Irving Fisher Committee on Central Bank Statistics

BIS

Dealing with artificial intelligence – a central banking perspective

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Central Bank of Chile Sixth Statistics Conference "The Power of Data for a Smart World" – 3-4 June 2025

The views expressed are those of the author and do not necessarily reflect those of the BIS or the IFC.

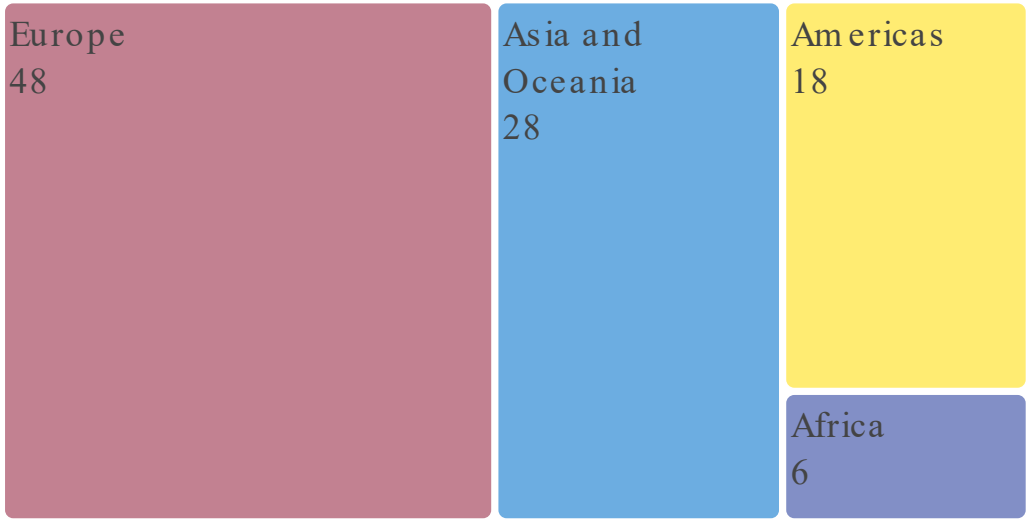
1. AI in central banks
2. General impact of AI
3. Generative AI
4. Governance of AI
5. IT aspects
6. Making the most of AI looking forward

