

# Central Banks 2018 | Trends & Investment Outlook



BNY MELLON



UNIVERSITY OF  
CAMBRIDGE  
Judge Business School



# Contents

- 1** | **Executive Summary**
- 3** | **Introduction**
- 4** | **Macro-economic context and investment strategy: Innovation in search of yield**
- 5** | **Securities lending: Growing interest, driven by QE, revenue opportunities**
- 7** | **Repo market: Reassessing operations in a dynamic environment**
- 8** | **Operating model: The increasing relevance of third-party services**
- 9** | **Risk management: Derivatives and collateral managed in-house...for now**
- 11** | **Data management: Toward a new paradigm**
- 12** | **Future priorities: Planning for operational contingencies and strategic flexibility**

# Executive Summary

**Although there are a number of distinctions between central banks in terms of asset size, as well as other factors dictated by their governing mandates and underlying economies, this report has been able to highlight key areas of shared practice, trends and correlations across respondents to our 2017 survey.**

In broad terms, our research reveals a gradual but definite expansion of investment and trading activities by central banks beyond traditional boundaries, which is putting pressure on existing operational infrastructure and driving demand for third-party solutions and services. The key findings below reflect a reappraisal of investment strategy and operations, also demonstrating a need for central banks to account for fast-evolving and unpredictable external forces, notably in the realms of macro-economics, financial markets and technology innovation.

---

**39%**

OF CENTRAL BANK SURVEY RESPONDENTS ALREADY INVEST IN EQUITIES

**61%**

CONFIRMED ACTIVE PARTICIPATION IN THE REPO MARKETS; 39% INVEST IN TIME DEPOSITS

**1/3**

INDICATE PLANS TO INVEST IN NEW MARKETS OR ASSET CLASSES

**1/3**

CURRENTLY UNDERTAKE SECURITIES LENDING ACTIVITY, WITH A SMALL PERCENTAGE EXPRESSING FUTURE INTEREST IN DOING SO

**72%**

REPORTED USE OF DERIVATIVES AS PART OF THEIR INVESTMENT MANAGEMENT ACTIVITIES

**44%**

CONFIRM USE OF ISDA/CSA AGREEMENTS WHEN CONDUCTING DERIVATIVES TRANSACTIONS

APPROXIMATELY

**1/2**

ARE PLANNING A TECHNOLOGY UPGRADE





# Introduction

**Produced in collaboration with the University of Cambridge's Judge Business School, this report focuses on the key trends influencing the investment strategies and operations of central banks worldwide.**

The report draws on data from an interview-based survey conducted by Judge Business School students and faculty, as well the expertise of BNY Mellon staff serving the central banking sector, to provide insights into current and future practices and priorities. Although this inaugural report already provides considerable detail, it is our intention, over the coming years, to deepen and broaden the scope of this annual survey in order to provide central banks with data on which to benchmark their own investment management activities as well as to provide perspectives on the trends and developments that will inform their future policy.

# Macro-economic context and investment strategy | Innovation in search of yield

Like all institutional investors, central banks have had to adapt to a prevailing low-yield investment environment over the past decade or so. Slow, fragile recoveries in developed economies and high levels of market volatility and political risk have combined to keep interest rates and investment returns at low levels.

Disappointing yields from traditional asset classes have led many central banks to re-think their investment strategies. This has taken a number of different forms, reflecting the diversity of approaches, priorities and mandate constraints across the central banking spectrum, including investment in a wider range of asset classes, currencies, and instruments, as well as the increased use of external managers. The tactics selected might be different, but the overall trend is clear: innovation in search of yield.

The investment mandates of most central banks—as well as their broader roles and responsibilities—make them relatively cautious in exploring new investment opportunities. However, there is both anecdotal and statistical evidence of growing sophistication and innovation by institutions willing and able to invest beyond established parameters. A number of institutions are looking well beyond the central banks' traditional focus on G-10 currency-denominated government debt, with some looking at a range of alternative assets.

## **NO SURPRISES IN FIXED INCOME FOCUS**

In our 2017 survey, 39% of central bank respondents indicated they were investing in equities, with some using passive investment vehicles such as exchange-traded funds, and some using external investment managers. Overall however, our survey suggests that most portfolios currently fall in line with central banks' established investment parameters, with most

portfolios weighted toward major currency government bonds and money market instruments. Fixed income portfolios are concentrated in government, agency, and supranational issuers, with relatively little exposure to corporate bonds.

