Current issues in central bank reserves management

John Nugée
Former Chief Manager of Reserves, Bank of England and
Executive Director of Reserves Management,
Hong Kong Monetary Authority

Abstract

With around EUR 15 trillion of investable reserves, central banks have become significant investors in capital markets, especially the fixed income and debt markets where the majority of official reserves are still invested. They face exactly the same current very low level of interest rates as other investors, and their response is therefore of interest both to other investors and to regulators and overseers of market stability. However, their objectives and strategies for the investment of their reserves and the constraints they face on their freedoms of action are not always the same as those of other investors, with many central banks facing the challenge of managing very large asset holdings and placing a lower emphasis on overall return than more typical investors, and this requires that their activities be considered separately from those of other market participants. The paper considers firstly the structure of central bank reserves management and the strategic environment that central banks operate in, with its implications for their objectives and asset management style. It then looks at current issues and in particular the central banks' response to current markets and the various constraints on their asset management activities, and finally it considers some of the issues that concern central bank reserves managers looking forward.

1 The structure of central bank reserves management

Central banks have managed their nation's foreign exchange reserves for well over 100 years; for most central banks it is a core part of their duties and since at least the 1920s they have been regular participants in the international markets for gold, bank deposits and foreign government bonds. As a result, their activities have always been of interest to those who follow markets, whether other investors and market

participants, or the authorities regulating markets and overseeing their financial stability.

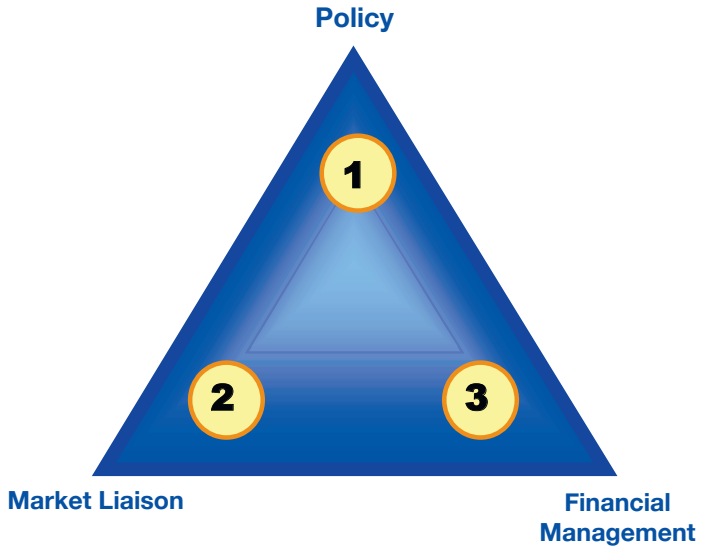
Until comparatively recently, however, central banks have been both relatively small investors compared to markets overall (total central bank reserves in the year 2000 were well under USD 2 trillion), and more importantly they were relatively passive investors, limiting themselves to core markets and not seeking to manage their portfolios that aggressively. In the last 15 years, however, total central bank reserves have grown rapidly, standing now at around USD 15 trillion, and in parallel with this (indeed partly because of the greater assets that need to be invested), central bank reserves managers have become active in a wider range of instruments and markets. Today, central banks invest in corporate bonds, equities, alternatives and the like; in short, they are present in almost all capital markets, and in many of them they are, due to their absolute size, significant players.

However, the fundamental rationale for reserves and so nature of reserves management has not been removed. Reserves Management remains a multi-faceted and multi-dimensional operation, with elements of *Policy* (for example the maintenance and defence of a fixed exchange rate, the maintenance of national creditworthiness, the management of national foreign currency denominated debt servicing) and *Market Liaison* (for example the oversight of and gathering of information on FX and bond markets, the communication of the central bank's intentions) alongside the more typical investor's objectives of *Financial Management* (for example balance sheet and risk management, income generation, wealth preservation). Any analysis of a central bank's actions as an investor, and in particular any consideration of their response to the current market environment, must therefore take into account this multi-faceted and multi-objective nature of their investment task.

The objectives outlined above – *Policy, Market Liaison* and *Financial Management* – are very different, and require different skills at both operational and managerial level. For any given central bank, the respective weights of each of the three will differ, and the impact on the central bank, its operations and its reputation will also differ. As a result, their investment style will also differ, both from other central banks and from other investors. The observer of central bank reserves management activities must first therefore consider, for any given central bank, what the respective importance of the three elements of reserves management is, and which will dominate the central bank's decision-making.

This can best be shown graphically, as in the following diagram:

Chart 1: The "Strategy Triangle" for central bank reserves management operations



Source: Author's compilation.

