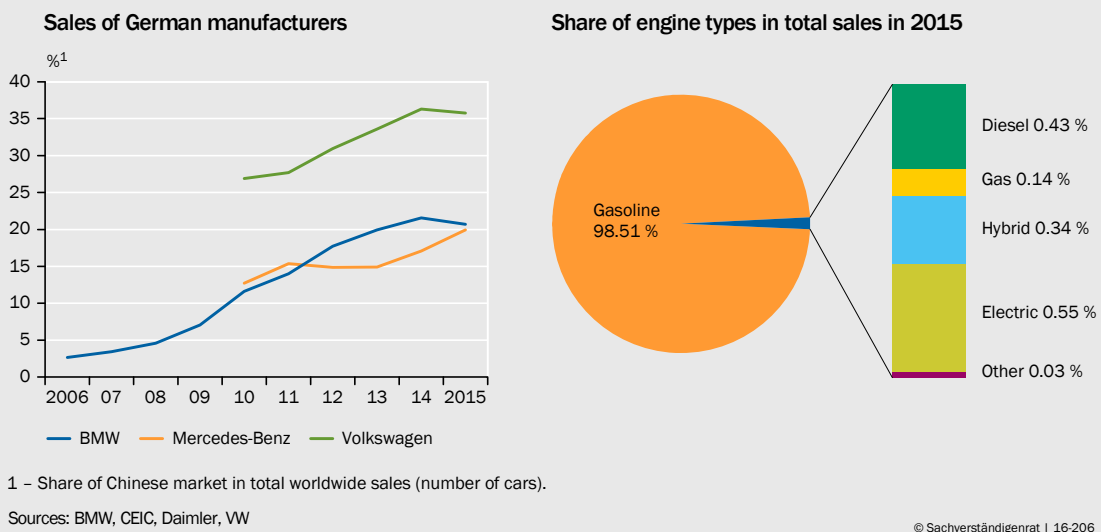
Car sales and production in China



The Chinese government has placed high priority on promoting the automobile market in the past few years, with a particular focus on **e-mobility**, and an annual sales goal of five million electric cars (around one fifth of total sales in China in 2015) by 2020. ↳ CHART 138 RIGHT This could negatively affect German manufacturers' sales as the competitive edge in knowledge enjoyed by foreign manufacturers in this market segment is comparatively small.

