Optimising official reserve portfolios

Bank reserve managers require a modern, flexible approach to achieve the investment trinity of safety, liquidity and return. This strategy is typified by BlackRock's model multi-asset portfolios, which use indexes as building blocks, maintain high levels of liquidity, enable customisable risk limits and are outperforming government bonds.

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In 2013, my colleague, former US Treasury and Federal Reserve official Peter Fisher, and I publicly commiserated with central bank reserve managers about their increasing challenges.[1] For decades, these dedicated public servants had been able to achieve a highly desired investment trilogy – safety, liquidity and return – without resorting to any sort of 'financial alchemy'. Throughout most of the 1980s, 1990s and 2000s – when global foreign exchange reserves grew from $500 billion to $12 trillion – US Treasury bills, notes and bonds paid positive, real rates of interest. Generating acceptable returns from a portfolio consisting exclusively of highly liquid government bonds was standard operating procedure for decades.

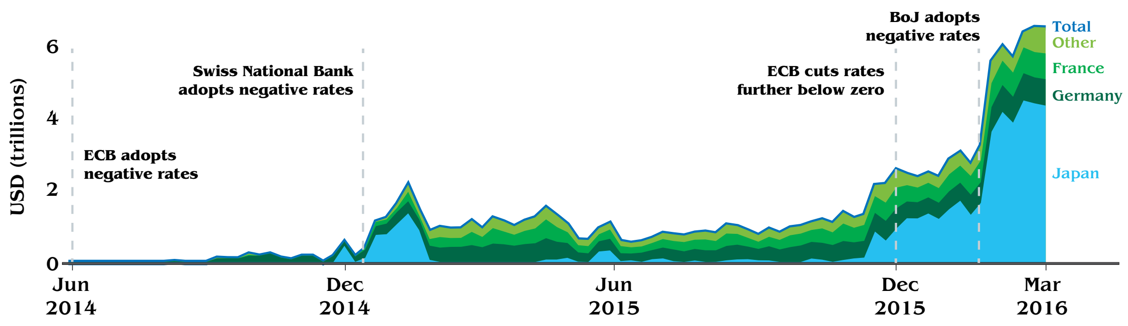
The perfect storm

But then came a perfect storm: the 2008–2009 financial crisis, which brought mounting fears of sovereign bond defaults, fluctuating government bond prices, seemingly endless quantitative easing and, finally, the coup de grâce, widespread negative government bond yields. Every reserve manager's dream became a nightmare as the trilogy moved out of reach. Today, the liquidity offered by many government bonds comes with a price tag (see chart 1). Safety has diminished as well, with default risk eclipsed by the more immediate threat of volatility – which may now exceed levels seen in other fixed income and even certain equity indexes.

A rethink was clearly in order. "The ordinal ranking of safety, liquidity and return is no longer a useful guide," Peter Fisher advised. "If you have not already done so, you should replace the old guidelines with a different trilogy: a conscious balance of volatility and liquidity constraints against an income objective."

Easy to say, but how to do in practice?

Chart 1. Going negative
Government bonds with negative yields 2014–2016



Source: BlackRock Investment Institute, JP Morgan and Thomson Reuters, March 2016. This chart is based on the JP Morgan Global Government Bond Index.

In June 2013, June 2014 and June 2015 – with the co-operation and assistance from our colleagues in BlackRock Client Solutions – we began publishing model central bank reserve portfolios with very deliberate liquidity, risk and return profiles. The idea was simple: to show how multi-asset portfolios could enable reserve managers to generate the kind of returns they were accustomed to while maintaining liquidity and risk levels comparable to those of typical government-bond portfolios.

Since every central bank must keep a core portion of its foreign exchange reserves in completely liquid form, we assigned at least 50% of each portfolio to 1–5y US Treasury bonds. The rest of the reserves were then allocated across other fixed-income markets, indexed equity and gold, all in accordance with BlackRock's optimising Aladdin analytics. Each year, we published two model portfolios: one with a 2.5% return target, and one with a 4.6% volatility constraint.

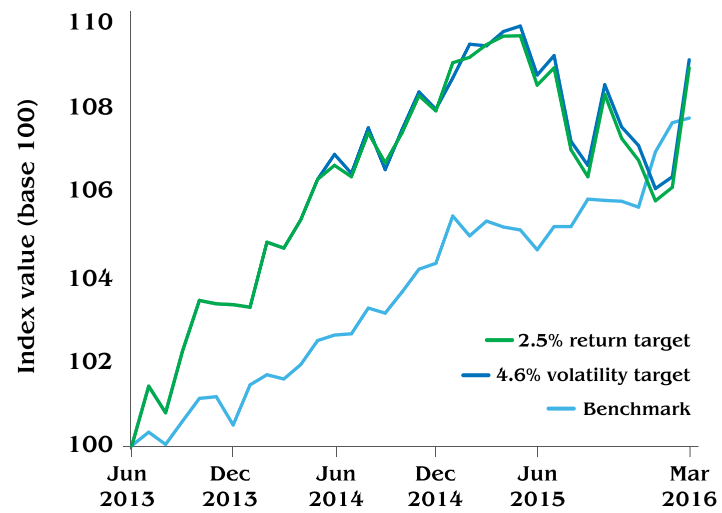
How have these model portfolios fared to date? Their total performance relative to a US Treasury one- to five-year index is illustrated in chart 2, and the results are encouraging. Since inception, both of BlackRock's theoretical multi-asset reserve portfolios exceeded their stated objective of 250 basis points of annualised return. Both also remained within the 4.6% volatility constraint. On paper at least, we can justifiably claim 'mission accomplished'.

