

Market intelligence at central banks

Insights from the 5th Markets Committee Workshop on Market Intelligence, chaired by Imène Rahmouni-Rousseau (ECB)

Introduction

Market intelligence (MI) activities are an indispensable analytic input to central bank operations and policy analysis. Direct interaction with market participants offers timely and valuable insights into market conditions and the impact of central banks' operations. These engagements provide context for interpreting market dynamics; help fill the gaps where data are non-existent, incomplete or lagged; and complement data analysis to illuminate broader market trends. MI output feeds into a wide range of central bank functions, including monetary policy analysis and implementation, foreign exchange (FX) reserve management and financial stability analysis.

On 18–19 February 2025, the European Central Bank (ECB) hosted the 5th Markets Committee (MC) Workshop on Market Intelligence in Frankfurt, Germany. The workshop was chaired by Imène Rahmouni-Rousseau (ECB's Director General for Market Operations). The series of discussion sessions, which included a showcase of MI tools, allowed central bank participants to exchange views on their respective MI frameworks, practices and challenges. The workshop also benefited from the results of a survey of MC central banks that was conducted in the fourth quarter 2024.

This article summarises five key insights from the workshop, also drawing on the survey results. Section 1 reviews recent enhancements to central banks' MI toolkit. Section 2 documents the trend towards greater MI outreach to non-bank financial intermediaries (NBFIs). The two subsequent sections discuss the factors driving demand for MI output within central banks and the strategies used to internally disseminate information. The final section reviews central banks' approaches to organising and planning MI activities.

1. Accelerated adoption of tools and technologies for MI

Over the last decade, central banks' MI activities have expanded beyond traditional intelligence-gathering strategies to include more data-driven analysis. Traditional MI involves sourcing anecdotal information through direct interaction with market participants, expert judgment for corroborating and synthesising insights, and surveys of market participants.¹ Today, central banks increasingly use quantitative market monitoring and are also leveraging new technologies, including data science and artificial intelligence (AI) (Graph 1). This evolving approach is seen as complementary to, rather than a replacement of, traditional MI. For example, data-

¹ For more discussion of traditional MI activities, see Markets Committee, "[Market intelligence gathering at central banks](#)", *Markets Committee Papers*, no 8, December 2016. For a summary of the insights from the most recent MC Workshop on Market Intelligence held in October 2022, see Markets Committee, "[Market intelligence at central banks](#)", May 2023.

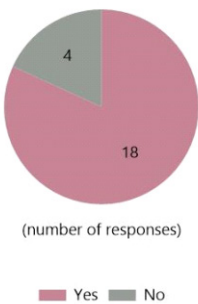
driven MI is used to identify the topics and the appropriate counterparts for traditional MI engagement, while data analysis is used to validate anecdotal claims that arise during traditional MI outreach.

The most significant development since the previous MI workshop in 2022 is broader adoption of AI tools for MI by central banks. Half of the respondents to the survey now use AI for MI, and several others are actively exploring the use of such techniques. At present, AI is mostly used to enhance operational efficiency and extract insights more systematically. For example, many central banks use natural language processing (NLP) techniques to classify, aggregate and analyse information contained in publicly available materials. Others use NLP tools to construct sentiment indicators. Only a few central banks use NLP tools to independently produce drafts of text materials, although several expect wider use in the future. Box A describes some of these initiatives.

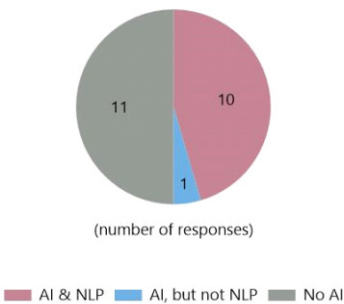
Adoption of new technologies for market intelligence

Number of central banks that report using the tools for MI Graph 1

A. Quantitative market monitoring or tools based on data science



B. Tools based on AI and NLP



AI = artificial intelligence; NLP = natural language processing.