***There is both anecdotal and statistical evidence of growing sophistication and innovation by institutions willing and able to invest beyond established parameters.***

## **INTEREST IN ALTERNATIVES REQUIRES NEW EXPERTISE**

The traditional approach of central banks may be undergoing a shift. Looking to the future, a third of respondents indicated they had recently or were planning to invest in new markets or asset classes. In most cases, the motivation is to increase yield, with a wide range of instruments targeted, including equities, corporate bonds, and real estate. In many cases, investment in these non-traditional asset classes, i.e. beyond the expertise of in-house resources, is executed via engagement of third-party investment managers. Even if portfolio management is maintained in house, investment strategy diversification is leading to a more segmented approach within teams to concentrate expertise. The survey reveals little appetite for greater investment in emerging market assets, but a minority of central banks noted that they are exploring RMB-denominated investments. It is also worthy of note that the Chinese Renminbi has been making steady progress in the currency composition of Official Foreign Exchange Reserves (COFER) published by the IMF, and aside from the Japanese Yen, is the only Asian currency mentioned.

This appetite for alternative assets may diminish in the event of a sustained change in the interest rate curve, a subject we will continue to monitor.

# Securities lending | Growing interest, driven by QE, revenue opportunities

The aforementioned search for yield is a significant factor behind a growing interest in both securities lending and repo activity among traditionally 'buy-and-hold' investment institutions in recent years, while regulatory factors also play a part. On the securities lending front, central banks, alongside other long-term investors, limited their activity levels in the aftermath of the financial crisis, first due to the impact of restrictions on short-selling and then in response to reduced demand from borrowers, e.g. prime brokers on behalf of hedge fund clients, as their returns on long/short strategies diminished.

For all long-term investors, the revenues available from lending securities become more attractive in periods when other earnings decline. Although some central banks can be regarded as champions of securities lending, particularly among those with a large pool of lendable securities, approaches to the market are as varied as the central banking sector itself. One factor that may contribute to a renewed interest (beyond the search for yield) is the quantitative easing programmes that have seen European and other central banks support asset prices by purchasing debt securities, including investment-grade bonds, then recycling them to the market through securities lending programmes.

***A third of central banks confirmed their current involvement in securities lending activity...an additional percentage expressing future interest or acknowledging pressure to start or increase programmes.***

Although there is a general upturn in central banks' interest in securities lending, it is still a minority pursuit overall at present. In the BNY Mellon survey, a third of central banks confirmed their current involvement in securities lending activity, with an additional small percentage either expressing future interest or acknowledging pressure to start or increase programmes to achieve greater yield. For those that currently conduct securities lending activity, the majority do so on a bilateral basis in the repo market, accepting a conservative collateral set.

Nevertheless, as more central banks take a fresh look at securities lending, some are also shifting from their traditional approach of mobilising and leveraging assets via the services of national or international central securities depositories (ICSDs). While most of the respondents to our survey hold assets at other central banks or ICSDs, 44% hold some assets at global custodians. There is also growing anecdotal evidence to suggest greater use of agency lenders by central banks to facilitate securities lending programmes, in line with the broader sector trend toward greater use of external capabilities to supplement internal resources in pursuit of evolving investment objectives.





# Repo market | Reassessing operations in a dynamic environment

Similar underlying motivations—i.e. the search for yield in a low-rate, low-returns investment climate—are encouraging central banks to reassess and in some cases increase their repo market operations. Just as corporates with long-term cash surpluses are a preferred counterparty sector in the repo markets for commercial and investment banks that wish to secure ongoing access to high-quality liquid assets (HQLAs), the G10-debt-laden portfolios of central banks are also of interest to sell-side firms looking to manage their balance sheets in line with Basel III.

A total of 61% of survey respondents confirmed active participation in the repo markets, while 39% invest in time deposits, with some overlap across the two groups. Only 16% of responding banks (all relatively small in terms of asset size) referred to repo market activity or time-deposit investments in currencies beyond USD, EUR, or GBP. Survey results also suggested that central banks typically use between a dozen and 20 counterparties in the repo market. Most of the survey respondents that provided details cited a conservative collateral set, with a number asserting they do not accept any financial instruments outside of their own investment universe.

