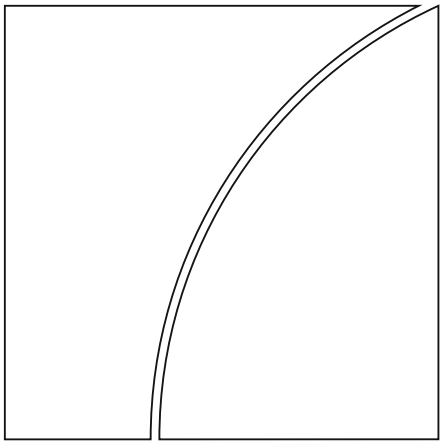
Markets Committee



# Market Intelligence Gathering at Central Banks

December 2016

JEL Classification: C81, E52, E58, G38

BANK FOR INTERNATIONAL SETTLEMENTS

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ISBN 978-92-9259-020-8 (online)

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# Market Intelligence Gathering at Central Banks[1]

## Introduction

'Market intelligence' (MI) refers to the information, primarily qualitative in nature, that central banks gather through direct interaction and dialogue with market participants. This descriptive paper seeks to increase understanding of the MI activities that are conducted by central banks. This is not, and nor is it intended to be, a definitive guide of best practice but rather to demonstrate that MI gathering can be conducted via a number of different models dependent on the central bank, its remit, size and resources. The paper proceeds by highlighting the purpose and importance of market intelligence to central banks. The recent evolution of MI activity is discussed and the markets and institutions on which intelligence is gathered are reviewed. Next, the paper outlines different organisational models for the collection, synthesis and dissemination of MI, and discusses various other aspects of how MI is conducted. Finally, the paper describes what central banks do with the information they collect, including how it is recorded and distributed, as well as the treatment of sensitive or confidential information.

## Why do central banks gather market intelligence?

Central bank remits necessitate that policy and operational decisions are made with an understanding of the financial market context in which central banks operate. Gathering intelligence on financial markets makes a vital contribution to that understanding. It enhances and extends insights that come from the analysis of market data and from published commentary and research, and thereby informs a range of policy and operational objectives.

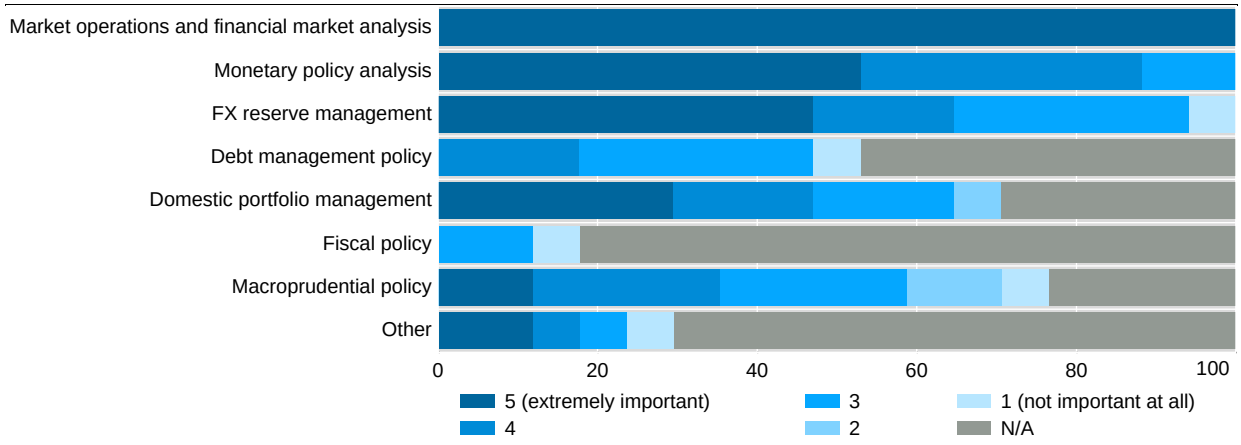
Graph 1 provides a breakdown of the reasons that central banks conduct MI, based on a 2015 survey of central banks represented on the BIS Markets Committee. MI is generally viewed as most important for market operations and analysis, monetary policy analysis, and FX reserve management, though it is used to support a wide range of functions, including financial stability.

