## Slowdown in growth in the emerging market economies

The emerging market economies have experienced impressive growth over the past 20 years, substantially boosting their share of global economic output and worldwide trade. Recently, however, economic momentum has tailed off considerably in a large number of emerging market economies, and the growth lead they once enjoyed over the industrial countries has narrowed.

At first, many thought this was due to cyclical strains, notably the short-lived lull in demand in the industrial countries. The fact that the slowdown is so persistent suggests, however, that it is rather the underlying path of expansion that has flattened. Given the advanced stage of the convergence process, it could be said that this is a "natural" easing of the rate of expansion. Nevertheless, such is the scale of the slowdown that a number of additional factors are also likely to be at play in several emerging market economies.

In China, the weaker pace of growth can probably be partly explained by the decreasing structural change at the sectoral level and the lessening impact of growth impulses stemming from earlier market reforms. For the emerging market economies specialising in the export of raw materials, the end of the commodities boom appears to be a relevant factor. In the emerging market economies of eastern Europe, the reduced pace of growth reflects a return to more normal circumstances, now that the high rates of growth seen immediately prior to the financial crisis have proven to be unsustainable. More moderate investment levels and neglect of the economic policy reform course are also holding back economic growth.

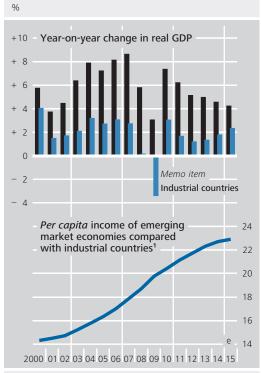
The predominantly structural nature of the slowdown would suggest that the aggregate pace of growth in the group of emerging market economies will remain muted in the years ahead. Growth could diminish further still if things take a turn for the worse. For the advanced economies, this outlook means that the underlying pace of their exports to the emerging market economies is likely to be lower in the foreseeable future. If the Chinese economy were to undergo a sharp downturn, the ripple effects would also be felt in Germany.

The slowdown in the pace of aggregate growth in the emerging market economies shows that a speedy and buoyant catch-up process cannot be taken for granted. The emerging market economies need new reform stimuli to put growth back on a higher trend path over the medium term.

# The current slowdown in growth in the emerging market economies in the context of their economic convergence process

Waning momentum in emerging market economies since global financial and economic crisis It was not only the sluggish development of some industrial countries that put the global economy on a moderate growth path in recent years; the flatter upward trajectory in the emerging market economies was another contributory factor. 1 Although the group of emerging market economies initially resumed a very buoyant rate of real gross domestic product (GDP) growth immediately following the global financial and economic crisis, the subsequent period saw the rate of expansion dwindle from one year to the next. In its current forecast, the IMF projects GDP growth of just 41/4% for 2015.2 This contrasts with an average growth rate of as much as 71/2% in 2010, while in the years immediately prior to the crisis, the pace even approached twice the current rate.

Economic growth and *per capita* income in the emerging market economies



Source: IMF World Economic Outlook, April 2015. **1** Based on purchasing power parities.

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The emerging market economies' current moderation in growth cannot be explained entirely by the flatter rates of expansion seen in a number of larger individual economies, such as the BRIC countries (Brazil, Russia, India and China). One need only look at the similarly sharp decline in the median growth rate of all emerging market economies, which contracted from 6% on average in 2006-07 to 3¾% in the past two years. Nor is the slowdown confined to certain parts of the world – momentum has waned markedly in all six of the IMF's regional groups (emerging Europe, Commonwealth of Independent States, Latin America, Middle East, emerging Asia, and sub-Saharan Africa).

Emerging market economies have outpaced industrial countries since mid-1990s, ...

All regions affected by slow-

down in growth

The aggregate pace of growth in the group of emerging market economies may have contracted somewhat, but it is still higher than in the group of advanced economies, for which the IMF expects GDP to grow by 21/2% in 2015 according to its April WEO.3 A longer-term analysis reveals that the steeper growth path observed in the emerging market economies is a relatively new phenomenon. Up until the early 1990s, the emerging market economies moved roughly in step with the industrial countries in terms of economic output. At that time, however, many emerging market economies, particularly those in Asia and eastern Europe, introduced free market reforms and opened up to external markets. These steps put the emerging market economies on course for integration into the international division of labour,

1 Here, and in the rest of this article, the emerging market economies also include the developing countries. Countries are divided into emerging market economies and industrial countries (or "advanced economies") according to the country classifications used by the International Monetary Fund (IMF) in the World Economic Outlook (WEO). See IMF, WEO, April 2015, p 147.

**2** The aggregate IMF growth rates used in this report are based on weights which reflect estimated purchasing power parity exchange rates. Alternatively, weights based on market exchange rates can also be used. Which weighting scheme is applicable should be determined on a case by case basis, depending on the topic in question. The general use of purchasing power parity weights can also be a source of problems. See Deutsche Bundesbank, The empirical relationship between world trade and global economic output, Monthly Report, November 2013, pp 13-17.

3 The IMF reduced this rate to 2% in its July update.

which was a major factor driving their economic ascent.<sup>4</sup>

... boosting their contributions to global output

For an indication of how this process elevated the emerging market economies' stature, one need only look at the steep rise in their share of global economic output which, adjusted for purchasing power parity, climbed from approximately 43% in 2000 to 57% in 2014.5 With the increase in real GDP came a sharp rise in per capita income and a distinct narrowing of the prosperity gap between the emerging market economies and the industrial countries. Factoring differences in purchasing power into the equation reveals that per capita income in emerging market economies recently came to the respectable level of just under a quarter of the median income in industrial countries, compared with approximately 14% in 2000.

Slowdown in growth reduces pace of income convergence

One outcome of the current slowdown in growth in the emerging market economies is that progress in closing the income gap has lost steam. While it is true that the industrial countries have also seen GDP growth falter in the wake of the global financial and economic crisis, the loss of momentum was not as pronounced in these countries. The narrower growth lead held by the emerging market economies also means that they are not expanding their share of global output as rapidly as previously. However, the emerging market economies already account for a large enough share of the global economy that they continue to make a major contribution - around four-fifths in recent years – to global growth.

Increased significance of emerging market economies for advanced economies

The impressive growth of the emerging market economies over the past two decades has also had a huge impact on the advanced economies. First, goods manufactured in the emerging market economies have deeply penetrated the markets of the industrial countries. This set in motion far-reaching adjustment processes across several industries and regions and increased the overall pace of structural change there. For consumers, many goods became cheaper, which markedly increased their pur-

chasing power.<sup>6</sup> Second, the significance of the emerging market economies for the industrial countries is by no means limited to their role as suppliers. Indeed, new sales markets have opened up there, especially for German businesses. Enterprises from the industrial countries, keen to meet the burgeoning demand from commercial and private customers in the emerging market economies, stepped up their exports and also expanded their production capabilities in the local markets, with the effect that the resulting knowledge transfer also contributed to the growth seen in the emerging market economies.

