“Nothing will come of nothing”

The challenges of negative interest rates for central bank reserves managers

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For professional clients only
The challenges of negative interest rates for central bank reserves managers

Introduction

How did we get here? - “I must be cruel only to be kind”

The HSBC Reserve Management Trends Survey - “If you prick us, do we not bleed?”

Concluding thoughts - “Waiting for Godot”

In brief

Causes…

- Central bank monetary policy resulting in low, and now negative, yields on many of the highest quality bonds have for some time been a source of concern among a wide range of investors
- The underlying cause is the global economy’s slow process of healing from the Global Financial Crisis (“GFC”), and the reality that monetary policy has had to bear the lion’s share of the burden of the policy response
- Macroeconomic conditions are very unusual, and the debt overhang is proving particularly intractable. This means there is limited room for manoeuvre on fiscal policy in many countries. It also reduces the potency of monetary policy
- For now, one thing we do know is that central banks themselves can be added to the list of investors struggling with the consequences of negative yields for their investment mandates
- The 2016 edition of the HSBC-sponsored Reserves Management Trends (RMT)* survey revealed that a clear majority of reserves managers were changing their investment approach as a result of negative yields
- Negative yields are a problem for reserve managers because they violate the first leg of the “Security, Liquidity, Return” trinity by eroding capital value. To mitigate that, reserve managers can withdraw from the currency where rates are negative, extend duration, or look to invest in new asset classes and currencies. The RMT provides evidence for all three

…and consequences

- A common theme in the responses was of reducing allocations to Euro, Yen, Swiss franc, Swedish krona and Danish krone
- Of those maintaining a fixed income exposure, a common theme was to extend duration to pick up at least some positive yield. Others have introduced, or increased, exposure to credit
- Another, and very significant, development that shows through in the RMT is the rise of Renminbi (RMB) as a reserve currency. Respondents expected RMB would account for 7% of global reserves by 2020, 10% by 2025 and that the proportion would continue to increase beyond that
- In terms of perceived attractiveness, the US dollar remains a strong favourite among currencies
- In terms of secular trends in asset class allocation, a common theme has been migration down the credit risk spectrum within the fixed income universe
- It is still a minority of central banks that invests in equities, although interest is growing particularly among relatively large reserve holders with significant investment tranches
- Among asset classes, reserve managers viewed high-rated government debt, agency paper and equities as being more attractive as investments than in 2015, and there was a constructive attitude to investment grade corporate bonds, covered bonds, gold and commodities. Their use of derivatives had also grown, for hedging and duration management but also – to some extent – to enhance yield. Green bonds as an asset class seem to be receiving a more mixed reception

*HSBC Reserve Management Trends 2016 provides analysis of exclusive survey of 77 central banks responsible for more than $6 trillion in reserves.

Since it was first published in 2005, this key guide has provided crucial insight into the policies, practices and thinking of reserve managers around globe. It is acknowledged as the industry standard among practitioners and the stakeholder community.
The challenges of negative interest rates for central bank reserves managers

Secular stagnation or crisis aftermath?

Globally, around $11.7 trillion worth of bonds now trade with a negative yield, a large increase from around $ 5.3 trillion a year ago. That follows the more widespread adoption by central banks of negative policy interest rates, the latest part of a longer cycle of aggressive monetary policy easing that began in the Global Financial Crisis (“GFC”). This phenomenon has recently been reinforced by a “flight to quality” in response to the result of the UK’s referendum on EU membership.

Exhibit 1: Long maturities drive growth of negative yielding debt

![Chart showing long maturities drive growth of negative yielding debt]

Source: Fitch Ratings, Bloomberg as of end of June 2016

Central bank monetary policy resulting in low, and now negative, yields on many of the highest quality bonds have for some time been a source of frustration and concern among a wide range of investors and their agents - from pension funds and insurance companies to banks and money market funds. The environment is particularly challenging for those who are required by their regulators or mandated by their investment guidelines to hold significant proportions of government bonds in their portfolios.