[1] This paper has been prepared by Rosey Jeffery (Bank of England), Holger Neuhaus (European Central Bank), Matthew Raskin (Federal Reserve Bank of New York), Andreas Schrimpf (Bank for International Settlements), Alvin Teo (Monetary Authority of Singapore) and Christian Vallence (Reserve Bank of Australia). It benefited from comments from Julija Jakovicka, Harri Vikstedt and Jonathan Rand. Amy Wood and Anamaria Illes provided much appreciated help with data analysis and graphs.

MI can generally be useful in interpreting and explaining available market data.[2] It can also provide insights into market developments where relevant available data is limited; for example, understanding the underlying motivations behind particular trading strategies, or the initial experience regarding market functioning with negative policy rates (eg Bech and Malkhozov (2016)). Furthermore, MI provides important information for central banks when designing and assessing the success of operational frameworks to support policy or regulatory decisions.

The importance of collecting market intelligence for central banks

In per cent[1] Graph 1




[1] The percentage of central bank respondents which gave a particular rating (from 1 – 5) for each category when asked, "Why do you collect market intelligence (MI)?

Source: Markets Committee survey on market intelligence frameworks, March 2015.

Central banks undertake MI on topics most suited to their mandates, though many MI remits focus on the financial system as a whole, covering both domestic and international markets. More specifically, the scope covers wholesale financial markets, including exchange-traded and over-the-counter markets. These remits do not generally cover markets in which retail investors access financial products, nor do they seek to identify or pursue regulatory concerns at individual institutions – these are generally under the remit of other authorities or departments within central banks dealing with the micro-prudential supervision.

## Recent evolution of MI activity

Prior to the global financial crisis, MI at the majority of central banks served primarily to inform (conventional) market operations and to support the design of

[2] For instance, the puzzling sharp price movements and reduction in US Treasury market depth that occurred on 15 October 2014 provide an example where MI was an indispensable ingredient in the analysis of the drivers. The Joint Staff Report (2015) on the 15 October 2014 flash rally in the US Treasury market benefited significantly from discussions with various types of players in the market, including broker-dealers, algorithmic traders and platform providers.

operational frameworks and the formulation of monetary policy.[3] Since the crisis, MI has been increasingly used to gain a deeper and more nuanced understanding of markets, their functioning and the range of institutions that participate in them. For example, MI has played an important role in the design, implementation and evaluation of the effectiveness of unconventional monetary policy tools such as quantitative easing and negative policy rates. Due to the nature of central banks' relationships with contacts, MI can often provide the most immediate reactions to and interpretations of how such policy tools are impacting markets and the financial system, yielding valuable and timely feedback to policy makers and operational staff. MI is also used to assess emerging risks, eg the potential impact of the rising importance of non-bank liquidity providers for market functioning.

MI has also informed assessments of the impact of regulatory changes following the financial crisis. For example, a key focus of MI gathering among many central banks over recent years has been market liquidity and the extent to which it may have been affected by regulatory reforms. A number of central banks have used MI insights to inform policymaker discussions on this topic, and to inform related external publications.[4]

Technology, innovation, regulatory developments and other consequences of the financial crisis have catalysed many changes to the financial landscape in recent years, for example, the increasing usage of electronic trading platforms (eg Markets Committee (2016)) and the growth of exchange-traded products. Policymakers need to be appraised of these developments even if they are not within the regulatory perimeter or the markets that a central bank is active in. As such, MI gatherers at some institutions have broadened their range of contacts in order to further develop their understanding of financial markets. MI frequently also informs policy reports on technical topics of relevance to the central bank community, eg on electronic trading in fixed income markets (Markets Committee (2016)) or fixed income liquidity conditions more broadly (CGFS (2016)).