***The G10-debt-laden portfolios of central banks are also of interest to sell-side firms looking to manage their balance sheets in line with Basel III.***

As with growing securities lending activity, an increase in repo market transaction volumes can lead to a greater demand among central banks for third-party capabilities, in particular to manage day-to-day operational processes, such as collateral management and substitution. As yet, central bank use of tri-party agents to support their repo market activities remains relatively low, but we expect to see an increase in future reports if repo market trends continue their current trajectory.

# Operating model | The increasing relevance of third-party services

Widening their investment scope typically has operational implications for central banks, whether or not it involves the use of third-party managers. If investing using internal resources, a broader investment strategy entails not only suitable portfolio management and trading capabilities across a wider range of assets, but also impacts areas such as risk and data management, reporting, performance benchmarking and safekeeping. Even if some of these capabilities are outsourced (e.g. to investment managers, custodians, tri-party agents), central banks will still need to deploy multi-asset systems and analytics to maintain accurate and effective oversight. In a number of ways, our survey results suggest central banks are very focused on whether current technology will support future needs.

At present, the picture is very varied both in terms of operating models and the use of third-party services. Most central banks prefer to invest using in-house capabilities and expertise; some are increasingly contracting third-party asset managers, especially when investing in alternative assets. As noted previously, many central banks opt to maintain their assets at central securities depositories; others are more open to discussions with custodians, as their needs and priorities evolve. In particular, a reweighting away from time deposits for short-term cash investments toward repo, and in time, securities lending, will heighten central banks' need for more sophisticated collateral management and related services, potentially from third-party providers.

Regardless of the extent to which central banks are currently relying more on third-party service providers, the ongoing re-evaluation and diversification of investment portfolios is putting pressure on in-house operational capabilities. Systems and workflows designed or acquired to manage and report on a relatively narrow spread of liquid, standardised fixed-income instruments will be challenged to do the same for less-liquid, bespoke and over-the-counter investments.

As such, it is no surprise to see half the central banks in our survey investing in technology systems or upgrades.

According to our survey, 39% of central banks currently use a third-party system as the core platform across front-, middle- and back-office operations, although a similar proportion declined to provide information. Overwhelmingly, central banks continue to use in-house systems and capabilities for asset administration, performance evaluation and risk management purposes. While no survey respondents reported using anything other than in-house risk management systems, a handful acknowledged use of third-party asset administration or performance evaluations. These were typically central banks with a smaller asset base using external facilities to monitor niche portfolios (e.g. equities) managed by external asset managers.

***Central banks are very focused on whether current technology will support future needs... As such, it is no surprise to see half the central banks investing in technology systems or upgrades.***

Approximately half of survey respondents say they are planning some kind of technology upgrade. The picture painted by those who provided details of upcoming technology projects is diverse in terms of motivation and focus. Some are switching from an in-house to third-party core system, others are upgrading or improving interfaces between existing platforms, while still others are responding to the need to build more robust defences against cyber-crime.

Although central banks are increasingly comfortable supplementing in-house expertise and capabilities via the services of third parties, this trend currently has clear limits. No central banks in our survey confirmed plans for partial outsourcing of front, back or middle office functions. But a small minority flagged reliance on third parties in particular circumstances, such as the use of external managers to offset internal capacity constraints.

# Risk management | Derivatives and collateral managed in-house...for now

Use of derivatives is a core competence and well-established necessity for central banks as they protect the value of their assets against inflation, as well as currency and interest rate movements. As the OTC derivatives market shifts to a more highly collateralised mode, both for non-cleared and centrally-cleared transactions, all market participants—including central banks—are revising their approach to collateral management, often relying on third-party service providers to mobilise and manage collateral assets. At present however, risk management—including derivatives trading—is largely an internal matter for most central banks.

***As the OTC derivatives market shifts to a more highly collateralised mode...all market participants—including central banks—are revising their approach to collateral management***

Almost three quarters (72%) of central banks responding to our survey reported use of derivatives as part of their investment management activities, albeit almost exclusively restricted to currency and interest-rate hedging activity via FX forwards, futures and swaps and interest rate swaps. A small minority also use equity index futures, reflecting a wider investment universe, while others note the role of derivatives in the portfolio hedging activities of external managers.