## What caused the moderation in growth: cyclical strains or a slowdown in potential growth?

An interesting point to note about the slow-down in growth in the emerging market economies is that the majority of economic observers – be they from the private sector or from international organisations – did not see it coming. In practically every edition of the WEO since 2011 (including the associated updates), the IMF revised down its growth forecasts for the group of emerging market economies for the respective current year.<sup>7</sup>

Series of downward revisions to emerging market economies' growth forecasts

Short-term factors, such as a reversal of the highly accommodative monetary and fiscal policy stance taken during the global financial and

Did slump in industrial countries hold back growth?

- 4 See, inter alia, E Prasad (ed, 2004), China's Growth and Integration into the World Economy, IMF Occasional Paper 232, as well as J Roaf et al (2014), 25 Years of Transition Post-Communist Europe and the IMF, IMF Regional Economic Issues Special Report.
- **5** The emerging market economies' share of global GDP also rose considerably when based on market exchange rates, climbing from 20% in 2000 to 39% at last count.
- **6** On the other hand, the emerging market economies' increased demand contributed to a steep upward trend in commodities prices, which has only recently started to slacken. See Deutsche Bundesbank, The price of crude oil and its impact on economic activity in the industrial countries, Monthly Report, June 2012, pp 27-49.
- **7** See Deutsche Bundesbank, The global growth forecast revisions in recent years, Monthly Report, November 2014, pp 12-15.

economic crisis, initially dominated the debate over the slackening pace of growth in the emerging market economies. The lacklustre economic activity in the industrial countries in recent years was also thought to be a major factor. In the euro area in particular, sovereign debt crises and macroeconomic adjustment processes had, for a time, taken guite a toll on some countries. At first glance, it would certainly appear plausible that the industrial countries were effectively holding back the emerging market economies via the foreign trade channel, given that the emerging market economies export a major share of their output to the advanced economies.8 However, a correlation of this kind would suggest that economies with a very active manufacturing sector and whose exports are heavily reliant on the industrial countries are particularly affected by the moderation. No such pattern is evident, however.9 Another factor which contradicts the theory of an export-induced slowdown in the emerging market economies is that economic activity – and imports, in particular – in the industrial countries have firmed up again recently, while the pace of growth has dwindled further in the emerging market economies.

the production function approach. These models rely on a pool of high-quality data, which are often not available for the emerging market economies. Other approaches smooth out real GDP directly using statistical procedures. To distinguish these procedures from methods with a stronger economic grounding, the change in the series thus created is referred to as trend growth. The following analysis uses what is known as the Hodrick-Prescott filter (HP filter). Other filtering techniques deliver similar results (see the box on pages 19 to 21).

Estimation of trend growth using the Hodrick-Prescott filter ...

ponent of output for the group of emerging market economies as a whole. 10 Trend growth can be seen to climb sharply until shortly prior to the onset of the global financial crisis, before slackening noticeably thereafter. Statistically speaking, this decline in trend growth can explain much of the slowdown in growth observed in the emerging market economies during this period. Thus, the contribution of cyc-

lical factors appears to be of secondary import-

ance.11

The HP filter is used to estimate the trend com-

... suggests that cyclical factors are less responsible for slowdown in growth

Persistence of frail growth points to decline in potential arowth Such is the persistence of the slowdown in the emerging market economies that it appears increasingly unlikely that a single demand-side factor, or even a series of negative events, is the root of the problem. A more likely explanation is that the path of potential output has flattened out. Potential output is defined as an economy's output at normal capacity utilisation levels, around which the actual output fluctuates over the course of the business cycle. It is primarily determined by supply-side factors, such as the economy's labour supply and fixed assets as well as a productivity component. Accordingly, the growth of potential output is largely dictated by changes in these variables.

Potential output cannot be observed directly and must therefore be estimated. One option is to use complex econometric models such as

**<sup>8</sup>** In 2010, these exports had a value of roughly US\$3.5 trillion, or approximately 15% of the aggregate economic output in the emerging market economies.

**<sup>9</sup>** See Deutsche Bundesbank, Impact of weak euro-area demand on the global economy, Monthly Report, November 2012, pp 11-14.

<sup>10</sup> As recommended by Ravn and Uhlig (2002), a smoothing parameter for the HP filter of 6.25 is chosen here and in the rest of this article. Likewise, the underlying time series of (actual) real GDP are consistently extracted from the IMF's current WEO database, transformed into logarithms, and projected for the current year and the year ahead using the IMF forecast. See M O Ravn and H Uhlig (2002), On Adjusting the Hodrick-Prescott Filter for the Frequency of Observations, Review of Economics and Statistics, Vol 84, Issue 2, pp 371-380.

<sup>11</sup> Any interpretation of these results should allow for the fact that the distinction between trend growth and the cyclical component is vague for the most recent data. This means that results may be subject to revision if, for example, the underlying GDP projections used here for the end of the time series prove to be inaccurate. The end-point problem surrounding the HP filter is discussed in further detail in the box on pp 19-21.

### A comparison of approaches to determining potential growth in emerging market economies

Potential output is generally defined as an economy's level of output when factor utilisation is normal. One common method of deriving this unobservable variable is to make an estimate based on a production function approach. This assumes that total economic output is determined by the factors of production (generally labour and capital) in conjunction with a productivity component known as total factor productivity (TFP). Potential growth can then be calculated from the trend rates of change in these determinants. However, it is difficult to apply this approach to emerging market economies since the required data on capital stock and labour input are often not available in the required quality.1 The relevant time series therefore need to be estimated, which further increases the inherent uncertainty involved in calculating potential growth and also makes the process rather intransparent.2

Another method for calculating potential output or potential growth entails deriving an estimate of the output gap - ie the discrepancy between potential output and actual output - from observable measures of overall capacity utilisation. The International Monetary Fund (IMF) recently chose such an approach when estimating potential growth for a series of industrial countries and emerging market economies.3 The chosen measures of capacity utilisation are the consumer price inflation rate and the unemployment rate (as a deviation from its natural level). However, this method is also only of limited suitability for determining the potential output of emerging market economies, as consumer price movements in these countries only partially correspond to the degree of overall capacity utilisation. This is because the statistical basket of consumer goods in many emerging market economies is largely constituted by foodstuffs, changes in the prices of which, however, are often a result of supply-side shocks

in those markets. The unemployment rate, on the other hand, is a meaningful indicator of overall capacity utilisation only if the formal labour market dominates. This is often not the case in emerging market economies, or only to a limited extent.<sup>4</sup>

An alternative to the aforementioned approaches is represented by univariate filters that smooth real gross domestic product (GDP) over time. However, there are conceptual differences between univariate filters and the aforementioned approaches that need to be taken into consideration. The implicit assumption when using filters is that there is a symmetrical cyclical movement on either side of a normal utilisation path. This allows cyclical fluctuations of up to a certain duration to be separated from a long-term trend. Owing to the differences between the approaches - and to distinguish them from methodologies that use economic determinants - the rate of change in a long-term component derived from statistical filters is also called trend growth. The most widespread method in this category is that developed by Hodrick and Prescott, which is explained in brief below and subsequently compared with alternative filter approaches.

