Investment **Research**

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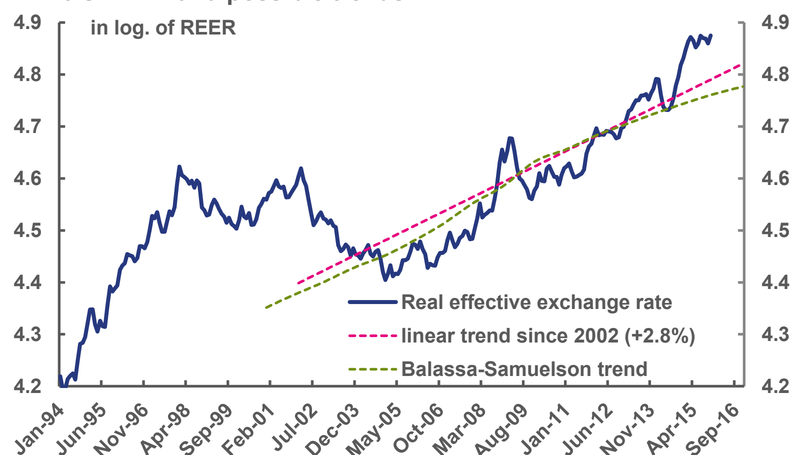
The yuan is overvalued but won't fall from a cliff

The structural change in China's exchange rate policy allows a further depreciation against the US dollar, which makes economic sense

Key points

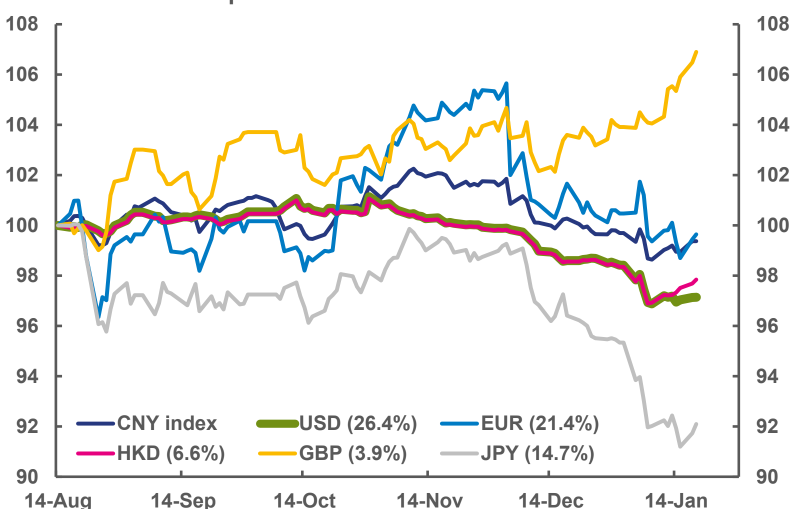
- Until recently, the Chinese exchange rate (FX) policy was driven by the bilateral CNY/US$ rate. With most emerging currencies and even the euro depreciating against the dollar, the real effective exchange rate of the yuan rose by 15% in the year to August 2015 (*Exhibit 1*).
- Using various metrics, we have come to the conclusion that the yuan is roughly 10% overvalued. Therefore, we consider a depreciation to make economic sense.
- The recent structural change in Chinese FX policy introduces more flexibility and an explicit reference to a trade-weighted average of 13 currencies. Renewed dollar appreciation, especially against emerging currencies have led to a yuan depreciation against the US$ (*Exhibit 2*).
- Even though China's capital account is partly open, Chinese authorities are still far from allowing free movements of capital and can therefore have an active FX policy, thanks to substantial reserves.
- Over the next 12 months, we expect a "non-disruptive" yuan depreciation by around 3% in effective terms (CNY index) and 7% against the US$, to around 7 CNY/US$.

Exhibit 1
The RMB/US$ policy led to a sharp increase in real terms



Source: Bank of International Settlements (BIS) and AXA IM Research

Exhibit 2
The new target (CNY index) is a basket of 13 DM currencies



Source: Datastream and AXA IM Research

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RMB: a new channel of risk transmission

Since the exchange rate reform last August, movements in the CNY/US$ (RMB's onshore exchange rate) and CNH/US$ (RMB's offshore Chinese rate) have been closely watched by investors, and at times, acted as **a source of market volatility**. The FX market liberalisation, in our view, has offered global investors a new way of expressing China fears, and created a powerful channel of transmission connecting China and the global markets.