Different central banks will find themselves in different positions within this "strategy triangle", depending on what the prime motive for their reserves management is. Here (1) would represent the position of a central bank for whom Policy considerations dominate, for example a country with a FX peg or currency board to maintain; (2) would represent the position of a central bank for whom Market Liaison considerations dominate, for example the Federal Reserve; while (3) would represent the position of a central bank for whom Financial Management considerations dominate, for example a central bank with very large reserves and a clear investment-orientated mandate (whether wealth preservation or even wealth maximisation).

This in turn translates into different emphases on the elements of reserves management. To a very large extent, all central banks adhere to the "classical trilogy" of reserves management of Security, Liquidity and Return, but the strength of emphasis any individual central bank places on any one of the three will differ. For example, a central bank for whom policy issues dominate (i.e. (1) in the diagram above) will tend to emphasise the importance of liquidity – the reserves have to be usable in a crisis; a central bank for whom market liaison issues dominate ((2) in the diagram) will tend to emphasise security – the avoidance of loss; and only those

central banks for whom financial management issues dominate ((3) in the diagram) will tend to emphasise return.

This has direct relevance to how central banks are reacting to the current very low interest rate environment – broadly speaking, the more important financial management is in the central bank's policy hierarchy (i.e., the closer the central bank is to the point marked (3) on the diagram), the more it is legitimate to assume it will react in a similar manner to other wealth-maximising investors. But the corollary is also true: for central banks whose policy stance is closer to the points marked (1) or (2), their response to current markets may not be similar to the majority of investors.

2 The style of central bank reserves management

In the early periods of central bank reserves management, the operation was almost entirely administrative, with accounting and maintenance duties dominating. Until at least the end of the Bretton Woods fixed exchange rate system in 1971, most central banks did not attempt to manage their reserves actively, and the minimisation of operational costs far outweighed any thought of maximising investment returns.

This changed with the very much more volatile bond and FX markets of the 1970s: much higher inflation in developed markets and more significant exchange rate movements between major currencies firstly introduced the concepts of significant *risk* and *loss* to the world of central bank reserves management, and very quickly thereafter encouraged some central banks to explore the other side of the coin of *opportunity* and *profit*. Ever since then, there have always been questions as to the appropriate style of reserves management – what activities are acceptable and legitimate, and what activities should be avoided.

For example, in the 1980s a major question was whether reserves could be managed actively for profit or not – was it legitimate for central banks, with their privileged position in markets and with their policy responsibilities, also to seek to manage their reserves for profit? Many felt that central banks should not run both a policy operation (management of an exchange rate, for example) and a profit-driven operation through the same dealing desk, with the risk that counterparties might be confused as to the intentions of any given trade, and there were also concerns about the use of privileged and time-sensitive information such as interest rate changes. This led to a much clearer separation between the two "operating modes" of the reserves managers, and "Chinese walls" within every central bank isolating the reserves managers from market-sensitive information.

By the 1990s the dominant question was the central bank community's stance on gold – did central banks have the right to trade gold solely with their own interests in mind, or did they also have some responsibility towards the functioning and

health of the gold market? The resolution of this debate led to the 1st Central Bank Gold Agreement (CBGA1) in 1999, an agreement that has subsequently been renewed three times, the last occasion being in 2014 with CBGA4.

Latterly, central banks have debated the appropriateness of holding equities in reserves portfolios, and whether, if they are a legitimate diversification, they should be held passively or traded actively. This debate has probably been concluded (around 25 central banks now hold some equities in their reserves), but it has spawned the subsidiary question of whether and if so how central banks should use their share holdings to exercise ownership and governance oversight. For many, the only legitimate stance is passive ownership – i.e. abstaining from votes – as this avoids the authorities becoming active in the direction of private sector companies, but others are concerned that this helps weak management and preserves weak governance.

As this short section has shown, central bank reserves management is continually evolving; the current markets are not unique in generating points for discussion in the central banking community or forcing change in their reserves management operations.

3 Current issues facing central bank reserves managers

In the current market environment there are two main types of issue currently facing central bank reserves managers: internal issues, such as the changing rationale for holding reserves as they grow, the size of reserves portfolios or the interaction with any Sovereign Wealth Fund (SWF) the country may have; and external issues, most obviously the state of markets and the level of yields. It would be wrong to take these in isolation of each other – of course central banks, like any other investors, are challenged by current markets and low yields are encouraging them to re-examine and perhaps change their investment style, just as they are forcing others to adapt too. But their responses are conditioned by their institutional framework and in many cases by their size.

