ECONOMIC ANALYSIS

Projecting China's foreign reserves in the aftermath of the August RMB devaluation

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Summary

- Starting from July 2014, China's foreign reserve started to decline over time, thus the large-scale capital outflow was deemed to be a serious threat to Chinese economy. The RMB sharp devaluation in August, after the PBoC announced the new mechanism of the fixing price formation, further put this issue to the crest of the wave.
- In order to know how worrisome the problem is, we first of all gauge capital outflows by adjusting the monthly changes of foreign reserves by trade surplus and net FDI, taking into account of FX deposit change and RMB cross-border flow as well. The result proves capital outflow problem becomes more serious in the recent months, due to the stock market crash and the RMB sharp depreciation.
- Based on the same method, we forecast the size of foreign reserve at end-2015 under "benign scenario" and "risky scenario". We predict that under the "benign" scenario, foreign reserve will decrease to USD 3492.2 bn, and it will be USD 2953.1 bn under the "risky" scenario at end-2015.
- In practice, we view the real case will most likely fall between these two extreme scenarios. To prevent the materialization of the worst case, China's authorities are likely to back down from their previous attempt to devalue the currency and reform the fixing rate. Toward the goal of avoiding foreign reserve's sharp declining, certain capital restrictions and market intervention are unavoidable.

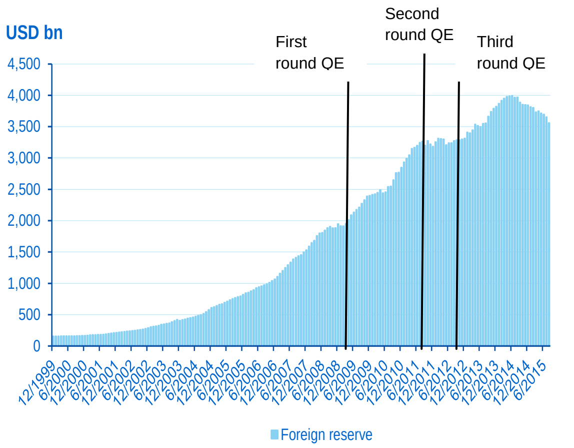
Gauging China's portfolio capital outflows

Just a couple of years ago, China was still enjoying a "twin surplus" on its balance of payment (BOP) as its exports and foreign investment brought vast amount of net inflows under both current and capital accounts. As a result, the twin surplus led to a persistent increase in China's foreign reserves. Especially during the period of US implementing ultra-loosening monetary policy in response to the 2008-2009 Global Financial Crisis (GFC), China's foreign reserves doubled its size in less than 6 years. (Figure 1)

However, the trend started to reverse from July 2014. Within a period of 13 months, foreign reserves diminished rapidly from USD 3.99 trillion as of end-July 2014 to USD 3.56 trillion this August. Given that China still had a sizable surplus under its current account during this period, the fall in foreign reserves is mainly due to the intensified capital outflows, in particular portfolio outflows.

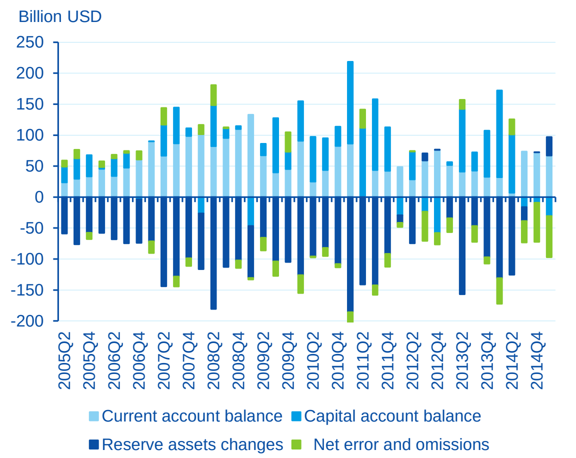
Understanding the historical pattern of China's portfolio outflows is imperative for us to forecast the evolution of foreign reserves and analyze related risks. Ironically, there is no reliable series of portfolio outflows reported by China's government. The Balance of Payment (BoP) data includes the balance of capital account but it also reports a very large error term which is believed to contain certain disguised capital flows. (Figure 2) Therefore, directly using portfolio flows in the BoP data could lead to some biased results in analysis. Another disadvantage for the official BoP data is that it's reported on a quarterly basis with a couple of months lag, making it almost impossible to conduct timely analysis at some game-changing moments, such as China's recently unexpected currency devaluation.

Figure 1
China's previous long-lasting capital inflows accumulated large foreign reserves



Source: CEIC and BBVA Research

Figure 2
The BoP data have large error terms, which could not provide accurate capital outflow figures



Source: CEIC and BBVA Research

Instead of using the portfolio outflow reported in the official BoP data, we gauge portfolio flows under China capital account by adjusting the monthly changes of foreign reserves. In particular, the portfolio outflow is defined as below:

Portfolio outflow = foreign reserves change-trade surplus-(net FDI)-(net RMB cross-border flow)+(FX deposit change)

(Equation 1)

On the right side of the equation, trade surplus and net FDI, the latter of which is defined as the difference between inward FDI and outward FDI, are the USD amounts reported by China's customs and central bank. They are the major contributors, along with the portfolio outflow, to foreign reserves accumulation. It is straightforward to exclude them from the changes of foreign reserves in calculating the portfolio outflow in the same period.