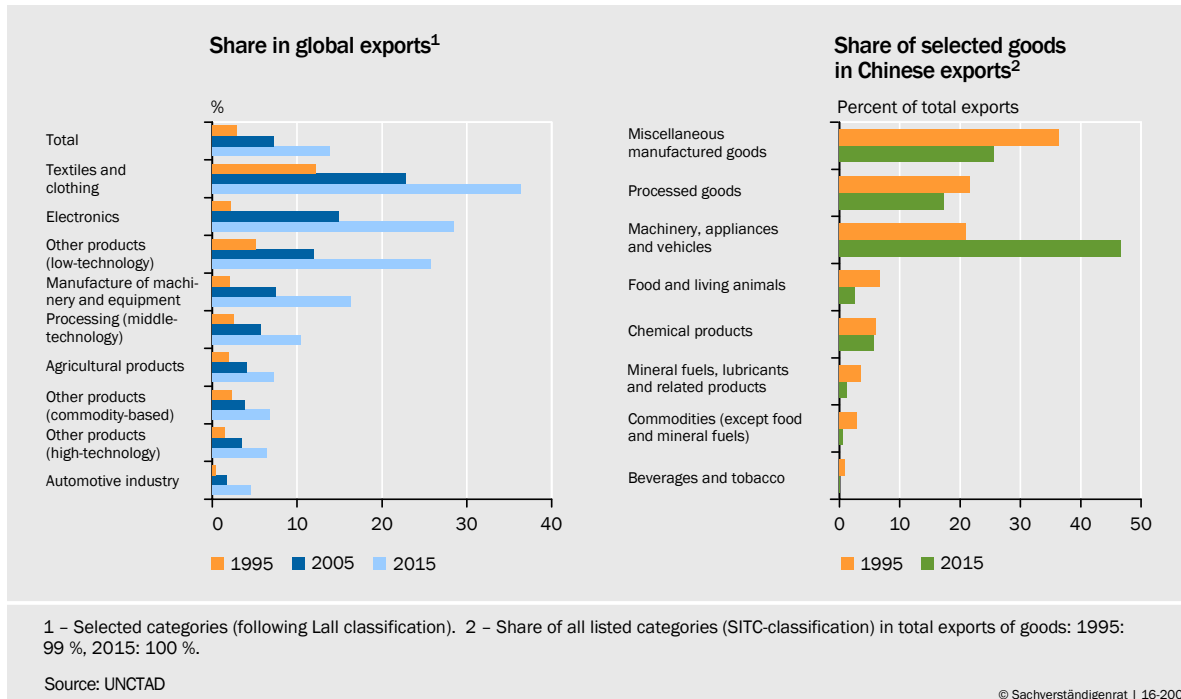
↳ CHART 138

Car sales in China



↘ CHART 139

World market shares and composition of Chinese exports

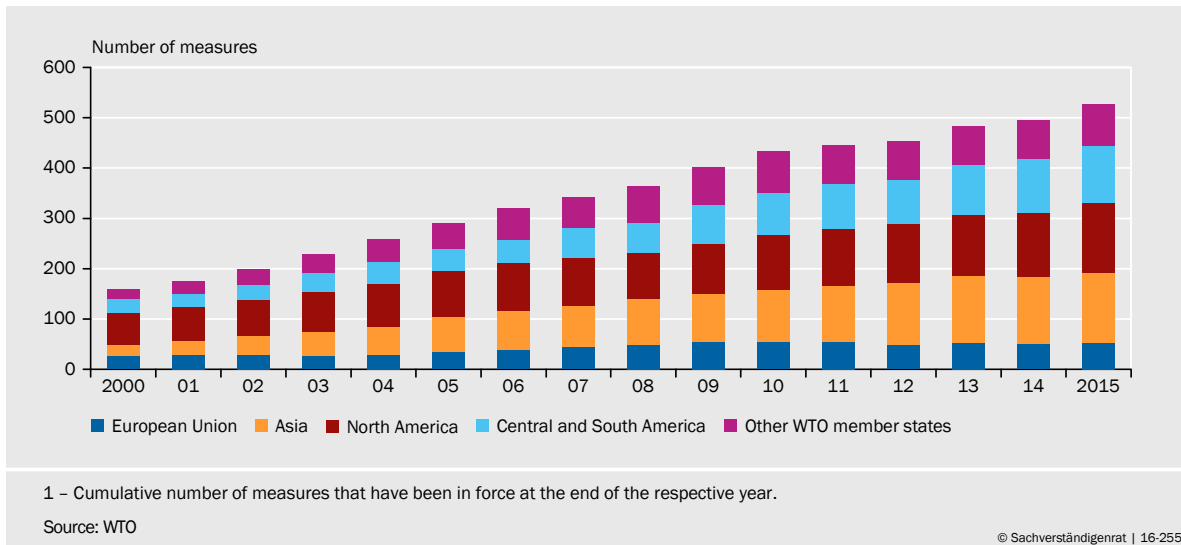


3. Competition for Germany on international markets

974. China has gradually established itself as a competitor on global markets due to the sheer size of its economy, which has given rise to considerable economies of scale. **China's market share** of global exports rose from 3 % in 1995 to 14 % in 2015. Displacement is primarily noted in exports from high-wage Asian countries (Athukorala, 2009). China's exports now comprise the majority of global exports in some product categories. ↘ CHART 139 LEFT
975. Whereas China previously enjoyed a comparative advantage in labour-intensive products, the high level of investment activity has caused a shift to **capital-intensive products**. The proportion of labour-intensive product categories in export has declined by 20 percentage points over the past 20 years, with research-intensive products considerably gaining in importance. Chinese product quality has also improved and is approaching competitor levels (Pula and Santabarbara, 2011). In this regard, China's exports have moved into **higher value categories**, such as machinery, telecommunication devices and vehicles. ↘ CHART 139 RIGHT China is thus increasingly exporting products that coincide with Germany's top export categories. This should not be regarded as a cause for concern for the German economy. Its high degree of competitiveness is most likely maintained in competition.
976. In some economic sectors, Chinese companies are in **fierce price competition** with rivals from other countries. Overcapacities in particular ↘ ITEM 928, for example in heavy industry, have caused a major price decline in some sectors. The fact that Chinese **steel production** is roughly twice that of total European production (European Union Chamber of Commerce in China, 2016b; World