This evolution of policy and markets since the financial crisis has prompted many central banks to review their MI activity and frameworks (eg Bank of England (2015)).[5] These reviews have generally led to more structured and formalised MI-gathering arrangements. Examples include:

- The creation of centralised MI teams to monitor and develop expertise in particular markets, and/or staff dedicated to MI on a full-time basis;

[3] Some central banks also used MI to support financial stability-related functions that had been established prior to the crisis.

[4] For instance, JSR (2015) investigated the flash rally in the US Treasury market on 15 October 2014, when yields exhibited outsize intraday price moves without an obvious economic trigger. The report – a joint effort of various US public sector institutions – relied to a significant extent on MI discussions with market participants. Informed by MI, Fender and Lewrick (2015) and Bech et al (2016) discuss how post-crisis changes in dealer business models and the rise of automated trading, respectively, are affecting liquidity conditions in fixed income markets. In a similar vein, Anderson et al (2015) and Cheshire (2016), draw on MI when analysing the resilience of market liquidity conditions.

[5] In addition, central bank officials have been giving speeches outlining MI activities to increase general public awareness (eg Potter (2012) and Shafik (2015)).

- A broadening of contacts together with more rigorous management of contacts databases;
- The establishment of frameworks for sharing MI within and, on an aggregated basis, outside central banks;
- The implementation of formal training programmes at a small number of central banks; and

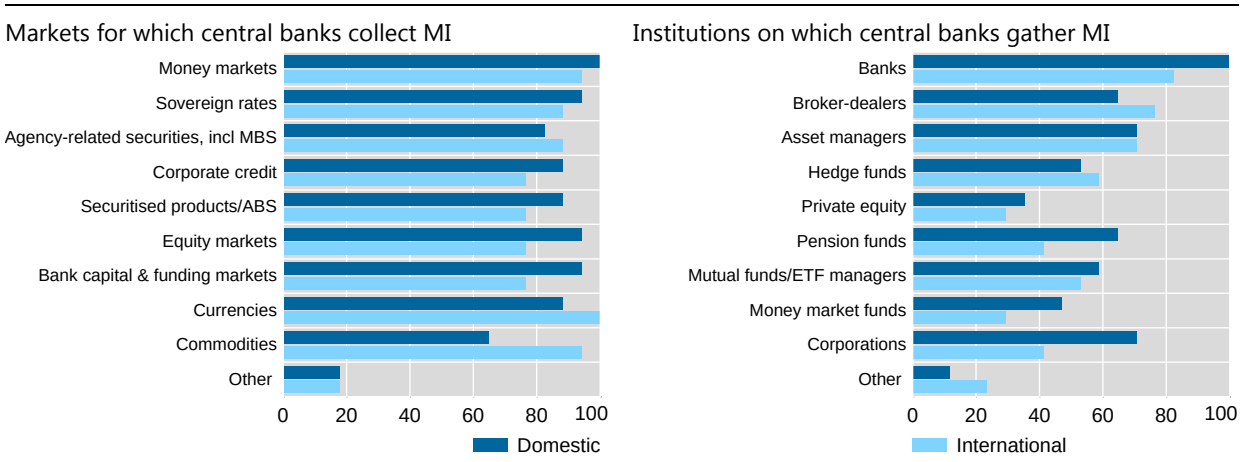
Some central banks have also taken steps to formalise their terms of engagement with market participants for example in the form of a published 'MI charter' (eg Bank of England (2016) and De Nederlandsche Bank (2016)).

## On which markets and institutions do central banks gather MI?

Central banks generally engage in conversations with a wide range of market participants. This covers both regulated and unregulated markets in their jurisdiction (including those who are counterparties to their own financial market transactions), as well as with market participants operating in major overseas financial centres. Each central bank will naturally gather MI on those markets, products and sectors that are most relevant to their local economy and policy mandate. As a result, each central bank will have varying levels of knowledge in various financial markets. Graph 2 shows the proportion of Markets Committee central banks that gather MI on various markets and institutions, indicating the generally wide range of coverage across central banks.

Market intelligence on markets and institutions

In percent[1] Graph 2




[1] The percentage of central banks who responded 'yes' to gathering MI for that particular market/type of institution.

Source: Markets Committee survey on market intelligence frameworks, March 2015.