The items of net RMB cross-border flow and the FX deposit change merit further elaboration:

First, the increasing usage of the RMB in settling transactions of cross-border trade and FDI has necessitated the relevant adjustment of RMB-denominated flows in trade surplus and net FDI because this part shouldn't lead to the change of foreign reserves. An extreme example is that if in a month all the FDI and trade are settled in the RMB, there will be no change of China's foreign reserves in the same period. Instead, the net impact of RMB cross-border flows will be the change of offshore RMB deposits. Previously, when the RMB still had strong appreciation expectations, foreign exporters showed great willingness to receive the RMB in their transactions with China's importers. As a result, the offshore RMB deposits had increased rapidly. (Figure 3)

Second, regarding the FX deposit change, it largely reflects that China's domestic individuals and enterprises, in the face of elevating RMB depreciation expectations, have been increase their holdings of

USD denominated deposits within the country. Given that these USD deposits still remained in China's financial system, albeit no longer as foreign reserves at the government's hand, they should not be treated as "outflow" at the moment.

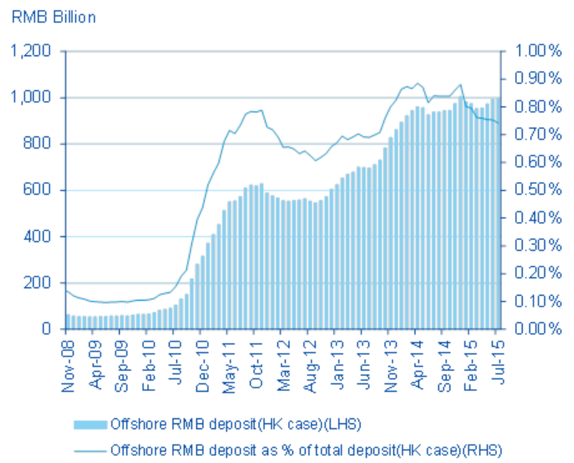
It is noted that both the net RMB cross-border flow and the FX deposit change are sensitive to the RMB exchange rate. For example, domestic individuals and enterprises significantly increased their holdings of FX deposits to USD 667.4 billion, compared to USD 640.4 billion in the previous month (USD 27 bn increasing). Looking ahead, we expect the RMB cross-border inflow and the FX deposit change to increase rapidly in the foreseeable future unless the authorities are to tighten the capital controls.

Based on relevant historical series, we estimate the dynamic of portfolio outflow since 2012. (Figure 4) The portfolio flow had swung between net outflow and net inflow during the period of January 2012 to June 2014. However, from July 2014 onwards it has been on the side of outflow.

Of our great interest is its recent performance in the aftermath of the August unanticipated devaluation. We estimate that August portfolio outflow increased to USD 148.1 billion from USD 137.9 billion in July. The spike of portfolio outflows in August has forced the authorities to spend more foreign reserves to intervene the market so as to stabilize the exchange rate.

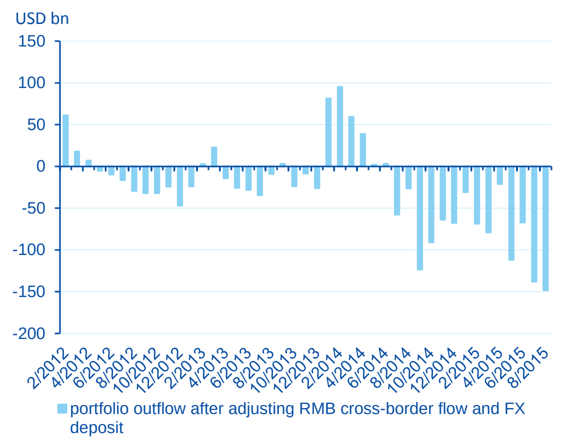
It is noted that our estimate of portfolio outflow didn't take into account the valuation effect of foreign reserves. It is mainly due to the lack of composition data for foreign reserves. All in all, the foreign reserves change due to valuation can be treated as a special form of capital flows.

Figure 3
Previously, offshore RMB deposits increased rapidly, when appreciation expectation dominated



Source: CEIC and BBVA Research

Figure 4
The estimated historical portfolio outflow since 2012



Source: CEIC and BBVA Research

Two scenarios of foreign reserves projections

With our estimates of portfolio outflows, we can construct two scenarios to forecast the dynamic of foreign reserves at the end of 2015. One scenario is a "benign" scenario, in which we assume that the impact of the unanticipated devaluation in August has a "one-off" nature so that the portfolio outflow and other factors will revert to their previous tracks throughout the rest of the year. On the other hand, the alternative scenario is a risky one which assumes that the market turmoil in August will continue and even deteriorate over the next several months prior to the end-year. We expect the real case will be somewhere between these two scenarios.

