

Global macro matters

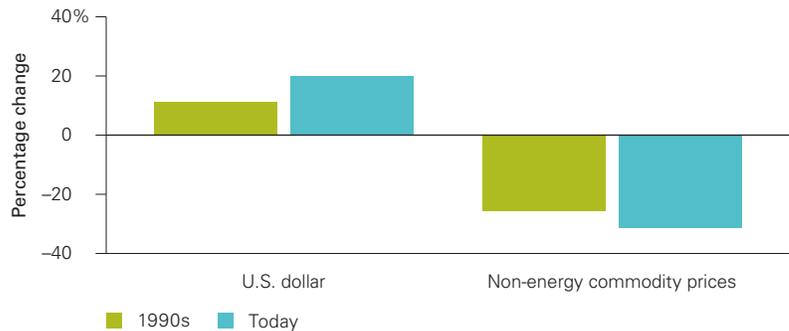
Remember the '90s? Emerging markets then and now

Macroeconomic conditions today are similar to those of the 1990s . . .

Two headwinds to emerging market growth—lower commodity prices and the relative strength of the U.S. dollar—are evoking comparisons between emerging market crises of the 1990s and the current situation.

Given today's diverging global central bank policies, an environment of falling commodity prices and a rising U.S. dollar may persist for the foreseeable future. Although these factors play a major role in emerging markets' growth, the growth outlook also depends upon individual emerging countries' unique characteristics and changes that have occurred in each since the 1990s crises.

Parallels between commodity prices and strength of U.S. dollar



Notes: "1990s" represents cumulative change in U.S. dollar as measured by the Board of Governors of the Federal Reserve System Trade Weighted Major Currencies Index and in S&P GSCI Non-Energy Commodity Spot Price Index from January 1996 through January 2000. "Today" represents cumulative change in the same values from January 2011 through January 2015.

Sources: Vanguard calculations, based on data from Thomson Reuters Datastream, Moody's Analytics Data Buffet, Federal Reserve Board, and S&P GSCI.

. . . and some concern is warranted

Since June 2014, the U.S. dollar has appreciated 17%, while commodity prices (ex-energy) have fallen -15% (as of February 28, 2015). Although concerning, the growth implications for specific emerging markets can differ based on many factors.

The relative strength of the U.S. dollar is generally a negative for economies that are reliant on international dollars to fund their domestic credit markets and to finance imports. Economies such as South Africa and Brazil that run current-account deficits are more vulnerable in a period of sustained USD appreciation than nations less dependent on foreign financing, such as China.

Similarly, weak commodity prices have been detrimental to many emerging markets, especially for exporters that are less diversified. In Russia, a fall in commodity prices can inhibit real GDP growth more than in India, a nation less dependent on commodity exports.

Estimated response of emerging market growth to typical shocks



Notes: Figure depicts the distribution (tails represent 90th and 10th percentiles and boxes represent 75th and 25th percentiles) of average impulse-response functions of emerging markets' growth over four quarters following typical shocks in S&P GSCI Non-Energy Total Return Index and Trade Weighted USD Broad Currency Index across 18 emerging markets (Argentina, Brazil, Chile, China, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, Turkey, and Venezuela). A "typical" shock is defined as a one-standard-error shock of commodities or of U.S. dollars multiplied by standard error of the respective country's GDP in the VAR (vector autoregression) to account for variability in GDP growth rates. Also included in the VAR are GDP-weighted G7 nation's real GDP growth and the J.P. Morgan Emerging Markets Bond Index spread relative to similar-maturity U.S. Treasuries. VAR was estimated over the period 1999 through 2014. In using a VAR-based analysis, we are assuming that shocks to the USD exchange rate and commodity prices occur exogenously with regard to conditions in emerging markets. This may not always be the case, particularly for commodity prices and when assessing the impact on larger emerging economies such as China.

Sources: Vanguard calculations, using data from Thomson Reuters Datastream, Moody's Analytics Data Buffet, Organisation for Economic Co-operation and Development, Federal Reserve, World Bank, and emerging market central banks and statistical agencies.

But fundamentals don't suggest 1990s-style crises

Appreciation in the dollar and falling commodity prices provided the backdrop for financial crises in several emerging economies in the 1990s. In that environment, central banks' ability to defend local currencies was tested, and many countries were forced to break their hard-currency pegs.

Since then, emerging markets have improved their monetary and financial structures. Notable positives include a buildup of foreign exchange reserves and use of floating currencies, which increase countries' ability to withstand market stress and to avoid currency runs.

Most emerging countries now have lower sovereign debt to GDP ratios than during the crises of the 1990s. For nations that increased their debt load, this generally reflects a maturation of domestic financial markets and better access to local-currency funding by the private sector.

Nevertheless, headwinds of lower export growth in many emerging market economies should be expected to persist for a time, even if commodity prices and the U.S. dollar stabilize. The biggest factor is China's ongoing slowdown, which arguably represents the largest downside risk to emerging market performance.

Emerging markets' financial systems are much different today

Crisis year	External debt (% of GDP)	Total reserves (% of total external debt)	External debt service (% of exports)	Years of coverage	Currency peg
Brazil, 2002	47.7	16.2	71.1	4.9	N
Hungary, 1997	52.1	36.4	32.9	0.5	Y
Malaysia, 1997	36.4	44.0	7.4	3.5	Y
Mexico, 1994	33.9	4.6	27.0	0.2	Y
South Africa, 1997	19.7	16.0	17.2	2.2	N
Turkey, 1997	32.1	22.0	22.3	7.1	N
Argentina, 2001	57.4	9.7	49.2	3.8	Y
Indonesia, 1997	51.6	12.2	30.3	3.3	Y
Russia, 1998	64.8	6.5	29.0	55.8	Y
South Korea, 1997	31.8	12.6	NA	8.5	Y

Today	External debt (% of GDP)	Total reserves (% of total external debt)	External debt service (% of exports)	Years of coverage	Currency peg
Brazil	21.5	73.8	28.6	4.4	N
Hungary	147.4	23.6	97.4	8.4	N
Malaysia	68.1	62.6	3.5	4.4	N
Mexico	35.1	39.6	10.3	6.6	N
South Africa	38.1	32.1	8.3	2.2	N
Turkey	47.2	28.6	28.7	1.7	N
Argentina	21.9	20.7	13.7	5.9	N
Indonesia	29.6	37.2	19.4	3.3	N
Russia	34.8	69.9	32.0	14.9	N
South Korea	31.9	83.3	NA	52.5	N

Notes: Data for total reserves as percentage of exports for Hungary begin in 2000. Data for external debt service as percentage of exports for Hungary and Russia begin in 2005. Years of coverage represent total reserves/current account deficit and reflect number of years a nation's foreign currency reserves could fund a trade deficit. Latest available data for "Today" are as of December 31, 2013.

Sources: Vanguard calculations, based on data from World Bank; International Monetary Fund; Oxford Economics; Bank of Korea, Korea Customs Service; Central Bank of the Russian Federation; Department of Statistics Malaysia; CEIC Data; Central Bank of Hungary; and Ethan Ilzetzki, Carmen Reinhart, and Kenneth Rogoff, 2011, *The Country Chronologies and Background Material to Exchange Rate Arrangements into the 21st Century: Will the Anchor Currency Hold?* (London: London School of Economics).

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