## How is market intelligence gathered?

Most MI is gathered through bilateral conversations conducted via telephone or through face-to-face meetings, which enable rich discussion and build rapport. MI

can also be gathered by electronic means, eg, via Bloomberg or Reuters chat rooms, or via email. Some MI gathering also takes place in more formal or structured settings, such as central banks' market participant contact groups,[6] via surveys, at financial market conferences, and at industry fora such as roundtables. With respect to central bank's organisational structures for gathering MI, these range from a decentralised approach, where MI-gathering is undertaken mainly by operational units, to a more centralised approach that involves staff fully dedicated to MI. Many staff structures combine elements of both approaches.

## Decentralised MI gathering

Most MI at most central banks is collected in a decentralised fashion, usually by operational staff and sourced from operational counterparties. These staff units are also typically responsible for analysing, synthesising and disseminating MI on the market(s) in which they operate. Historically, the purpose of this decentralised MI was to inform the design, implementation and evaluation of operational policy, though since the financial crisis its use has been expanded to inform wider policy audiences of financial market conditions and developments. Decentralised MI gathering by operational staff is a cost-efficient source of MI as it leverages existing market expertise and contacts to inform the broader policy agenda of the central bank. Moreover, operational staff, in particular when they are themselves market participants, are often well placed to understand the sometimes disparate or nuanced views of other market players.

In addition to decentralised MI conducted by operational staffs, some large central banks, often those operating in major financial centres, also often maintain expertise in markets beyond operational activities, usually by establishing dedicated non-operational "market specialists" with responsibility for monitoring a specific market and liaising with participants in that market.[7] MI gathered by decentralised staff could sometimes have limits as an information source for the broader policy audience. It is often tailored to the specific needs of operational units, and can be challenging to present in a way that is of use to monetary policy or financial stability departments.

[6] Many central banks, for instance, participate or chair foreign exchange committees in their respective jurisdictions. The Bank of England administers and chairs the London Foreign Exchange Standing Committee (FXJSC), the Reserve Bank of Australia is chair of the Australian Foreign Exchange Committee (AFXC), the Monetary Authority of Singapore co-chairs the Singapore Foreign Exchange Market Committee (SFEMC), and the Federal Reserve Bank of New York sponsors the Foreign Exchange Committee (FXC). Other foreign exchange committees include the Canadian Foreign Exchange Committee, the ECB Foreign Exchange Contact Group, the Treasury Markets Association in Hong Kong and the Tokyo Foreign Exchange Committee. In addition, several central banks participate or chair similar committees on fixed income markets in their respective jurisdictions.

[7] Many central banks maintain MI-gathering capabilities as part of their operational activities in regional or international offices. Jurisdictions where the central bank is not located in the country's financial centre typically maintain dealing capabilities and/or market liaison staff in those centres. Many central banks also maintain offshore offices, typically in major global financial centres such as New York, London and Tokyo. Such offices usually consist of reserve asset management operations, and/or representative staff, and are routinely used to gather MI.

## Centralised MI gathering ("cross-market teams")

A few central banks organise their MI operations in a more centralised way. This usually involves leveraging the expertise and reach of operational staff (or non-operational market specialists) by overlaying them with a central coordinating team of cross-market generalists. The cross-market team typically takes responsibility for the synthesis and dissemination of MI, for standardising MI-gathering practices and output, and for liaising with senior stakeholders and setting MI priorities. These teams may also maintain their own market contacts and independently gather MI.

Such arrangements help ensure the harmonisation of MI practices, foster information-sharing within the central bank, exploit synergies and reduce duplication of effort, and facilitate dynamic and responsive priority setting. Cross-market teams also allow for greater oversight over the MI-gathering process and facilitate the management of risks associated with MI gathering. However, such arrangements are inevitability more resource intensive, and, by separating MI collection from MI synthesis and analysis, may result in some information loss. In addition, the design of appropriate reporting frameworks for MI-gatherers can be challenging; some central banks have adopted dual reporting lines, where front-line MI-gathering staff report to both operational line managers and central MI managers, while others maintain single reporting lines within operational units.