“Nothing will come from nothing” is, of course, taken from Shakespeare’s greatest tragedy, King Lear. Lear undertakes a classic tragic journey through hubris and nemesis to redemption of a kind. His fall is triggered by his own failures of judgment. Shakespeare then charts Lear’s descent, in which he seems to lose everything – power, family, supporters, and his own sanity. But, through being reduced to nothing, Lear finally experiences a personal epiphany and a form of enlightenment: eventually, and in an unexpected form, something does indeed come from nothing.

Global macroeconomic policymakers may achieve redemption, and investors everywhere can hope for something other than a tragic denouement, but no-one knows how the current drama will unfold and be resolved.

The underlying cause of all of this is, of course, the global economy’s slow process of healing from the GFC, and the reality that monetary policy has had to bear the lion’s share – and, many argue, a disproportionate share – of the burden of the policy response to support demand during the recovery. My colleagues in HSBC Global Asset Management describe financial markets as being in a “fragile equilibrium”, in which in the global economy there is just enough demand relative to supply to deliver modest growth and low inflation, which results in a broad consensus that the central bank interest rate cycle will be “slow and low”.

The equilibrium in financial markets is fragile because it rests on very unusual macroeconomic conditions:

- an unprecedented expansion in central bank balance sheets;
- negative policy rates in many large economies;
- expectations of negative real interest rates stretching quite far into the future;
- weak productivity growth;
- a ratio of global debt to GDP that is even higher than at the start of the balance sheet recession in 2008.

In the academic and policy community there is a rich debate as to whether this all reflects secular stagnation – a structural global deficiency in aggregate demand; or the long aftermath of the unsustainable financial boom that preceded the GFC. The diagnosis has some bearing on the nature of the policy response and the appropriate mix of monetary, fiscal and structural measures.

The debt overhang is proving particularly intractable, particularly as concerns about systemic risk seem to have inhibited write-downs of government and some private sector debt. The debt overhang means there is limited room for manoeuvre on fiscal policy in many countries. It also reduces the potency of monetary policy – the effectiveness of easier policy in encouraging consumers and businesses to pull forward spending from the future to today is constrained when private and public sector balance sheets are already very extended.
How did we get here?
“I must be cruel only to be kind”

For investors, the question of how the global economy transitions from this unsatisfactory conjuncture, and its implications for medium-term asset class returns, is difficult and uncertain.

For now, one thing we do know is that central banks themselves can be added to the list of investors struggling with the consequences of negative yields for their investment mandates. The 2016 edition of the HSBC-sponsored Reserves Management Trends (RMT) survey revealed that a clear majority of reserves managers from 77 central banks, responsible for managing reserves worth $6 trillion, were changing their investment approach as a result of negative yields.

How did this happen?

When they reached the effective zero lower bound on policy interest rates, and with the traditional monetary transmission mechanism compromised by the banking system’s need to shrink and repair its balance sheet, many of the world’s major central banks launched quantitative easing (“QE”) to continue monetary easing. The jury is still out on the overall effectiveness of QE, and on which of the different elements of its transmission mechanism might have been more or less effective. One of the ways in which QE was intended to stimulate demand was via the ‘portfolio balance’ channel bringing about a generalized rise in asset prices. Against the backdrop of steep price falls earlier in the Crisis, higher asset prices contributed to making extended balance sheet positions more sustainable. For businesses, higher equity and debt prices represent a lower cost of capital, which was expected to provide support for investment spending. But the flipside of lower borrowing costs for governments, businesses and individuals is lower expected returns for investors.

Breaching the zero lower bound

At the time QE programmes were launched, the consensus view in the central bank community was that there was an effective floor of zero on nominal interest rates. That is not to deny that there had been a long history of theoretical interest in the possibility of negative interest rates. But practical arguments prevailed: that at negative rates there would be an incentive to hold cash, which delivers a zero return, rather than bank deposits; and, with doubts about banks’ ability to pass on negative rates to retail depositors, that their net interest margins could be further compressed and so impair their appetite to undertake new lending.

Another consideration, based on the experience of Japan in the 1990s, was that setting the floor on rates slightly above zero was the best chance of preserving the functioning and infrastructure of private sector money markets.

