Decoupled and resilient ? The changing role of emerging market economies in an interconnected world

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Introduction

The global economy has been going through an extraordinary transition phase over the past two to three decades. This period has been marked by stronger integration among economies, spurred on by falling trade and communication costs, but above all by the rising prominence of emerging market and developing economies (EMDE), which as a group have enjoyed persistently higher growth than advanced economies (AE)[1].Their handling of the global financial crisis in 2008 by and large supported the strong impression they left in the period before the crisis: while they were certainly not spared from the adverse impact of the crisis, they generally bounced back much faster from it than AEs, even if not all regions have fully recovered yet.

EMDEs' rising global presence has mechanically lifted their influence on economic variables, such as world growth, prices, trade and financial flows. At the same time, it has also remodelled the global economic order, giving the "systemically important emerging markets" (Rana, 2013) a greater role in global economic governance, notably within the framework of the G20, and reinforcing dialogue and cooperation between them (at annual BRIC summits, for instance).

The contrasting growth performance of EMDEs and AEs has repeatedly raised the question about the sustainability of the (high) growth path followed by EMDEs. Interest has in particular focused on the extent to which their business cycles have decoupled from those in AEs. In the same vein, the strong growth performance of EMDEs has also heightened interest in their resilience, defined as an individual country's capacity to sustain periods of growth and to minimise the recovery duration following an adverse shock. After having gone through some very deep financial crises in the 1990s, many EMDEs have indeed overhauled their policy frameworks and institutions, something which appears to have been particularly rewarding in the recent crisis.

The EMDE aggregate is extremely heterogeneous. While entering into details for individual countries would go beyond the scope of this article, the singular role of China is worth highlighting from the outset, given its size and impressive growth performance, enjoying a real growth rate of 10 % per annum on average since 1990. Accounting for one-fifth of the global population, its share in global GDP (in nominal terms) went up from 1.8 % in 1990 to 11.5 % in 2012, making it the second largest economy in the world today, even if living standards still remain relatively low. Many of the general conclusions about EMDEs are hence likely to be driven or be strongly affected by economic developments in China.

The objective of this article is first to illustrate how EMDEs' growing weight in the global economy and the multiplication of their ties with other parts of the world have reshaped the global economic landscape. Secondly, it examines how this affects their possible decoupling from AEs and how greater resilience at the country level has influenced this process. This article therefore examines general changes in business cycles and policy frameworks which have arisen in past decades. Specific events or individual countries are mentioned only by way of illustration. Similarly, an analysis of the current financial market tensions facing various EMDEs, and the lively debate over policy options and policy coordination are beyond the scope of this article. However, these recent developments confirm the article's findings, namely the importance of good fundamentals and appropriate policy frameworks, as expectations concerning a gradual dismantling of quantitative easing by the US central bank have led to pressure particularly on the currency of a number of EMDEs with weaker fundamentals. This affected countries such as India, which are heavily dependent on foreign capital to finance a substantial current account deficit.

This article is structured as follows. Section 1 considers the longer-term growth patterns of EMDEs and their constituent regions and analyses the impact that the global financial and economic crisis of 2008 had on them. Section 2 looks at the implications of the larger weight of EMDEs for the world economy, illustrating this with a few examples. Given the contrasting developments of the two groups, the next section addresses the hypothesis of EMDEs' business cycle decoupling from AEs. In particular, it discusses the compatibility of the decoupling concept with the growing mutual connections of economies among each other. As benefits of integration and exposure to shocks often come as two sides of the same coin, individual countries need to find ways to help them maximise the former, while reducing the frequency or the disruptive potential of the latter. This leads to the concept of resilience, which is further analysed in section 4.

1. Growth patterns before and during the great recession

1.1 Divergent growth patterns between EMDEs and AEs

Growth differentials between EMDEs, on the one hand, and AEs, on the other, were relatively modest during the 1980s. Although the average growth differential widened from 0.4 to 0.9 percentage points in favour of EMDEs in the following decade, that gap was not stable and
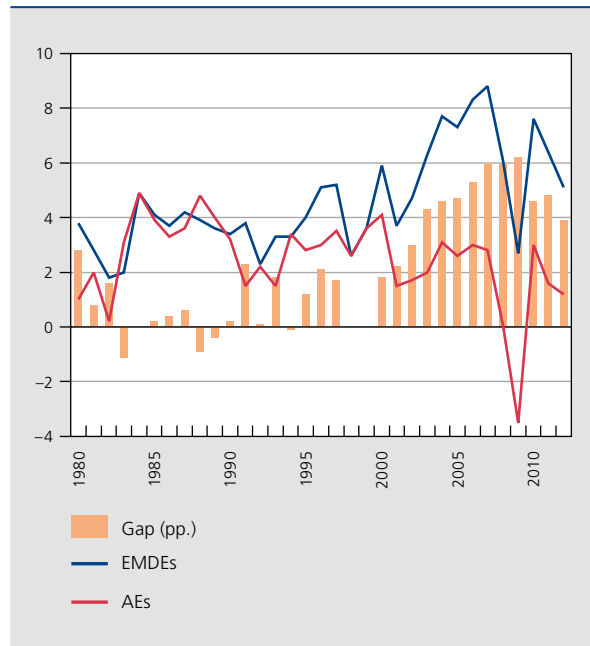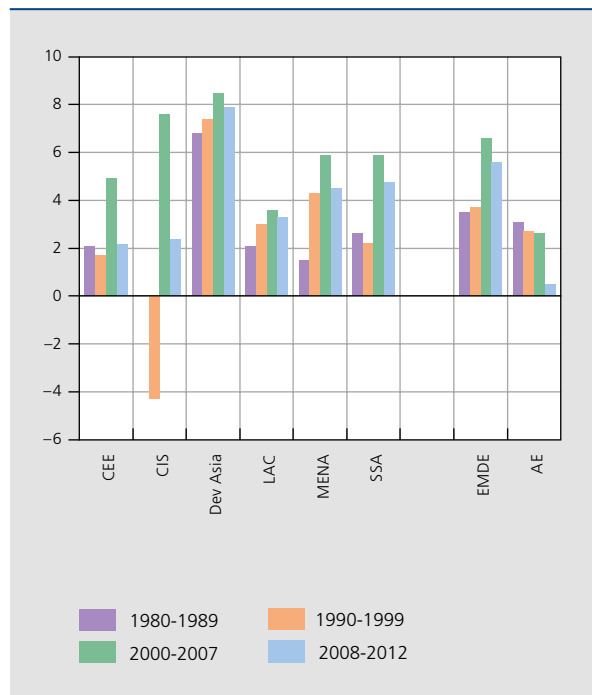
Source: IMF.

occasionally the advantage continued to swing between the two groups. Real growth in EMDEs started to significantly and persistently outpace that of AEs from 2000 onwards (see chart 1): the widening growth differential reflected both faster growth in EMDEs, which recorded an average growth rate of 6.2 % per year between 2000 and 2012 (up by 2.5 percentage points from the 1990s), as well as a slowdown in AEs, which grew at an average rate of 1.8 % during the same period (down by 0.9 percentage points from the 1990s).

The EMDE aggregate of course blurs a considerable degree of heterogeneity among the constituent regions and countries[1]. As chart 2 shows, growth patterns have been quite mixed across regions. Over the three decades considered here, Developing Asia in particular set itself apart with fast and steady growth – temporarily interrupted by the 1997 Asian crisis – with China and India pacing ahead at average rates of respectively 10 % and 6 %. China's 2012 output was more than three times higher than its 2000 level and almost 9 times that of 1990[2]. The other regions followed slower and generally more uneven growth paths: in the CIS countries, growth took off only in the 2000s on the back of high commodity prices.