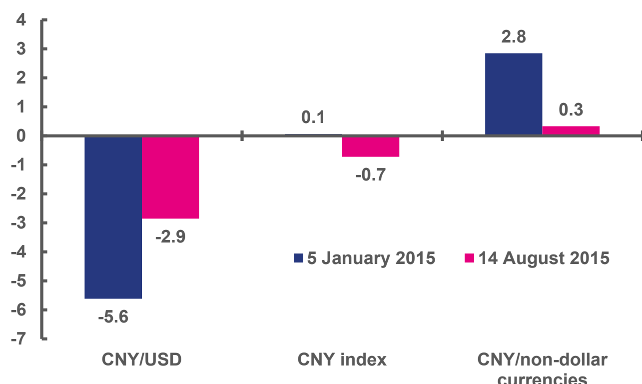
We think the 11 August reform, which led to the largest one-day fall in the CNY/US$, was an integral part of China's financial system reform, consistent with the SDR inclusion and the progressive opening up of the capital account.

Following the de-peg from the USUS, China also introduced an RMB trade-weighted index, which consists of 13 currencies[1]. This transition of official reference from the CNY/US$ to the more economically sound trade-weighted index[2], marks **a significant shift in China's foreign exchange regime**.

In practice, the yuan has only depreciated visibly against the US$, by 6% over the past 12 months (and 3% since the August reform), but actually strengthened against other (commodity exporters' and emerging Asian) currencies, with the overall index staying broadly flat. In other words, the CNY/USD move was driven more by USD strength than yuan weakness (*Exhibit* 3).

Exhibit 3

Yuan's depreciation is mainly against the US$ and yen



Source: Bloomberg, CEIC and AXA IM Research

For those who argued that the yuan was artificially kept undervalued, the depreciating pressure – which the People's Bank of China (PBoC) has intervened to slow down over this period – should be a wake-up call: at this juncture, **market forces are for the yuan to depreciate.**

A free-floating RMB (with free movement of capitals) would depreciate

Let's begin with **a thought experiment**: imagine China allowed, as most other emerging markets do, for free movement of capitals and free market-driven adjustment of its (therefore free-floating) exchange rate. Since China already allows capital inflows, a rational guess would be to see an increase in net capital outflows. In particular, Chinese companies and households would most likely take this opportunity to diversify the currency, and more generally geographic, exposure of their savings and shift part of them abroad. This movement might be reinforced by the fear of being "trapped" again in case of a return to capital controls. Gross capital inflows may also increase, as foreign investors would be reassured by the possibility of freely repatriating their assets. Altogether, we would expect **the yuan (RMB) to sharply depreciate in the short run**.

In the medium term – still as a thought experiment, imagining the yuan was a free-floating currency with free capital movements – it would still make sense for **the RMB to depreciate further against the dollar,** considering the divergence of monetary policies (Fed tightening versus accommodative measures by the PBoC with cuts in interest rates and required reserve ratio). In this sense, the RMB would behave very much like other EM currencies and, with an unfavourable relative cyclical positions (slowdown in China), **the RMB would probably depreciate even in effective terms**.

In the long run, as expressed in our "Outlook 2016[3]", we would expect the net external investment position to stay roughly the same as today, with China remaining a net creditor to the world. The composition of gross assets would however change, with less reserves and a much more diversified asset portfolio, which in turn would reinforce China's income balance, offset by an appreciation of the currency and a smaller trade surplus. Summing this up, China's fundamental exchange rate (see Cline[4] for a recent estimate) points to **a long-term appreciation**.

The yuan is overvalued by 10%

Given its peg to the rising dollar, China's effective exchange rate has risen sharply over the past few years (*Exhibit 1*) and we think the RMB clearly exhibits **symptoms of overvaluation**. Comparing China's real effective exchange rate (REER) evolutions with a "benchmark" average of REER movements for 11 countries[5] (either at a comparable level of economic development as China, or with a similar growth model), suggests a large yuan overvaluation (*Exhibit 4*).

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[1] The CNY Index consists of USD (26% weight), EUR (21%), JPY (15%), HKD (6.6%), AUD (6.3%), GBP (4%) and another seven EM currencies. http://www.pbc.gov.cn/english/130721/2988680/index.html

[2] Even though the official China Foreign Exchange Trade System (CFETS) index includes only 13 bilateral exchange rates (e.g. the Korean won and Taiwanese dollar are excluded), it tracks very closely the BIS Nominal Effective Exchange Rate (with 41 currencies).

