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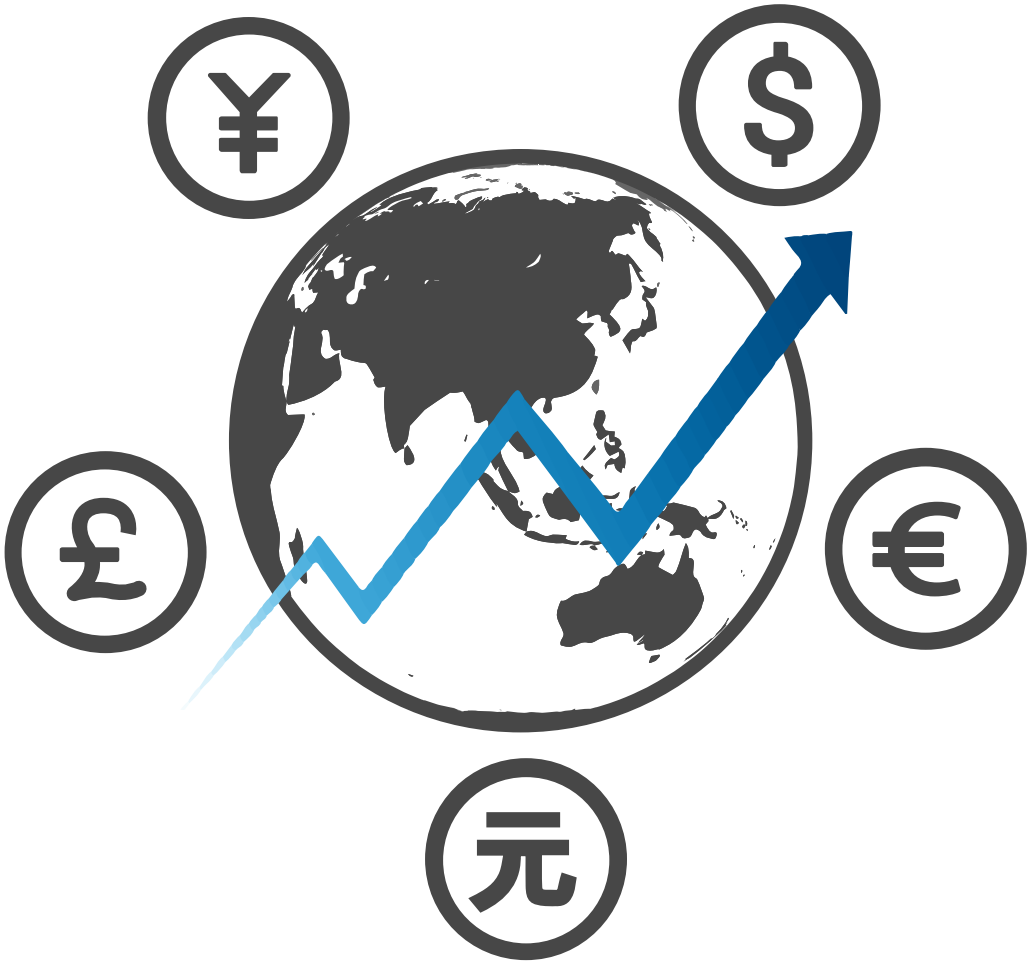
Foreign exchange reserves in a volatile world

Gary Smith and John Nugée



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He began his career in 1986 in the Economics Department of Greenwell Montagu. In 1989, he moved to the Economics and Fixed Income Research Department of Merrill Lynch. From 1995-2004 he worked in the Morgan Stanley Fixed Income Sales Department. He joined the BNP Paribas Group in 2004, and between 2008-13 was the Global Head of Official Institutions at BNP Paribas Investment Partners.

Smith's articles have appeared in various publications, including the OMFIF Bulletin and the Central Banking Journal. He is a frequent commentator on topics of interest to the official institutions community. He is a member of the OMFIF Advisory Board.

John Nugée is on the Board of Directors of OMFIF and an independent commentator and public speaker on financial, economic and political issues.

Nugée has worked extensively in and with the official sector during his career, the major part of which was spent at the Bank of England where his last post was Chief Manager of the Reserves. He also worked at the Hong Kong Monetary Authority, where he was Executive Director in charge of Reserves Management, and acted as a UK director at the European Investment Bank and European Investment Fund.