↘ CHART 140

Anti-dumping measures in force against China in the WTO member states¹



Steel Association, 2016) and the threat of dumping have promoted the European Commission to take action. The Commission and China agreed, in July 2016, to set up a “steel platform”, by which the EU can monitor the agreed reduction of excess capacity, the reform of state-owned enterprises and European companies' access in this industry.

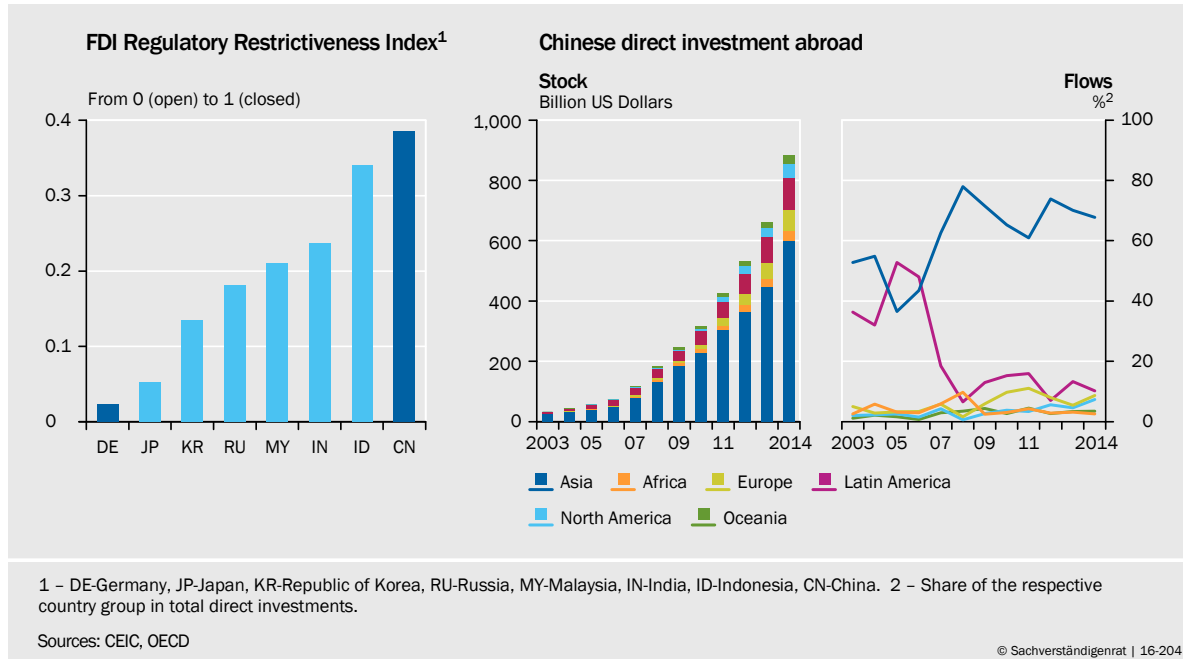
977. China' accession agreement to the World Trade Organisation (WTO) stipulated that WTO member states do not have to treat China as a market economy when calculating a benchmark for imposing **anti-dumping measures**. However, this stipulation expires 15 years after China's accession to the WTO, i.e. at the end of 2016, which means that the other WTO states will have extremely limited opportunities for imposing customs duties to sanction dumping. Nevertheless, the European Union has only made very limited use of this instrument thus far.
978. The number of anti-dumping measures worldwide against China exceeded 500 for the first time in 2015, with the majority imposed in Asia and North America, and only 52 imposed in the EU. ↘ CHART 140 Comparing ad valorem duties is a means of comparing the **level of punitive duties**. Forty-two of the anti-dumping measures the EU imposed against China in 2015 are ad valorem duties, at an average rate of 44 %. This rate is considerably lower than the average duty imposed by the USA of 141 %, and Canada of 104 %. Although the rate imposed by the Republic of Korea of 20 % is, in contrast, below that of the EU (Bown, 2016). This comparison, however, shows the EU's scant use of the instrument. This is justified, given the advantage that trade with China offers to the European economy even in the case of dumping.