Around half make reference to posting collateral in support of derivatives transactions, with some noting use of ISDA/CSAs to govern collateral arrangements. Just under half (44%) confirm use of ISDA/CSA agreements when conducting derivatives transactions. The survey revealed a wide divergence in the number of counterparties with which central banks traded derivatives under ISDA/CSA terms, ranging from just a handful to as many as 40. In all cases, arrangements with counterparties were overseen in-house, rather than involving third parties.

Most central banks follow a similar approval policy for new counterparties, with all key decisions on investment policy being undertaken at board level or by a board-appointed committee with appropriate risk, controls, investment responsibilities and expertise. Changes are typically effected on a bottom-up basis, with front-office staff making initial recommendations.





# Data management | Toward a new paradigm

With an increased reliance on third-party service providers—whether asset managers specialising in alternative assets or agent lenders providing securities lending services—the concomitant increase in data flows may provide challenges to the existing internal technology infrastructures of some central banks. Inefficiencies in processing and analysing data can lead to delays in decision-making relating to investment performance, with similar negative implications for risk management. This issue can, and is, being addressed through investment in technology infrastructure by central banks, but can also be alleviated through advances in data management services by service providers, which feed data directly into client systems rather than in static report formats (e.g. PDFs).

Of the few central banks that responded to questions on data processing and management in our 2017 survey, the majority indicated that these responsibilities were largely handled in-house at present. However, a small minority of smaller banks suggested there was potential to involve a third-party provider such as a global custodian to centralise asset data flows in the event of investment books exceeding internal capacity.

***Inefficiencies in processing and analysing data can lead to delays in decision-making relating to investment performance...similar negative implications for risk management.***

# Future priorities | Planning for operational contingencies and strategic flexibility

The role of central banks has evolved significantly over the past decade, due to their prominent involvement in macro-prudential policy and regulatory reform in the aftermath of the 2007-2008 financial crisis. Risk management challenges have also evolved. In addition to the macro-economic, political and market trends that have prompted the shift in some central banks' investment management policies noted above, operational risks have come to the fore, through the rise in information security threats, for example, and the rapid innovation in technology-driven financial services, i.e., fintech.

Rising concerns over cyber-security and other operational threats to central banking functions have contributed to an even more intense focus upon infrastructure resiliency than usual, including investment in remote back-up facilities to support business continuity and disaster recovery capabilities. In addition, central banks are increasingly securing the availability of third-party capabilities, through contingency arrangements, in the event of a service disruption at a primary provider.

While cyber-crime presents a significant operational threat to central banks, crypto-currencies may provide a strategic opportunity. A number of central banks have been examining the potential impact of crypto-currencies on financial stability, monetary policy and currency issuance, with a view to the potential development of central-bank issued digital currencies. As research is conducted into the risks and benefits of providing businesses and individuals with access to real-time payments with final settlement in electronic central bank money, central banks are also exploring the appropriate operational and IT implications, such as the role of distributed ledger technologies and their integration with existing systems.

Alongside such new strategic developments for central banks, the search for yield within a prudent reserve management framework is likely to remain a key priority. As active and alternative investment strategies assume growing importance alongside traditional debt-focused portfolios, the investment management frameworks of central banks will inevitably evolve. Although many central banks will continue to operate within relatively narrow investment guidelines, there are an increasing number of bespoke approaches—including hedging strategies to offset interest rate and commodity price shifts—that can be adopted without breaching mandates. For less-constrained central banks, diversification into alternatives and illiquid asset classes can be achieved whilst maintaining capital preservation, albeit with careful judgement and advice. At the same time, securities lending and repo market activity offer further opportunities to increase investment yield, especially for those central banks able to leverage and manage collateral assets nimbly and in a cost-effective manner.

As such, this report concludes that there is growing scope for central banks to augment in-house expertise and proprietary capabilities with third-party support, particularly among those institutions that are expanding outside traditional boundaries. Whether adjusting investment strategy (and thus related operational functions) to generate yield or upgrading infrastructure to improve efficiency, transparency and accountability of investment operations, the sourcing of support services—across investment management, operations management, collateral management, data management and risk management—will become a core competence at central banks over the next decade. At BNY Mellon, we look forward to tracking the development of this and related trends, whilst also standing ready to support the resilience, flexibility and effectiveness of central banks' investment operations.