From 2000-13 he worked at State Street Global Advisors, the asset management division of State Street Corporation, latterly as Senior Managing Director. He founded and ran SSGA's Official Institutions Group, responsible for overseeing the interaction with the firm's official sector clients.

The views and opinions expressed in this report are those of the authors and not of Baring Asset Management, OFI Global, Babson Capital Management, Cornerstone Real Estate or Wood Creek Capital Management.

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Foreword: Timeliness on reserves

David Marsh

This is the second OMFIF report in the past nine months embracing findings by Gary Smith and John Nugée on the accumulation and rundown of foreign exchange reserves, especially by emerging market economies. The report confirms and amplifies the findings of the earlier study from September 2015, which suggested that the sharp fall in foreign exchange reserves since the peak in 2014 was likely to be temporary and reserves could be expected to resume an upward trend once circumstances, especially in commodity-producing countries, became more propitious.

The second report is timely for three reasons. First, the world has passed an important milestone in the gradual transition towards a system of multiple reserve currencies, with the end-November 2015 decision by the International Monetary Fund to bring the renminbi into the basket of currencies in the special drawing right system from 1 October 2016. China is the world's largest reserves holder and the biggest international creditor after Japan and Germany. But its currency, emerging on to the global stage from a cocoon of protection by the Communist authorities, is also particularly exposed to international capital market vicissitudes.

Second, and linked to the gradual ascent of the Chinese currency, the renminbi has been both weak and fluctuating on the international currency stage. Chinese reserves, having risen to a peak of $4tn in mid-2014, have fallen by about 20%, as Smith and Nugée chronicle. Understandably, as a developing country dealing with a host of internal and external challenges, Beijing is resisting (with the support of the US) any idea of full currency liberalisation. The renminbi has fallen about 5% on a trade-weighted basis since its peak in November 2015. But this compares with appreciation of 5%-6% a year in each of the previous three 12 month periods. Since end-2012, the renminbi has been one of the strongest major currencies – with the trade-weighted value up 13.7%, against gains of 20.4% for the dollar, 2.4% for sterling, 1.9% for the euro and a decline of 15.0% for the yen.

Third, all these other established reserve currencies have been weighed down by their own set of anxieties and volatilities. The Federal Reserve is once again undecided about when it can resume the hikes in interest rates started in December 2015. The euro area is becalmed in a debt-induced low or negative interest rate trap. The economic revitalisation inaugurated by Japanese Prime Minister Shinzo Abe is faltering. And Britain is beset by doubts about its relationship with the European Union. All this uncertainty has a considerable impact on the reserve-holding disposition of official institutions. Especially with negative yields across $10tn worth of mainstream bonds, building reserves can be inconvenient and costly. But it is a great deal more inconvenient and costly when, in a crisis, countries find they do not have enough.

With the passing of time, the context for the global reserves fall since 2014 has become clearer. A range of large emerging market economies has been running down reserves as part of a broad strategy of shoring up currencies and economies in the face of political and economic perturbations. Saudi Arabia and Russia are two notable countries to shoulder a general fall in reserves. But there are many other examples, highlighted here in the cases of Malaysia, Indonesia and Thailand (where the data have been updated from the September 2015 study) of how countries have used a combination of currency depreciation, capital controls (no longer an IMF taboo) and discrete foreign borrowing to weather economic oscillations. As Smith and Nugée document, reserves by themselves cannot guarantee economic success. But, with the reserves now earmarked for far more purposes than in the past, this is an area where monetary authorities economise at their peril.

David Marsh is Managing Director of OMFIF

Executive summary

Shrinkage in official holdings will prove temporary

- Global foreign exchange reserves, as measured by the IMF, have fallen from around $12tn in 2014 to just under $11tn at end-2015, on the latest available data.

- The trend of foreign currency accumulation seen over the last 15 years is unlikely to go into full reverse. The reasons for holding reserves have expanded greatly in recent years, suggesting that central banks will take urgent steps to avoid reducing their holdings too far. The use of large amounts of reserves to support single policy objectives, such as defending the exchange rate, is unlikely.

- Two long-term trends point to higher accumulation of reserves over time. Developing and emerging market economies will continue to take a growing share of global GDP. And these nations will continue to have more foreign exchange reserves per unit of GDP than developed countries.

