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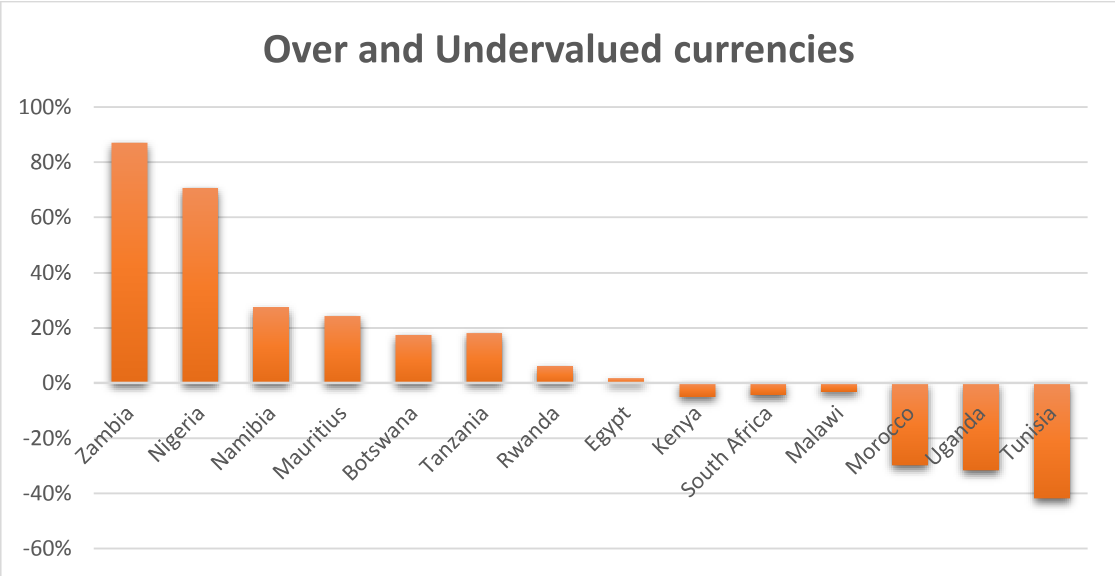
What can milk tell us about currencies in Africa?

In 1986 the Economist created an informal guide to establish the fair value of a currency based on the theory of purchasing-power parity, which simply states that exchange rates should adjust to make prices of identical goods the same. Based on the price of a burger they created the Big Mac Index.

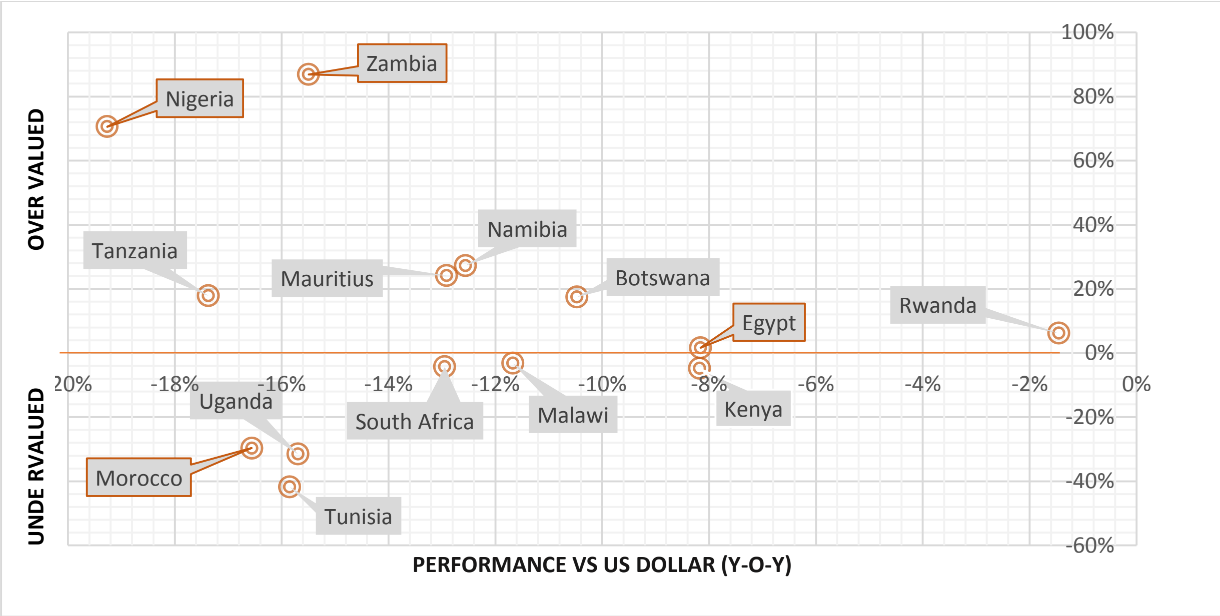
Unfortunately, Big Macs are not sold in every country in the world and so its application is limited only to countries where McDonald's has a presence. We therefore sought to create a similar index on products available in Africa. Enter the Milk Index based on the comparable prices of a gallon of milk.

