

# REER Valuation: Looking for Natural Suspects

By ING

*We apply the REER concept to key CIS currencies to assess their valuation. We find the Armenian dram (AMD) and Georgian lari (GEL) to be the most overvalued in real terms on a relative basis, flagging a risk of nominal depreciation ahead unless the CPI differential turns negative. Of the commodity currencies, AZN, KZT and RUB, the RUB might have the weakest relative position, but all three have already adjusted a lot. Overall, KZT is our top pick as we believe it is likely to see the greatest upside, if oil prices stay flat or rise.*

## WHAT IS THE APPROACH?

The REER (real effective exchange rate) model we use is based on the purchasing power parity (PPP) concept. It assumes that changes in general price levels must be offset by changes in national currency exchange rates to keep goods equally priced and to satisfy the no-arbitrage condition. When prices in Russia rise by 1%, while in the rest of the world they remain stable, the RUB should weaken by 1% to effectively keep the relative price level unchanged. Otherwise, goods produced by the rest of the world would become more competitive than Russian goods. One of the most common examples of this approach is the Big Mac index, which assumes that the most popular McDonalds burger must be priced equally all over the world. Of course, the model significantly simplifies the reality: not all goods and services from the CPI basket can be freely traded globally. Transportation costs mean that the composition of CPI baskets varies. CPI inflation might not be a good proxy for changes in general price levels and currencies might not be free-floating, so not allowing for a natural price-discovery mechanism. Yet, this is a good starting point for assessing the scale of currency over- or undervaluation.

To assess bilateral exchange rate valuations, economists use the nominal effective exchange rate (NEER), calculated as a trade-weighted average of changes in bilateral pairs. The most consistent way to weight currency pairs is to use shares of the origin country in foreign trade turnover to capture changes in relative competitiveness of imported and domestically produced goods. The same approach is used to combine price levels, captured by CPI. We include countries with weights above 0.5% for two years in a row and exclude countries which don't present monthly figures or have data gaps.

The below data and conclusions have been amended from the initial version published on 23 February 2016 in the CIS Quarterly report "A moment of truth". We have added the Georgian lari (GEL) to the initial list of six CIS currencies: the Armenian dram (AMD), Azerbaijani manat (AZN), Belarus rouble (BYR), Kazakhstani tenge (KZT), Russian rouble (RUB) and Ukrainian hryvnia (UAH). We present historical and run-time data (as of Mar-16) as well as forecasts, compiled using data for 42 countries covered by the ING global research team. To make it more applicable, we also

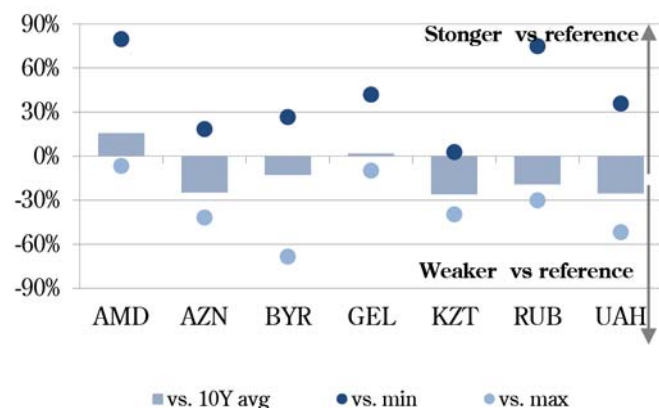
use our REER model to return bilateral exchange rates against USD using different assumptions on future REER performance.

## KEY FINDINGS AND INVESTMENT IMPLICATIONS

After the 1Q16 dynamics, AZN, KZT and UAH remain among the worst performers in REER terms vs the 10Yr averages, losing 25-26%. After the YTD rally the RUB reduced the scale of relative underperformance, while it was among the laggards in Jan-16. BYR deviates even less from their averages, while AMD and GEL are the strongest ones.