In general, investors fall into one of two categories. There are those who are managing net assets in excess of or without any offsetting liabilities – one might call these Wealth Managers – and there are also those who are managing assets against roughly commensurate liabilities or obligations – one might call these Balance Sheet Managers. Central banks can fall into either category, but in addition have a third category – managing assets against unquantifiable obligations (for example the duty to intervene to support a currency). As a result the assessment of the size of a central bank's reserves is always more qualitative than quantitative (the question of "how much reserves is adequate?" is notoriously difficult to answer), and any table describing the size of reserves against their uses will tend to be more descriptive than numerical.

However, this does not negate the value of considering the size of a country's reserves, and the tables below map reserve size against management style. Table 1 considers the size of the reserves relative to the central bank's own circumstances and need for reserves (e. g. its obligations):

Table 1: Different sizes of reserves relative to the central bank's own circumstances

Relative size of reserves	Implications for Reserves Management style
Inadequate	Liquidity management, rationing of access to foreign exchange (e. g. via exchange controls), prioritisation of servicing of foreign currency debt, establishment of credit lines, dialogue with official sector finance (IMF etc.)
Sufficient	Liquidity management, hedging of foreign currency debt, maintenance of creditworthiness and access to market finance
Comfortable	Liquidity management, hedging of foreign currency debt, interest rate risk management, increased transparency to stakeholders?
Surplus	Interest rate risk management, market selection, asset allocation and diversification, much increased communication with stakeholders
Significant Wealth	Wealth management, market selection, strategic asset allocation, role as shareholder/owner, implications for public profile of the central bank, issue of whether or not to split off assets to a SWF

Source: Author's compilation.

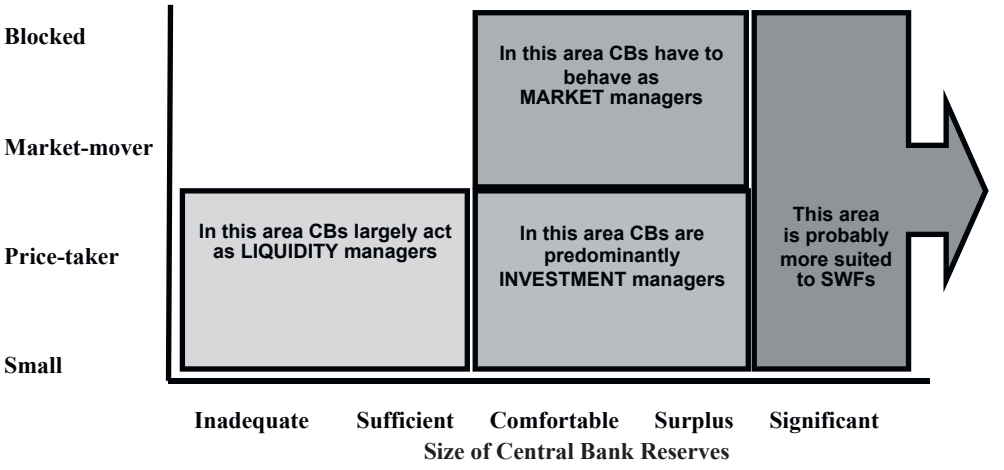
Secondly, we can consider the size of a central bank's reserves relative to the markets it is investing in:

Table 2: Different sizes of reserves relative to the markets

Size relative to market	Relationship of CB operations with market	Consequence for investment style	Implications for management
Very small	No significant effect	None	None – no need to consider market consequences of activity
Small or Medium	Price taker	Able to trade at almost all times	Choice of counter-parties important – need a selection but can include second tier players
Large	Price maker, potential market mover	Timing becomes important, need sensitivity to market	Choice of counter-parties crucial – should be drawn from the premier houses
Very large	Dominant market player if not largely blocked	Timing and order management crucial	Confidentiality pre-trade and trans-parency implications post-trade rise in importance

We can combine these two analyses on a single chart:

Chart 2: Different management styles for different sized reserves



Turning then to the central bank response to low yields, we can see that how any given central bank will respond will largely be determined by whether it is positioned mainly as a liquidity manager, an investment manager or a market manager. For example, those central banks facing a shortage of reserves and acting mainly as liquidity managers (and even more those forced to act as liquidity rationers) will find that their reserves management task is little changed by the very low yields on their investments: their assets are not predominantly held for their return potential and while a higher return is always welcome, they do not have the liberty to seek better returns if doing so jeopardises their liquidity position.

Similarly, those central banks whose reserves are so large that they are mainly acting as market managers will be forced to hold the bulk of their assets in the larger markets like government bonds; they may seek out other options at the margin but few spread markets will be large enough to absorb more than a small fraction of their assets.