The forecasting formula of foreign reserves is a simple transformation of Equation (1):

Foreign reserves = portfolio outflow +trade surplus+(net FDI) +(net RMB cross-border flow)-(FX deposit change)

(Equation 2)

The Benign scenario: the impact of devaluation is transitory

In this scenario we assume that the impact of the August devaluation on foreign reserves is transitory. As such, the portfolio outflow as well as other factors would revert to their previous trend throughout the rest of the year. In particular, below assumptions are adopted in this scenario:

(1) Portfolio outflow: we assume that the portfolio outflow will amount to USD 70 billion per month from September to December, which is the average level in the period of January-July.

(2) Trade surplus: we forecast that exports will decrease at 1.4% y/y from September to December, in line with the ytd growth rate in January-August 2015. Meanwhile imports will also decline by 14.5% y/y in September-December. As a result, the projected trade surplus will be USD 54.66, 66.16, 74.54 and 72.47 billion from September to December, respectively.

(3) Net FDI: we forecast that FDI will grow at 8% y/y from September to December, in line with the ytd growth rate in January-August 2015. Meanwhile, with the same method, ODI will also grow by 21% y/y in September-December.

(4) RMB cross-border net flow: If the RMB cross-border settlement continues its pervious trend in January-July, the RMB will flow from overseas market to the mainland market with a pace of USD 10.58 billion per month.

(5) FX deposit change: the FX deposit change is assumed to follow its previous trend of January-July in the rest of the year. In particular, individuals and enterprises will increase their holdings of FX deposits by averagely USD 9.56 billion per month from September to December.

Based on the above assumptions, we come up with a projection of foreign reserves at USD 3492.2 billion as of the end-2015. It implies a modest decline of USD 64.8 billion in foreign reserves between August and then. The pressure of portfolio outflows can largely be offset by stable trade surplus. Under such a scenario, the authorities should not feel liquidity squeeze.

The risk scenario: the impact of devaluation is long-lasting

On the other hand, under the risky scenario, we adjust our assumptions for the scale of the portfolio outflow, the RMB cross-border flow as well as the FX deposits change under the alternative risk scenario, taking into account the possibility that the impact of the August devaluation could be long-lasting rather than short-lived. The difference between the two scenarios mainly reflects on the variables with high sensitivity to currency expectations and financial market movements. Regarding the factors relating to the real sector such as trade surplus and net FDI, we make the same assumptions under both scenarios.

(1) Portfolio outflow: we assume that the portfolio outflow will amount to USD 150 billion per month from September to December, almost equivalent to the outflow seen in August.

(2) Trade surplus: the same assumption under the benign scenario

(3) Net FDI: the same assumption under the benign scenario

(4) RMB cross-border net flow: currently, the total amount of overseas RMB deposits is estimated to be RMB 2.6 trillion (or USD 413 billion). We assume that one third of these overseas RMB (USD 137.7 bn) will flow back to the onshore market during the remainder of the year through trade payment, direct FDI as well as portfolio inflows. All these will lead to the equivalent decline in China's foreign reserves as we elaborated in the previous section.

(5)FX deposit change: in August, FX deposit increased by 27 bn USD, mainly due to the sharp RMB depreciation in the same month. We assume that from September to December, FX deposit will increase at the same speed of that of August, taking into account of the RMB depreciation effect.

Altogether, under the risk scenario, we forecast that foreign reserves will significantly decline to USD 2953.1 billion at the end of the year. Accelerated portfolio outflows, the inflow of overseas RMB, and the residents' increasing willingness of holding FX deposits all play their part in the sharp decline of foreign reserves.

Conclusions

In practice, we view the real case will most likely fall between these two extreme scenarios. From the perspective of Chinese policymakers, the risk scenario is unacceptable because such a swift disposal of foreign reserves will exert enormous pressure on the liquidity management of the central bank. This could force China's central bank to sell a bulk of US treasury bonds in a short period to meet their liquidity needs. It could have knock-on effects on global financial markets. (Refer to our recent Global Economic Outlook for the spillover effects of China to other economies).

To prevent the materialization of the worst case, China's authorities are likely to back down from their previous attempt to devalue the currency and reform the fixing rate. We expect the authorities to tighten capital controls to stem capital outflows. Indeed, they have already implemented a series of macro-prudential measures in this respect including (i) increase costs of RMB derivative trading; (ii) enhance supervision on cross-border capital flows; and (iii) tighten the FX exchange for residents.

In the meantime, the authorities have beefed up their efforts to strengthen investors' confidence in the RMB exchange rate so as to avert the vicious cycle of currency depreciation and capital outflows. They have intervened both the onshore and offshore RMB markets to lead the exchange rate to go stronger. All in all, the authorities need to control the pace of foreign reserves decline within an acceptable range to avert the relevant risks not only to the country's financial system but also the global financial markets. Toward this goal, certain capital restrictions and market intervention are unavoidable.

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