4. China as an investor

979. Chinese companies have considerably stepped up their **foreign direct investment**. They are already among the most important foreign investors in some African and Asian countries. ↘ CHART 141 RIGHT Chinese investors have most recently pursued larger activities in the EU and the USA. However, their share in

↳ CHART 141

FDI Regulatory Restrictiveness Index in 2015 and Chinese direct investment abroad



aggregate foreign direct investment stocks in these regions has been very low to date.

980. China provides broad support to its companies' activities abroad via **state-owned development banks**. The Export-Import Bank of China and China Development Bank manage a combined credit volume of US\$550 billion, which is approximately four times the World Bank's credit volume (approx. US\$150 billion). The banks increasingly grant direct loans to governments and companies in developing countries in order to reinforce China's position. Even aid to countries in crisis, such as in Latin America, is extended through those development banks.
981. China's largest share of foreign direct investment is in Asia (around 10 %), followed by Latin America (6 %) and Africa (5 %). It has been repeatedly pointed out, particularly as regards **Africa**, that China hopes to secure access to important resources through foreign direct investment (Buckley et al., 2007; Cheng and Ma, 2007). There are, however, other views as well. For one thing, China's share of total foreign direct investments may be increasing but it is still very small, and these investments are strongly dominated by a few major takeovers by state-owned enterprises in connection with natural resources. For another, Chen et al. (2015) show that Chinese investment behaviour in Africa in terms of resources does not differ from that of western countries. From 2012 to 2015, the share of Chinese corporate takeovers in mining and minerals and in oil and gas worldwide plummeted from nearly 50 % to approximately 10 % (EY, 2016a). Instead there has been a substantial increase in the ICT, automobile and transport, and financial services sectors.
982. In 2014, China held its largest foreign direct investment stock in the **EU** in Luxembourg (US\$16 billion), the UK (US\$13 billion) and France (US\$8 billion), according to the Ministry of Commerce China (MOFCOM). Consequently, the larg-