Source: 2024 MC Survey on MI practices.

A few obstacles have slowed the wider application of AI for MI. The first is data confidentiality. In most central banks, external, off-the-shelf AI technologies cannot be used to analyse sensitive or confidential internal data. Some central banks have thus developed in-house AI tools, eg large language models (LLMs), to use for such analysis. Another obstacle relates to resource constraints, as hiring staff with AI skills, building in-house AI tools and training existing MI staff on new technologies can be costly and time-consuming.

Innovative tools make central banks' market intelligence activities more efficient

Showcase of MI tools an opportunity for knowledge-sharing

During the workshop, several central banks demonstrated innovative tools used to support MI activities. These included tools powered by artificial intelligence (AI) as well as other tools aimed at enhancing the efficiency of central banks' traditional MI outreach and market monitoring.

A number of central banks showcased how in-house tools based on AI, and in particular natural language processing, assist their MI activities. These tools help to classify topics that appear in the financial press and build sentiment indicators based on these articles, assess the scale and importance of various types of investor flows and produce first drafts of standardised internal summary documents. Moreover, some central banks presented MI tools that help to interpret market participants' perception of monetary policy decisions and communication.

Participants also showcased new tools that do not involve AI. One new tool for analysing monetary policy expectations checks market data for biases to enable further analysis. Others help visualise data from surveys of market participants to identify trends. In addition, a central bank demonstrated its platform for planning, documenting and tracking MI outreach.

2. Broader MI outreach amid NBFIs' growing footprint

Central banks have in recent years increasingly targeted information about the activities of buy-side actors, in particular NBFIs, in their MI activities. This reflects NBFIs' larger role in many markets since the Great Financial Crisis (GFC) and the fact that they at times function as the marginal price setter. To collect MI, it is important to develop relationships and trust with entities that do not have a long history of interacting with central banks. Central banks thus conduct targeted outreach with NBFIs, invite them to join roundtable discussions and include them as respondents in surveys. While building relationships with NBFIs that have a steady presence in local markets is seen as relatively straightforward, it can be more difficult with those NBFIs that are located offshore.

At the same time, the perceived importance of MI targeted at banks and dealers on the sell side has declined in tandem with their scaling back of proprietary trading activities after the GFC. Although sell-side outreach remains the most frequent MI activity, discussions have increasingly focused on what the buy-side clients of sell-side contacts are doing.

3. Greater internal demand for MI output

MI is increasingly seen as important for a wider range of functions within central banks. A decade ago, central banks used MI mainly to inform decisions on monetary policy implementation and analysis. While MI remains crucial for these functions, its importance has also gained ground in other areas. This shift has been particularly pronounced for financial stability analysis, where MI can provide timely information on emergent risks and help monitor market functioning.

At least three developments have contributed to greater central bank internal demand for MI insights.

First, recurrent bouts of market turbulence in recent years have made the prompt collection of MI increasingly valuable, in particular as it provides timely insights about

markets that are not captured in standard data or reported only with a lag. For instance, central banks whose currencies are often used in so-called carry trades use MI to monitor the build-up of such risks, which may amplify market turbulence significantly if unwound, as was the case in early August 2024 (Box B). Since MI outreach can be challenging during periods of turbulence, building relationships in calm times that can be drawn on when turbulence emerges is critical.

Second, structural changes in markets are not always captured in standard data collections, thus boosting the relative value of information gained via MI outreach. As noted above, MI has been critical for understanding NBFIs' – and especially hedge funds' – growing role in sovereign debt markets. Standard data collections, often targeted at banks, tend to yield only an indirect measure of NBFIs' activities. Moreover, direct outreach can provide qualitative information that is not readily discernible in raw data. For instance, regularly scheduled, structured dialogue with hedge funds, asset managers and insurance companies can often improve central banks' understanding of these market participants' incentives, which in turn enhances central banks' analyses of market dynamics and positioning. In addition, MI has been a key component in analyses related to the reform of benchmark interest rates, as well as the subsequent monitoring of the use of such rates.