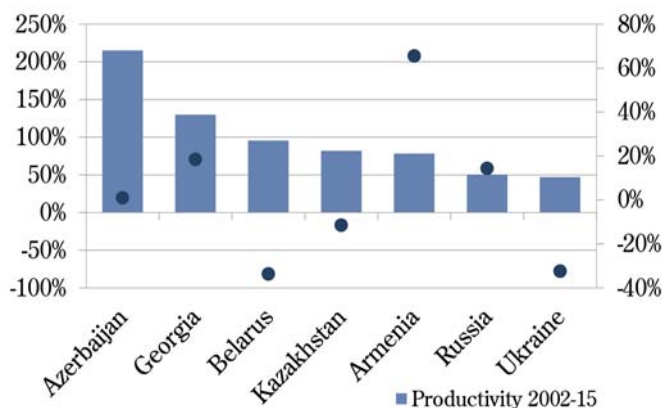
Next, we look at their deviations from historical min/max levels. Compared with minimum levels, AMD leads again at 80% followed by RUB at 75% and GEL at 42%, UAH at 36%, BYR at 27% and AZN at 18% with KZT still being traded close to the minimum. A similar comparison with maximum levels reveals that AMD is only 7% below its all-time high while GEL is about 10% below. Other currencies have bigger deviations with RUB at 30% below, KZT and AZN c.40-42% below and UAH 52% below its all-time high. BYR has deviated the most from its highs, by 68% in March 2016.

Fig 1. REER historical perspective (Mar-16)



Source: Bloomberg, National Sources, ING estimates.

Fig 2. REER vs labour productivity: Mar-16 vs Dec-02



Source: CEIC Database, National Sources, ING estimates

Fig 3. REER statistics and ING REER-driven estimates for 2016

Currency	USD/lc cross (05/05/16)	% change		Index (Dec-2003=100)		USD/LC cross at various REER (next 4Q average)			USD/LC cross at various REER (next 4Q range)			
		2016 YTD	2015	NEER 1Q16	REER 1Q16	REER min	REER max	REER 10Y avg	REER min	REER max	REER 10Y avg	
Armenia	AMD	479.5	-0.8	1.9	177.7	170.4	885	460	570	859-896	446-465	553-577
Azerbaijan	AZN	1.5067	-3.5	99.5	76.7	115.2	1.8900	0.9300	1.2000	1.87-1.92	0.92-0.94	1.19-1.22
Belarus	BYR	19,434.0	4.2	69.5	20.0	70.9	25,885	6,461	17,821	25,449-26,097	6,353-6,514	17,520-17,966
Georgia	GEL	2.21	-7.9	27.3	139.6	130.0	3.38	2.14	2.42	3.26-3.42	2.07-2.17	2.33-2.45
Kazakhstan	KZT	332.2	-2.5	86.8	54.5	90.3	358.0	210.0	257.0	349-362	205-213	251-260
Russia	RUB	65.8	-9.7	19.9	57.3	109.9	125.9	50.3	58.1	120.4-127.81	48.15-51.12	55.56-58.98
Ukraine	UAH	25.1	4.6	51.9	32.8	73.9	37.6	13.3	20.7	35.1-39.6	12.5-14.1	19.3-21.8

Source: Bloomberg, National Sources, ING estimates

In Figure 2 we compare labour productivity gains vs REER dynamics over 2003-15 (comparable data before 2003 is not available for all the countries). Theoretically, productivity gains may help a country to withstand a gradual erosion of competitiveness stemming from real appreciation of its currency. We note, though, that significantly different scale of REER-vs-Productivity adjustments may stem from the fact that the countries had different bases, with the productivity leaders having a very low base. Hence, we don't make any far-reaching inferences from this analysis. We only note that, on a relative basis, Armenia looks the worst again, followed by Russia.

In Figure 3, we present key numerical metrics. We start with current exchange rates and their absolute 2015 and 2016 YTD performances followed by 1Q16 NEER/REER. Next we show averages for our 1Q-4Q16 estimates of the implied nominal exchange rate vs USD under various REER assumptions (ie, REER at min, max or 10Yr avg), and exact ranges we use for the averages calculation are put into the last three columns. These might be useful in assessing respective REER-based trading ranges over 2016.

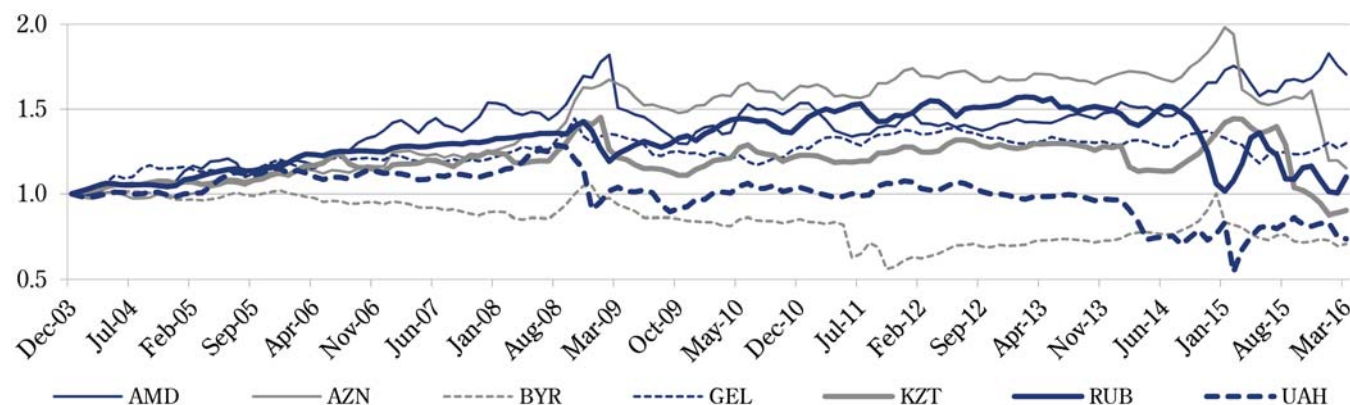
Below we list key implications from the details and model predictions in Figure 3:

- CIS commodity currencies (AZN, KZT, RUB) seem to have gone enough down the road of adjustment to low oil prices, barring a scenario of their renewed decline. Still, the RUB position is relatively less-appealing vs the other two from a historical perspective.
- By all metrics AMD and GEL look the most overvalued in real terms, which may require further adjustment in the nominal exchange rate. Despite both having strengthened recently after reaching multi-year lows in Feb-16, the REER valuation is likely to cap any significant upside in nominal terms. Note that both currencies are officially floating ones, but both central banks are able to intervene, if needed.
- At the other extreme, KZT has made the biggest adjustment among the CIS peers, now standing close to its all-time lows. Hence, KZT retains upside potential in 2016 even under stable oil prices. Compared to other CIS commodity currencies, it may perform better as, in Russia, a potential resumption of the CBR

hard currency buying from the market may cap any significant RUB gains, while, in Azerbaijan, the re-intensified conflict with Armenia over Nagorno-Karabakh, less prudent fiscal policy and insufficient adjustment on the monetary policy front reduces AZN appeal.

- A final note refers to the Customs Union between Russia, Belarus, Kazakhstan, Armenia and Kyrgyz Republic. The huge disparity between RUB and KZT, which appeared over 2015, has gone, removing Kazakh concerns about improved Russian competitiveness in bilateral trade. Belarus's position looks mixed: historically, Russia-Belarus relations have been dominated by political arguments, affecting economic decisions. But in 2015 we had already heard about Belarus calling for IMF support, and following the recent removal of EU sanctions against Belarus's top officials, it will be interesting to see any shifts there. Lastly, Armenia has clearly lost external competitiveness vs Russia, which may affect economic and political cooperation between the two in the future.

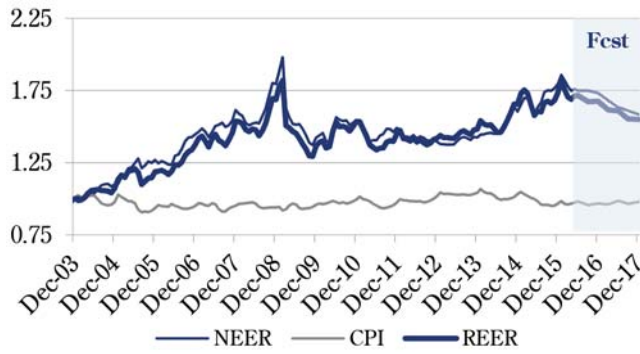
Fig 4. CIS currencies REER index dynamics (Dec-03 = 1)



Source: Bloomberg, National Sources, ING

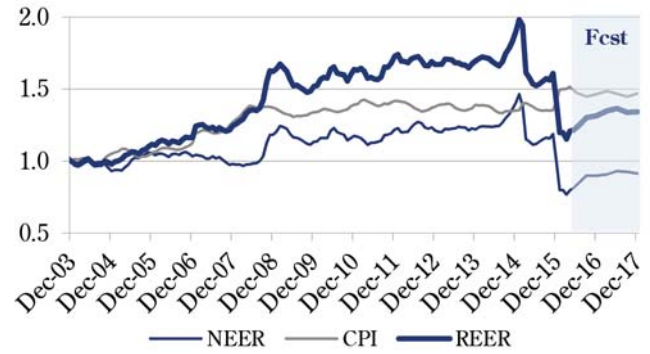
COUNTRY CHARTS

ARMENIA – NEER, CPI differential and REER



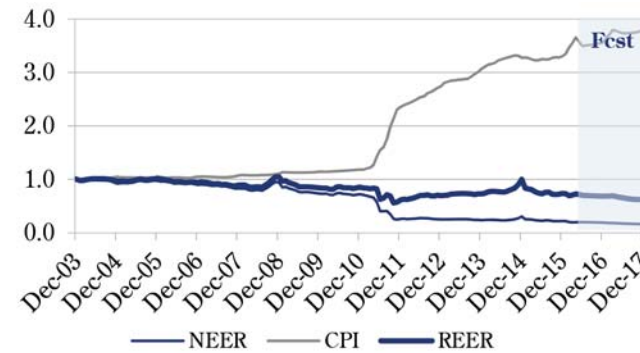
Source: Bloomberg, National Sources, Focus Economics, ING