(1) Given their population and territorial size, internal heterogeneity is also a prominent characteristic of many of the larger EMDEs.
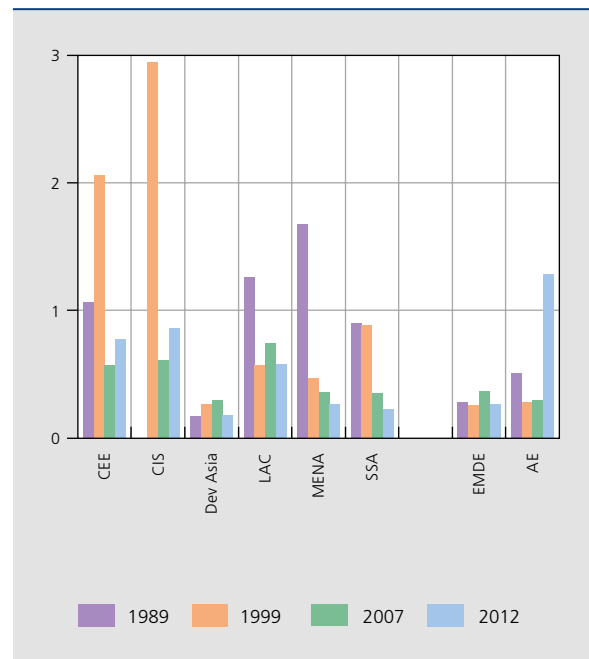(2) The additional output that China produced in 2011 relative to 2010 was about equivalent to the entire GDP of Spain in 2011.

CHART 2   REAL GDP GROWTH BY REGION
(annual averages, %)

Source : IMF.

CHART 3   GROWTH VOLATILITY BY REGION
(coefficient of variation)

Source : IMF.
Note : Coefficient of variation over 10-year period ending in the reported year.

Russia, whose economy contracted at an annual average rate of 5.1 % in the transition decade of the 1990s, only returned to its 1990 output level during the course of 2007, after expanding at an annual average rate of 5.2 % since 2000. Sub-Saharan Africa, meanwhile, experienced a strong acceleration in growth after entering the new millennium, benefiting from strong demand for its natural resources. Still, it is worth noting that, in spite of differences in speed, the growth acceleration seen since 2000 is a general phenomenon across EMDE regions.

EMDEs' growth profiles also have become smoother over the past two decades, contrasting with the past when they were generally uneven and abruptly changing. In the decade starting in 2000, EMDEs thus spent more than 80 percent of the time in expansion – the highest proportion on record, and more than AEs. This is the consequence of both higher trend growth and of a reduction in growth variability (IMF, 2012), reflecting higher resilience, as discussed in section 4. Indeed, volatility lessened in general between the early 1990s and 2007, both for regional aggregates (chart 3) and individual countries.

1.2 The impact of the crisis on EMDEs

Higher growth rates during the great recession and a speedier and more vigorous post-crisis rebound indicate that EMDEs have weathered the global financial crisis better than AEs. This observation nonetheless merits being adequately qualified and put in perspective.

After the demise of Lehman Brothers and the outbreak of the global financial crisis in 2008, followed by a collapse in trade and a drying-up of cross-border capital flows (see chart 9), economic activity dropped around the globe, and growth in virtually every country decelerated between 2007 and 2009 (see chart 4). While EMDEs as a group succeeded in maintaining a positive growth rate of 2.7 % in 2009, contrasting with the AEs' contraction of 3.5 %, the respective growth collapse – i.e. the growth deceleration measured by the percentage-point reduction in growth between 2007 and 2009 – was nonetheless comparable in magnitude for both aggregates (respectively –6.1 and –6.3 percentage points, see table 1). This observation is confirmed by the parallel collapse in growth of industrial production (Didier *et al*. 2012). Chart 5 (based on IMF, 2012), showing the path of per capita output for the median country in the different EMDE regions and for AEs after the peak preceding the great recession,

confirms that the initial adverse impact of the crisis was comparable, if not sometimes larger, in EMDEs (CEE and CIS countries stand out).

Conclusions on a general EMDE pattern during the downturn are misleading, as the positive aggregate growth figure for 2009 essentially reflects a continuing expansion in activity in Developing Asia – where the counter-cyclical policy response has sometimes been considerable, as for example in China – and to a lesser extent in MENA and SSA countries. Meanwhile, other EMDEs, notably in the CIS and in central and eastern Europe, suffered considerably more from the crisis than their peers or indeed AEs (see table 1). Within the latter region, the Baltic states (Estonia, Latvia and Lithuania) stand out, after contracting by 15.5 % in 2009 (average) and seeing their growth drop by 24.5 percentage points from the 2007 rate. On the other side of the Atlantic, the economic performance of EMDEs relative to neighbouring AEs was also mixed. The LACs' overall contraction in 2009 (–1.5 %) was for example milder than that of the US (–3.1 %). The Mexican economy, meanwhile, underperformed in comparison to the US, both in terms of growth (–6 %) and growth collapse (–9.2 percentage points compared with –5.0).

Other indicators highlight the disproportionately large effect of the crisis on countries in the middle of the per capita GDP distribution, i.e. emerging economies. Didier *et al*. (2011) point to the existence of a positive but non-linear relationship between pre-crisis GDP per capita and the collapse of growth during the crisis (reproduced in chart 4). Accordingly, low-income economies at the bottom end of the distribution eluded the full impact of the downturn, "benefiting" from their relative isolation on global goods and capital markets [1]. Likewise, the impact on economies at the high end of the distribution was relatively contained given their income levels, owing to an immediate and vigorous response by fiscal and monetary policy authorities.

As a group, EMDEs have recovered faster from the crisis than their more advanced counterparts. This is reflected by an earlier return to the pre-crisis GDP level. The 2012 output of EMDEs exceeded that of 2007 by 31 %, whereas real GDP in AEs stood a mere 2.3 % above the pre-crisis level (see table 1). While Asian economies kept their front-runner status during the recovery, many of the individual economies that had experienced a contraction during the crisis, such as Russia, Mexico or Turkey,

CHART 4   REAL GDP GROWTH COLLAPSE (2007-2009) BY INCOME LEVEL
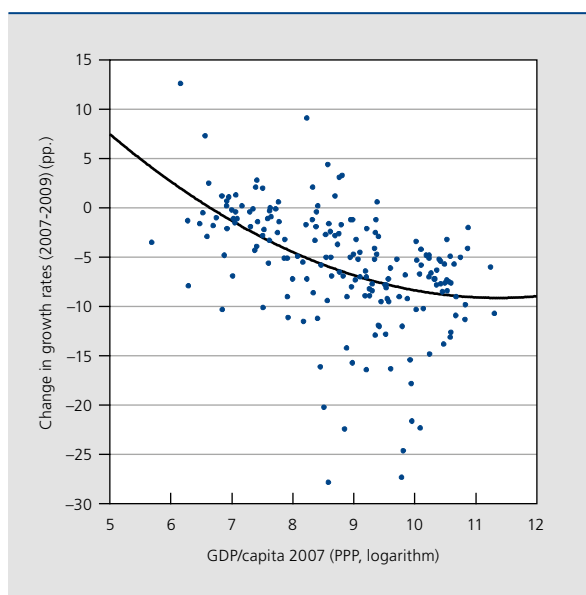
Sources: Didier *et al.* (2011), IMF.

bounced back to their pre-crisis level of output by 2010. AEs in contrast only achieved this one year later (euro area GDP, meanwhile, is still below its 2007 output figure and is not forecast to return to this level until 2015). Across the EMDE regions, the economic recovery has been more modest and protracted in the CIS and CEE, partly due

CHART 5   DYNAMICS OF GDP PER CAPITA DURING THE GREAT RECESSION IN DIFFERENT EMDE REGIONS
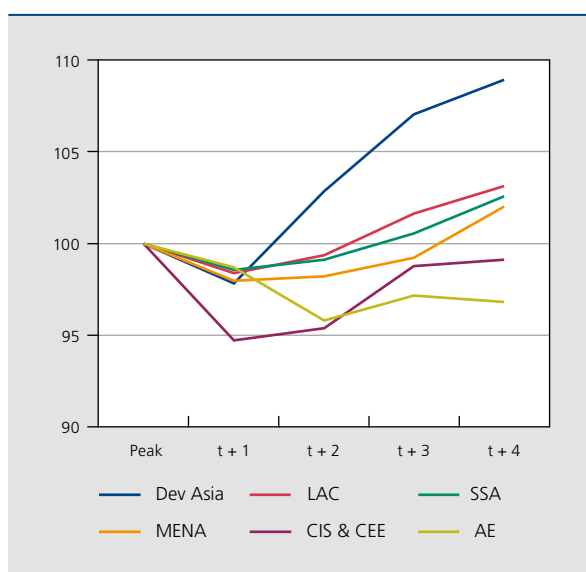
Source: IMF (2012).
Note: Median output per capita; peak = 100; years on x axis.