<sup>1</sup> See A Burns, T J Van Rensburg, K Dybczak and T Bui (2014), Estimating potential output in developing countries, Journal of Policy Modeling 36(4), pp 700-716

<sup>2</sup> The fact that corresponding estimates for industrialised countries carried out by international organisations are highly prone to revision indicates that there is an extremely high level of uncertainty even when data availability is good. See Deutsche Bundesbank, On the reliability of international organisations' estimates of the output gap, Monthly Report, April 2014, pp 13-35.

3 See IMF, Where are we headed? Perspectives on potential output, World Economic Outlook, April 2015, pp 69-92.

<sup>4</sup> For example, the unemployment rate published by the Chinese statistical office only includes registered persons, thus excluding, in particular, the sizeable migrant worker population. Furthermore, this measure is considered to be rather unreliable, as it has fluctuated remarkably little in recent years at a low level (between 4.0% and 4.1%).

The Hodrick-Prescott filter (HP filter)<sup>5</sup> is based on a separation of trend and cycle using a minimisation problem that takes into account the goodness of fit – as a sum of the trend's squared deviations from the original series – and the magnitude of the trend's remaining fluctuations. A smoothing parameter  $\lambda$  is used to provide a relative weighting for these two competing objectives. The smaller  $\lambda$  is, the closer the trend series lies to the original values and mirrors its movements. The choice of a suitable value for  $\lambda$  is therefore the topic of intense debate. The frequently chosen value of 6.25 for annual data corresponds to a reference cycle<sup>6</sup> length of about ten years.<sup>7</sup>

While the length of the reference cycle under the HP filter can only be set indirectly through the choice of  $\lambda$ , a range of other statistical filters allow us to explicitly choose the frequency bands – and thus the cycle lengths – that are to be extracted from a time series. Theoretically, optimal filtering is possible, but this would require infinitely long data series, which in practice means that attempts must be made to find as good an approximation as possible. Within this category of band-pass filter, the methodologies of Baxter and King (BK filter) and Christiano and Fitzgerald (CF filter) are often used in business cycle analysis.

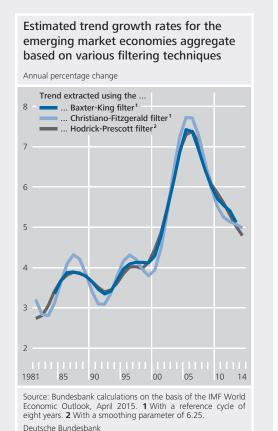
The BK filter uses a symmetrical weighting scheme, which implies that some values are needed at the beginning and at the end of the time series for the calculation and that the resulting trend series is therefore shorter than the original series. 12 By contrast, the CF filter – like the HP filter – uses asymmetric weightings, which means that while no data points are disregarded, the most recent observations have a stronger weighting in the calculation of the trend, which can lead to distortions in the result at the current end of the time series. The extent of deviations using the CF filter is, however, significantly lower than for the HP filter. In both cases, this end-point problem can be partially mitigated by extending the underlying GDP series with forecast data.<sup>13</sup> A comparison of various forecast variants for the emerging market economies aggregate ultimately reveals only negligible differences. Specifically, the results based on two-year extrapolations using the forecasts by the IMF, the value for 2014, and long-term growth averages differ by less than one-tenth of a percentage point from one another when using either the HP filter or the CF filter. A significant deviation only

- **5** See R J Hodrick and E C Prescott (1997), Postwar U. S. Business Cycles: An Empirical Investigation, Journal of Money, Credit, and Banking 29, pp 1-16.
- **6** The reference cycle denotes the cycle for which the filter removes 50% of oscillations, thus representing the borderline between waves that remain and those that are filtered out.
- 7 The value of 6.25 corresponds to the recommendation of M O Ravn and H Uhlig (2002), On Adjusting the Hodrick-Prescott Filter for the Frequency of Observations, Review of Economics and Statistics, Vol 84, No 2, pp 371-380. Other frequently used values for annual data are 8, 20 and 100. However, according to Ravn and Uhlig's line of reasoning, these are less suitable because they lead to larger deviations between the series trend components extracted from annual data and those extracted from quarterly data if the standard value is used for the latter. However, as a caveat it should be noted that even the value for quarterly data from Hodrick and Prescott was determined solely on the basis of empirical findings on US GDP data between 1950 and 1979, and these are not necessarily transferable to other countries or periods of time.
- **8** Typically, cycles within a range of six to 32 quarters or two to eight years are classified as cyclical fluctuations, which are then to be separated from other frequencies as precisely as possible.
- 9 In principle, band-pass filters, which were developed to extract a cyclical component, are only suitable for determining the trend growth to a limited extent because an area of high frequency fluctuations remains alongside the long-term development. However, where annual data are used and the lower limit of the cycle length is set at two years, the band-pass filter corresponds to a high-pass filter, which, like the HP filter, merely separates two areas of high and low frequency.
- **10** See M Baxter und R G King (1999), Measuring Business Cycles: Approximate Band-Pass Filters for Economic Time Series, Review of Economics and Statistics 81, pp 575-593.
- **11** See L Christiano und T J Fitzgerald (2003), The Band-Pass Filter, International Economic Review 44, pp 435-465.
- 12 For annual data, Baxter and King recommend using three lags as the best compromise between approximating the ideal filter and missing observation points at the series ends.
- **13** See Deutsche Bundesbank, Determining aggregate trend output in the USA, Monthly Report, April 2013, pp 31-35.

arises if the time series is not extended at all.

The three filtering techniques presented in this box make it possible to generate comparison values for the trend growth of the emerging market economies aggregate. 14 The trend growth rates turn out to be rather similar. While the results of the HP and BK methodologies are virtually identical, the results using the CF filter show somewhat more pronounced fluctuations and slight phase shifts compared to the other filters. However, the general picture of decreasing trend growth since the middle of the last decade is confirmed in all cases.