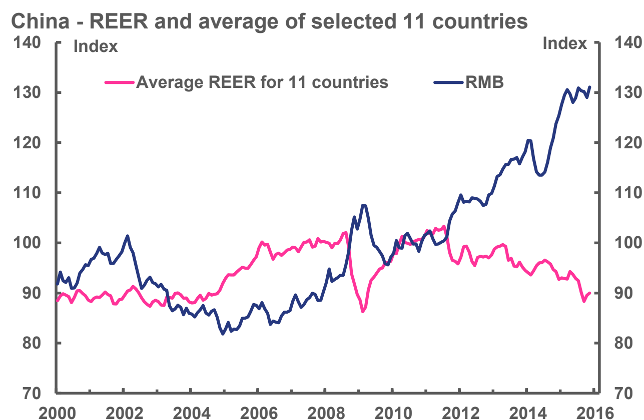
[3] Yao, A., "China: turning on the capital flow tap – implications of capital account liberalisation", AXA IM Research Outlook 2016 p. 17, 18 December 2015.

[4] Cline, W., "Estimates of Fundamental Equilibrium Exchange Rates", Peterson Institute for International Economics, November 2015.

[5] BRL, IDR, INR, KRW, MYR, MXN, BRL, TWD, ZAR, CZK, PLN.

Exhibit 4

China's REER appreciation at odds with similar countries



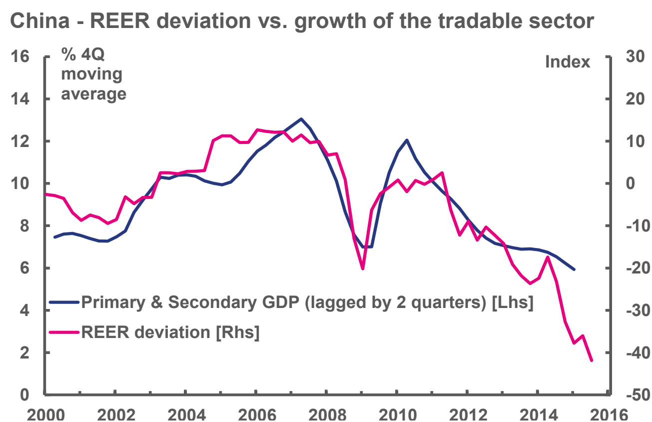
Source: Bloomberg, BIS, CEIC and AXA IM Research

However, such a crude correlation does not tell the full story. One could argue that the selection of the "benchmark" is imperfect, as China's economy has clearly outperformed all the comparable countries. This should translate to a real outperformance of the yuan against other currencies. Besides, despite the rise of the currency, China continues to gain market share in global exports.

But the RMB appreciation clearly represented **an unwelcome monetary tightening**. at a time when the domestic economy is slowing (*Exhibit 5*), macro imbalances are intensifying, and **deflation is deepening** (our estimate for China's GDP deflator, at -0.4%yoy in the fourth quarter, points to a mild but persistent deflation).

Exhibit 5

The RMB appreciation occurred in a downturn

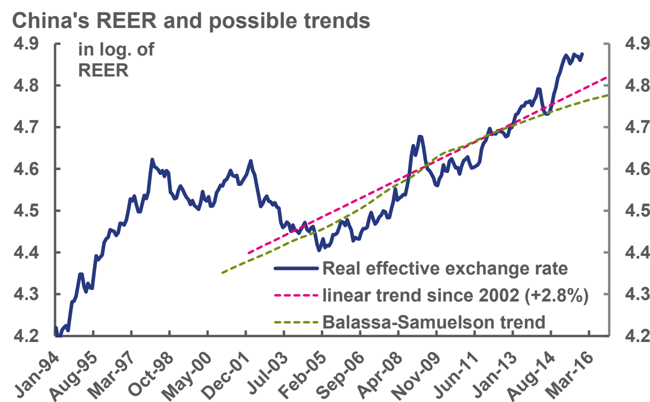


Source: Bloomberg, BIS, CEIC and AXA IM Research

Adjusting for the trend[6] (due to China's larger productivity growth which implies a real effective appreciation; *Exhibit 6*), **the yuan is overvalued by around 10%**. It is however worth acknowledging that this trend computation is fragile and relies heavily on the starting point; for example, considering China's entrance in the World Trade Organisation from December 2001 would lead to a flatter trend, hence a much larger deviation / overvaluation.

Exhibit 6

China's REER is 8-11% above its long-term trend



Source: BIS and AXA IM Research

The extent of the yuan depreciation is a choice of economic policy

In 2016, China's productivity still grows faster than the (trade-weighted) average of its main partners, which would translate into a REER appreciation… but a stronger depreciating force is also at play to correct the current overvaluation. Altogether, we believe a purely economic-driven RMB would depreciate in effective terms.

We think the downward pressure will continue to come from capital outflows. Our estimate suggests that **total capital outflows amounted to US$760bn in 2015**, driven by a combination of a knee-jerk reaction to the yuan depreciation and the structural need of Chinese investors to diversify assets overseas, under a more open capital account[3]. We think the same set of cyclical (yuan depreciation) and structural (portfolio diversification) factors will keep outflow pressures high for 2016. In particular, we see capital outflows coming from:

1) Chinese corporates paying down dollar debts with cheaper onshore funding[7],
2) local banks lending more overseas to support China's increasing ODI[8] and OBOR[9]/AIIB[10] projects, and
3) foreign carry trade on CNH unwinding.