Finally, changes in central banks' own monetary policy and operational frameworks have contributed to the demand for MI. Central banks have used MI to understand the impact of changes to their balance sheet on market structure and the financial system. As central banks adopted quantitative easing policies, they used MI to assess the implications of a *ceteris paribus* reduced free float of bonds and, in some cases, collateral scarcity in the financial system. Now, as many central banks are transitioning towards smaller balance sheets with quantitative tightening policies, they similarly use MI to, for example, assess the buy side's absorptive capacity. In addition, several central banks noted that MI had been instrumental in assessing the likely impact of changes to their operational frameworks in recent years.

Box B

Market intelligence can help bridge data gaps in the monitoring of carry trades

Central banks invest in both quantitative and traditional MI to better understand capital flows

Data gaps in benchmark statistics hinder the measurement of countries' and sectors' positions in particular currencies. This, in turn, makes it difficult to understand the potential impact of market events that can spur an unwinding of carry trades and other similar trading strategies. While publicly available data from financial markets, eg Commodity Futures Trading Commission data, are often a starting point for sizing up such trades, they are typically insufficient.

To get a sense of when and where such positions are building up, central banks tend to use a combination of traditional MI and quantitative MI. These indirect and often anecdotal indications are especially important since carry trade positions in a particular currency can swiftly and simultaneously build up in multiple jurisdictions.

As part of these efforts, central banks whose currencies are typically used in carry trade activity – either as investment or funding currencies – tend to use proprietary data collections. Surveys are frequently an important complement to existing data or a source of additional data. In addition, these central banks often invest in MI tools and engage with market participants to assess positioning and capital flows in their respective currencies. In many cases, monitoring carry trade activity also involves tracking market sentiment towards the currency (eg with artificial intelligence tools) and the profitability of common carry trading strategies.

4. Wider internal distribution of MI output to meet growing demand

Central banks have adapted how they distribute MI output to meet growing demand from their key internal stakeholders, especially decision-makers. During the Covid-19 pandemic, MI teams routinely leveraged hybrid technologies, both in outreach and internal briefings, to broaden engagement. While such practices still exist to some extent, there has been a notable return to in-person engagement. Timely, succinct messages in graph-driven presentations have increasingly replaced longer memos, partly to avoid information overload. For the same reason, many central banks have also adopted a thematic and cross-market approach to their MI output, to better connect the dots for stakeholders across the markets that they cover. Responding to the demand for MI and drawing on the lessons from the pandemic, central banks have also opened their internal MI briefings to wider internal audiences.

5. Central banks organise MI differently but face common challenges

While central banks face similar challenges in implementing their MI activities, no model for organising these activities is dominant. In most central banks, the planning and execution of MI activities is decentralised or only partly centralised, although a few have a fully centralised model. The number of staff working on MI varies considerably across central banks. In most cases, MI staff also have other duties.

The heterogeneous approach to organising MI activities reflects the range of functions within central banks that have MI responsibilities. In nearly all central banks, the monetary policy implementation function has long been heavily involved in MI. However, compared with a decade ago, staff in monetary policy analysis and financial stability units have taken on more MI activities. Central bank staff working in FX reserve management or conducting other operations are also involved in MI activities to a large degree.

Regardless of how MI activities are organised, successful MI requires systematic planning to help staff structure the workload, ensure representativeness in the outreach and avoid duplicating efforts as well as ensure that certain themes or markets are continuously followed. To this end, many central banks have set up cross-departmental steering groups or have integrated or aligned MI activities with other processes, typically the monetary policy process.

In addition, many central banks evaluate their MI activities to support planning, although in most cases these evaluations are informal. Records of MI outreach and the information gathered, which may be required for transparency and compliance, can be used as inputs for evaluating and planning future MI activities. To this end, a few central banks have also invested in contact relationship management systems to log activities and serve as a common platform for staff involved in MI.