**14** A smoothing parameter of 6.25 was assumed for the HP filter. For the BK and CF filters, in each case a cut-off frequency corresponding to an eight-year cycle length was used.



#### Reasons for the decline in trend growth

Still plenty of scope for further catch-up growth

The slowdown in trend growth in the emerging market economies suggests that a "natural" easing of the rate of expansion has occurred, after the rapid convergence process had moved many countries closer to the very limits of their technological capabilities. However, a very wide gap still remains. There are calculations, for instance, which indicate that labour productivity in China and in other major emerging market economies had each reached less than one-tenth of the corresponding level in the United States in 2011. Similarly, total factor productivity, a measure which also incorporates capital input, continues to show that China and other countries trail a long way behind the United States. 12

From this perspective, it seems reasonable to assume that a number of additional factors were behind the relatively sharp downturn in trend growth witnessed in recent years. To investigate this further, this article will now proceed by determining trend growth developments for each individual emerging market economy.<sup>13</sup> Trend growth has slackened since 2006-07 in roughly two-thirds of the 135 economies observed overall. One of these is economic heavyweight China, where trend growth plummeted from around 12% to 7½%. Other countries which have seen a marked downturn in the underlying pace of economic activity include a remarkably large number of economies specialising in the export of commodities.

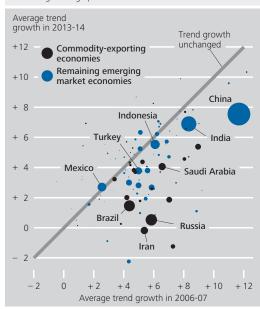
The notion that momentum decelerated particularly strongly in the commodity-exporting economies is borne out by an analysis of differ-

Trend growth weaker in many emerging market economies

**<sup>12</sup>** See M Molnar and T Chalaux (2015), Recent trends in productivity in China: Shift-share analysis of labour productivity growth and the evolution of the productivity gap, OECD Economics Department Working Papers No 1221. **13** Economies with only a relatively short GDP time series in the WEO database (starting after 1992) are excluded.

#### Change in trend growth in individual emerging market economies\*

Percentage change per annum

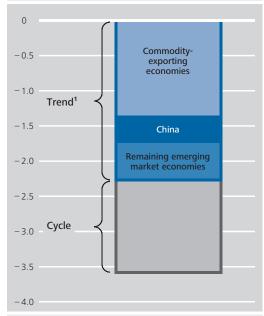


Source: Bundesbank calculations based on IMF World Economic Outlook, April 2015. \* Trend growth determined using the Hodrick-Prescott filter. The size of each circle shows the relative size of each country's GDP at purchasing power parity in 2010. Angola, Azerbaijan, Central African Republic, Equatorial Guinea, Libya and Qatar all lie outside the area represented in the chart.

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#### Contributions to the slowdown in growth in the emerging market economies\*

Percentage points



Source: Bundesbank calculations based on IMF World Economic Outlook, April 2015. \* Computed decomposition of the difference between the average annual GDP growth rates in 2013-14 and 2006-07 for an aggregate of 135 emerging market economies. 1 Trend growth determined using the Hodrick-Prescott filter.

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ent groups of countries, which reveals that aggregate trend growth in the group of commodity exporters slowed from about 6% in the mid-2000s to 2% at last count.14 The other emerging market economies, meanwhile, saw their trend growth contracting by a smaller margin over the same period (from just under 8% to 6%). Factoring China out of these calculations, the drop is less still, at just 1 percentage point. These results shed light on how much each group of countries contributed to the slowdown in growth experienced by the group of emerging market economies as a whole. Thus, the commodity exporters, especially the oil-producing countries, are mostly to blame, statistically speaking, for the 21/4 percentage point fall in the trend rate since 2006-07. China is also responsible for a large share. China and the commodity-exporting economies combined account for roughly threequarters of the slowdown in trend growth in the emerging market economies, even though they merely generated just under 60% of this group's overall economic output prior to the onset of the global financial crisis.

The next sections of this article will look into specific strains on trend growth in China and in the group of commodity exporters, followed by an analysis of the eastern European countries. Although eastern Europe has made a relatively modest contribution to the slowdown in growth experienced by the emerging market economies as a whole, this group of countries is a very important market for exporters from Germany and other euro-area countries.

#### China

Breaking down trend growth to single out the contributions made by labour input and labour

14 Countries are classified as commodity exporters in line with IMF data on the main source of export earnings; see IMF, WEO, April 2015, p 151. Additionally, Brazil is classified as a commodity-exporting country here, since raw materials have accounted for almost half of Brazil's aggregate nominal goods exports in recent years.

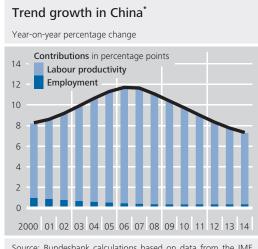
Commodity exporters contribute substantially to slowdown in group of emerging market economies

Lower rise in labour productivity is decisive factor productivity sheds greater light on China's macroeconomic slowdown. It reveals that labour input, as measured in terms of the number of persons working in the overall economy, has only ever contributed minimally to the increase in economic output due to its weak upward tendency. The main driver here is the rise in labour productivity, which has experienced a marked decline in recent years and is behind the slowdown in trend growth, whereas the low positive contributions attributable to labour input have remained more or less unchanged.

Increasing productivity in economy as a whole curbed by flagging structural change The flagging pace of structural change appears to be partly to blame for the lower rise in labour productivity. One major factor driving overall productivity growth in China is the migration of rural agricultural labour to urban areas, where they take up employment in the significantly more productive industrial or services sector. This process appears to have slowed of late. Indeed, the official estimate indicates that the number of migrant workers rose by only 2% on average over the past four years compared with an increase of 4% between 2004 and 2010. One likely reason for this is that the rural labour reserve has now been all but exhausted.<sup>15</sup>

Positive effects of past structural reforms petering out

Probably of even greater significance than the waning pace of sectoral structural change is the slowdown in productivity gains at the sectoral level, 16 with the dwindling positive effects of previous structural reforms likely to have played a major role in this. A key reform step taken by China was to become a member of the World Trade Organization (WTO) in 2001. The greater trade openness that followed led to considerably stiffer competition in China, which – especially in the first few years – is likely to have increased economic efficiency significantly.<sup>17</sup> Other measures adopted at this time, namely the restructuring and privatisation of state-owned enterprises, are also likely to have unleashed substantial efficiency gains. 18 However, this transformation process has practically stalled in recent years. For example, the number of persons employed by state-owned



Source: Bundesbank calculations based on data from the IMF and China's National Bureau of Statistics. \* Trend growth and trend employment rates determined using the Hodrick-Prescott filter.