Besides, the possibility for retail investors to convert US$50k-worth of yuan into foreign currencies puts pressure on the currency, even though it does not translate into outflows from China[11,12].

[6] We built a trade-weighted trend in productivity growth differential and retain the common econometric estimate of 0.4 for the REER pass-through (K. Rogoff, 1996).

[7] China's foreign currency debt amounted to US$804bn as of Q3 2015 according to SAFE data, down around 100bn a year ago.

[8] Outbound direct investment

[9] China "One belt, One Road" strategy

[10] China-led Asian Infrastructure Investment Bank

[11] The banking sector foreign currency deposits, both personal and corporate, stood at US$630bn by end-2015, up US$60bn from a year ago. Retail FX conversion was not a big driver of capital outflows last year, but assuming a reasonable amount of wealthy

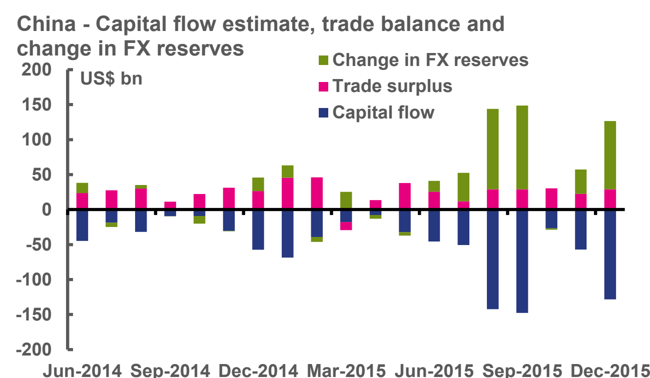
Chinese authorities are however still **far from allowing free movements of capital** (restrictions for households, quota for foreign investors, and most domestic companies being state-controlled), with the help of a structural current account surplus and of substantial reserves, **the extent of the RMB depreciation in 2016 is a choice of economic policy**.

China will let the RMB depreciate further but not free fall

We believe the Chinese authorities will not fight against an unwind of currency overvaluation (because it will be positive for the economy), **as long as it does not damage macro and financial stability**, still a key priority for the government. Should currency market volatility and accompanied capital outflows become destabilising and contagious, the authorities will react decisively with force, as attested by the FX intervention in early 2016. Clearly, the FX reserves have been deployed extensively to counter outflows last year (*Exhibit 7*), but the fast pace of reserve depletion will make the PBoC more cautious in continuing the operation at such scales. We think the official defence (against outflows) could gravitate more towards temporarily tightening capital controls and/or ad-hoc window guidance to limit banks' facilitation of speculative activities[13].

Exhibit 7

Facing capital outflows, PBoC intervened to limit the yuan depreciation



Source: CEIC and AXA IM Research

Structurally, we believe the most important element in the utility function of Chinese authorities is to **preserve the reform momentum.** The RMB is therefore unlikely to fall off a cliff, with damaging consequences for the real economy.

Conclusion: a 7% depreciation against US$

We quantify this **"non-disruptive" depreciation of the RMB to around 3% in effective terms** (i.e. in CNY Index), only slowly unwinding the 10% overvaluation over the next three years (as the current overvaluation was accumulated over the past three years). Considering our forecast of euro-dollar at parity by end 2016 and taking into account a spill over effect (beta) of RMB depreciation on other emerging currencies, we expect **a 7% depreciation against the US$ by end-2016, to slightly above 7 CNY/US$**.

If the global market becomes receptive of the yuan weakness as a natural part of China's economic rebalancing, we believe Chinese authorities would (rightly) **take this opportunity to let the RMB depreciate faster**, with the CNY index basket falling by 5% by year-end, and the weakening against the US$ therefore reaching 13%.

Chinese take advantage of the scheme, potential outflows could be significant.

[12] To our knowledge, a vast majority of the USD deposits converted by retail investors have been kept in the Chinese banking system, as the physical movement of money crossing the border is still stringently controlled by the authorities.

[13] The PBoC intervened the offshore CNH market recently by draining market liquidity, but also requesting banks to raise the CNH HIBOR rate, making it very expensive for speculators to borrow and short CNH.

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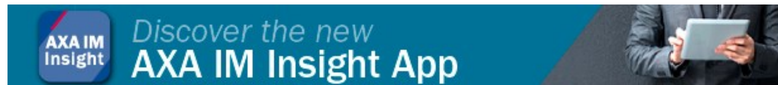

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