But desperate times call for desperate measures. Faced with strong upward pressure on their currencies from large scale capital inflows following the euro area crisis, the central banks of Switzerland, Denmark and Sweden implemented negative interest rates – as it turned out, without operational drama, and with results largely consistent with their policy objectives. Subsequently, both the European Central Bank and the Bank of Japan have introduced negative marginal policy rates alongside their existing QE programmes. In both cases, the backdrop was concerns about the risk of tipping into persistent deflation: the disinflationary effect of the plunge in oil prices had caused CPI inflation to turn negative which, given positive output gaps in Japan and the euro area, risked a de-anchoring to the downside of inflation expectations. In those circumstances, if the central banks had not cut short-term nominal rates below zero, with CPI inflation slightly negative and inflation expectations falling, real interest rates would have risen – exacerbating the deflationary impulse.
Promoting recovery

The objective of central banks using unconventional monetary policy - including QE and negative rates - has been to preserve capacity and to stimulate demand, and so to secure the recoveries of their economies. By extension – given the share of world GDP, trade and capital flows accounted for by the United States, Japan, the euro area, the United Kingdom and other European countries – that was expected to promote stronger expansion in the global economy.

These central banks, and the governments concerned, would regard the welfare gains from economic recovery (and therefore higher tax receipts) to more than outweigh the costs from any losses on their QE portfolios and, a fortiori, from any losses on their reserves management activities, as interest rates eventually rose. On that view, extraordinary monetary policy involving ultra-low returns for savers and investors is part of the price that has to be paid to secure sustainable growth in the global economy.

Many central banks and governments of countries that see themselves as experiencing collateral damage from unconventional monetary policy would have a more nuanced view of the cost-benefit trade-off. Reflecting that, there is a big agenda of work on how to better manage vulnerabilities and policy trade-offs in future, at the level both of the international financial architecture and of enhancements to domestic macro-prudential and financial frameworks. President Draghi’s speech in late June at the ECB’s annual forum in Sintra, Portugal, is a recent acknowledgement of the consequences of extraordinary monetary easing by major central banks.


Global Reserves (USD trillion)

End of Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Global Reserves (USD trillion)</th>
<th>Annual growth rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>1.39</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>2.6</td>
<td>13%</td>
</tr>
<tr>
<td>1997</td>
<td>3.1</td>
<td>3%</td>
</tr>
<tr>
<td>1998</td>
<td>3.3</td>
<td>2%</td>
</tr>
<tr>
<td>1999</td>
<td>3.5</td>
<td>9%</td>
</tr>
<tr>
<td>2000</td>
<td>3.8</td>
<td>6%</td>
</tr>
<tr>
<td>2001</td>
<td>4.1</td>
<td>17%</td>
</tr>
<tr>
<td>2002</td>
<td>4.7</td>
<td>26%</td>
</tr>
<tr>
<td>2003</td>
<td>5.4</td>
<td>24%</td>
</tr>
<tr>
<td>2004</td>
<td>6.2</td>
<td>15%</td>
</tr>
<tr>
<td>2005</td>
<td>7.0</td>
<td>10%</td>
</tr>
<tr>
<td>2006</td>
<td>7.7</td>
<td>11%</td>
</tr>
<tr>
<td>2007</td>
<td>8.5</td>
<td>13%</td>
</tr>
<tr>
<td>2008</td>
<td>9.3</td>
<td>10%</td>
</tr>
<tr>
<td>2009</td>
<td>10.2</td>
<td>7%</td>
</tr>
<tr>
<td>2010</td>
<td>11.0</td>
<td>7%</td>
</tr>
<tr>
<td>2011</td>
<td>11.7</td>
<td>-1%</td>
</tr>
<tr>
<td>2012</td>
<td>12.3</td>
<td>-6%</td>
</tr>
<tr>
<td>2013</td>
<td>12.8</td>
<td>-10%</td>
</tr>
<tr>
<td>2014</td>
<td>13.3</td>
<td>0%</td>
</tr>
<tr>
<td>2015</td>
<td>13.9</td>
<td>5%</td>
</tr>
</tbody>
</table>

Source: IMF COFER Statistics 15 April 2016
With that as the mise-en-scène, what are central bank reserves managers doing in response to negative rates? The first thing to say is that the HSBC RMT survey covers a wide range of central banks, with different sized portfolios, different motivations for holding reserves reflected in different investment mandates, and different probabilities of needing to use their reserves.