## Considerations that drive MI staff organisational structure

The manner in which a central bank structures its MI arrangements tends to be driven by the size and complexity of the markets in which it operates and of its resources. As such, smaller central banks tend to have operations-based models, while the largest central banks have more centralised coordination and dedicated MI teams. Nonetheless, since the financial crisis, the trend has been for institutional frameworks to become more formalised. Several central banks have established cross-markets teams, particularly those banks in global financial centres, those that have relatively large domestic financial sectors, and those that have taken on new operational responsibilities.

Even at central banks that have not adopted a centralised model, there has been a trend towards a more structured approach to MI-gathering as central banks seek to improve the collection and synthesis of MI, and to engender a more homogeneous application of risk controls around the MI process. This trend includes greater standardisation of MI-gathering practices and output across operational units, better record keeping of the sourced information, and more training of staff on how to gather MI. Many central banks are also increasingly utilising information technology systems to facilitate these goals, usually with off-the-shelf corporate management software that records meeting details and content. Such software helps MI teams to structure and document MI meetings and facilitates the analysis of the MI gathered.

## An expanding pool of MI contacts

A traditional and enduring primary source of MI is the banks and broker-dealers with which central banks conduct domestic money market, FX and reserve management operations. However, since the financial crisis there has been a

reduction in the share of market turnover attributable to sell-side firms, which has prompted central banks to look beyond traditional sources of MI. Hence many central banks liaise with a broader set of market participants. These can include buy-side market participants such as fund managers, insurance firms and corporates, as well as newly-emergent market participants such as high-frequency or algorithmic traders. Some central banks also engage with market think tanks, consultancies, rating agencies, law firms and accounting firms in order to get a broader understanding for the drivers of market activity. Graph 3 shows the frequency with which the Markets Committee central banks gather MI from various sources. While sell-side counterparties are generally engaged most regularly, a wide range of institution types provide MI daily or at lower frequencies.

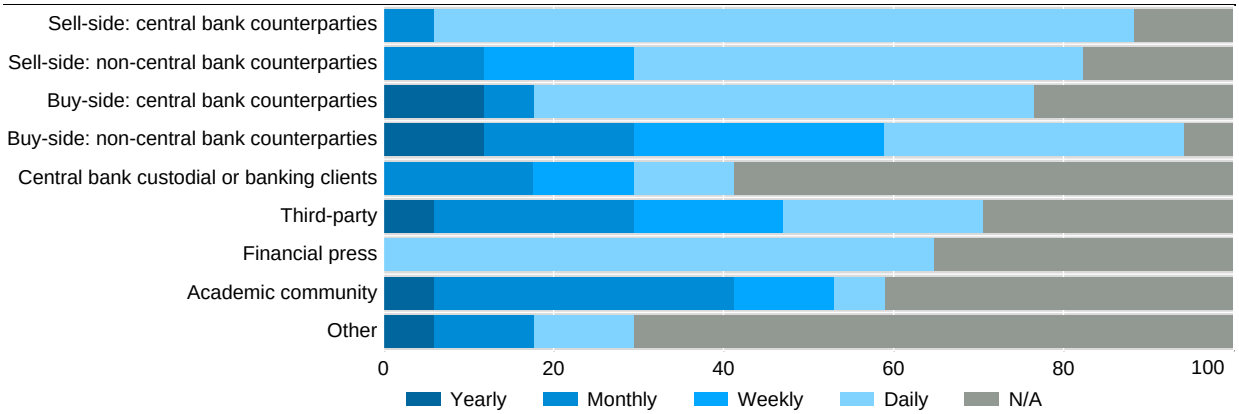
Another source of MI stems from information sharing between central banks at international fora. For example, the BIS, FSB and IMF, among others, maintain discussion groups that share MI. Such sharing is necessarily at a high level to ensure confidentially, but can be of particular use to smaller central banks with open financial markets that are sensitive to developments in international markets.