- There is no universally recognised and accepted measure for whether a given level of reserves is adequate, leading to analysis of reserves accumulation and depletion lacking firm foundations. In little more than a year China went from having a 'very big problem' with the burgeoning size of its reserves to speculation that the country's reserves levels were inadequate.

- The experience of reserves shrinkage will raise the perception of what counts as adequate, both for those managing reserves and those commentating on their actions, leading to higher overall holdings in future.

Highlights from September 2015 report

- A key player in reserves developments is China. China has been a role model for other Asian nations.

- Reserves depletion during a crisis often appears to have the effect of encouraging subsequent reserves expansion.

- There appears to be a significant difference between developing and developed countries in the appetite to build reserves.

- Many central banks are being asked to take on more, not fewer, responsibilities. The implication is that the size of 'excess' reserves is smaller than previously calculated.

1 FOREIGN EXCHANGE RESERVES IN A VOLATILE WORLD

In our September 2015 paper ('The changing role of central bank foreign exchange reserves', published by OMFIF) we made several observations on the uses and likely path of central bank foreign exchange reserves. After a turbulent few months in financial markets we take the opportunity to revisit the issues, and to develop further some prominent themes.

During the last 18 months the general backdrop to global foreign exchange reserves has shifted significantly. After almost 15 years of unremitting growth to mid-2014, foreign reserves totals have declined, in some countries rather rapidly. China's reserves, after peaking at around $4tn in mid-2014, have fallen to around $3.2tn, a 20% decline. Global reserves, as measured by the IMF, have fallen from around $12tn to just under $11tn at end-2015, on the latest available data.

The example of China's falling reserves has captured the headlines, both because of the absolute size of the decline and because it is partly a reflection of China's slowing economy and the authorities' struggle to maintain an orderly market in renminbi.

China's reserve losses have been mirrored by substantial reserve depletion in other important emerging market economies. Russia's central bank spent more than $128bn defending the rouble during 2014, around 28% of total reserves. This compares with a $5.6bn decline during the Russian currency crisis in 1998, where it spent over 40% of its total reserves in just one month. Saudi Arabia saw 12 months of continuous declines during 2015 and lost more than $117bn, but at just 16% of its total reserves, this loss was proportionately far smaller than those of other emerging countries during previous crises.

Some commentators have extrapolated from cases such as China, Russia and Saudi Arabia the likelihood of a further trend towards declining reserves in the emerging world, reversing the pattern of the last 15 years. However these forecasts are unlikely to be correct. There has not been much change in the underlying economics of emerging markets or in the strategies adopted to meet their sizeable challenges.

Trends are still firmly in place that provide longer-term structural support for growing foreign exchange reserves. The global reserves surge in the 15 years to 2014 is unlikely to go into full reverse.

Growing responsibilities for central bank reserves

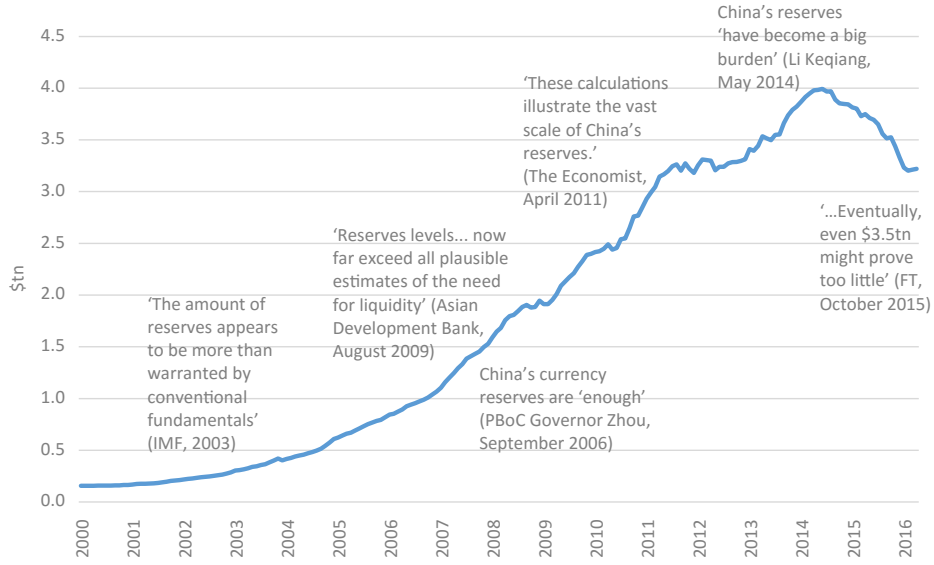
The reasons for owning foreign reserves have expanded greatly in recent years. Although holding reserves can be costly, their benefits should not be underestimated: They can support sovereign credit ratings and can help to weigh against credit default swaps widening in the event of a crisis.