## **bnymellon.com**

BNY Mellon is the corporate brand of The Bank of New York Mellon Corporation and may be used as a generic term to reference the corporation as a whole and/or its various subsidiaries generally. This material and any products and services may be issued or provided under various brand names in various countries by duly authorised and regulated subsidiaries, affiliates, and joint ventures of BNY Mellon, which may include any of the following. The Bank of New York Mellon, at 225 Liberty St, NY, NY 10286 USA, a banking corporation organised pursuant to the laws of the State of New York, and operating in England through its branch at One Canada Square, London E14 5AL, registered in England and Wales with numbers FC005522 and BR000818. The Bank of New York Mellon is supervised and regulated by the New York State Department of Financial Services and the US Federal Reserve and authorised by the Prudential Regulation Authority. The Bank of New York Mellon, London Branch is subject to regulation by the Financial Conduct Authority and limited regulation by the Prudential Regulation Authority. Details about the extent of our regulation by the Prudential Regulation Authority are available from us on request. The Bank of New York Mellon SA/NV, a Belgian public limited liability company, with company number 0806.743.159, whose registered office is at 46 Rue Montoyerstraat, B-1000 Brussels, authorised and regulated as a significant credit institution by the European Central Bank (ECB), under the prudential supervision of the National Bank of Belgium (NBB) and under the supervision of the Belgian Financial Services and Markets Authority (FSMA) for conduct of business rules, a subsidiary of The Bank of New York Mellon, and operating in England through its branch at 160 Queen Victoria Street, London EC4V 4LA, registered in England and Wales with numbers FC029379 and BR014361. The Bank of New York Mellon SA/NV (London Branch) is authorised by the ECB and subject to limited regulation by the Financial Conduct Authority and the Prudential Regulation Authority. Details about the extent of our regulation by the Financial Conduct Authority and Prudential Regulation Authority are available from us on request. The Bank of New York Mellon SA/NV, operating in Ireland through its branch at 4th Floor Hanover Building, Windmill Lane, Dublin 2, Ireland, trading as The Bank of New York Mellon SA/NV, Dublin Branch, which is authorized by the ECB and registered with the Companies Registration Office in Ireland No. 907126 & with VAT No. IE 9578054E. If this material is distributed in or from, the Dubai International Financial Centre (DIFC), it is communicated by The Bank of New York Mellon, DIFC Branch, (the "DIFC Branch") on behalf of BNY Mellon (as defined above). This material is intended for Professional Clients and Market Counterparties only and no other person should act upon it. The DIFC Branch is regulated by the DFSA and is located at DIFC, The Exchange Building 5 North, Level 6, Room 601, P.O. Box 506723, Dubai, UAE. Not all products and services are offered in all countries.

The material contained in this document, which may be considered advertising, is for general information and reference purposes only and is not intended to provide legal, tax, accounting, investment, financial or other professional advice on any matter, and is not to be used as such. The contents may not be comprehensive or up-to-date, and BNY Mellon will not be responsible for updating any information contained within this document. If distributed in the UK or EMEA, this document is a financial promotion. This document and the statements contained herein, are not an offer or solicitation to buy or sell any products (including financial products) or services or to participate in any particular strategy mentioned and should not be construed as such. This document is not intended for distribution to, or use by, any person or entity in any jurisdiction or country in which such distribution or use would be contrary to local law or regulation. Similarly, this document may not be distributed or used for the purpose of offers or solicitations in any jurisdiction or in any circumstances in which such offers or solicitations are unlawful or not authorised, or where there would be, by virtue of such distribution, new or additional registration requirements. Persons into whose possession this document comes are required to inform themselves about and to observe any restrictions that apply to the distribution of this document in their jurisdiction. The information contained in this document is for use by wholesale clients only and is not to be relied upon by retail clients. Trademarks, service marks and logos belong to their respective owners.

BNY Mellon assumes no liability whatsoever for any action taken in reliance on the information contained in this material, or for direct or indirect damages or losses resulting from use of this material, its content, or services. Any unauthorised use of material contained herein is at the user's own risk. Reproduction, distribution, republication and retransmission of material contained herein is prohibited without the prior consent of BNY Mellon.



BNY MELLON



UNIVERSITY OF  
CAMBRIDGE  
Judge Business School