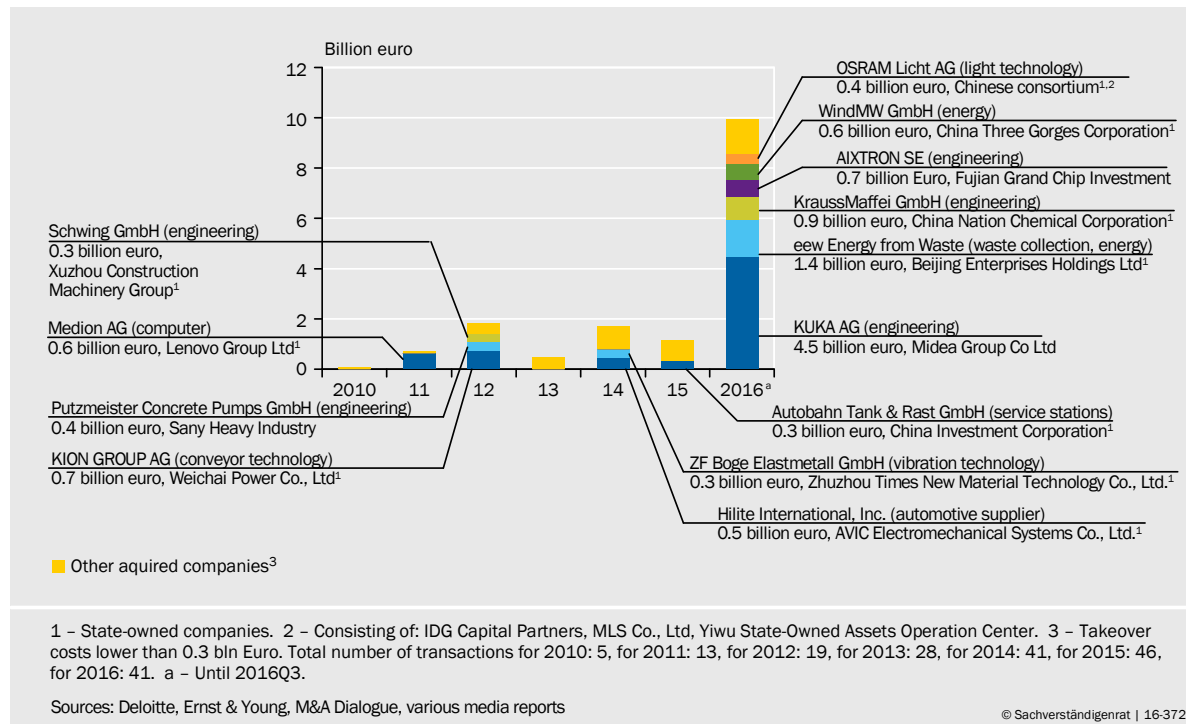
est stocks are in leasing, commercial services and financial intermediation. Manufacturing comes in third place at a volume of US\$9 billion in 2014.

983. Chinese **foreign direct investment** flows in Germany stood at around €2 billion in 2015, which in turn, however, only constitutes a small proportion (4.7 %) of total net foreign direct investments in Germany compared to investments from other regions. By comparison, the proportion of foreign direct investments by Switzerland is 14.4 %, by the EU28 60.8 %, and by the USA 28.1 %.
984. Chinese takeovers of German companies drew a great deal of attention in the media this year due to the Chinese takeover of robot manufacturer Kuka. There are discussions as to the potential threat posed by Chinese government attempts to procure key technologies and know-how from developed countries by means of state-owned enterprises. In fact, 74 % of China's 50 companies with the largest volume of investments abroad are state-owned enterprises (MOFCOM, 2015).
985. Moreover, the number of Chinese corporate takeovers in Germany in the period from 2010 to Q3 2016 (inclusive) rose from five to 41. Their volume in 2016 has risen rapidly. [↘ CHART 142](#) However, the statistics on takeover volumes, which differ from foreign direct investment which also includes foundations and financial sector transactions, are based on a **very small number of transactions**. For example, the seven largest takeovers from 2010 to 2015 constitute more than half of Chinese investors' total takeover volume. The combined total of the three largest takeovers in 2016 (KUKA AG, EEW Energy from Waste GmbH and Krauss-Maffei GmbH) is already higher than the total of all takeovers in the past five years. The Chinese state is the majority owner of the buyer company in 70 % of the 20 largest transactions in recent years. Moreover, the largest acquisitions have been in the mechanical engineering, automotive and chemical industries. Takeover targets are frequently **global market leaders** in very specialised submarkets.
986. As an export-oriented economy, Germany has a strong interest in open capital markets (GCEE Annual Economic Report 2007 items 590ff.) Current cases – such as Chinese investor Midea's takeover of robot manufacturer Kuka and Fujian Grand Chip Investment's acquisition of mechanical engineering company AIXTRON – have sparked demands for reviews or even bans of foreign takeovers. However, a **general requirement for approval** is not compliant with European law unless this serves in the narrowly interpreted sense to protect public order and safety, such as in the defence industry (GCEE Annual Economic Report 2007 items 608ff.) This does not apply to pure economic interests or economic policy objectives. An approach such as in the USA, where the transaction under review and the relevant criteria are only vaguely prescribed and can be more or less extended as desired, would be incompatible with EU law and could end in a general restriction on free capital movement.
987. The companies participating in the survey by the European Union Chamber of Commerce in China (2016a) cited the **lack of reciprocity** in foreign direct investment as a serious problem. Foreign companies' access to the Chinese market is heavily obstructed. Frequently, their only options are to issue a license to a