Reserves have become too important to be run down rapidly, as this would risk compromising a range of objectives. Pursuit of just one policy (such as defending the exchange rate) is unrealistic. In private conversations with central bank foreign reserves managers, many have agreed with this observation, suggesting that central banks will take urgent steps to avoid reducing their foreign reserves, even after periods of substantial reserves increases.

2 CHINA AND CHANGING DEFINITIONS OF RESERVE ADEQUACY

China illustrates some important lessons. The chart shows Chinese foreign exchange reserves over the last 15 years, and is accompanied by news headlines describing specific developments. Expert commentary on reserves development has often not been well informed, nor has it benefited from particularly deep analysis. In little more than a year China went from being 'burdened' by the burgeoning size of its reserves (to quote Li Keqiang, China's premier, in May 2014), to speculation (for example in October 2015) that the country's reserves levels were inadequate.

Chart 1: Chinese reserves have dropped 20% since a $4tn high in 2014
Foreign exchange reserves, $tn, 2000-16



Source: IMF

Reserves adequacy

It seems that the absolute level of reserves is now less important than their rate of change as an indicator of the health of the central bank and underlying economy. As we argued in September 2015, 'Perversely, reserves are sometimes of more use when… not utilised', in part because the rapid use of reserves is likely to be perceived as a sign of weakness.

This is a key problem for central bankers as they seek both to manage their foreign exchange and to defend a strategy of either accumulating or running down reserves. With no universally recognised and accepted measures for whether a given level of reserves is adequate, let alone any theory on what level is optimal, conventional analysis of reserves usage has no firm foundations. Instead, the definition of reserves adequacy is constantly shifting, as stocks of foreign exchange are potentially earmarked against an ever lengthening list of responsibilities. For some countries it seems that almost any quantum of growth in reserves has not occurred quickly enough to keep up with this phenomenon, with the obvious consequence that for many countries a definition of adequate reserves may always prove to be elusive.

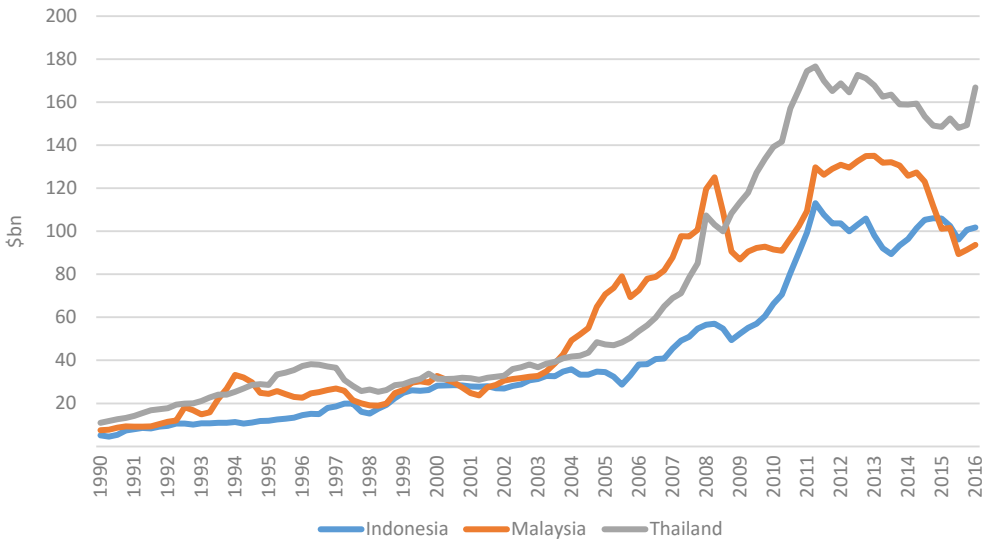
While few central bank governors or finance ministers have been bold enough to declare that they have adequate reserves, there are administrative challenges in managing, and keeping fully invested, such a large portfolio. The 'burden' highlighted by Premier Li Keqiang in May 2014 was more a reflection of these issues than a statement of reserves adequacy or abundance (not least because at the time central banks in developed countries, engaged in quantitative easing, were reducing the supply of their government bonds for the People's Bank of China to buy).