The main category of central banks that is able to react to the very low yields and do something material in response is those in the box labelled investment managers. This is not entirely surprising; these are the central banks that have both asset sufficiency and the freedom to act most like other investors in markets. And the solutions such central banks are considering are similar to those that others have adopted, viz:

– Diversification into other fixed income asset classes (e. g. corporate bonds)
– Diversification into second tier developed markets (e. g. CAD, AUD, NZD, CHF, NOK, SEK, DKK)
– Consideration of emerging markets (especially RMB)
– Introduction of equity portfolios and portfolios of alternative assets
– A renewed consideration of the role of gold
– Outsourcing non-core portfolios to external managers including hedge funds

Many of these markets pose challenges to all investors, whether central banks or not. These include issues of market and deal size, market liquidity, market and trade transparency, incomplete or unusual market structure, and the availability and familiarity of satisfactory counterparties. Such challenges are common to all investors seeking to diversify away from traditional first tier markets.

But in addition central banks face a range of extra challenges and issues before adding complexity, for example:

– Is it worth it? Does it move the dial? There is no point in adding extra complexity (and, probably, risk) for limited or no extra return taken over the portfolio as a whole.
– Do we have the staff to understand it? And can we survive their departure? Central banks are often very vulnerable to key staff risk and should not build portfolios which cannot be maintained if key staff leave.
– Does management understand it? Can they explain it to the public? Governance issues are increasingly important for central banks as reserves sizes grow, and all central banks are now much more aware of the risk of reputational loss from poorly executed operations.
– How does this interact with any other official investor of the state? For countries with SWFs or national pension funds, what is optimal for the central bank in isolation may not be optimal for the authorities taken as a whole, and the central bank may have to step back from diversification if to do so would result in unwanted overlap with another part of the authorities' overall asset management structure.
– How will the recipient market (and its authorities) respond? Not all markets welcome large official sector investors, and a central bank always has to remember that what for it is a foreign market is for a fellow central bank their home market.

4 Outlook and concerns

Collectively, central bank reserves managers do not expect yield levels to return rapidly to normal, and if any phrase sums up expectations, it is "Lower for Longer". This seems to be much in keeping with general investor sentiment, though it is notably (and perhaps strangely) in contrast to the Federal Reserve's own interest rate expectations as shown in the Federal Open Market Comittee's "Dot charts".

Having said that, central bank reserves managers do have some particular concerns, largely arising out of their interaction with their colleagues on the domestic money market and regulatory sides of the bank, as part of the central bank's internal analysis of how markets are working under Quantitative Easing (QE) and very low or even negative yield environments. Two that repeatedly arise in discussions with central bankers are the market's function as a source of signalling and information, and the changing attitudes of other market participants.

The first of these concerns stems directly from the use that central banks make of markets to provide information on the underlying real economy and on the actions and intentions of other market participants. As central banks increase the scale and scope of their market operations the ability of markets, particularly money markets, to operate independently of the central bank is reduced – indeed, in a number of markets the central bank is now the dominant player, and acts not so much as the market clearer and LOLR (Lender of Last Resort) but market maker and FOFR (Funder of First Resort). And even where financial institutions are not actually dependent on the central bank for funds, the central bank's operations (e. g. QE) can heavily influence markets.

As a result, some markets are increasingly moving from being a window for the central bank, showing it the outside world, to a mirror, merely reflecting back the consequences of its own operations. These risks reducing the information flow available to the central bank, and increases the risk of policy uncertainty if not error.

Secondly, investors' response functions to central bank actions is also changing. Market positions have inevitably become more sensitive to the stance of the central bank, as market participants hold positions not only on their assessment of inherent value but increasingly on their expectations of official actions. As a consequence they may be less tightly held, and a change in policy can produce a bigger response from markets than has hitherto been considered the norm – two recent examples being reactions from the US Treasury market and emerging markets to the indications in late 2013 that QE would be reduced (the "taper tantrum"), and the response to the Schweizerische Nationalbank's removal of the cap on the Swiss Franc in January of this year.

This is compounded by the observed reduction in market-maker capacity and hence liquidity in many bond markets, a phenomenon that is well documented and largely the result of regulatory changes. The consequence is that increasingly, markets are subject to the risk of periods of elevated volatility, and even the largest markets may suffer volatility spikes and liquidity deserts at times of major policy change.

For central bank reserves managers, with their traditional focus on security and liquidity, this further restricts the number of markets that are considered appropriate and investable, and means that their response to the current market environment of ultra-low yields is even more closely constrained.