↘ CHART 142

Takeovers of German companies by Chinese investors

Transactions in connection with takeovers of full or parts of German companies where takeover prices had become known



Chinese company, set up a joint venture with a Chinese partner or allow themselves to be acquired by a Chinese investor. In terms of restrictiveness regarding foreign direct investment, Germany ranks among the most open and China the least. ↘ CHART 141 LEFT

988. Despite the lack of reciprocity, Germany should **itself unilaterally maintain its openness** towards Chinese investors. Free international movement of capital is a key factor in German prosperity. It enables efficient use of capital and promotes international division of labour. It does not matter whether foreign direct investment is made by private or governmental investors or what country they are from. It is true that state ownership in companies can be harmful in terms of the regulatory framework. However, this opinion is largely based on fears of inefficiency if state-owned companies are subject to soft budget restrictions. Such inefficiency ultimately affects the taxpayers of the country that grants such implicit guarantees but not the target country of such companies' foreign direct investments (Kronberger Kreis, 2008).
989. The fear that Chinese investors will transfer to China the technological expertise they acquire when taking over German companies, and thereby gain a lasting advantage over German companies, is likely exaggerated. Firstly, measures are available for **sanctioning violations of intellectual property rights**, which involve a lot less intervention than restricting free movement of capital, for example via the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement). Such measures have by no means been exhausted.

Secondly, **technology transfer** offers **German companies new opportunities**. If Chinese investors can skip technological development steps they become even more interesting trading partners of the German economy. Even if they threaten to overtake German companies in terms of technology in the process, this is not necessarily a disadvantage. Instead it incentivises technology leaders to keep abreast of new developments (Brezis et al., 1993). Technology leadership requires swift adaptation to technological progress, with and without technology transfer, which many fear, due to Chinese foreign direct investment.

990. The principle of **reciprocity** corresponds to the conventional view of fairness. From a global economic point of view, free movement of capital is, moreover, in the interest of all countries involved, as it results in worldwide factor price equalisation. Reciprocity does not, however, necessarily result in greater freedom of capital movement. From an individual country's point of view, **market openness unilaterally pays off** (according to the free-trade-for-one theorem, Siebert, 2007). The capital resources in an open capital-importing economy increase and production becomes more capital-intensive. Domestic capital resources then become less scarce. This increases labour productivity followed by wages.

Unilateral openness to Chinese foreign direct investment would thus likely be **advantageous**, particularly **for the German workforce**. It is correct and, as regards free world trade, commendable for the Federal Government to insist on opening the Chinese market to foreign direct investment. However making the reciprocity principle a cornerstone of German foreign economic policy would not be a good idea – neither for China nor for other countries.

III. CONCLUSION

991. The Chinese economy is in a difficult **period of transformation**. The unavoidable transition from growth driven by heavily credit-financed investment to growth driven by private consumption and services is bound to involve some friction. The global economy has noted this in the significant slowdown in China's exports and imports. Transition in this manner has resulted in a decoupling of Chinese foreign trade while the Chinese economy continues to grow at a relatively fast pace. Despite high excess capacities in sectors such as industry and construction, and a debt level that continues to rise in relation to economic output, an abrupt economic slump is nevertheless highly unlikely even if a certain risk of financial crisis persists.
992. The Chinese government remains more than willing to administer a heavy dose of demand stimulation to achieve scaled-back but still ambitious growth targets at any price. In principle, they are still within reach, given the large direct and indirect **influence of the government on the economy** and the financial system. However, adhering to growth generated by credit-financed, largely government-driven investment may be to the detriment of a fundamental transfor-

mation of the economic system. Whether China can succeed in asserting its competitiveness on international markets in the medium and long term while still tending to more strictly limit basic civil liberties remains questionable.