	Real growth (in %)			Growth collapse (percentage points)	Recovery (percentage points)	Current level (2007 = 100)	
	2007	2009	2010	2009-2007	2010-2009	2012	2013 e
CEE	5.4	−3.6	4.6	−9.0	8.2	111.1	113.6
CIS	8.9	−6.4	4.9	−15.3	11.3	112.0	115.8
Dev. Asia	11.6	6.9	9.9	−4.7	3.0	146.1	156.4
LAC	5.8	−1.5	6.1	−7.3	7.6	117.3	121.3
MENAAP	6.3	2.9	5.3	−3.4	2.4	123.8	127.6
SSA	7.0	2.7	5.4	−4.3	2.7	126.1	133.2
EMDEs	8.8	2.7	7.6	−6.1	4.9	131.1	138.1
AEs	2.8	−3.5	3.0	−6.3	6.5	102.3	103.5
World	5.4	−0.6	5.2	−6.0	5.8	115.4	119.2
BR	6.1	−0.3	7.5	−6.4	7.8	116.8	120.3
RU	8.5	−7.8	4.5	−16.3	12.3	109.3	113.0
IN	10.1	5.0	11.2	−5.1	6.2	138.9	146.8
CN	14.2	9.2	10.4	−5.0	1.2	155.7	168.1
SA	5.5	−1.5	3.1	−7.0	4.6	111.6	114.7
MX	3.2	−6.0	5.3	−9.2	11.3	108.1	111.8
TR	4.7	−4.8	9.2	−9.5	14.0	116.5	120.5
Euro area	3.0	−4.4	2.0	−7.4	6.4	98.7	98.4
United States	1.9	−3.1	2.4	−5.0	5.5	102.9	104.9

Source : IMF.

to their trade and financial exposure to the euro area. In spite of recent high growth rates, in 2012 the Baltic states, for example, were still lagging behind their 2007 real GDP level.

## 2. The global implications of EMDEs' stronger economic weight

Lastingly higher growth rates have logically translated into an increase in the relative economic weight of EMDEs. Accounting for only about one-third of world output in the 1990s, their contribution gradually rose, putting them on par with AEs by the year 2012 (see chart 6). This parity, however, is still a far cry from the distribution of the world population, 85 % of which currently lives in EMDEs. Chart 7 plots the cumulative proportion of world population, ranked by GDP per capita, against the cumulative proportion of their income (Lorenz curve) in different years. While the income inequality across the globe only lessened marginally during the 1980s and 1990s, it declined more substantially in the 2000s, as many EMDE economies took off, reflected by the sizeable inward shift

of the Lorenz curve. Given the EMDEs' catching-up potential, faster growth is generally expected to continue in the medium term : according to IMF projections (WEO, April 2013), they should overtake AEs in size as of 2013 and account for 55 % of global output by 2018 [1].

Chart 6 also shows that EMDEs' rising share in world GDP is largely due to the BRIC countries and China above all. The share of the remaining countries has been fairly stable. The strong growth of Asian economies in particular implies that the geographic distribution of economic activity across the planet is changing. Danny Quah (2011) explains how the reshuffling in the relative contributions to global output has shifted the location of the world economy's centre of gravity over time. While in 1980 this point was situated in the mid-Atlantic between Europe and America, it has gradually moved eastwards and is projected to settle between China and India by 2050. Unsurprisingly, this point lies in the vicinity of the

(1) Lawrence (2013) discusses a series of studies with a forecasting period up to 2030, in which there is general agreement that there will still be some disparity in growth between the AEs and the EMDEs in the forseeable future. However, there is no consensus on the speed of convergence, given that this is not an automatic process and countries often see their growth rates slow down as soon as they have reached a certain standard income level (Agénor and Canuto, 2012).

CHART 6

CHART 6   GEOGRAPHICAL DISTRIBUTION OF WORLD GDP BASED ON PPP

(%)
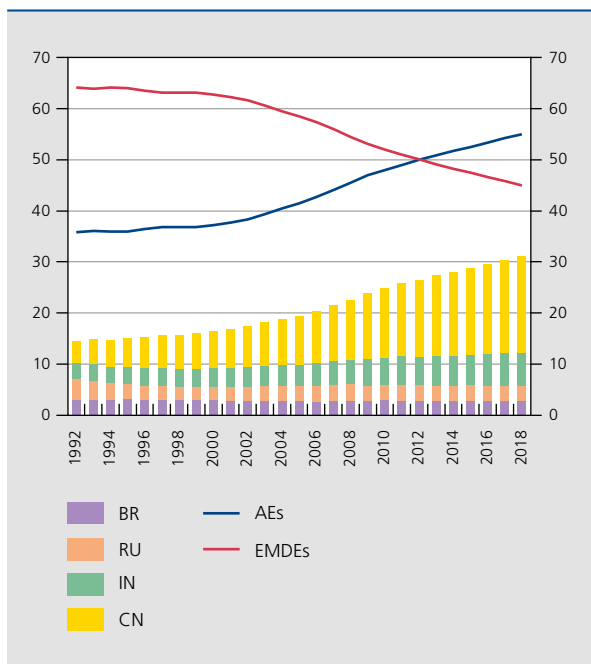
Source: IMF (projections as of 2013).

CHART 7   LORENZ CURVE OF WORLD GDP
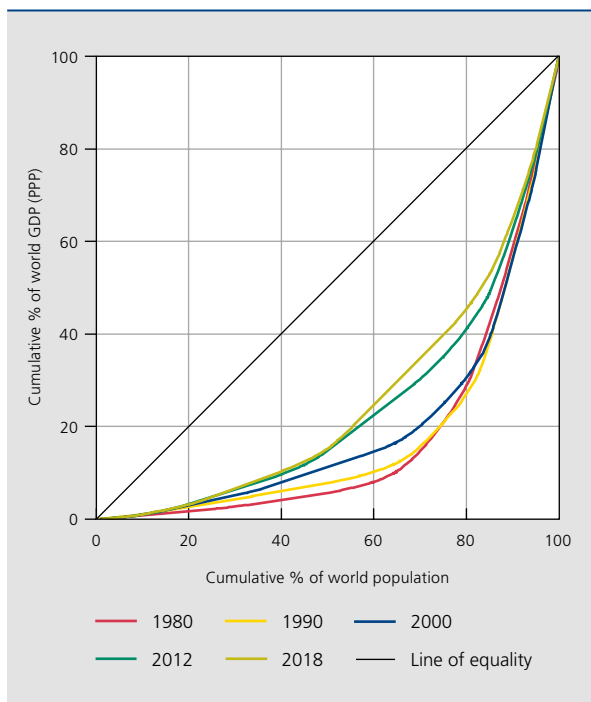
Source: IMF.

Note: Countries with incomplete GDP data are excluded. GDP/capita is assumed to be equal within each country.

'demographic centre of gravity', with which the Earth's economic centre of gravity would coincide if income levels converged everywhere around the world (i.e. coinciding with the hypothetical line of equality in chart 7).

The strong growth differentials between EMDEs and AEs indeed have to be viewed in the light of a substantial difference in living standards (measured in terms of per capita GDP based on purchasing power parity)[1]. As shown in chart 8, the catching-up process seems to be an important explanatory factor behind the EMDEs' growth over the past two decades, as countries with lower initial income levels generally enjoyed higher growth rates. Meanwhile, poverty still remains a major issue in many of these countries (World Bank, 2013), and even though income levels have risen in EMDEs over the years – substantially in some cases – they still lag considerably behind those observed in AEs. The average income of a Chinese citizen in 2012 thus corresponded to about four times his income of 2000 (in PPP terms), but amounted merely to around 18 % of the average income of a US citizen or to one-quarter of that of a Belgian citizen. Given the heterogeneity among countries, the distribution of living standards across EMDEs, relative to the US, was also wide in 2012, ranging from 4.9 % in sub-Saharan Africa to 31.8 % in central and eastern Europe.

The larger economic weight of EMDEs has been changing the parameters of the global economic landscape, as their influence on global economic developments and outcomes has widened almost mechanically. This impact has been felt in the recent past, for example through their more prominent role in global trade, their contribution to the build-up of macroeconomic imbalances (and hence to financial stability risks) or their impact on global supply and demand patterns. With some of the EMDEs having effectively crossed the threshold to become large open economies, their economic fundamentals and domestic policies hence matter increasingly outside their own borders, be it in advanced or in other emerging economies.