3 CASE STUDIES: MALAYSIA, INDONESIA AND THAILAND

The Asian financial crisis of 1997-98 revealed the risks to emerging markets of large international capital flows, and encouraged the subsequent accumulation of foreign reserves as financial buffers against future shocks. In Malaysia, Indonesia and Thailand, which were among the worst affected countries during the crisis, foreign reserves fell by $6.9bn, $4.9bn and $13bn, respectively, within a matter of months, equal to 27%, 24% and 35% of these countries' total reserves.

When global growth recovered and strong capital inflows returned to the region in the early 2000s, these countries began accumulating foreign reserves at a more rapid pace, and to a much higher level, than previously (see Chart 2).

Chart 2: Rapid accumulation of Southeast Asian foreign reserves
Foreign exchange reserves, $bn, 1990-2016



Source: IMF

Stategy of increasing foreign reserves

This accumulation reflects a conscious strategy among emerging market central banks of increasing foreign reserves as their domestic currencies appreciate during times of capital inflows, in order to provide financial resources with which to support their currencies during periods of depreciation and capital outflows. These reserves were hit again at the end of 2008 with the onset of the financial crisis, when global reserves suffered a net fall of around 4.5%.

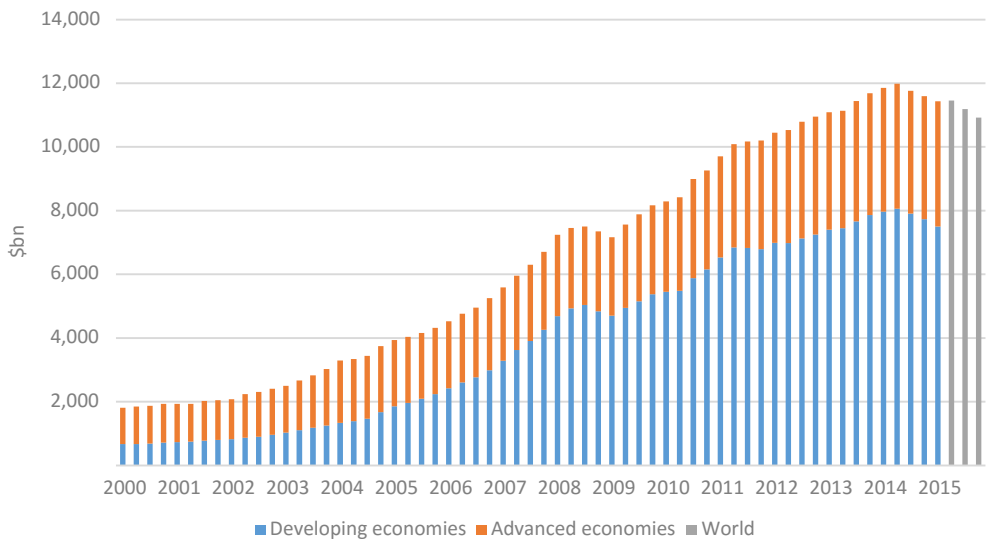
Rebuilding foreign exchange holdings

After the short-lived 2008-09 dent in reserves, central banks around the world quickly rebuilt their foreign currency holdings, which surpassed their pre-crisis peak by the end of the second quarter of 2009 (see Chart 3).

In 2014-15, Southeast Asia encountered another bout of turbulence during speculation that the US would tighten monetary policy for the first time since 2006, encouraging capital flows out of emerging market currencies into the dollar.

During the sell-off Malaysia spent $38bn of its reserves defending its currency between August 2014 and September 2015, Indonesia spent $15bn in February-November 2015 and Thailand spent $14bn betwen August 2014 and February 2015, larger nominal declines than in their previous episodes of depletion. Despite the absolute size of these losses compared with episodes such as in 1997-98, the sizeable growth in reserves since the Asian crisis means that the percentage decline was more manageable, at 30%, 13.5% and 8.6% for Malaysia, Indonesia and Thailand, respectively.