993. The impacts of the transformation in China affect the German economy, in particular. German exports to China have recently posted very little increase, after the dramatic growth recorded from 2008 to 2012. They have actually shown a negative tendency since the end of 2014. This reflects the increasing importance of German car brands being produced in China, in addition to **less import-intensive growth**. Chinese steel manufacturers' overcapacities also have a negative impact on German manufacturers. Overall, China's importance to the German economy is far greater than the proportion of exports to China in relation to total exports would suggest, which is at a constant 6 % for some years now.
994. Chinese companies' increasing activity in acquiring foreign companies is viewed with scepticism. In principle, free movement of capital is advantageous for all involved. This even applies unilaterally, if a country has a liberal economy and others pursue a protectionist agenda. Capital import is likely to increase domestic productivity and wages. Technology transfer to China renders Chinese trading partners even more interesting for the German economy than they currently are. Germany should therefore maintain its **openness to Chinese investors**.

The EU and China are currently negotiating an investment agreement which should replace the 27 national investment agreements of the 28 EU member states. The GCEE calls for the government to advocate **open market access** as this improves the international division of labour further beyond the unilateral advantages mentioned.

A differing opinion

995. One member of the Council, Peter Bofinger, does not agree with the opinion expressed by the majority of Council members on reciprocity in foreign direct investment.
996. The majority see no need for **reciprocity in foreign direct investment** as many parties have demanded, not least the Chancellor in her most recent visit to China. However, German investors will be permanently worse off than Chinese investors should this demand not be made. This is particularly problematic as it robs German companies of the opportunity, by acquiring Chinese companies, to access the Chinese markets, which are heavily protected towards the outside. Germany would be unnecessarily sacrificing an important strategic instrument in failing to demand reciprocity, given China's significant interest in acquiring German companies.
997. The majority of Council members advocate unilateral openness on a **goods market-based model** of foreign trade, in which capital resources in a capital-importing economy would increase and production would become more capital-

intensive. The scarcity of domestic capital resources would then be reduced. This would increase labour productivity followed by wages. Unilateral openness to Chinese foreign direct investment would thus be advantageous, particularly for German workers.

In reality – which is different to the goods-market based international trade theory in the world of modelling – Chinese investors' acquisition of German companies does not result in an increase in capital stock in Germany. That is to say, not capital goods but financial assets flow from China to Germany, which consequently does not increase Germany's capital stock but its net financial position. Given the low investment propensity of the German economy and the high level of financial reserves many companies have, it is highly unlikely that this will result in greater investment and increased capital stock in Germany, in which case neither labour productivity nor the wages of German workers change.

998. It is astonishing that precisely economists, who are very sceptical of the **state playing an active role** in the economic process, have no qualms about Chinese investors acquiring German technology leaders. Even if the companies in question are privately owned, it is quite possible given the fine line separating government and private economy, especially in the financial sector, that the Chinese government is involved behind the scenes.

The fact that it is not the German but the Chinese government that would suffer the consequences in case of mismanagement and related loss is not the problem. It would be disastrous for Germany as an industrial location if its top-tier technology companies were to lose their global leadership role in the medium and long term due to mismanagement of Chinese owners.

999. It is also incomprehensible why the majority of the Council members believe that the fear of a **transfer of technological know-how** through acquisition of German companies is exaggerated. They say that the acquisition of technology leaders can especially not be equated to a violation of intellectual property rights. Moreover, it is far from certain that the technology transfer will offer new opportunities for German companies.
1000. For the above reasons, it is a welcome move that the Federal Minister for Economic Affairs and Energy has now drafted some **“key points for a proposal on reviewing investments at the European Union level”**. These are a step in the right direction. Firstly, they call for the principle of reciprocity and, secondly, they provide for a special review in the case of investors receiving a government subsidy or if they are a state-owned or partially state-owned company.

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