The intensification of international trade has been one of the main features of the globalisation period. Exports measured as a share of world GDP steadily progressed from 15 % in 1990 to over 25 % on the eve of the global financial crisis (see chart 9)[2]. At the same time,

(1) While GDP per capita is the most relevant output measure used for welfare analysis, it is nonetheless an imperfect indicator. Indeed, it represents a theoretical allocation of GDP and does not account for income inequalities, which are very high within some emerging economies. In China, for example, high overall inequality comes in the form of regional disparities between urban (coastal) provinces on the one hand, where living standards sometimes reach levels comparable to some EU-15 countries, and the poorer rural provinces on the other. As authorities have begun to tackle this issue, inequality has stabilised in recent years, albeit at a high level (OECD, 2013). Inequality has traditionally also been particularly pronounced in many African and Latin American countries, which top the rankings in terms of the Gini coefficient (World Bank World Development Indicators).

(2) Figures in this paragraph are based on WTO, World Bank and IMF data.
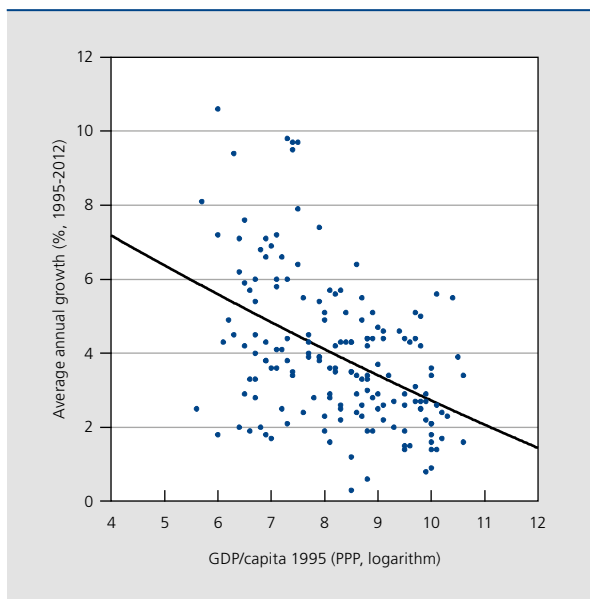
Source : IMF.

export market shares have been reshuffled, as EMDEs' participation in the global trading system has become ever more significant (see chart 10). The joint share of the BRIC countries climbed from 3 % in 1990 to 7 % in 2000, from where it rocketed to almost 17 % in 2012. The corollary of this is a decrease in export market shares of AEs, notably the US and the EU (considering extra-EU exports only). Within EMDEs, China again stands out, having become the world's largest exporter in a matter of years. The other BRIC countries meanwhile have also gained export market share, but they account for a much lower proportion of world trade. These gains came along with an increased export orientation of their domestic economies, as reflected in the growing ratio of exports to GDP in all BRICs. The stronger participation of EMDEs in world trade is also visible on the import side. While the US remained the world's largest importer in 2012 with 12 % of world imports, the BRIC countries' share rose from slightly below 3 % in 1990 to around 15 % in 2012 – China accounted for about one-tenth of world imports. While more than half of its imports where sourced in other Asian countries, one-fifth originated in Africa, Latin America and the Middle East, reflecting an intensifica-tion in trade among EMDEs, and most notably China's reliance on commodities from those particular regions. Importantly, the changing pattern in international trade is not just a volume effect explained by the emergence of new trade partners, but also reflects growing structural links among economies. Indeed, production chains have

increasingly become fragmented across borders and trade in intermediary goods has risen considerably (hence the strong intra-Asian trade links), as the recent studies on global value chains clearly confirm (e.g. OECD, 2013b).

Besides trade, the growing interconnection is also visible in terms of capital flows, notably direct investment. For example, while the share of the four BRIC countries in global foreign direct investment (FDI) had grown from 1 or 2 % in the 1990s to 9 % by 2009, the proportion going to low-income countries (LICs) has been particularly dynamic (Machila and Tabeke, 2011).

The current account imbalances which built up during the 2000s and were a characteristic feature of the global economy at the start of the 2008/2009 financial crisis are another symptom of the growing influence of EMDEs. During the pre-crisis period, capital outflows originating mainly from emerging markets – notably Asian econo-mies and oil exporters – contributed to the financing of a large and growing current account deficit in the US. These uphill capital flows were driven by a combination of factors, including resistance to nominal exchange rate appreciation by some countries, a lack of domestic in-vestment opportunities in others, precautionary savings, high oil prices and an accumulation of foreign reserves. While establishing a direct causality between the current account imbalances on the one hand and the financial crisis on the other would certainly be too narrow a view (Borio and Disyatat, 2011), the bottom line is that global

CHART 9   SHARE OF EXPORTS
(% of world GDP)
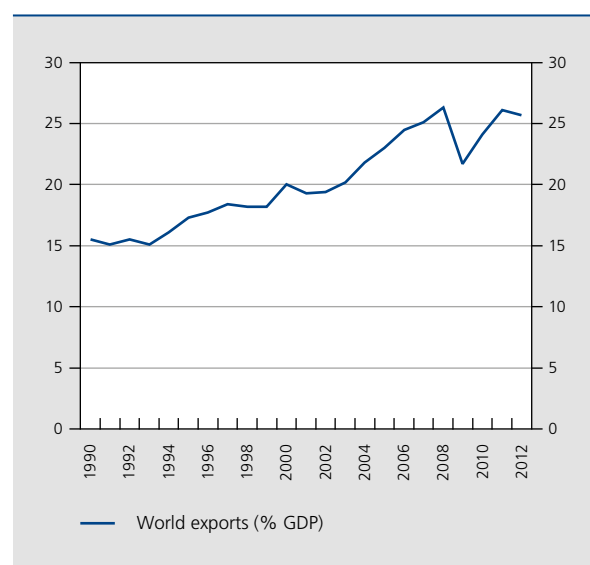
Sources : IMF, WTO.

CHART 10   GEOGRAPHICAL BREAKDOWN OF WORLD
            EXPORTS BY EXPORTER

            (%)
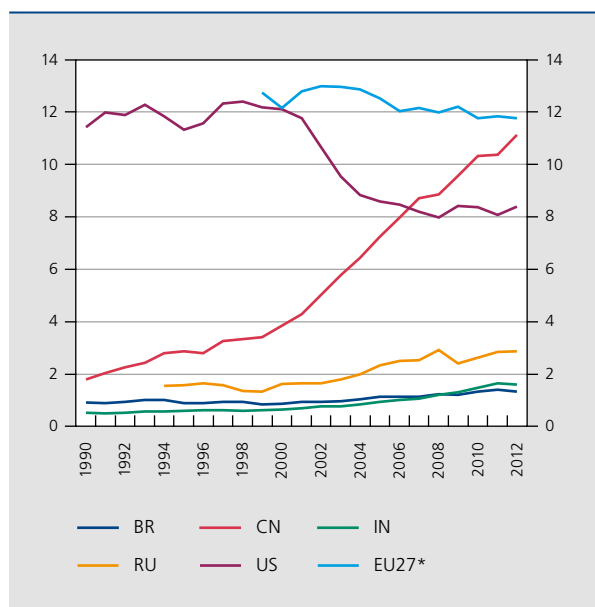
Source : WTO.
Note : EU27 excludes intra-Community exports.

imbalances can pose substantial financial stability risks, and that EMDEs are sufficiently large to be a driving force behind their accumulation.

The global influence of EMDEs is also visible in prices of traded goods, and by extension global inflation dynamics (Simola, 2012 ; Eickmeier and Kühnlenz, 2013). On the supply side, lower production costs in many EMDEs have exerted dampening effects on prices of manufactured products, impacting on inflation in AEs via the import channel. Competitive pressure triggered by EMDE imports have also put the profit margins of some AE firms under strain, indirectly amplifying downward pressure on the general price level. But growing domestic demand from the EMDEs also implies stronger pressure being exerted on some globally traded goods, including commodities, capital and consumer goods. Investment to support ongoing industrialisation and urbanisation processes has indeed been very commodity-intensive and has consequently been a driving force behind the price increases observed throughout the last decade. For example, the share of investment in China's GDP came to almost 50 %[1]. In 2010, China's share in global consumption of base metals (e.g. copper, aluminium), of which it also became the dominant importer, or coal, amounted to around 40 %[2]. Besides investment, growing disposable incomes have also reshaped personal consumption profiles in EMDEs. This is notably visible in food consumption patterns,

where higher demand for meat, and consequently for animal feed requirements, is adding to price pressures in certain food categories (OECD-FAO, 2013). Meanwhile, the increased ownership of personal vehicles translates into a higher private demand for fuel[3]. Looking ahead, emerging markets' impact on the prices of commodity prices is thus likely to become even greater, even if some countries may gradually depart from a commodity-intensive investment-led growth model and shift to a consumption-led one. The shift may impact individual commodities to a different extent, but the larger weight in global demand implies that a reshuffling in the composition of domestic demand is unlikely to pass unnoticed.