Deutsche Bundesbank

enterprises has not budged from around 65 million since 2005 after falling by no less than 40% in the ten years beforehand.

In the past, another factor that contributed to the sharp rise in intrasectoral productivity was exceptionally dynamic investment activity on the back of high levels of domestic saving. Growth in gross fixed capital formation gained even more traction during the global financial and economic crisis, sending its share of GDP higher still from 38% in 2007 to 44% in 2009. This ratio of capital formation, which is decidedly high by international standards, raises

Evidence of lower investment efficiency

- 15 The national household registration system (hukou) restricts the mobility of those who still live in rural areas by preventing migrants from officially relocating to urban areas and thus gaining access to social welfare benefits and education services there. See 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.
- **16** Based on the official estimates for employment in each economic sector, trend productivity growth has tapered off perceptibly in the services sector, in particular. However, a certain level of uncertainty surrounds Chinese data on employment patterns.
- 17 For information on how China's accession to the WTO has affected productivity in Chinese industry, see, inter alia, R Wakasugi and H Zhang (2015), Impacts of the World Trade Organization on Chinese Exports, RIETI Discussion Paper Series 15-E-021.
- **18** The lower efficiency of state-owned enterprises in China is evidenced, for example, by their weaker profitability. See, inter alia, D Zhang and O Freestone (2013), China's Unfinished State-Owned Enterprise Reforms, Economic Roundup, Issue 2, pp 77-99, The Australian Treasury.

the question as to whether bad investment decisions could have been made. And there is indeed evidence to suggest that the allocative efficiency of investment has waned in recent years. One pointer is the emergence of overcapacities in a number of industrial sectors such as the steel and cement industries. 19 The investment push during the global financial and economic crisis, in particular, probably saw a raft of unprofitable projects being launched after the government encouraged state-owned enterprises to ramp up their investment as a way of counteracting the slump in foreign demand.<sup>20</sup> Another area that appears to be hampered by overinvestment is the housing market. Much of the residential investment seen in recent years is probably attributable to purchases that reflect investment motives rather than actual demand for housing. Consequently, the latest slowdown in the Chinese housing market should not be regarded solely as a cyclical phenomenon so much as a possible reduction in the structural oversupply.<sup>21</sup>

Inflow of foreign direct investment drying up A third reason for the flagging productivity growth, particularly in Chinese industry, could have something to do with foreign direct investment (FDI). FDI is mainly relevant to the convergence processes of emerging market economies as it goes hand in hand with the transfer of foreign technology and expertise.<sup>22</sup> But the inflow of FDI to China's manufacturing sector - which was abundant for many years has abated sharply of late, 23 with the associated productivity gains likely to have faded accordingly. It is commonly held that foreign investment in China fell because wage costs skyrocketed in recent years on the back of the aforementioned structural tightening in the country's labour market. This dulled China's appeal as a production base when compared not just with other emerging market economies but some advanced economies as well. Another factor could be that foreign investors may be less inclined to invest in China because constraints on market access and other unfavourable regulations, say, mean that their businesses lose out against their Chinese counterparts.<sup>24</sup>

#### Commodity-exporting economies

The international commodity markets experienced a veritable boom in the last decade, with the US dollar prices of both energy products and other commodities more than doubling between 2000 and 2011. In those emerging market economies specialised in the export of these goods, the boom fuelled macroeconomic growth through a variety of channels. First, higher export prices led to improved terms of trade. Second, exporting countries significantly upped the volume of their commodity exports. For instance, Brazil was able to roughly triple its commodity export volume in the last decade. Third, commodity exporters invested heavily to align their output with demand.25 And fourth, a number of countries in the Middle East used some of their governments' windfall revenues

Major commodity price boom in last decade ...

- **19** Based on a cross-country comparison, IMF economists put the scale of overinvestment in China at an estimated 10% of GDP. See Lee et al (2012), Is China Over-Investing and Does it Matter?, IMF Working Paper 12/277.
- **20** For information on the tools used to exercise influence over state-owned enterprises during the global financial crisis, see Y Deng et al (2014), China's Pseudo-monetary Policy, Review of Finance, 19 (1), pp 55-93.
- 21 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; and M Chivakul et al (2015), Understanding Residential Real Estate in China, IMF Working Paper 15/84.
- **22** See, inter alia, E Borensztein et al (1998), How does foreign direct investment affect economic growth?, Journal of International Economics, 45, pp 115-135; and X Li and X Liu (2005), Foreign Direct Investment and Economic Growth: An Increasingly Endogenous Relationship, World Development, 33 (3), pp 393-407.
- 23 Last year, FDI in the manufacturing sector was down by a quarter on 2011 in US dollar terms. Measured in terms of industrial value added, the deterioration in FDI was even steeper still.
- **24** See, inter alia, European Union Chamber of Commerce in China (2015), European Business in China Business Confidence Survey; and The American Chamber of Commerce in Shanghai (2015), China Business Report.
- 25 According to the World Bank, global investment by oil, gas and mining enterprises rose severalfold between 2000 and 2012. Furthermore, the hike in commodity prices appears to have triggered commercial investment outside the commodities sector, too. See World Bank, After the Commodities Boom: What Next for Low-Income Countries?, Global Economic Prospects, June 2015, pp 93-106; and N Magud and S Sosa (2015), Investment in Emerging Markets We Are Not in Kansas Anymore ... Or Are We?, IMF Working Paper 15/77.

from oil trading to massively expand their infrastructure.<sup>26</sup>

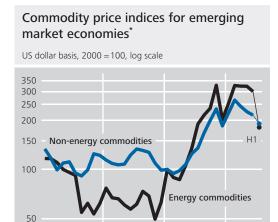
... sent commodity exporters' growth soaring The commodities boom therefore did more than just spur demand in export countries; the investment it sparked also increased aggregate capacity utilisation. Most of these countries thus saw a sharp rise in real GDP trend growth as well. In oil-producing countries, trend growth climbed from around 4% at the turn of the millennium to peak at 7% in the mid-2000s; the remaining commodity-exporting countries saw this figure rise from 2% to 5% in 2007 and 2008. The point at which growth culminated in both groups of countries roughly coincided with peak trend increases in prices for their respective commodities. This observation is consistent with literature findings, according to which economic growth in commodity-exporting countries hinges on changes in commodity prices rather than their levels.<sup>27</sup>

Commodities hoom is over

The boom in the commodity markets is likely to have come to an end in recent years. Metals and food prices have been following a clear downward trajectory since 2011, though prices in the oil market held out at a high level for quite some time before finally plummeting in late 2014. The macroeconomic adjustment measures that this brought about – lower investment in the commodities sector being one example – caused trend growth in export countries to dwindle further still.

China's influence on commodity markets ...