## Staffing MI teams

Staff require a broad suite of skills to effectively gather MI. They need a good understanding of markets and the ability to speak the 'language' of markets to effectively engage with participants. They need the soft skills necessary to conduct MI interviews and maintain MI relationships without inadvertently revealing sensitive information to market participants, and the analytical and writing skills to synthesise MI and produce MI reports for a range of audiences.

Frequency with which central banks collect market intelligence

In percent[1] Graph 3




[1] The percentage of central bank respondents that engage at each frequency (from daily to yearly) with the listed types of contact.

Source: Markets Committee survey on market intelligence frameworks, March 2015.

Most central banks rely on on-the-job training to prepare staff for gathering MI. New staff are typically paired with a more experienced staff member and gradually introduced to market participants. Staff are also often rotated to ensure they gain exposure to a wide range of markets and contacts. A few central banks

have implemented more formal training programs and often require staff to have completed some modules before commencing MI-gathering duties. The most advanced training programs include simulated MI discussions to ensure staff preparedness ahead of engaging market participants. Some central banks have also created MI manuals to assist staff undertaking MI and to facilitate the standardisation of MI gathering.

## Why do market contacts contribute to MI?

MI gathering activities naturally raise the question: why do market participants contribute to central bank MI? After all, such contributions are not costless to provide. For sell-side participants, the explanation seems straight-forward: leveraging their market footprint to inform clients, including central banks, of market conditions is a well-established part of their business model. Providing MI may also be a requirement for transacting with the central bank. More generally, all market participants have an interest in a well-informed central bank. Of course, not each participant is necessarily correct in his or her views on market developments, and might in some circumstances even have an incentive to bias the information that he or she shares. Central banks manage the associated risks through maintaining a broad basis of MI contacts and cross-checking the plausibility of information received against a wide swath of information sources.

### Other gathering techniques: surveys

A few central banks (or their sponsored committees) utilise surveys – either regular or one-off – to gather MI.[8] Surveys facilitate the analysis of MI as all respondents answer the same questions at roughly the same time. However, unlike in bilateral exchanges, the ability to ask follow up questions is limited. Surveys are generally better at measuring uncertainty, and can be structured in a way that facilitates quantitative analysis. By asking a repeated set of questions over time, regular surveys can also shed light on how expectations are changing, and how various economic and policy expectations correlate with each other and with market developments. Surveys allow for more targeted and dynamic MI gathering as each survey can be tailored to address specific questions; while there is some risk that a survey inadvertently signals policy intentions, great care is taken to avoid this. For this reason, those central banks that do utilise surveys often release the survey publically at the same time as it is sent to respondents (eg Potter (2012)).

# What do central banks do with the information they collect?

Central banks have a variety of practices and policies that govern how they record, analyse, and disseminate to key stakeholders the information that is collected through MI activities.

[8] Examples include the comprehensive Canadian Fixed-Income Forum (CFIF) survey on liquidity, transparency and market access in Canadian fixed income markets, or the primary dealer survey in the United States.

## Recording of market intelligence

Central banks generally attach great importance to the recording and management of information gathered through MI activities, and almost all keep some record of their conversations with market participants. This record-keeping takes various forms, but generally serves to track key ideas and information exchanged, including the evolution of market sentiments and views over time, and to facilitate the subsequent analysis, synthesis and distribution of MI.

## Analysis and synthesis of market intelligence

MI staff need to ensure that information gathered is reliable, policy-relevant and serves to inform key decision-makers. At the most basic level, this involves filtering through the vast amounts of information that MI staff receive daily via direct interaction with market participants, and indirectly through market commentary and other information sources. In many instances, this requires probing deeper into issues of possible relevance. A frequent requirement is the need to synthesise information gathered across a number of different markets; here the availability of dedicated MI staff or cross-market generalists can be particularly useful.

Another important aspect of MI gathering is the verification of findings obtained. Most staff involved in MI gathering leverage their access to a broad range of counterparties and other market participants to corroborate their understanding of market developments. In more structured MI efforts, this is accomplished by ensuring that information is gathered from a sufficiently wide and representative group of financial institutions. In most central banks, MI staff would also be expected to verify market intelligence findings against other available sources of information, including pricing and transactions data. MI findings are typically anyway married up with financial market analysis to achieve the broader aims of market monitoring.