The consequences of higher commodity prices of course vary depending whether countries are commodity importers or exporters. For many EMDEs, the more intense domestic investment in some of their counterparts have constituted an important growth driver, by boosting external demand[4], improving their terms of trade and contributing to an expansion of foreign investment. Indeed, as described by Mlachila and Takebe (2011), FDI from BRICs – above all from China – into economies in sub-Saharan Africa has been primarily directed into natural resource industries (i.e. oil and mining) and has often been accompanied by complementary infrastructure projects (roads and ports).

3. Business cycle decoupling in an increasingly integrated world economy

Persistent growth differentials between EMDEs and AEs prior to the crisis gave rise at the time to a debate on the degree of economic "decoupling" of the two groups from each other. The interest notably focused on whether EMDEs would withstand a slowdown in AEs or join them in a synchronised downward business cycle move. The general impact of the 2008/2009 crisis has temporarily answered this question (see section 1), but the differentiated post-crisis rebound, which has by and large been swifter in EMDEs, has nevertheless raised it again (e.g. Leduc and Spiegel, 2013).

(1) The figure refers to 2011. This represents more than 5 % of world GDP in nominal terms, exceeding Germany's GDP. By way of comparison, the equivalent rate in the US was 15 %.

(2) Despite this growing weight, AEs are generally still the main drivers of price changes (Simola, 2012). The United States' impact on commodity markets is hence even greater than China's (Roache, 2012).

(3) The motor vehicle density in China almost quadrupled from 15 (per thousand people) in 2003 to 57 in 2010 (World Bank WDI database). To reach a motor vehicle density comparable to that of Brazil (209) or Belgium (560), for example, around 200 or 670 million additional vehicles would be necessary.

(4) Latin American commodity exporters – such as Brazil (iron ore, soyabeans) and Chile (copper) – and many CIS economies (gas, oil) have thus all benefited.

Decoupling is defined as "the emergence of a business-cycle dynamic that is relatively independent of global demand trends and that is driven mainly by autonomous changes in internal demand" (Asian Development Bank (ADB), 2007). Lasting economic divergences among countries at a time of deepening ties between each other may at first glance seem contradictory – notably since economic integration essentially constitutes a form of structural coupling. In contrast to a situation of autarchy, which would isolate a country from outside influences[1], opening up borders entails a multiplication and deepening of the connections a country effectively or potentially maintains with the rest of the world. This raises the question of which factors, shocks or circumstances could prompt a decoupling of business cycles. This section briefly discusses, from a conceptual viewpoint, how economic integration affects growth, shock transmission and business cycle synchronicity, and presents some empirical findings from the economic literature.

3.1 Conceptual considerations regarding the impact of economic integration

3.1.1 Two sides of integration: growth driver and shock transmission channel

For an individual country, economic integration can generate potential benefits, the extent of which generally depends on the difference in its relative endowment of factors compared to other countries, and its ability to redeploy them across sectors. By exploiting their comparative advantage or making use of economies of scale, countries can engage in mutually beneficial inter- or intra-industry trade. Meanwhile, by accessing international capital markets, they can overcome domestic shortfalls in savings through capital imports or profitably invest their excess savings abroad.

Economic integration can contribute to an economy's ability to grow and, in the case of EMDEs, narrow their income gap with respect to AEs. Asian economies have demonstrated this over the past decades by relying on export-led growth models. But the permeability of borders also exposes an economy to the vagaries of external demand, changes in risk appetite and the consequences of foreign policy decisions. Importantly, the channels through which adverse shocks unfold are often exactly the same as those delivering the benefits[2]. Risks typically grow when some channels are excessively relied upon: while specialising in the production of a given traded product or focusing on a particular export market may at first spur growth, it may make a country vulnerable to a loss of external demand or a terms-of-trade shock. Likewise, while incoming capital

may help to smooth consumption or finance productive projects, it may also contribute to the build-up of over-capacity in some sectors or fuel asset price bubbles. Similarly, excessive reliance of domestic banking systems on foreign funding makes domestic credit supply dependent on the sound functioning of credit markets abroad. Countries of central, eastern and south-eastern Europe, for example, with largely foreign-funded (and foreign-owned) banking systems have suffered from a drying-up of capital inflows following the protracted crisis in the euro area (limited in part by banks' commitments under the so-called Vienna initiative to maintain their exposure to the region), which led to stalled credit growth and ultimately exacerbated the contraction of output.

3.1.2 Relative economic size and direction of shocks

In an interconnected world, countries can be either at the origin or at the receiving end of a shock – this is true for positive and adverse shocks alike. Generally speaking, relative size matters and the ADB definition indicates that decoupling is essentially the prerogative of a large economy with sufficiently autonomous domestic demand to disconnect itself from global demand. Taking account of EMDEs' increasing relative economic weight and the growing share of trade and capital flowing among them, the one-directional influence of AEs is gradually diminishing. Section 2 provides a number of examples through which EMDEs have been influencing global economic developments recently, suggesting that interdependence is indeed becoming increasingly two-sided. This appears to be confirmed by current concerns about the consequences for AEs of a slowdown of the Chinese economy.

3.2 Review of empirical findings on EMDE decoupling

From a theoretical point of view, the effect of economic integration on the synchronisation of business cycles is ambiguous, as it essentially depends on the structures which emerge from the integration process itself and on the nature of cross-border shocks (Baxter and Kouparitsas, 2005). Strong trade and financial connections may foster specialisation and ultimately reduce the co-movements in output, notably when there are frequent sector-specific shocks. Conversely, aggregate demand shocks at the level of individual countries may be transmitted across borders via trade and capital channels, this time actually

(1) See the more limited impact of the global financial crisis on the relatively isolated low-income economies described above.
(2) This presupposes an effective functioning of these channels. Home biases (resulting from consumer preferences or regulations) or risk awareness can limit them.

promoting the co-movement of output patterns. It should be noted that this would also be the case for countries highly specialised in complementary activities that are integrated into transnational production processes[1].

The empirical evidence regarding the business cycle synchronicity between AEs and EMDEs also delivers ambiguous results. Kose *et al.* (2008), for example, analyse the cyclical interdependence over the period 1960-2005 across 106 countries, classed as industrial countries, emerging markets and other developing economies[2]. They find that between 1985 and 2005 (the "globalisation period") business cycles among industrial countries and among emerging markets became more closely aligned compared to the period running from 1960 to 1984, suggesting that cyclical convergence of the countries within each group has intensified[3]. A global factor also explains a small but significant share of macroeconomic fluctuations, which points to the existence of a global business cycle. The decline in its relative importance over time, however, points to a decoupling of the business cycle movements between the two groups. Siklos (2012) reaches more ambiguous conclusions regarding co-movements in business cycles, stressing their sensitivity to the periods covered and the regions analysed.

A number of authors have examined business cycle co-movements with a focus on certain geographical regions, particularly Asia. Pula and Peltonen (2009) and ADB (2007), for example, find no evidence of any structural or cyclical decoupling of Asian economies from AEs. On the contrary, the ADB observes that Asian economies' business cycles have become more synchronised with industrial economies and also among each other. They attribute this to greater intra-Asian economic interdependence, as evidenced by shared cross-border production processes, which itself is actually the result of stronger integration of the region as a whole into the world economy. Cesa-Bianchi *et al.* (2012) find a growing synchronisation between growth in China and different Latin American economies and show that the latter's cycles have now become more sensitive to China – the long-term impact of a shock to Chinese GDP has increased threefold since the mid-1990s – and conversely less to the US, which nevertheless retains considerable influence. This evidence supports the view of closer business cycle alignment among

EMDEs, but also suggests that the decoupling observed by other authors (e.g. Kose *et al.,* 2008) might to a large extent be related to the emergence of China as a major driver of world growth, rather than to any widespread autonomous decoupling of individual EMDEs' business cycles from the AEs.

