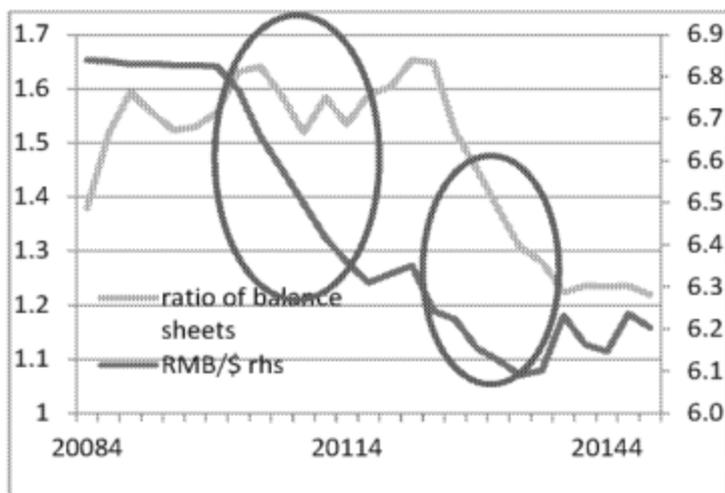




RMB vs. ratio of Fed to PBOC balance sheet



Source: Bloomberg and Deutsche Bank

The table below highlights these three periods in terms of the actual notional impact on global liquidity via the combined effects of revaluing the PBOC balance sheet as well as the changes in the underlying domestic liquidity. Under a relatively stable currency the PBOC expanded its balance sheet aggressively in the first phase, presumably in part being obliged to accelerated FX reserve accumulation; the Fed was more or less in between expanding their balance sheet. The second phase saw the more dramatic currency appreciation with a strong Fed expansion but also strong PBOC liquidity expansion. The third phase saw even stronger Fed balance sheet expansion but weaker PBOC expansion and more modest RMB appreciation. The last two phases combined saw global central bank liquidity expand by notionally similar amounts i.e. \$1500 billion. More than double the first phase when the currency was more stable and the Fed was quieter. However note that as expected, the reserve accumulation was almost the same in each period, around 500-600+ billion. So even though the Fed wasn't expanding the balance sheet much, the hangover of the previous expansion and capital flows in general required a more aggressive intervention by PBOC to acquire reserves and maintain the a stable currency. So a notionally less aggressive expansion in global central bank liquidity under a stable exchange rate regime was disproportionately more skewed to reserve accumulation.

Changes in central bank balance sheet liquidity

	chg Fed BS	chg \$ bn	chg Ch BS	RMB change bn	RMB start	RMB finish	% chg RMB	USD change bn	Total	Reserve chg bn
2010q2-2008q4	4.1%	90	17.3%	3584	6.84	6.82	0.23%	532	622	508
2012q1-2010q3	25.8%	581	14.2%	3534	6.77	6.31	7.26%	827	1408	657
2013q4-2012q4	39.3%	1126	7.7%	2274	6.24	6.09	2.51%	492	1618	510

Source: Haver Analytics and Deutsche Bank

The next issue is given changes to liquidity how does it impact asset prices. We can think of the three components of liquidity: the Fed's balance sheet, the accumulation of FX reserves by other central banks; and the residual of other central banks' liquidity expansion after the accumulation of FX reserves. As the chart below shows in terms of growth the explosion of the Fed stands out during the crisis but there have been strong expansions in other central banks' liquidity excluding reserve increases. FX reserve accumulation has been quite weak since 2012 and is now negative. In absolute terms liquidity is strongest in FX reserves and other central banks ex reserves by a factor of three times for the Fed's balance sheet.