

### Box 3: The relative performance of financial variables in episodes of financial stress depends on each country's economic vulnerabilities

There have been two episodes since the beginning of 2013 when financial tensions in emerging economies suffered a significant upturn. The first occurred between May and September 2013 (see Chart 45). Financial conditions in emerging economies stabilised in general after September, but financial tension increased again in January of this year. In these upturns in risk perception, the financial markets in emerging economies suffered capital outflows, depreciations in their currencies against the dollar and significant drops in the price of sovereign debt, reflected in significant increases in the yield rates.

Chart 45

#### Exchange rates against the US dollar of selected EM currencies 2 Jan, 2013=100



Source: BBVA Research with data from Bloomberg

The tensions were sparked in May 2013 in response to statements made by the Fed indicating that it would probably start to reduce its large-scale asset purchases at the end of 2013. These signals caused a surge in uncertainty and volatility on global financial markets. Until that point, the extraordinarily low interest rates in the United States and huge liquidity in global markets had encouraged investors to take advantage of the situation by investing in emerging market economies (EMEs), with higher rates than those prevailing in developed economies, carrying out short-term investment operations, known as carry trade. These transactions have higher margins when EME currencies remain stable or ap-

preciate. But when the expectation of a slowing rate of asset purchases on the part of the Fed led to higher interest rates in the US, investors rapidly reversed these operations, which were then accompanied by significant depreciations in EME currencies against the dollar and major falls in asset prices.

In December 2013, when the Fed finally announced a reduction in asset purchases, the reaction on the part of financial markets in the EMEs was moderate. The main reason was that the Fed's statement back in September had removed the uncertainty caused up to that point by the difficulty of explaining the distinction between the decisions that would be taken about unconventional monetary stimulus and decisions about the forthcoming return to conventional monetary policy (i.e. the cycle of hikes in the target monetary rate) which was still far off on the horizon, further away than the markets were expecting at that point. Then, in January 2014, volatility returned to these markets. Unlike the first episode, in this there were no important changes in the expectations for US monetary policy. It was rather that this second episode of risk aversion was characterised by a series of adverse events: a weaker than expected result in China's manufacturing industry, the devaluation of the Argentine peso, the intervention in Turkey propping up its currency and the geopolitical tensions resulting from the crisis in Ukraine.

During both risk-aversion episodes, the financial conditions in the EMEs were affected, although there was differentiation between countries, which suggests that, even when the wave of EME asset sales was driven by shared factors, investor decisions also were nuanced by these economies' differing conditions. Chart 45 illustrates that although one can see that all currencies were affected, some were more resilient than others. The same thing happened with sovereign yields. This suggests that the differentiation may be in response to investor perception of economic vulnerabilities in the EMEs.

#### Emerging Market Economy Vulnerability Index

In order to quantify this differentiation and forecast the resilience of financial markets in the EMEs in future episodes of financial tensions, the vulnerability index built by the Federal Reserve (published in its February 2014 Monetary Policy Report) has been reproduced and is compared with the performance of a range of financial variables over stress periods.

The relative vulnerability index for EMEs is prepared using a sample of 15 EMEs<sup>1</sup> and based on six indexes: (1) current account balance as a percentage of gross domestic product (GDP), (2) gross public debt as a percentage of GDP, (3) annual average inflation in the last three years, (4) the change over the last five years in banking lending to the private sector as a percentage of GDP, (5) the relationship between total external debt and annual exports, and (6) international currency reserves as a percentage of GDP. In order to build the index, the 15 EMEs were ranked by each one of the six indexes, starting at least vulnerable (ranking of 1) to most vulnerable (ranking of 15). Then the average ranking of each EME was calculated to obtain the index score for each EME. Thus, from the way the index was constructed, the higher the index score, the higher the vulnerability.