3.3 Some reflections on the concept of decoupling

First, a polar representation contrasting decoupling and convergence seems to ignore some of the realities of an interconnected world composed of a growing number of large players. Siklos (2012, p.6) thus asks whether it is "useful to think in terms of coupling (to)/decoupling (from)?", and prefers to regard business cycles between AEs and EMDEs as being subject to mutual interdependence. Still, a number of open issues are worth discussing:

Transitory or permanent? Even though decoupling does not mean that the regions that are compared do not share common growth drivers, it implies however that these are blurred by other factors to an extent that is compatible with unsynchronised business cycles. That in turn raises the question whether differences in the relative strength of growth drivers are a permanent/structural phenomenon, a transitory divergence resulting from idiosyncratic shocks or the consequence of different initial economic conditions. Charts 7 and 8 illustrate the latter. EMDE growth in recent years has taken place within a catching-up context and supported by specific growth models. The potential margin for catching up (and hence differentials in growth rates) is still sizeable and it remains to be seen how business cycle co-movements will be affected once growth rates reach some steady-state level.

General or China-specific? Should decoupling be regarded as an idiosyncratic phenomenon applicable to individual EMDEs in general, or does it reflect the emergence of China as a major global player? As mentioned above, China has indeed become an important driver of growth for many EMDEs, and started to exert stronger influence on their business cycles, as shown by Cesa-Bianchi *et al.* (2012). This would support the assumption that EMDEs (excluding China) have essentially swapped the economies to which they are tied. Consequently, this would also entail that a slowdown in China would also be felt across EMDEs. Yet, the coupling to China could also prove conditional on its particular growth model, which has created forms of structural coupling with many EMDEs: a reorientation of its growth model could therefore end in potentially detrimental decoupling for many of them.

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(1) The effect of integration on the synchronous behaviour of different macroeconomic aggregates meanwhile is likely to differ: downhill capital flows should for example limit the correlation of investment, while consumption correlation should increase as a result of the income risk diversification that financial integration allows.

(2) They break down the countries' macroeconomic fluctuations within the framework of a dynamic factor model into a global, a group-specific and a country factor and estimate the relative contribution of each.

(3) This is consistent with Baxter and Kouparitsas (2005), who find that bilateral business cycle co-movements are higher when both countries are industrialised or both are developing countries.

The role of counter-cyclical policies. A further question relates to the link between business cycle synchronicity and counter-cyclical policies implemented at national level. The absence of coupled growth patterns may indeed result either from asymmetric shocks or from a differentiated reaction to a common shock. The case of China is again very enlightening in this respect. Due to its strong reliance on exports to AEs (Chinese exports to the EU, North America and Japan currently correspond to more than 15 % of its GDP), it was particularly exposed to the global trade collapse of 2008/2009, when its export share in GDP contracted by over 8 percentage points to 26 %. Owing to a colossal fiscal and monetary stimulus, it managed to swiftly compensate the shortfall in its exports by higher investment and thus to maintain growth at 9.2 % in 2009. As will be discussed in the next section, the capacity to pursue counter-cyclical policies is a major factor behind an economy's resilience. As such, resilience would actually foster the decoupling process. That said, the margin for a counter-cyclical policy response is typically limited and, the longer recessions abroad last, the more difficult it becomes to offset possible shortfalls in external demand and capital inflows[1].This is obviously a topical problem in the present context of subdued growth in AEs, and it questions the permanent character of decoupling.

(1) Furthermore, a large stimulus may itself become the source of unsustainable developments. In China, for example, strong credit expansion has led to overheating symptoms and sectoral imbalances, as well as the current concerns about property prices and excessive off-balance sheet financing by the banking system and local governments (OECD, 2013).

4. Factors behind EMDEs' stronger resilience

The integration of EMDEs into the global trading system and world capital markets has brought them considerable benefits over the past decades (see section 2). Despite higher exposure to adverse external shocks, they appear at the same time to have become more resilient. In 2012, the IMF defined resilience as an economy's "ability to sustain longer and stronger expansions and to experience shorter and shallower downturns and more rapid recoveries".

Chart 11 (IMF, 2012) illustrates the stronger resilience of EMDEs, showing the dynamics of per capita output following a peak at different periods in time. It suggests that, since the year 2000, EMDEs have indeed experienced shorter and shallower downturns and quicker recoveries than in previous decades. This greater robustness continues to hold for the great recession period. Remarkably, since the turn of the millennium, EMDEs have outperformed AEs in terms of both brevity of recessions and vigour of expansions.

EMDEs hence seem to be better armed nowadays against shocks that are potentially disruptive and that increase the likelihood of an expansion phase coming to an end. The IMF (2012) identifies two domestic shocks (banking crises and credit booms) as well as a set of external shocks (a surge in global uncertainty; a rise in US interest rates; advanced economy recessions; a drop in the terms of trade; a sudden stop in capital flows) which it finds significantly

CHART 11   DYNAMICS OF OUTPUT PER CAPITA FOLLOWING PEAKS

EMDEs   AEs

— 1950-69   — 1970-89   — 1990-99   — 2000-06   — Great recession
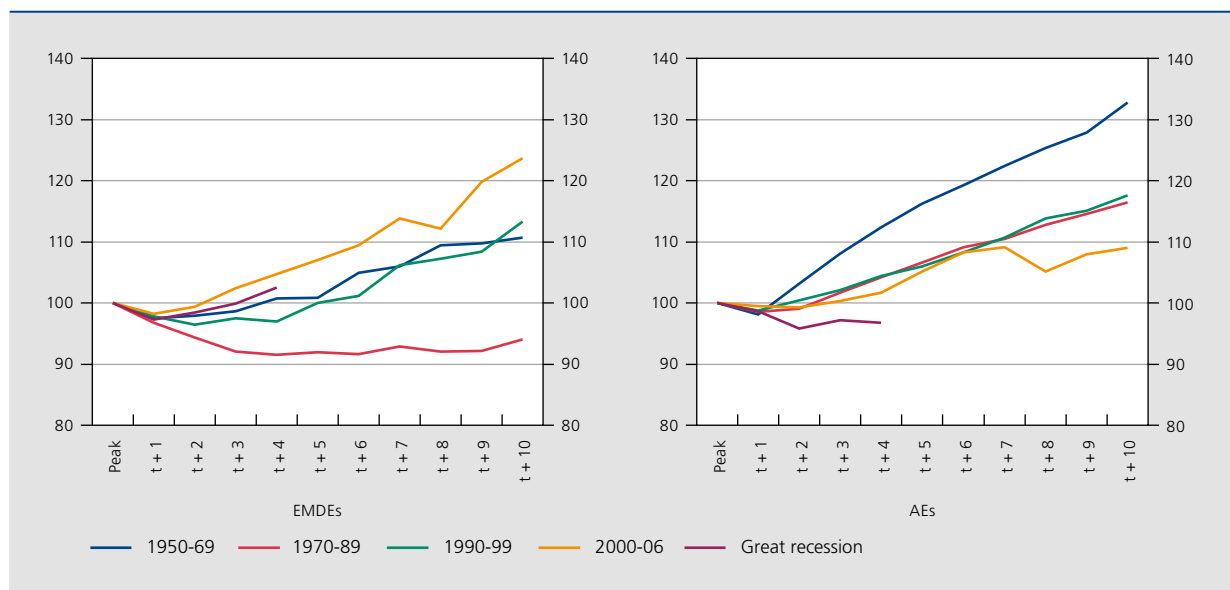
Source : IMF (2012).
Note : Median output per capita ; peak = 100 ; years on x axis.

increase the probability of ending an expansion[1]. Efforts to strengthen a country's resilience should therefore focus on minimising the likelihood of domestic shocks occurring – for instance through adequate prudential supervision (to prevent banking crises) or the establishment of clear financial stability mandates (to avert credit booms). While external shocks are typically beyond domestic policy-makers' control, they can nevertheless set up conditions to help mitigate their potential disruptive impact[2].