In aggregate, global reserve holdings total some $11 trillion, which makes central bank reserves managers very significant players in foreign exchange and fixed income markets in particular. Classically, central banks hold reserves as insurance against macroeconomic and financial tail events, so-called “sudden stops”. That leads them to hold portfolios of high-quality, liquid fixed-income assets denominated for the most part in the major reserve currencies: US dollar, euro, yen, and sterling and, increasingly, RMB. The guiding trinity of reserves management is “Security, Liquidity and Return” – in that order of priority. However, many central banks hold more reserves than they need to cover most expected short-term demands. They may then tranche their portfolios in some way to sacrifice liquidity, and to some extent security, to earn a higher return. Even so, and with the exception of central banks that are also de facto sovereign wealth funds, their portfolios tend to be relatively conservative, with a low tolerance for realising losses from credit events in particular.

Central banks’ concerns

Despite this heterogeneity in central bank portfolios, some clear trends do emerge from the survey. When asked what would have the most significant impact on reserves management in 2016, half opted for diverging monetary policies between major central banks. That was well ahead of concerns about: economic developments in China and emerging market economies; the decline in oil and other commodity prices; changes in reserves levels; and exchange rate volatility. The spread of negative rates to some major reserve currencies had led many central banks to make changes to their portfolio management, and others to consider seriously making changes. 75% of respondents reported that they had made changes to the composition of their portfolios in the past year; and more than half reported that the transmission of negative policy rates into very low and negative yields had impacted their reserves management.

Negative yields are a problem for reserve managers because they violate the first leg of the “Security, Liquidity, Return” trinity by eroding capital value. To mitigate that, reserve managers have to take on other risks: they can withdraw from the currency where rates are negative, extend duration, or look to invest in new asset classes and currencies where yields are positive. The RMT provides evidence for all three.

Exhibit 3: Which in your view will have the most significant impact on reserve management in 2016?

<table>
<thead>
<tr>
<th>Options</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diverging monetary policies</td>
<td>36</td>
<td>49%</td>
</tr>
<tr>
<td>Economic development in China, emergings markets</td>
<td>14</td>
<td>19%</td>
</tr>
<tr>
<td>Decline in oil price and other commodities</td>
<td>10</td>
<td>14%</td>
</tr>
<tr>
<td>Changes in reserves levels</td>
<td>7</td>
<td>10%</td>
</tr>
<tr>
<td>Exchange rate volatility</td>
<td>6</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Central Banking Publications, HSBC Reserve Management Trends 2016. 73 respondents replied to this question.
These most recent responses to negative rates in some currencies have taken place in the context of a longer trend to increased asset class and currency diversity in reserves holdings since the GFC, the euro area crisis and the global search for yield. In that time, there has been an increase in investment in non-traditional reserve currencies – the Australian, Canadian and New Zealand dollars, the Scandinavian currencies, the Singapore dollar and the Korean won. Interestingly, however, in the most recent RMT there had been a slight reduction in the number of respondents investing in those currencies, with the exception of the Korean won.

Seeking positive yields

A common theme in the responses was of reducing allocations to euros, yen, Swiss franc, Swedish krona and Danish krone. That could take the form of shrinking bond portfolios; reducing currency holdings to the minimum needed to fund nostro accounts to support transactions needs; or cutting exposure to the currency completely. Of those maintaining a fixed income exposure, a common theme – and a continuation of a longer-run trend – was to extend duration to pick up at least some positive yield. Others have introduced, or increased, exposure to credit – e.g. commercial bank deposits, corporate bonds and asset-backed securities – in different parts of their portfolios to pick up yield.

Exhibit 4: Which view best describes your attitude to the following asset classes?