The protracted spell of price inflation and ensuing slowdown in the international commodity markets are likely to be linked, in no small part, to the strength of China's economic growth. In the last decade, China's appetite for raw materials has jumped dramatically, leading it to even become the driving force behind the growing global demand for commodities. This was attributable to not just the rapid upswing enjoyed by China but also the commodity intensity of local growth. The boost in China's demand for metals was particularly impressive: the nation now consumes around 40% of all metals produced globally, using them particu-



Source: World Bank. \* Commodities are each weighted according to their share in the exports of economies with low and medium income levels in the years 2002 to 2004.

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larly for infrastructure development and in the construction sector. China has now advanced to become the world's largest energy consumer as well.<sup>28</sup> The recent downturn in the pace of aggregate economic expansion has also dampened growth in the country's demand for commodities, as is all too apparent in China's import patterns. For instance, growth in crude oil imports, which averaged 13% *per annum* between 2000 and 2010, is now just half that figure. The downswing has been steeper still for some industrial metals such as iron ore and copper.

China's appetite for commodities over the past decade is likely to have significantly buoyed the booming commodity markets. Conversely, the reduced pace of China's demand for commodities – combined with a significant upturn of supply in the corresponding markets – is also likely to have been a key driver behind the broad decline in commodity prices over recent years. Seen from this perspective, the economic

... has made commodity exporters economically reliant on China

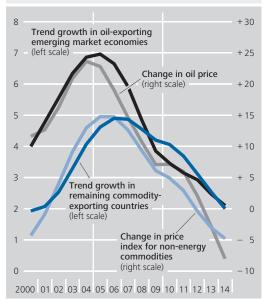
**<sup>26</sup>** See M Albino-War et al (2014), Making the Most of Public Investment in MENA and CCA Oil-Exporting Countries, IMF Staff Discussion Note 14/10.

**<sup>27</sup>** See, for example, B Gruss (2014), After the Boom – Commodity Prices and Economic Growth in Latin America and the Caribbean, IMF Working Paper 14/154.

**<sup>28</sup>** See Asian Development Bank, Asian Development Outlook 2013: Asia's Energy Challenge, pp 29-37.

## Trend growth in commodity-exporting emerging market economies and trend changes in commodity prices\*

Year-on-year percentage change

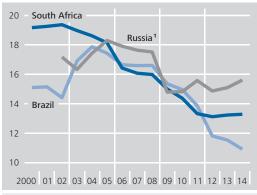


Source: Bundesbank calculations based on data from the IMF World Economic Outlook, April 2015, and from the World Bank. \* Trend growth and trend changes in prices determined using the Hodrick-Prescott filter. Commodities priced in US dollars; underlying commodity price series for 2015 and 2016 extrapolated from the World Bank's June 2015 forecast.

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## Importance of the manufacturing sector in selected commodity-exporting countries

As a percentage of total gross value added



Source: National statistics. **1** No data available prior to 2002. Deutsche Bundesbank

fortunes of commodity-exporting countries are heavily reliant on China.<sup>29</sup>

The lacklustre performance of commodityexporting countries in recent years indicates that, in the absence of the tailwinds provided by the commodity markets, these economies

can achieve no more than modest growth rates.30 On the one hand, low underlying trend growth appears to be somehow related to the erosion of price competitiveness, which many commodity-exporting countries experienced over the course of the previous price boom.31 The manufacturing sector, in particular, thus finds itself in a difficult position, as evidenced by the fact that these countries continue to be massively underrepresented in the global export markets for industrially manufactured goods. In many countries, manufacturing output was significantly outpaced – including in real terms – by that of other sectors during the commodities boom, diminishing its importance to the overall economy. This development gives cause for concern, not least because productivity in the manufacturing sector appears to be converging rapidly at the international level. Hence, this sector is seen as playing a pivotal role in macroeconomic catch-up processes - a role it will only be able to perform if it is sufficiently large.32

Underlying trend growth in commodityexporting countries very low, ...

In addition to subdued price competitiveness, a variety of structural factors are probably also holding back growth in commodity-exporting countries. In some instances, these problems have been an issue for some time and were merely masked by the commodities boom. In the case of Brazil and other Latin American countries, for example, such problems include deficient infrastructures and high fiscal burdens. In South Africa and other economies on

... also due to structural factors

29 Commodity exporters' reliance on China has been empirically documented in various studies. See, inter alia, B Gruss (2014), op cit; and L Gauvin and C Rebillard (2015), Towards Recoupling? Assessing the Global Impact of a Chinese Hard Landing through Trade and Commodity Price Channels, Banque de France Working Paper No 562.

30 This tallies with figures estimating that the trend growth rate in Russia excluding oil price rises is only 2%. See J Rautava (2013), Oil Prices, Excess Uncertainty and Trend Growth, Focus on European Economic Integration, Oesterreichische Nationalbank, Issue 4, pp 77-87.

**31** This effect is known as the Dutch disease and is backed up by strong empirical evidence. See, inter alia, F van der Ploeg (2011), Natural Resources: Curse or Blessing?, Journal of Economic Literature, 49 (2), pp 366-420.

**32** See D Rodrik (2013), Unconditional Convergence in Manufacturing, Quarterly Journal of Economics, 128 (1), pp 165-204.

27

the African continent, low-skilled workers and a lack of internal security represent major obstacles to more solid growth. In Russia and various central Asian energy-exporting countries, meanwhile, heightened political uncertainty and widespread corruption appear to be undermining the confidence of private investors.

### Emerging market economies in eastern Europe

Growth driven by short-term capital inflows not sustainable In the eastern European emerging market economies, like in the commodity-exporting countries, the sharp upswing of the past decade has been buoyed by favourable external influences. There, it was not rising commodity prices, but abundant short-term capital inflows which had spurred consumer demand and investment. In some countries, this brought about enormous current account deficits, a massive increase in private debt and excesses in the real estate markets. When external sources of funding dried up in the wake of the global crisis, those countries faced an inevitable painful process of adjustment. Poland – the largest of the eastern European economies - is something of an exception to this rule. Macroeconomic imbalances were considerably less pronounced in the Polish economy, which goes some way to explaining why the Polish economy did not slip into recession during the global financial crisis.

Lower growth also a reflection of lasting impairment of investment levels ... Economic output in many eastern European countries has been back on a clear upward path in the past few years, but growth rates are, for the most part, noticeably down on precrisis levels. The reduced pace of growth seems to partly reflect a return to more normal circumstances, now that the high rates of growth seen prior to 2008 have proven to be unsustainable in many places. Furthermore, the lingering after-effects of the crisis are probably still holding back aggregate growth, with investment, in particular, still likely to be impaired in some countries. This is probably more than just a case of enterprises looking to deleverage

#### Trend growth in eastern European emerging market economies\*

Year-on-year percentage change



Source: Bundesbank calculations based on data from the IMF World Economic Outlook, April 2015. \*Trend growth determined using the Hodrick-Prescott filter. 1 Aggregate of Albania, Bulgaria, Croatia, Hungary, FYR Macedonia, Poland and Romania.