While identifying different adverse shocks is a prerequisite for adequately dealing with them, political economy constraints may in some cases obstruct the implementation of the necessary preventive measures[3]. If nothing else, the

painful experiences of severe financial and economic crises in a number of EMDEs after 1990 – Mexico (1994), Asian countries (1997), Russia (1998), Turkey (2001), Argentina (2001) – have raised both the necessary risk awareness and loosened implementation constraints. They effectively triggered institutional overhauls and led to the adoption of sounder policy frameworks[4], which were often successfully put to the test during the 2008/2009 crisis, when many EMDEs were in a position to partially offset the decline in external demand and in capital inflows. This reaction constituted a significant break with respect to their own past. The remainder of this section briefly discusses some of the features behind this strengthened resilience, namely the role of policy frameworks, structural characteristics and institutional features.

4.1 Economic policy frameworks and policy space

Counter-cyclical fiscal policy frameworks and, as a corollary, the availability of fiscal policy space (i.e. fiscal surpluses and low public debt) are associated with

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(1) The impact is particularly strong for the domestic shocks, as well as sudden stops and AE recessions. The latter finding further questions the decoupling hypothesis discussed above.

(2) Note, however, that a domestic shock is likely to represent an external shock for someone else, and vice versa. In an integrated world, preventing domestic shocks hence becomes a matter of common interest and would justify the adoption of global rules and regulatory standards.

(3) In general, this can occur when the costs of a preventive measure are clearly defined and sometimes assigned to a particular (vocal) group, while the social benefits, albeit larger, are spread too widely across society to garner the necessary support (e.g. higher capital requirements may represent a cost to the financial industry, but may strengthen the overall degree of financial stability).

(4) In some cases, the adoption of institutional reforms was a condition for receiving financial assistance by multilateral donors.

CHART 12   EFFECTS OF POLICIES ON EXPANSION DURATION AND SPEED OF RECOVERY IN EMDEs
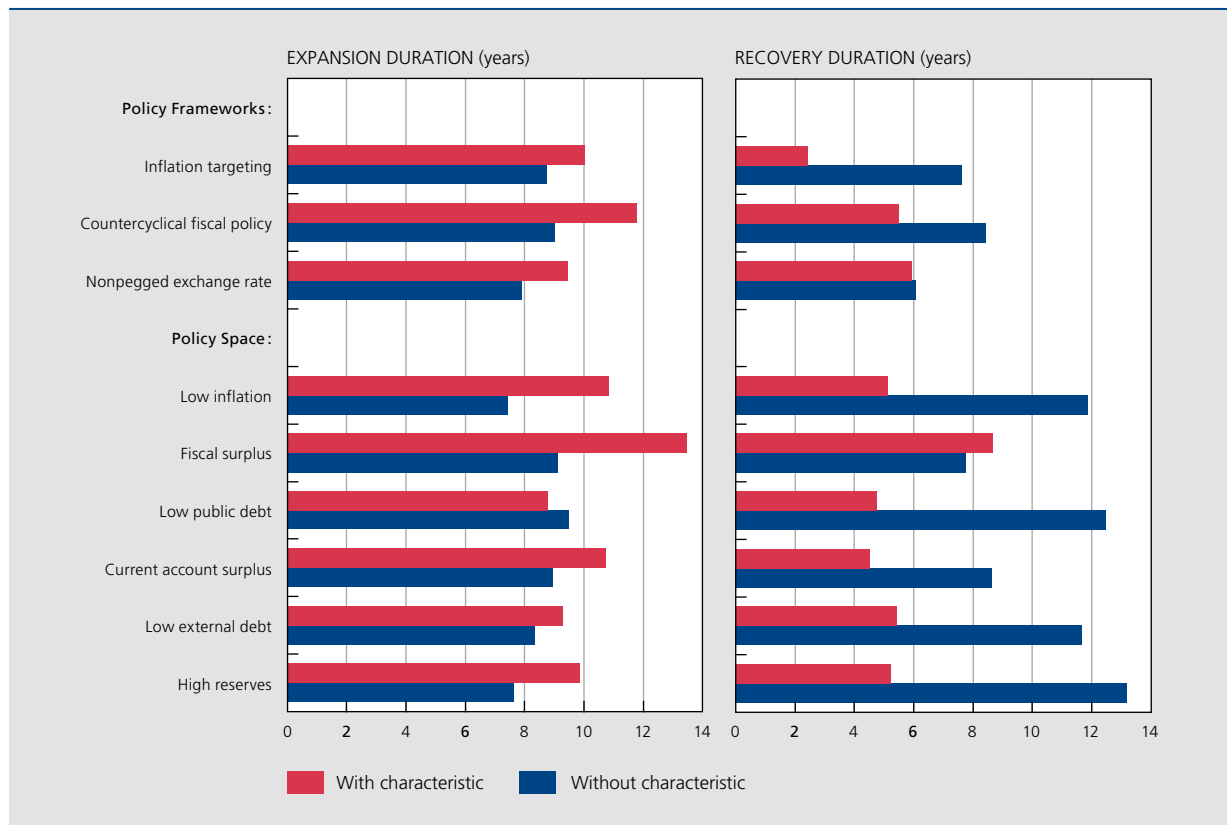
Source: IMF (2012).

longer expansions and shorter downturns, as shown in IMF (2012). Conversely, countries lacking these characteristics typically experience shorter expansions and longer recoveries (see chart 12). Since 2000, a large number of EMDEs – such as Chile and Brazil – have effectively adopted such frameworks (Frankel *et al.*, 2012), shifting away from the pro-cyclical fiscal policies of the past (1960-1999) – the latter were *inter alia* the consequence of imperfect credit market access preventing fiscal expansion during downturns, or of political pressures to raise government expenditure or to cut taxes in good times. Frankel *et al.* explain this "graduation" by the improved overall institutional quality in EMDEs and better fiscal policy frameworks in particular, for example comprising independent fiscal institutions (e.g. forecasting commissions) and fiscal policy rules based on cyclically-adjusted primary balances, as has been the case in Chile.

A similar counter-cyclical reorientation occurred on the monetary policy side (BIS, 2012; Vegh and Vuletin, 2012). The successful shift to inflation-targeting frameworks indeed provided central banks in many EMDEs with the credibility and space (i.e. low inflation) to pursue accommodative policies in response to adverse shocks. Their reactions during the global financial crisis are a case in point: like their AE counterparts, they slashed interest rates as the crisis erupted, often to historical lows, as has been the case in Brazil, South Africa or Turkey, which also adopted a set of new "unconventional" policy instruments[1]. While in some countries the scope for keeping interest rates at low levels has been eroded subsequently by inflationary pressures or accelerating credit growth (e.g. India, Russia, and more recently Brazil), other EMDEs have nonetheless managed to keep rates low (see chart 13). This policy reaction departs from similar episodes in the past, when many EMDEs were often left with no other option but to tighten monetary policy to prevent capital from streaming out and stop their currencies from depreciating. While such policies may have been inevitable due to the prevailing circumstances – e.g. a fixed exchange rate regime, weak fundamentals (e.g. significant currency mismatches) – they exacerbated contractions in aggregate demand.

This last point also makes clear, however, that the feasibility of a counter-cyclical monetary policy response is conditional on the exchange rate regime and a country's external position. In other words, any "fears of free falling" (Vegh and Vuletin, 2012) need to be averted beforehand. Following the experience of the 1990s, many EMDEs indeed switched to more flexible exchange rate regimes, acting as automatic external adjustment mechanisms, and improved their external positions (Didier *et al.*, 2011; IMF, 2012). For example, by lowering the
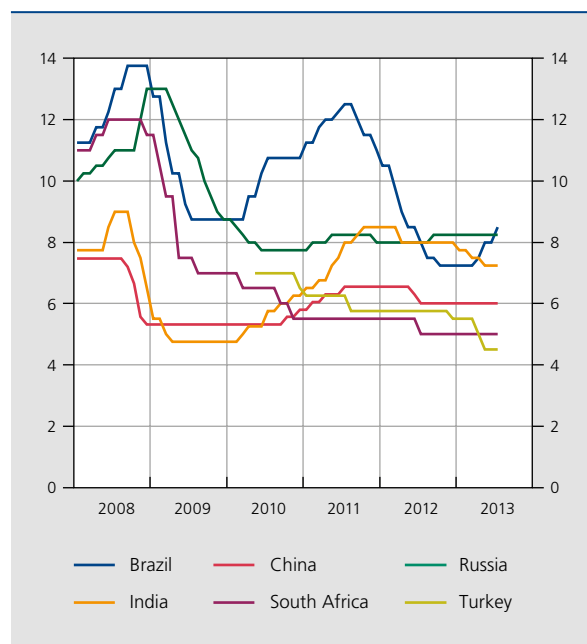
share of foreign-currency-denominated debt[2], the risks of adverse balance-sheet effects of currency fluctuations were reduced, while countries in some regions (e.g. Latin America and the Caribbean) managed to extend the average maturity of their international debt. Meanwhile, reliance on external financing was itself cut back through an improvement in the current account positions of many countries. Finally, the structure of the foreign asset and liability position was transformed: while liabilities now more often take the form of equity (rather than debt; see below), many EMDEs themselves started to accumulate debt assets abroad, as reflected in higher stocks of foreign reserves on their asset side[3]. These characteristics – a flexible exchange rate regime, current account surpluses, low external debt and high reserves – are all generally associated with higher resilience (see chart 12). Cardarelli *et al.* (2010), for example, show that lower current accounts, counter-cyclical fiscal policies and nominal exchange rate