Chart 3: The steady rise of global reserves
Foreign exchange reserves, $bn, 2000 to end-2015



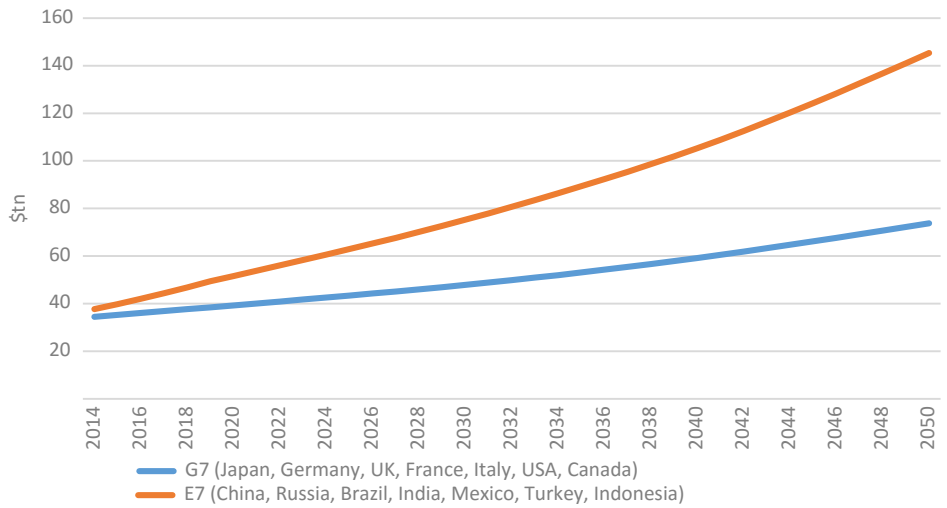
Source: IMF

4 TWO TRENDS FOR RESERVE ACCUMULATION

We suspect that the natural bias of central bankers and finance ministers for 'more not less' has not ended. While forecasting the next few months of Chinese and global foreign reserves evolution is a difficult task, the longer-term pattern might be a little easier to predict. Two trends appear inescapable. Developing economies will, over time, continue to take a growing share of global GDP. And emerging nations will continue to have more foreign exchange reserves per unit of GDP than developed countries.

Regarding the first point, a 2015 paper by PwC projects that China will overtake the US economy in market exchange rate terms in around a decade, having already overtaken it on a PPP basis. By 2050, India may be the second largest economy in the world. Nations such as Mexico and Indonesia are likely to be larger than the UK and France by around 2030. Nigeria, Pakistan, Egypt, Philippines, Vietnam, Bangladesh, and Malaysia are all projected to be rapid climbers in the league table of GDP rankings over the next 35 years. Chart 4 shows the changing balance of global GDP between advanced and developing countries up to 2050.

Chart 4: E7 countries to grow at faster rate than G7 countries
Balance of global GDP, advanced and developing countries, PPP, 2014-50