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– banks appear to be reluctant to supply credit because they are saddled with a substantial stock of non-performing loans, amongst other things.<sup>33</sup>

Another likely factor curbing trend growth is a recent lack of commitment to the market reform path which the countries had embarked upon in the early 1990s. And it is by no means the case that the pace of reform has slowed only in areas in which major progress has already been made in converging with the industrial countries, such as price liberalisation or the opening-up of global trade. On the contrary, progress has been more sluggish in areas in which the gulf is still substantial, such as competition policy.<sup>34</sup>

... and waning pace of reform

## Growth outlook for the emerging market economies

The present analysis indicates that the aggregate slowdown in the group of emerging market economies is chiefly attributable to a decline in their trend growth. In China, two factors suggest that the underlying pace might be

Growing demographic burden on China in the coming years

**33** See IMF (2015), Central, Eastern, and Southeastern Europe – Regional Economic Issues, May, chapter 2, pp 17-41. **34** See European Bank for Reconstruction and Development, Stuck in Transition?, Transition Report 2013.

even flatter still in the medium term. First, the positive effects of structural change are likely to peter out. Second, demographic trends are likely to hamper aggregate growth. Projections by the United Nations indicate that China's working-age population (15 to 64 years) is at its peak and will contract in the coming years. 35 This challenge will be compounded by a change in the age structure of the working population, with the number of people aged 55 to 64 years set to climb from 155 million to 210 million by 2025. Given that the labour market participation rate declines markedly with advancing age, this factor will place an additional burden on China's labour potential, assuming that these patterns do not change.<sup>36</sup>

Little prospect of a marked rise in growth in commodityexporting and eastern European countries Future developments in the commodityexporting emerging market economies will very much depend, as hitherto, on the ups and downs of the international commodity markets. Given that China is likely to be locked in at a lower pace of growth, there is little to suggest at present that these markets will see another robust price increase over a period of several years. This implies that commodity exporters will be stuck on a flat aggregate growth path, at least for the time being. In the eastern European emerging market economies, too, the underlying pace is unlikely to increase distinctly in the foreseeable future. In countries in which the current rate of economic growth is still being hampered by the after-effects of the adjustment crisis of 2008-09, these influences could well gradually diminish, but a number of countries continue to face the prospect that unfavourable demographic trends will hold back growth.37

Overall, growth in emerging market economies likely to remain muted All things considered, there is much to suggest that the emerging market economies will continue their aggregate upward path for the time being, albeit at the recent muted pace. The international organisations now also share this view, with the IMF's current WEO projecting a five-year-average growth rate of around 5% for the group of emerging market economies,

which broadly matches the trend growth rate estimated at the current juncture in this article.

Under certain circumstances, economic growth in the emerging market economies might diminish at an even faster pace. Since the global financial crisis, external funding conditions have been highly favourable for the emerging market economies thanks to the exceptionally accommodative monetary policy stance in the industrial countries. However, if monetary policy returns to normality, especially in the United States, capital inflows into the emerging market economies might wane. Events in May 2013 showed how quickly matters can unfold and spark severe tensions in the financial markets. At that time, talk at the US Federal Reserve about potentially exiting the government bond purchase programme, a process known as tapering, sparked a wave of asset and currency sell-offs in some emerging market economies, mainly hitting countries with sizeable current account deficits. Such frailties continue to exist in many countries, making them as vulnerable as ever.

Downside risks related to financial market tensions stemming from volatile capital inflows ...

On top of these external risks, domestic imbalances are another major source of risk. These chiefly include an exceedingly strong upturn in debt levels in recent years.<sup>38</sup> Both the corporate and general government sectors have contributed to this rise. If internal or external shocks were to occur, particularly in combination with the expected slowdown in trend growth, some

... and a steep rise in debt

**35** See United Nations, World Population Prospects: The 2012 Revision.

36 International Labour Organization estimates show that the participation rate in China among people aged between 55 and 64 stood at 59.8% in 2013, compared with 80.3% in the rest of the labour force. On top of this, the progressive ageing of the population could impact negatively on aggregate productivity, since a person's productivity typically peaks in the middle part of their working life.

37 In Poland, for example, the number of people of working age will fall from 27.2 million in 2013 to a projected 25.5 million in 2020. See European Commission (2015), The 2015 Ageing Report: Economic and budgetary projections for the 28 EU Member States (2013-2060), European

**38** Data from the Bank for International Settlements indicate that average debt levels in the public and non-financial private sectors of the emerging market economies have now reached 150% of GDP.

Economy 3.

#### The international ripple effects of a severe economic slowdown in China

Although Chinese GDP growth was considerably slower in the past few years than previously, it remained quite steady on the whole. However, owing to the massive rise in domestic indebtedness, the Chinese economy has recently been showing signs of increased vulnerability to disruption. The construction and real estate sectors, in particular, saw a considerable rise in borrowing. A substantial medium to long-term downswing in the Chinese housing market or another severe shock to the corporate sector would probably cause a raft of loan defaults, which would weigh on the financial system.1 Potential problems in the Chinese financial industry could reverberate through the country's real sector. In a lessthan-ideal case, this would cause a significant slowdown in economic growth. Known as a "hard landing", this phenomenon is regarded by the International Monetary Fund (IMF), the World Bank and the OECD as a material risk to the global economy.2 The German economy would probably also feel the effects due to its close trade links with China. Last year, German exports of goods to China amounted to €75 billion in value, or 6½% of all German goods exports.

In order to measure the possible effects of a sharp economic slowdown on the real economy in China, a simulation was performed using the NiGEM global macroeconometric model.3 Specifically, a temporary negative shock to (real) domestic demand in China was assumed – one that reduces domestic demand relative to the baseline by just under 6% in the first year and by 9% in the second.4 In such a scenario, Chinese GDP would deviate downwards from the path originally laid out by up to 4%. One factor behind the weaker response to domestic value added is that the shortfall in aggregate demand affects not only goods and services produced domestically but also imported goods. Through this channel, the shock is propagated to China's trading partners. According to NiGEM, real GDP in Germany would fall in the first two years by ¼% relative to the baseline. In the other large euro-area member states, output losses would be smaller as these countries are less reliant on exports to China, but would nonetheless remain perceptible. Conversely, the effects would be stronger – in some cases, significantly so – in economies that have closer foreign trade links with China, such as Japan and South Korea.