Moreover, while our multi-asset approach is a passive one with annual rebalancing, it also provided ample opportunity for proactive intervention. Over the past three years, outperformance of BlackRock's theoretical portfolios peaked at 740 basis points in May 2015 and stood at 578 basis points at the end of the first quarter of 2016. At any point during this exercise, had a central bank needed to raise or lower its liquidity or risk levels, it would have been free to do so.

2016 model portfolios

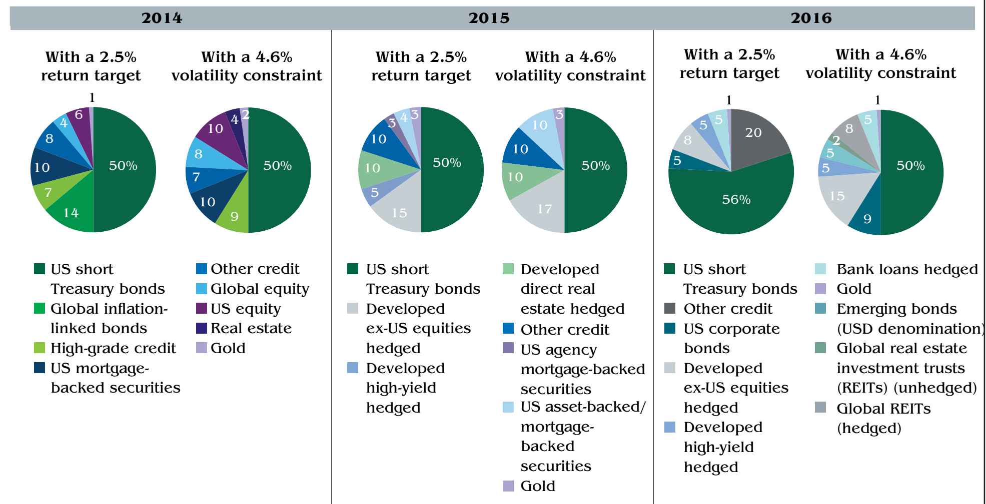
This brings us to our 2016 model portfolios, illustrated in chart 3 along with those of the two previous years to provide some context. In the current climate, rising US Treasury yields are enabling reserve managers to achieve more return with less risk – or more return with the same level of risk, if that is what they would prefer.

Chart 2. Hypothetical returns for model reserve portfolios



Source: BlackRock Solutions, April 2016. The chart shows the hypothetical performance of BlackRock's model reserve portfolios since they were first published, with a start date of 28 June, 2013, for the indexes making up the portfolios (see chart 3). Benchmark is the Bank of America ML Global Government G7 1–10y index. Model portfolios were rebalanced monthly to track index target weights and annually when the strategies were updated and index target weights were reset.

Chart 3. Changes in model reserve portfolios 2014–2016



	2014: With a 2.5% return target	2014: With a 4.6% volatility constraint	2015: With a 2.5% return target	2015: With a 4.6% volatility constraint	2016: With a 2.5% return target	2016: With a 4.6% volatility constraint
Hypothetical return	2.50%	3.10%	2.50%	2.49%	2.50%	3.43%
Expected volatility	3.30%	4.60%	4.52%	4.60%	2.06%	4.60%
Hypothetical return/risk ratio	0.76	0.67	0.55	0.57	1.21	0.75
Expected drawdown (95%)	-3.00%	-4.50%	-4.84%	-4.65%	-0.91%	-4.11%

Source: BlackRock Solutions, April 2016. The portfolios are modelled to achieve either a 2.5% return objective or a 4.6% volatility constraint, with a 50% liquidity constraint in both cases. The liquidity constraint of each portfolio is represented by the allocation to short (1–5y) US Treasury bonds. The outcomes for each hypothetical portfolio are then derived using BlackRock's five-year strategic assumptions for the respective asset class in an optimisation model. Please see *https://www.blackrock.com/official-institutions-group/official-insights/publications* for relevant asset class proxies. Other credit can include high-yield bonds, bank loans and other non-investment-grade fixed-income assets.