AZERBAIJAN - NEER, CPI differential and REER



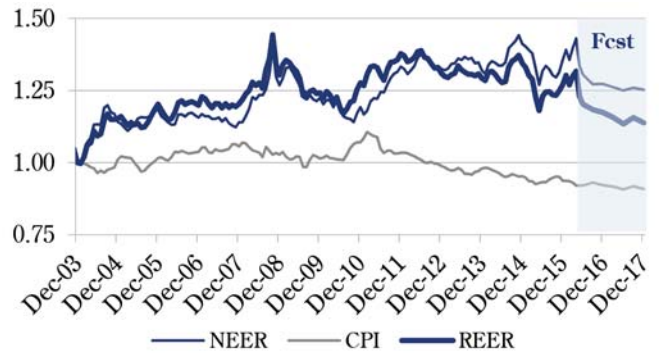
Source: Bloomberg, National Sources, ING

BELARUS - NEER, CPI differential and REER



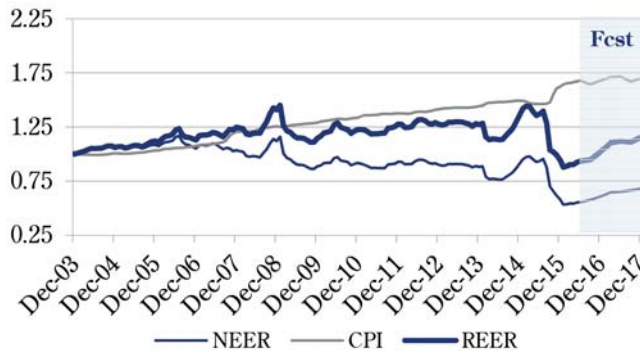
Source: Bloomberg, National Sources, Focus Economics, ING

GEORGIA - NEER, CPI differential and REER



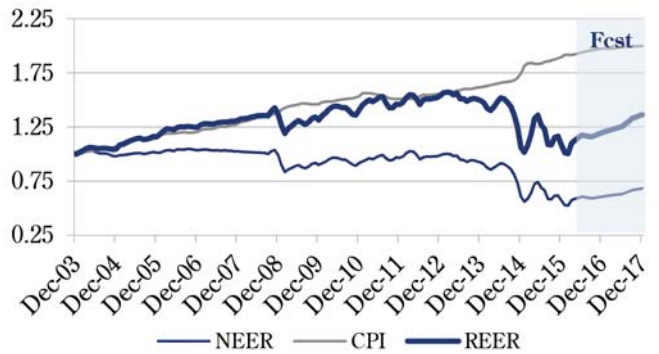
Source: Bloomberg, National Sources, Focus Economics, ING

KAZAKHSTAN - NEER, CPI differential and REER



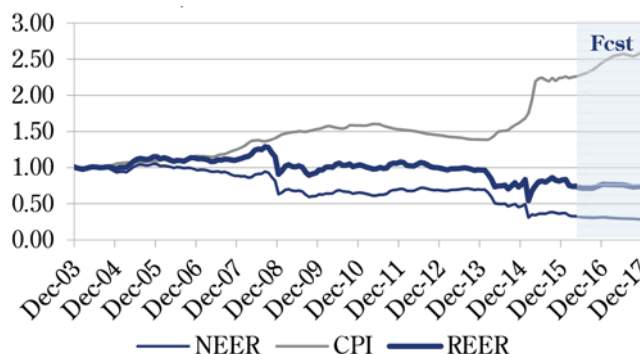
Source: Bloomberg, National Sources, ING

RUSSIA - NEER, CPI differential and REER



Source: Bloomberg, National Sources, ING

UKRAINE - NEER, CPI differential and REER



Source: Bloomberg, National Sources, ING

After the 1Q16 dynamics, AZN, KZT and UAH remain among the worst performers in REER terms vs the 10Yr averages, losing 25-26%. After the YTD rally the RUB reduced the scale of relative underperformance, while it was among the laggards in Jan-16. BYR deviates even less from their averages, while AMD and GEL are the strongest ones.