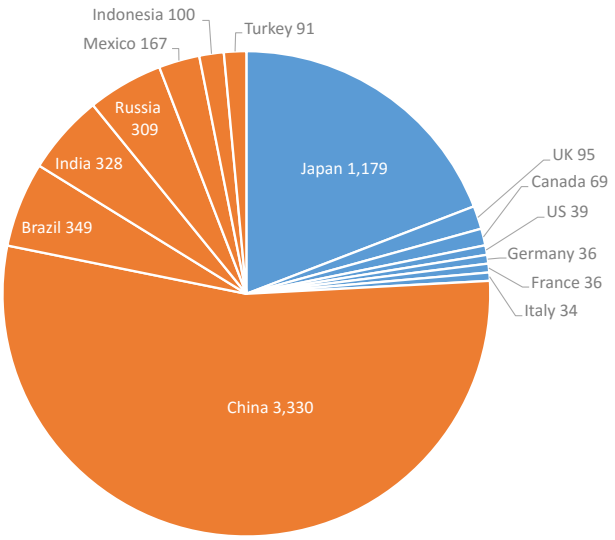
Source: PwC

With regards to the second trend, at the end of 2015 the seven largest emerging economies (the 'E7') had significantly more foreign exchange reserves than the seven largest advanced economies (the G7) despite roughly similar aggregate levels of GDP (see Chart 5 on next page). Moreover, they have sought to increase reserves from a larger base level. To this consensus we would add the observation that, as the proportion of world GDP that is provided by developing economies increases, so the world increasingly becomes on average less developed. When 85% of world GDP was generated by developed economies (as it was in the late 1960s), then the world as a whole behaved broadly as if it was a developed economy. If in 2050 the proportion of world GDP provided by developed economies is only 35%, and that provided by developing economies is 65% (a ratio that many commentators think is eminently possible), the world will have more of the dynamics of a developing economy. As one of these dynamics is a greater appetite for holding foreign exchange reserves than developed nations, the prospect of global reserves totals rising to a new high is a likely outcome.

5 DEVELOPING COUNTRY RESERVE CHALLENGES

There are a number of reasons why developing nations have a preference for holding more foreign reserves per unit of GDP than developed ones. Their economies are likely to be riskier and more volatile than developed economies, creating a greater need and desire for stability through higher reserves accumulation. In recognition of these countries' relative fragility, the IMF has recommended that the level of public debt for developing economies should be around 25% of GDP, significantly lower than the 75% of GDP for developed economies. The difference between these two ratios reflects the greater need among developing economies for large financial buffers against economic instability. This same dynamic leads them to have higher foreign reserves than developed economies.

Chart 5: The world's biggest reserves holders are emerging market economies
Foreign exchange of E7 and G7 economies, $bn, end-2015



Source: IMF. Figures as of end-2015

Connected to this point, when things go wrong for an emerging country, access to multilateral economic support mechanisms, such as the 'communal safety net' of the IMF or dollar swap lines with the Federal Reserve, is less assured than for developed countries. If that support does come, it is more likely to have restrictions and conditions attached. Ever since the Asian financial crisis of 1997-98, emerging countries have learnt to be cautious about relying on the goodwill of the developed world in assisting them, seeking to 'self-insure' themselves by building up their reserves instead. To coin a popular recent phrase, 'relying on the kindness of strangers' is usually viewed as a less optimal strategy.

Countries with large foreign reserves are viewed with greater confidence by international investors, which view large currency holdings as an assurance that their claims are able to be honoured. Research conducted by the Central Bank of Chile, published in 2011, showed that there was a negative correlation between the level of foreign exchange reserves and the perceived credit risk of a nation (measured by credit default swaps), as those reserves help to overcome some of the potential risks to emerging market investments.

The world's financial system tends to grow faster than GDP. If, as many emerging countries do, one sees the interaction of the domestic economy and the international financial system as a potential source of instability, then it makes sense to measure the adequacy of reserves against the size of the financial system rather than just GDP. Events of the past 10-15 years seem to indicate that an 'arms race' may be developing between central banks, especially in emerging economies, and the financial system, which central banks see in somewhat adversarial terms. As the global financial system expands much more quickly than world output, central banks searching for adequate defence mechanisms may need to bolster their reserves faster than global economic growth.

6 CONCLUSIONS

The 2014-15 pause – and for some nations the decline – in foreign reserves totals has led some commentators to suggest that the 15-year upswing in reserves accumulation will go into significant reverse.

Our view is that a sustained decline in reserves will be unpalatable for many nations. Reserves are just too important, and have too many separate uses, to be spent, at least in large quantities. It is most unlikely that we will ever see a repeat of September 1992, when the Bank of England and the Treasury spent all of the government's foreign reserves in one day to defend a single policy target.

The reserves decline since the end of 2014 is the result of macroeconomic forces still unfolding across the global economy. This steady fall in reserves may not end soon. However, when macroeconomic pressures change and circumstances allow, reserves are likely to resume growing. We believe that the experience of reserves shrinkage will raise the perception of what counts as adequate, both for those managing reserves and those commentating on their actions, leading to higher overall holdings in future.

The fall in Chinese reserves has been slowing over the past nine months – to $20.8bn in the latest three months (March-May 2016) from $128bn between December 2015 and February 2016 and $75.8bn between September and November 2015 – although these fluctuations have been considerably affected by valuation changes. As the Chinese authorities seek to stabilise the monetary position, the People's Bank of China might be expected – partly for psychological reasons – to start to accumulate reserves again in coming months. Chinese policy-makers are unlikely to 'have a headache' from excess reserves the next time their total reaches $4tn.

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