Box 1

GAUGING THE MACROECONOMIC IMPACTS OF CHANGING FINANCIAL CONDITIONS IN EMERGING MARKET ECONOMIES

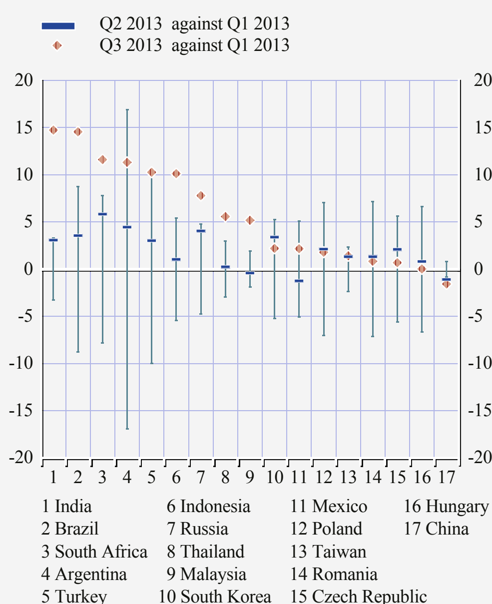
As macroeconomic conditions in advanced economies have started to improve, financial markets have priced in a normalisation of accommodative macroeconomic policies that have underpinned the recovery from the financial crisis. A corollary of this has been a capital flow reversal – sharp at times – in several emerging market economies, which intensified in early May after the US Federal Reserve signalled its intention to taper its bond-buying programme in late 2013. As the latest investment fund asset allocation data show a tendency to further rebalance portfolios away from emerging markets, this box assesses the growth implications of this activity and discusses potential repercussions for the euro area.

During the second and especially the third quarter of this year, conditions in foreign exchange, equity and sovereign bond markets deteriorated sharply in many emerging economies. Exchange rates weakened vis-à-vis the US dollar by more than 10% in India, Brazil, South Africa, Argentina, Turkey and Indonesia when compared with the first quarter of 2013 (see Chart A), while equities and government bonds experienced selling pressures across most regions (see Charts B and C).

Countries with perceived fragilities in macroeconomic fundamentals have generally been those subject to larger exchange rate and asset price drops. In more detail, concerns regarding Turkey relate to a substantial current account deficit which is largely financed by short-term portfolio flows and its unfavourable (short-term) external debt metrics. India, South

Chart A Exchange rate developments in selected emerging market economies

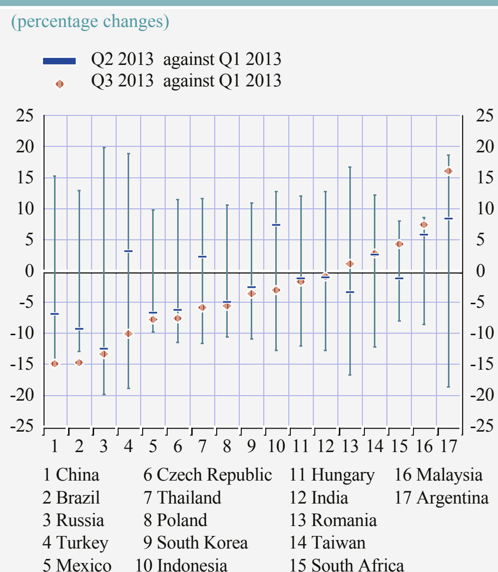
(percentage changes vis-à-vis the US dollar)



Source: Haver Analytics.
Notes: The green error bars denote one standard deviation of quarterly changes between 2000 and 2012. A rise in exchange rates indicates a depreciation of the currency.

Chart B Equity market developments in selected emerging market economies

(percentage changes)

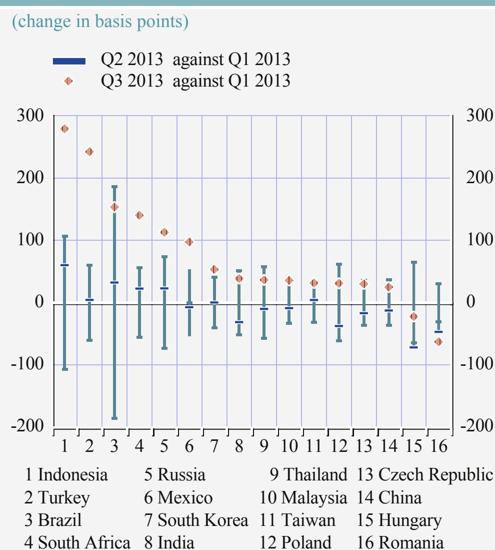


1 China
2 Brazil
3 Russia
4 Turkey
5 Mexico
6 Czech Republic
7 Thailand
8 Poland
9 South Korea
10 Indonesia
11 Hungary
12 India
13 Romania
14 Taiwan
15 South Africa
16 Malaysia
17 Argentina

Sources: National sources and Haver Analytics.
Note: The green error bars denote one standard deviation of quarterly changes between 2000 and 2012.