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<table>
<thead>
<tr>
<th></th>
<th>Equities</th>
<th>Emerging market bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2015</td>
<td>2016</td>
</tr>
<tr>
<td>No interest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investing now</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Considering</td>
<td>5-10 years</td>
<td></td>
</tr>
<tr>
<td>Would consider</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Investing now</td>
<td>20%</td>
<td>30%</td>
</tr>
<tr>
<td>Investing now</td>
<td>10%</td>
<td>10%</td>
</tr>
</tbody>
</table>
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“We have invested in emerging market government bonds issued in local currency in order to enhance long-term return on foreign reserves. However recent developments have highlighted that emerging markets are more volatile and unpredictable than we have initially assumed.”

-European reserve manager

Source: Central Banking Publications, HSBC Reserve Management Trends 2015 and 2016. The number of respondents varied with each year and asset class.
In terms of secular trends in asset class allocation, a common theme has been migration down the credit risk spectrum within the fixed income universe: either via allocations to corporate credit or to a wider range of global sovereign bonds including US dollar-denominated emerging market government debt.

It is still a minority of central banks that invests in equities, although interest is growing particularly among relatively large reserve holders with significant investment tranches. Around 15% of respondents said that they currently invested in equities, while the proportion currently invested or considering investing in the medium term was just over half. Classically, equities are a difficult asset class for central banks because their position at the bottom of the capital structure and relatively high volatility has been at odds with the Security objective of the reserve managers’ trinity. Moreover, central banks generally try to avoid being in a position where they are – or can be construed to be – making decisions on the allocation of capital within the private sector. That tends to mean that, when they do invest in equities, they are most inclined to do so in market capitalisation-weighted indices and to invest on a passively-managed basis.

**The rise of the RMB**

Another, and very significant, development that shows through in the RMT is the rise of the Renminbi (RMB) as a reserve currency. In 2012, just three central bank respondents said they were investing in RMB, and a further 11 said they were considering it. In 2015, 20 respondents said they were investing and a further 10 were considering investing. In the 2016 survey, the number investing had risen to 32 and 12 more said they were considering it – together they represented almost 50% of respondents. The IMF’s decision to include the RMB in the SDR from October 2016 is part of the story, and itself reflects the rise of the RMB as a currency for international payments and investment.

The scale of central bank allocations to RMB is currently relatively modest, which seems to reflect a combination of inherent caution among naturally conservative investors and the need first to gain experience with the Chinese market’s specifications and particularities. The Bank for International Settlements’ (BIS) 2015 Annual Report suggested that the share of RMB in global reserve holdings might be around 1%. The IMF suggested a share of around 1.1% in 2014, a rise from 0.7% in 2013.

The work of the Chinese authorities in improving ease of access to the on-shore market was noted by respondents to the RMT, however; partly reflecting that, central banks expected allocations to increase over time. Respondents expected that the RMB would account for 7% of global reserves by 2020, 10% by 2025 and that the proportion would continue increase beyond that.

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**Exhibit 5: Which of the following best describes your stance regarding investing in the RMB?**

- No interest
- Not considering investing yet
- Considering investing now
- Investing now

Source: Source: Central Banking Publications, HSBC Reserve Management Trends 2016. 72 respondents gave at least one answer this question.

“The Rise of Renminbi: In 2012, three central banks said they were investing in the Chinese currency, and a further 11 said they were considering it. A year later the corresponding numbers were seven investing, 13 considering. In 2014, 62% of respondents felt it was more attractive as a currency than a year before and, in 2015, 20 reserve managers said they were investing and a further 10 were now considering investing”

Central Banking Publications
**Continued primacy of the US dollar**

The RMT also asked reserves managers for their views on the attractiveness of different currencies and asset classes relative to their view 12 months ago, which is an interesting diagnostic on the state of markets and the global economy. The US dollar remained the strong favourite among currencies, with the prospect of higher yields and stronger economic growth relative to the euro area and Japan in particular underpinning its appeal.