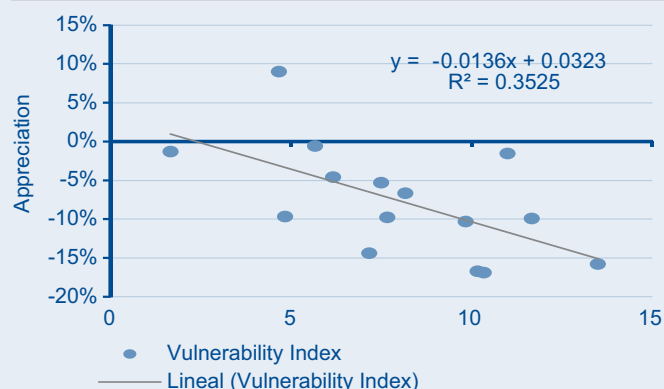
As Charts 46 and 47 illustrate, the emerging economies which are relatively more vulnerable according to the index experienced more intense depreciations and larger rises in their sovereign debt yields. Two conclusions can be drawn from this: (1) although the EMEs will continue to be exposed to future variations in risk perception, (2) the more vulnerable EMEs will continue to show less resilience against external shocks. Therefore, reducing economic vulnerabilities is important if economies are to be more resilient to external shocks.

Mexico has a good position in the index, with a score of 8.17, the second of the Latin American EMEs, just one point below Chile, the best positioned economy in this region. This position is possible thanks to the permanent efforts being made to maintain macroeconomic stability, improve the economy's structural conditions and reduce vulnerability to external shocks. These endeavours, which have been underway for many years, include inflation control, total public debt limitation, reduction of external indebtedness and the accumulation of international reserves. In consequence, Mexico's degree of vulnerability is now lower and our country better positioned than in the past to absorb external shocks and limit volatility in the financial markets.

Nevertheless, Mexico is still a long way behind the emerging Asian economies, which are by far the best positioned according to the index, which the financial markets have confirmed, insofar as that their movements were more moderate during the recent bouts of financial stress. That is why the long-term changes in which our country is immersed, with the agenda of reforms already approved or on the way to being approved, are so important. These structural changes will not only increase the economy's growth potential, they will also reduce economic vulnerabilities, allowing Mexico to gain a relatively stronger position, enabling it to allay investor nerves when high volatility events occur on the financial markets in the future.

Chart 46

**Currency appreciation (+)/depreciation (-) against the US dollar and emerging economies vulnerability index**

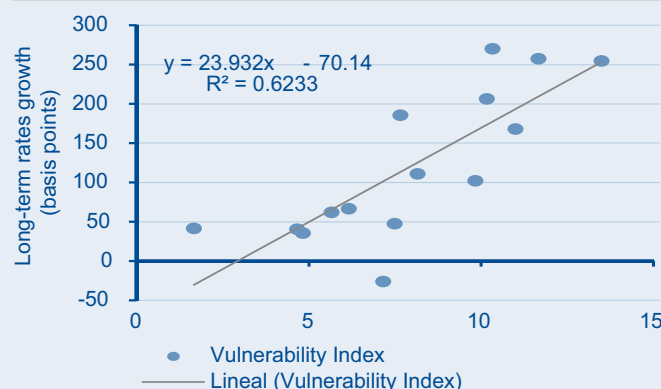


Note: the percentage appreciation of EME currencies against the dollar is measured from 30 April 2013 to 7 July 2014

Source: Haver Analytics and BBVA Research calculations

Chart 47

**Increase in 10Y yields and emerging economies vulnerability index**



Note: the change in base points of yields is measured from 30 April 2013 to 7 July 2014

Source: Haver Analytics and BBVA Research calculations

<sup>1</sup> Brazil, China, Chile, Colombia, Indonesia, India, South Korea, Malaysia, Mexico, Philippines, Russia, South Africa, Taiwan, Thailand and Turkey.

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#### References

*"Financial Stress and Vulnerabilities in the Emerging Market Economies"*, Federal Reserve Monetary Policy Report, 11 February, 2014, pages 28 and 29.

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