We applied the Big Mac methodology to the price of milk in 14 north and Sub-Saharan countries with the chart below indicating which countries have over/undervalued currencies:



Data source: www.numbeo.com

Relative to today's exchange rates, the Zambian Kwacha and the Tunisian Dinar are respectively the two most over and undervalued currencies relative to the US Dollar. Given the volatility of the US Dollar, Euro and the Swiss Franc in the last 12 months, are African currencies by this measure moving closer or further away from their fair value? The chart below is a starting point to answering this question.



Data source: Capital IQ

The above compares the year-on-year performance of the 14 African countries against the Dollar compared to the over and undervaluation of the same based on our methodology. Of these countries we analyse a few:

Egypt: overvalued by 2% relative to its spot of 7.6 to the US$.

- In the January meeting, the Central Bank of Egypt allowed Egyptian banks to widen the band around which they can trade Dollars to EGP0.1 from EGP 0.03. This was done to mainly eliminate the currency black market and make the investment outlook more attractive. Since then the EGP has weakened by approximately 6%. Egypt's net international reserves as of April were $5 billion higher than March's having received deposits from the Saudi Arabia, UAE and Kuwait. Given this kind of support we do not expect a disorderly weakening but rather a gradual weakening towards a possible fair value of USDEGP7.7. The upside risk is seen in the 12 month Non-deliverable forward ("NDF") that suggests that a move towards 8.5 is on the cards in the next 12 months. If this were to happen then the currency at current milk prices will be undervalued by 10%.

Nigeria: overvalued by 71% relative to its spot of 198 to the US$.

- Given the dependency of Nigeria's exports and government revenue on oil proceeds, the naira has weakened significantly due to the collapse of the crude oil prices since June last year. The fall in prices raised questions about the sustainability of its external position which led to significant portfolio and other capital outflows. Supporting the naira through dollar sales was draining the forex reserves and as a result the Central Bank of Nigeria abandoned its weekly auctions which was effectively a devaluation of the currency. However, despite the 19% year-on-year and 7% year-to-date weakening, the naira still has a way to go to reach its possible fair value of 339 to the Dollar. This fair value suggests weakening past what the 12 month NDF rate of 244 is indicating. This weakening trend against the dollar could come to a swift halt should crude prices stage a sustained recovery this year.

Morocco: undervalued by 30% relative to its spot of 9.73 to the US$.

- Historically the Bank Al-Maghrib (BAM) (Morocco's central bank) had managed the dirham against a basket of currencies of which the euro had an 80% weight. Last month the BAM announced that it had adjusted the weightings such that the Euro now has a 60% weighting and the dollar now has a 40% weighting. This move is significant because 75% of Morocco's external debt is in euros and the recent weakness in the euro against major pairs gives Morocco some relief. Going forward, a number of top FX dealing banks are forecasting EUR/USD parity in the next 12-48 months market. Further expected EUR/USD weakness suggests moves higher in the USD/MAD which implies further undervaluation.

Zambia: Overvalued by 87% relative to its spot of 7.46

- Much like Nigeria, Zambia is suffering on the back of falling commodity prices, in this case copper prices which have been mainly caused by oversupply, a strong dollar and the possibility of Chinese growth slowdown. Zambia's copper exports account for 75% of total exports and China accounts for 45% of global demand. Copper prices have slumped to a 5-year low at $5353 a tonne of which the marginal cost of copper production is about $5500 a tonne. The index suggests that the Kwacha should fall to 13.94 despite year-on-year and year to date fall of 15 and 14% respectively.

The Milk Index much like the Bic Mac index are indices meant to approximate, with varying degrees of accuracy, the purchasing power parity. As can be seen from the above analysis the Milk Index provides some intuitively accurate assessments of the historic trends of currencies and perhaps informs some forecasts. If anything the Milk Index is a starting point of debate concerning the fair valuation of African currencies given the obvious geographic limitations of the Big Mac Index.

Comment piece by the Macroeconomic Strategy Team at Atria Africa, an asset management and corporate advisory firm, focused on Sub-Saharan Africa.

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