## Distribution of insights gleaned from market intelligence

MI is weaved into various forms of reports for dissemination. In most central banks, such reports are directed primarily towards an internal audience and are circulated at least once a day to senior management and other relevant staff, with email, personal briefings and memos the most common methods of distribution. These daily reports are usually supplemented by reports at a lower frequency that serve to capture the evolution of broader market trends.

Some central banks also share MI reports externally, most commonly with the finance ministry and financial regulatory agencies. The extent to which MI is shared with the debt management office depends in part on whether that office is part of the central bank. For those banks that do share MI externally, this information tends to be shared less frequently than it is internally, and tends to be highly aggregated and non-institution specific. A number of central banks also make available to the public summaries of discussions with market fora, such as market contact groups, in order to ensure a level playing field for all market participants with regards to information access. While central banks make publications and announcements that are informed, inter alia, by MI, they generally do not share specific MI information with other authorities, the academic community, or the broader public.

## Handling of sensitive or confidential information

Most central banks rely on internal business/counterparty relationship guidelines for guidance on MI relationships and the handling of information those relationships produce. Most also rely to some extent on market conventions around information sharing, including industry codes of conduct, and explain the 'ground rules' of their interactions at initial meetings with market participants. A small number have formal documentation that codifies MI relationships with counterparts, and a few have public charters that describe the objectives and scope of their MI activities.

Most central banks have policies in place to govern the use of institution-specific transaction data, which may be more broadly applied to MI information gathered from market participants. Dissemination of such information is also limited to a need-to-know basis. Consequently, most information that is shared widely is anonymised and/or aggregated. Security classification controls in place would also apply to the circulation of confidential information.

Many central banks have policies that limit the sharing of information with internal reserve managers to prevent conflicts of interest from arising should there be informational content that could aid reserve managers in their investment decisions. While almost all reserve managers are involved in the process of MI gathering and the information they obtain is typically shared with those involved in monetary operations and policy formulation, the reverse may not be the case. Specifically, some controls may limit the sharing with reserve managers of information obtained from other parts of the central bank for policy purposes. In most instances, this is guided by the principle of need-to-know. By and large, reserve managers do not need to be privy to details of domestic monetary operations or information gathered through these channels, which could be highly confidential in nature given the role of a central bank in monetary policy and as a liquidity backstop.[9]

Non-aggregated or counterparty-specific information is never shared with other contacts under any circumstances. A significant number of central banks also do not allow staff to share non-published aggregated views of contacts on market and policy issues with other contacts. Similarly, central banks tend to discourage staff from sharing their personal views on market and policy issues. Where personal views are shared, these are usually highly generalised to make clear no privileged information is being shared.

## What do central banks do if they hear about misconduct?

MI tends to focus on the financial system as a whole, and does not seek to identify or pursue supervisory issues relating to specific institutions. Nonetheless, in the course of gathering MI, staff may come across information which could point to possible market misconduct. Central banks recognise that there is an expectation,

[9] Needless to say, it is common practice at central banks generally to have policies to prevent the abuse of confidential information for personal gain. These could include restrictions on and/or require declaration of personal financial transactions, as well as conflict of interest guidelines. Some central banks require staff to provide regular attestation regarding potential conflicts of interest and compliance with internal codes of conduct.

given their role as official institutions and as market participants, that such information would be acted upon or communicated to relevant agencies. In light of this, central banks often have formal policies or guidelines governing the escalation of suspicious activity identified through MI efforts.

## Conclusion

The intention of this paper has been to increase transparency and understanding of the practice of market intelligence gathering. For central banks considering, or in the early stages of, establishing an MI function, it is hoped this paper provides useful information and demonstrates that there is not a one-size-fits-all approach. Central banks have been conducting market intelligence in various guises for many years, often since their inception. The options for how it is done have evolved and in most cases have become more sophisticated. With a rapidly changing financial landscape, market intelligence will continue to be a crucial source of information for central banks.

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