(1) See Kara (2012) for a descriptive analysis of the new monetary policy framework.
(2) The capacity to issue debt in domestic currencies is of course dependent on the strength of fundamentals.
(3) Foreign exchange reserves can be viewed as a self-insurance mechanism against capital flow reversals: by lowering a country's perceived credit risk and allaying doubts about its solvency, they should thus help preserve investors' willingness to finance it and to roll over its debt. Should external sources of financing nonetheless dry up, they constitute a first line of defence, which can be temporarily tapped, notably to service short-term debt or support orderly adjustments, thereby mitigating self-reinforcing financial stress or contagion. Holding reserves comes at a cost, however: their accumulation may (sometimes intentionally) distort the exchange rate and (if unsterilised) contribute to inflationary pressures. The high reserves can contribute to global imbalances, notably when they result from financing large current account deficits abroad (section 2). Finally, there is an opportunity cost to holding reserves (rather than investing in higher-yield assets).

flexibility have either reduced the likelihood of a sudden stop in capital inflows or put countries in a better position to deal with any such shock (notably as exchange rate appreciations would curb capital inflows in the first place).

4.2 Structural characteristics

The structural characteristics of an economy, such as trade openness or capital inflow composition, also determine its shock exposure and hence its resilience. Relying on some booming export (e.g. commodity related) or domestic (e.g. housing) sectors may drive growth in the short term, but may also divert both resources and policy attention away from activities that would perhaps contribute to more sustainable growth in the longer run and hamper a country's adjustment capacity. The diversification of economic sectors or of trading partners can help mitigate the drop in demand stemming from one trading partner or specific to one sector. A greater reorientation and focus on their peers seems to have helped many EMDEs to cushion the effects of the recent crisis, even if it may have been at the expense of new vulnerabilities in the form of dependence on commodity exports and particular export markets, such as China.

The composition of capital inflows also determines the sudden stop risks a country faces. Episodes of large capital inflows tend to be accompanied by faster growth in the short term (Cardarelli *et al.*, 2010), but often end abruptly, which may then result in economic downturns, as shown above[1]. Foreign direct investment (FDI) has typically proved to be the most stable flow to EMDEs and plays almost no role in sudden-stop episodes (Levchenko and Mauro, 2007). A larger proportion of FDI should thus contribute to an economy's resilience. Encouragingly, compared to waves of capital flows to EMDEs in the 1990s, the share of FDI relative to portfolio and other flows has actually become predominant in the 2000s (Cardarelli *et al.*, 2010)[2].

The IMF (2012) examines the association between different structural characteristics and, respectively, the length of an expansion and the speed of recovery. It finds that the length of an expansionary phase increases with the proportion of FDI in capital inflows and declines with the degree of income inequality, which is considerable in some EMDEs. Meanwhile, the speed of recovery is positively associated with larger trade openness, export diversification, a higher capital account openness and a higher proportion of FDI. Didier *et al.* (2011) also study the impact of country characteristics on growth collapse and recovery and find that economies that are more open to trade and more financially open suffered a larger

growth collapse in 2008/2009. However, these two features are also associated with quicker recoveries, clearly confirming the dual nature of openness emphasised in the previous section.

4.3 Growth potential and institutional quality

The "ability to sustain longer and stronger expansions" is inextricably linked to a country's growth potential so resilience also has to be viewed in that light. Catching-up has been an important driver behind faster growth in EMDEs and hence plays a part in the observed resilience. The "dividend" from starting out from a low level of development essentially results from the abundance of factors that can initially be drawn into activities where they generate high (but diminishing) returns, and from the possibility of importing technology from abroad. Yet, the scope for such kind of growth is by definition limited, and actually appears to slow down and get more complicated as countries reach middle-income levels (Eichengreen *et al.*, 2013). To avoid falling into such "middle-income growth traps", countries have to focus on setting up institutions and infrastructure conducive to productivity growth and eventually to rising living standards. Analysing countries that have averted that "trap", Agénor and Canuto (2012) emphasise the importance of advanced infrastructure (essentially communication infrastructure), institutions, such as the strong enforcement of property rights, and labour market rules that do not encumber an optimal matching of workers and jobs. These conclusions are supported by previous research that has pointed up a positive association between the quality of institutions and investment on the one hand and growth on the other (see Aron, 2000).

5. Conclusions and challenges to come

The significance of EMDEs for the world economy has grown enormously over the past few decades. This has been evident in their growing share of world trade and capital flows and in their ability to influence demand, prices and financial stability at the global level. At the same time, their persistently higher, less volatile and possibly less synchronised growth profile, has stood in contrast with that of AEs. Their stronger resilience than in the past appears to have benefited from the adoption of better policy frameworks, institutions and the implementation of counter-cyclical economic policies. While EMDEs were

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(1) This partly explains the worries expressed by some EMDEs regarding the very accommodative monetary policies currently pursued in AEs.
(2) Furthermore, FDI has other desirable properties, such as potentially generating spillovers (technology, human capital, fiscal revenues, etc.), which may be beneficial for growth in the host economy.

certainly not spared from the 2008/2009 global financial crisis, these features have helped them to limit its adverse impact and handle the crisis better than similar events in the past, when external shocks were often magnified domestically. Furthermore, and despite some regional exceptions, such as central and eastern Europe, EMDEs generally tended to bounce back more rapidly and vigorously from the great recession than AEs.

Resilience is to a large extent the result of factors which domestic policy-makers can directly control or at least influence, for example by adopting good policy frameworks and ensuring that macroeconomic fundamentals remain strong. Even in countries with a large catching-up potential, high growth cannot be taken for granted, as the period before 2000 has shown. It is thus countries' own responsibility to improve their growth potential in a sustainable way and to remove any obstacles to growth. This may in some cases consist in tackling red tape or corruption, or ensuring a level playing field between private and state-owned enterprises in others. Furthermore, countries also need to exhibit a sufficient degree of flexibility to react to the ongoing transformations in their external environment. However, putting in place strong institutions and setting up competent enforcement authorities (financial market regulators, competition authorities, patent offices, etc.) requires time and is costly. Permanent resilience is thus an illusory concept, not least as the availability of policy space, which is one of the factors contributing to it, is limited and buffers need to be rebuilt once they have been exhausted. In a strongly interlinked global economy, where the benefits of integration and the disruptions are often transmitted through the same channel, a reasonable degree of prudence and moderation is thus recommended in order to avoid over-reliance on foreign capital or excessive dependence on specific export markets or products.

This article has also shown how the one-directional influence of AEs has been gradually diminishing and it has provided a number of examples through which EMDEs have been influencing global economic developments recently. This does actually suggest that the interdependence between EMDEs and AEs is becoming increasingly two-sided. The article has also stressed the singular role that China has come to play for EMDEs in particular and in the world economy more generally. It now remains to be seen to what extent the traditional coupling and shock-transmission patterns are likely to be affected over time.

Looking ahead, the relative weight of EMDEs is expected to grow further. The pace and nature of that process is surrounded by many unknowns, however. While AEs, and notably the euro area, continue to struggle with the aftermath of the financial crisis, many EMDEs are themselves reviewing their growth model. In the short run, meanwhile, the EMDEs' resilience is likely to be tested further, as suggested by the recent downward revision in the growth projections for 2013 and 2014, for both for EMDEs and AEs (IMF WEO, July 2013 update). At the same time, the strong policy response to the crisis by China is now increasingly appearing as a potential source of destabilisation. Given the mutual inter-dependence among EMDEs on the one hand and between EMDEs and AEs on the other, this may again translate into more synchronised co-movements of business cycles.

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