BlackRock's 2.5% target return portfolio for 2016 has a 56% allocation to short US treasuries and 20% cash – our highest ever. Combined with an 8% equity allocation and a 15% allocation to other fixed-income asset classes, including corporate bonds, a 2.5% return can be targeted with an expected volatility of only 2.06% and an astonishing low drawdown risk of only -0.91%. If, as in previous years, one is willing to withstand as much as 4.6% volatility, our analysts in the client solutions department believe a 3.43% return is possible over the next year. While this riskier portfolio maintains our minimum 50% allocation to short Treasuries, it contains more risk assets, including 15% in equities, 14% in corporate bonds and 5% in emerging market (EM) debt, as well as global real estate investment trusts, bank loans and some gold.

Concluding observations

The parameters of BlackRock's 2016 model portfolios, together with the record of prior portfolios, suggest a few concluding observations:

> ***"The ordinal ranking of safety, liquidity and return is no longer a useful guide ... you should replace the old guidelines with a conscious balance of volatility and liquidity constraints against an income objective"***

1. Peter Fisher's paradigm – "a conscious balancing of volatility and liquidity constraints against an income objective" – is inherently flexible and could be used by every central bank in every imaginable circumstance. Some may want more liquidity, some less; some may say "no equities," others "more EM." The model enables customisable risk limits, asset class constraints and liquidity needs – including 100% liquidity if desired.
2. Given our use of indexes as building blocks, individual security selection has no bearing on results. Reputational risk is also inherently limited. Implementation can also be done directly, using futures or exchange-traded funds and/or assistance from third parties.
3. Building multi-asset portfolios that outperform government bonds with comparable volatility and adequate liquidity is not rocket science. BlackRock analytics are readily available, and our analysts always happy to help.

With the benefit of three years of experience in market conditions that could be described as 'challenging' at best – BlackRock is more confident than ever that central banks and other institutional investors need not abandon desired financial goals. Return expectations and investment approaches may need to be adapted – but achieving a modern version of safety, liquidity and return remains within reach. ❑

Notes

1. Peter Fisher and Terrence Keeley, "In search of a new official investment paradigm: Rethinking safety, liquidity and return", June 2013.

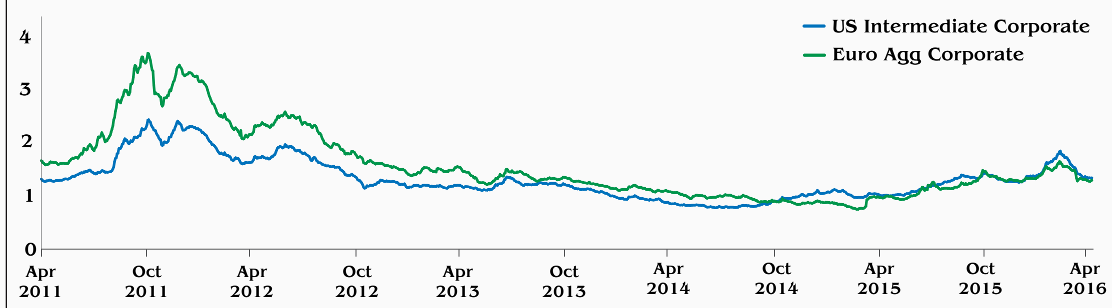
The case for investment-grade credit

More than one-quarter of the world's investment-grade government bond market now suffers from negative yields, with Europe and Japan dominating (see chart 1). Investors – including a growing number of central bank reserve managers – are increasingly reluctant to pay issuers for the privilege of owning their debt. Many are turning to the investment-grade corporate markets for respite. The relative loss of liquidity and marginally higher credit risk – in both the euro and US dollar markets – are believed to be more than fairly compensated by the increase in yields.

While all this is true, timing still matters. As illustrated in chart 4, the yield spread between US dollar governments and comparably long-lasting investment-grade credit has ranged from 50 to 250 basis points since 2010, while their euro-denominated counterpart versus German bunds has been much more volatile, at 100–400 basis points. Those who caught the investment-grade market at the wider ends of these ranges made an extraordinary return. Those who bought at the tighter ends had to wait to benefit from the exposure, but still did over time. The best returns were earned by those who were greedy at a time when others were fearful. Patience, however, has always been rewarded.

Because of their desire to minimise reputational risk, central banks have used two distinct approaches to adding investment-grade exposures: funding separate account mandates with external managers, and direct investment in the exchange-traded funds (ETFs) market. There are advantages and disadvantages to each approach. The latter facilitates more tactical decision-making, while the former leads to fewer settlement headaches. For information about the levels of liquidity and total returns of some of the most important credit ETFs, you should look at LQD, CSJ for US dollar, and IEAC and IBCX for euro alternatives on Bloomberg.

Chart 4. Spreads of IG corporate bonds versus government bonds



Source: Datastream, April 2016. Chart shows option-adjusted spreads for Barclays Corporate Intermediate (USD) and Barclays Euro Agg Corporate (EUR) indexes versus US Treasury and German Bund indexes of comparable duration.

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