Chart C Ten-year local currency sovereign bond yields in selected emerging market economies

(change in basis points)



1 Indonesia
2 Turkey
3 Brazil
4 South Africa
5 Russia
6 Mexico
7 South Korea
8 India
9 Thailand
10 Malaysia
11 Taiwan
12 Poland
13 Czech Republic
14 China
15 Hungary
16 Romania

Sources: JPMorgan and Haver Analytics.
Notes: The green error bars denote one standard deviation of quarterly changes between 2000 and 2012. Sovereign bond yields for Argentina are not available.

Africa and – to a lesser extent – Indonesia are displaying twin deficits in combination with a dependence on portfolio investment (South Africa) or buoyant credit growth (Indonesia). The latter is also a cause for concern in Brazil and China. Russia, by contrast, seems less vulnerable when compared with other emerging economies, but has nevertheless witnessed sizeable stock market losses and a significant depreciation of its currency. In spite of the prevalent macroeconomic and financial imbalances, countries in central and eastern Europe have been generally less affected by the global events, which is likely due to the ongoing adjustment of these imbalances.

The heterogeneous link between capital flow activity and domestic fundamentals suggests that elements that are not captured by the indicators most commonly used to assess domestic and external imbalances have possibly also played a role in the current emerging market asset repricing. These might include *credit* factors, such as other structural impediments to higher (potential) growth, exposure to a slowdown in Chinese output or the gradual recovery in economic activity in the euro area. However, they might also comprise *liquidity* factors, such as access to foreign currency in case of intense capital flight.

Results from two different models are used (see the notes to Table A for details) to estimate the impact of the changes in financial conditions for key emerging market economies on GDP growth. The models capture trade and financial linkages between the economies. For each country, the size of the shock to long-term bond yields and equity prices is given in Table A, based on the respective cumulative change in the second and third quarters of 2013. The model-based assessment of the substantial deterioration of financial conditions for selected emerging markets suggests that its impact on growth would be rather contained in emerging Asia, while some countries in Latin America would be more affected, owing to larger bond market spillovers from the United States.

Table A Estimated cumulative impact of changes in financial conditions on GDP growth in selected emerging market economies

(percentage point deviation from baseline levels)

	Cumulative impact		Shock	
			10-year sovereign yields	Equities
	2013	2014	*(bps)*	*(%)*
Brazil	-0.17	-0.60	155	-14.7
Russia	-0.11	-0.20	115	-13.3
India	0.06	0.00	39	-0.9
China	-0.05	-0.27	29	-14.9
South Africa	0.08	0.05	140	4.3

Source: ECB calculations.
Notes: The GDP impacts are average impacts across two models: NiGEM (maintained by the UK National Institute for Social and Economic Research) and a global VAR model, which includes 33 countries and is based on Dees, S., di Mauro, F., Pesaran, M. H. and Smith, V., "Exploring the International Linkages of the Euro Area: A Global VAR Analysis", *Journal of Applied Econometrics*, 2007. The Russia impact is modelled by NiGEM only.

Estimates range from a near-zero impact in India to a 0.6 percentage point cumulated output loss in Brazil by 2014. These results, while illustrative, could be subject to upside risks, such as a continuation or re-acceleration of the recently recorded tentative flows of capital back into emerging equity and bond markets, which may alleviate negative growth effects. At the same time, financial stability risks would arise if financing conditions in key emerging economies were to worsen beyond what has been observed to date, including the prospect of correlated declines with more widespread contagion.

For the euro area, the transmission of a deteriorating economic environment in emerging markets could stem from both trade and financial channels, which, however, suggest relatively contained direct impacts.

Table B Direct bilateral exposures of the euro area vis-à-vis selected emerging economies

	Euro area exposure		
	Cross-border bank claims (percentage of total claims) (Q2 2013)	Portfolio assets (percentage of total assets) (2011)	Merchandise exports (percentage of total euro area exports) (2012)
Czech Republic	3.0	0.4	3.8
Hungary	1.4	0.5	2.2
Poland	4.0	1.0	5.1
Romania	1.6	0.1	1.6
Russia	2.1	0.7	4.7
Turkey	2.3	0.6	3.3
China	1.7	1.1	7.0
India	0.9	0.6	1.6
Indonesia	0.2	0.5	0.4
South Korea	0.7	1.2	1.5
Malaysia	0.2	0.5	0.6
Taiwan	0.3	0.5	...
Thailand	0.1	0.3	0.6
Argentina	0.4	0.1	0.4
Brazil	3.6	1.5	1.7
Mexico	2.8	0.7	1.3
South Africa	0.2	0.6	1.0

Sources: IMF, BIS and national sources.
Notes: Net of intra-euro area exposure. Cross-border bank claims are based on data for Austria, Belgium, Finland, France, Germany, Greece, Italy, Luxembourg, the Netherlands, Portugal and Spain.

Trade linkages tend to be the strongest with emerging economies in the geographical neighbourhood of the euro area as well as with China, even though the prevailing global economic environment is clearly important, for instance, if economic conditions in the United States provide some offset. Concerning the financial channels of transmission, euro area portfolio investments in emerging bond and equity markets are relatively low and cross-border bank loans are predominantly geared towards selected countries in central and eastern Europe and Latin America (see Table B). Clearly, however, any sharper or more disruptive adjustment in emerging market economies needs to be closely monitored, given the potential for stronger and more persistent euro area impacts.

… while tighter financing conditions may weigh on the economic outlook in Asia and Latin America