For the United States, which exports comparatively little to China, the model simulation even shows somewhat higher economic output in the second year. One of the chief reasons for this is that, in China, price pressures are dampened by the demand shock, which affects consumer prices in other countries via imports of Chinese goods, thus enabling those countries' central banks to conduct a more expansionary monetary policy.<sup>5</sup> Since the US economy imports a large volume of goods from China, this effect is relatively pronounced. In addition, the oil price falls slightly because of sagging Chinese demand. If these two easing factors were omitted, the USA, too, would see a negative GDP effect in the second year, while the shortfall in output in Germany over the same period would turn out to be around two-tenths of a percentage point higher.

<sup>1</sup> See M Chivakul and W R Lam (2015), Assessing China's Corporate Sector Vulnerabilities, IMF Working Paper 15/72.

**<sup>2</sup>** See, for example, IMF, World Economic Outlook, April 2015, p 22.

**<sup>3</sup>** Developed by the UK-based National Institute of Economic and Social Research (NIESR), NiGEM is a model with New Keynesian features. It covers some 60 countries and territories, which are modelled with varying degrees of detail. For more information on the model structure, visit http://nimodel.niesr.ac.uk.

**<sup>4</sup>** The shock lasts two years. Beginning in the third year, domestic demand gradually returns to the baseline.

**<sup>5</sup>** In economies touching the zero interest bound, looser monetary policy means putting off future interest rate hikes.

## Short-term output effects of a weakening of real domestic demand in China\*

Percentage deviation of real GDP from baseline

	Year 1	Year 2
China Euro area of which Germany United Kingdom United States Japan South Korea	- 2.3 - 0.2 - 0.3 - 0.2 0.0 - 0.5 - 0.8	- 4.1 - 0.2 - 0.3 - 0.2 + 0.2 - 0.8 - 1.5

Source: NiGEM simulations. \* Temporary shock to real domestic demand in China that causes it to fall relative to the baseline by just under 6% in the first year and 9% in the second.

Deutsche Bundesbank

All in all, the simulations show that a "hard landing" in China would have a perceptible impact on the real economy in Germany and other countries. The model simulations may well even understate the effects. A marked economic slump in China could possibly be accompanied by a loss of confidence and heightened uncertainty. None of

this is modelled by NiGEM.<sup>6</sup> Such confidence effects could be disproportionately amplified if the slump in China were to trigger political and social tensions. With regard to the effects reported for Germany, it must also be noted that NiGEM assumes homogeneous economic output. It omits the German economy's high degree of specialisation in capital goods, which are of particular importance for exports to China. Consequently, what the simulations also fail to reflect is that, in the scenario of a financial market-induced downswing in China, domestic demand for capital goods would likely be particularly affected.

**6** Conversely, the decline in commodity prices, which are modelled in only a rudimentary fashion, could be greater. However, there is considerable uncertainty surrounding the impact of lower oil prices on economic activity. See Deutsche Bundesbank, Potential impacts of the fall in oil prices on the real economy, Monthly Report, February 2015, pp 12-14.

countries might no longer be able to guarantee the sustainability of their debt.<sup>39</sup>

Potential implications for the industrial countries The prospect of a persistently flatter pace of growth in the emerging market economies is likely to have major implications for the advanced economies. First, if the prices for commodities, notably crude oil, were indeed to remain lower over the long term due to a possible lull in demand, especially from China, it would have far-reaching consequences for households and enterprises in the industrial countries. Second, a flattening of aggregate demand in the emerging market economies will probably curb their appetite for imports from the industrial countries. This would also make itself felt on German exporters, whose robust position in the emerging market economies enabled them to reap substantial rewards from the soaring growth seen in the past in this group of countries. Between 2000 and 2010, the euro value of German exports to the emerging market economies climbed by an

average of 10% per annum. Growth rates have already retreated to around half that figure in recent years. 40 Such is the growth outlook predicted for the emerging market economies that this flatter underlying tendency looks set to continue in the coming years. Germany's external trade links with China are particularly close, and they are likely to become even more intense going forward. If the Chinese economy were to undergo a sharp downturn, the ripple effects would also be felt in Germany (see the box on pages 29 to 30).

**<sup>39</sup>** In the past, an exceptionally strong growth in lending to the private sector, as can currently be observed in individual emerging market economies, was often a harbinger of severe tensions in the banking system. See Bank for International Settlements (2015), 85th Annual Report, chapter III, pp 45-63.

**<sup>40</sup>** In the case of German exports to China, German carmakers' growing tendency to cater for the Chinese market directly – ie via local production facilities – has also contributed to the slowdown. See Deutsche Bundesbank, Reasons for the recent slump in German goods exports to China, Monthly Report, November 2013, pp 47-49.

### Challenges for economic policy

Continuation of a speedy and buoyant catchup process cannot be taken for granted, even if the gap is still substantial The fact that the emerging market economies are still trailing far behind the industrial countries in terms of income and productivity would suggest that, in principle, they still possess abundant upside potential. Yet lasting progress towards economic convergence is only feasible under the right economic policy conditions. As a case in point, the convergence process which began in the mid-1990s in a large number of emerging market economies only gained traction after radical reforms had been introduced.

New reform stimuli necessary

Another factor which has hampered growth in a number of emerging market economies, including China and the eastern European countries, is the neglect of the economic policy reform course in recent years. These countries need new reform stimuli to put growth back on a higher trend path over the medium term. The first signs coming from China are promising in this regard. At a party congress in November 2013, the Chinese state leadership underlined its commitment to restructuring the economy and sketched out its intended economic policy reforms. Yet progress on fleshing out these plans and putting them into practice has been rather sluggish to date.

It is important for the commodity-exporting emerging market economies to adapt to the new external environment and to press ahead with the sectoral diversification of their economies. This includes, in particular, creating a more favourable setting to foster growth in the manufacturing sector, which is likely to be crucially important for the convergence processes. The eagerness of the countries affected to do what is needed still appears to be rather muted so far. While Russia took its first welcome steps along this path in recent years, culminating in its accession to the WTO in 2012, recent political events involving Ukraine have undone much of the progress made in this regard.

Economic policy in the emerging market economies faces stiff challenges, given the need to embrace comprehensive reform. Stimulating aggregate demand by loosening the fiscal or monetary policy reins, which may ostensibly seem to be the easier approach, would, however, be the wrong remedy in most cases. That course of action would not solve the underlying problems given the structural nature of the slowdown. Indeed, in some countries, it might also exacerbate existing internal imbalances and thus increase the risk of setbacks in the catch-up process.

Sectoral diversification required in commodityexporting countries

More accommodative fiscal and monetary policy not an alternative to structural reforms