The broader context is that the dollar remains the dominant global reserve currency. Foreign exchange turnover surveys consistently report that the dollar is involved in around 90% of all FX transactions. It accounted for more than 60% of reserves at end-2015, compared with 70% in 2000 and 75% in 1978. The BIS international banking and international debt securities statistics suggests that the dollar’s share was similar in private sector claims: they show that it accounted for around 60% of all international assets in 2015 and a similar percentage of liabilities, highlighting its key role as a funding currency.

Beyond the US dollar, and in addition to the RMB, RMT respondents had increased their constructive attitude to the Canadian and Australian dollars and to the Norwegian krone.

Among asset classes, reserve managers viewed high-rated government debt, agency paper and equities as being more attractive as investments than in 2015, and there was also a constructive attitude to investment grade corporate bonds, covered bonds, gold and commodities. Their use of derivatives had also grown: with less liquidity and greater volatility in markets, they are used for hedging and duration management but also—to some extent—to enhance yield. Green bonds as an asset class seem to be receiving a mixed reception from respondents, with some taking a positive view on the role they could in principle play in reserves management but only a few saying they had been actively considered.

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**Exhibit 6: Which of the following currencies appear more attractive than 12 months ago?**

![Chart showing currency attractiveness over time](chart)

*Source: Central Banking Publications, HSBC Reserve Management Trends 2015 and 2016. The number of respondents varied with each currency and year.*
Concluding thoughts
“Waiting for Godot”

We have seen that low and negative expected returns have pushed many central bank reserves managers into a search for yield, in riskier asset classes than those that used to be their natural habitat. That is consistent with the portfolio balance channel of monetary policy, one of the elements of the transmission mechanism through which QE was expected to be effective. Reserves managers also seem to have been reducing, and in some cases cutting out altogether, allocations to negatively-yielding currencies – which is consistent with the operation of the exchange rate channel of monetary policy.

Reserves managers have therefore been caught up in developments that are the intended effects of the decisions of their colleagues who set monetary policy. In that sense, central bank investors are experiencing much the same unrelentingly uncomfortable environment as all other investors.

It is hard to see the investment landscape changing fundamentally until the policy mix changes. Recent G20 statements seem to be moving in that direction, putting emphasis on the desirability of pro-growth fiscal policies and structural reforms. That would have the benefit of stimulating more demand now and, in time, of increasing the potential growth rate of the global economy. Such a policy mix might in principle be expected to ease the current burden on monetary policy; and in time to be reflected in higher expected returns for investors.

Until then, given inflation is below the targets they have been set, many central banks are to a large extent prisoners of their mandates, so they feel compelled to loosen policy further even in the face of an emerging consensus that monetary easing is running into – at best – diminishing marginal effectiveness; and, at worst, that it risks exacerbating vulnerabilities in the international monetary and financial system.

We don’t know how the play will end. Tragedy typically builds up to a bloodbath, followed by a sombre stock-take by the surviving characters. The pattern of comic drama is generally a long period of amusing misunderstanding and confusion, ending in a party.

The Theatre of the Absurd offers an intriguing third analogy. Samuel Beckett’s “Waiting for Godot” ends with the narrative set to continue indefinitely without resolution, and emphasises the roles of hope and resilience in managing the human condition:

- **ESTRAGON**: “I can't go on like this.”
- **VLADIMIR**: “That’s what you think.”
Before joining HSBC Global Asset Management in 2015, Michael had a twenty-five-years career in the official sector, for the most part at the Bank of England, but also at the International Monetary Fund where he was Private Secretary to the Managing Director, Michel Camdessus, between 1997 and 2000. At the Bank of England, he was Head of Sterling Markets Division, responsible for the implementation of monetary policy and liquidity-supplying operations to the banking system in the Global Financial Crisis, between 2007 and 2009. From 2009 to 2015 he was Head of Foreign Exchange Division and Reserves Management, during which time the UK’s foreign exchange reserves were doubled as part of the policy response to the challenges of the post-crisis period. At the same time, he was a member of the Secretariat of the Monetary Policy Committee, Chairman of the London Foreign Exchange Joint Standing Committee, and a member of the Markets Committee of central banks at the BIS.
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