1. Artificial intelligence (AI) is a priority for central banks…

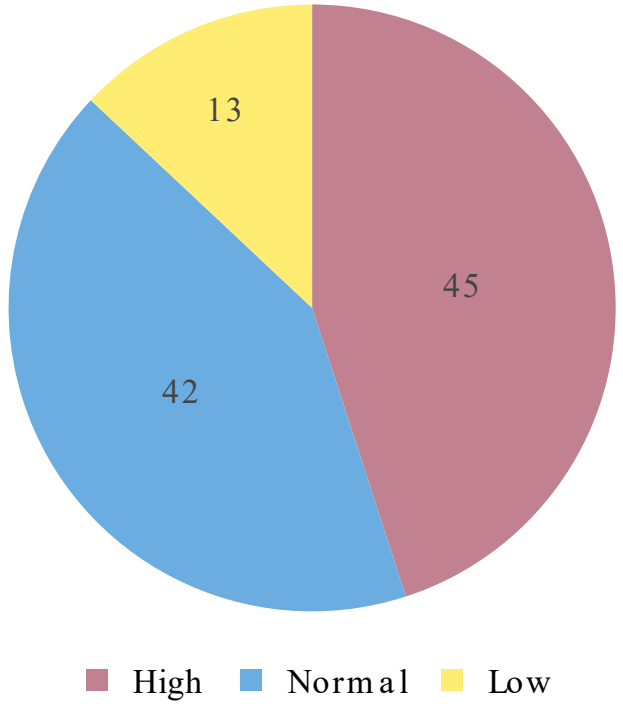
In per cent of respondents

Graph 1

A. Survey coverage



B. Evaluating AI/ML importance in strategic planning



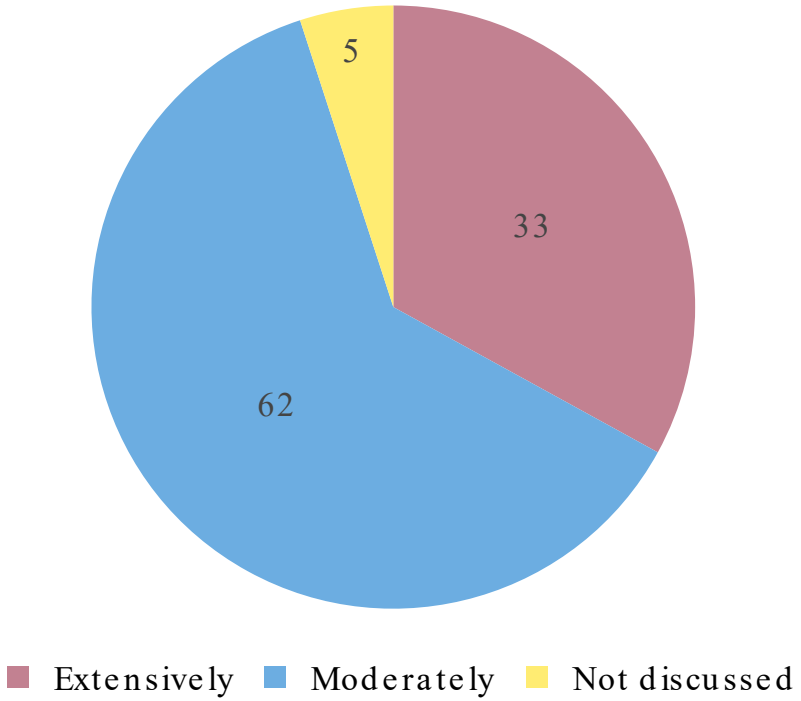
Source: IFC (2025).

1. … and is a key topic for discussion, with a budget growing

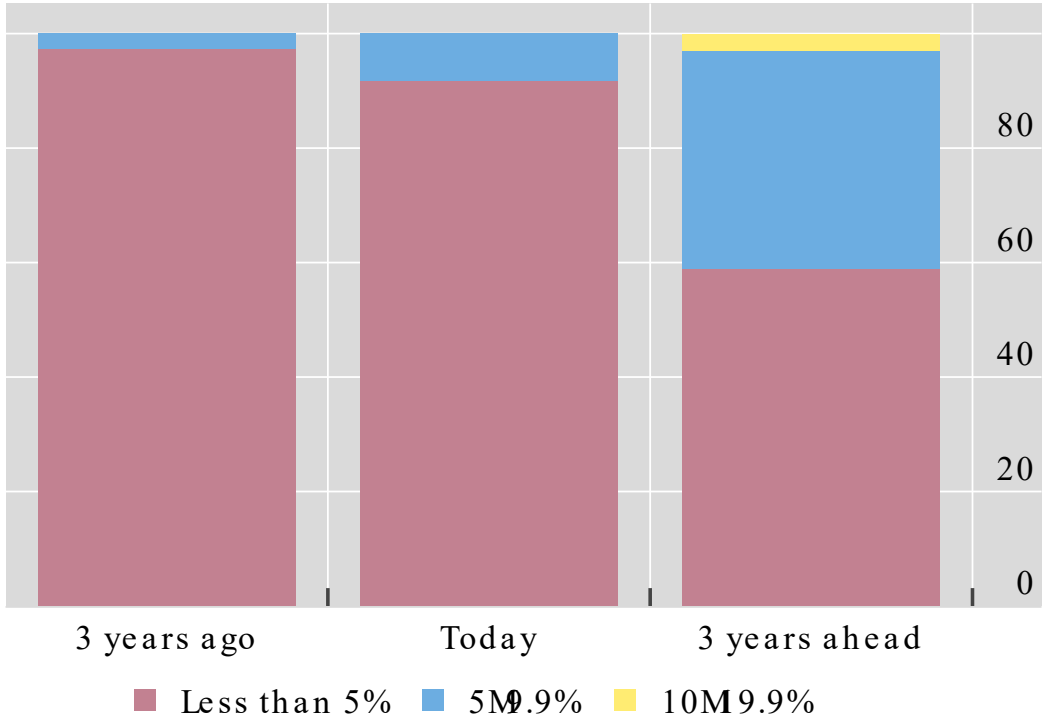
In per cent of respondents

Graph 2

A. Internal discussions on AI/ML



B. Budget allocated to AI/ML projects



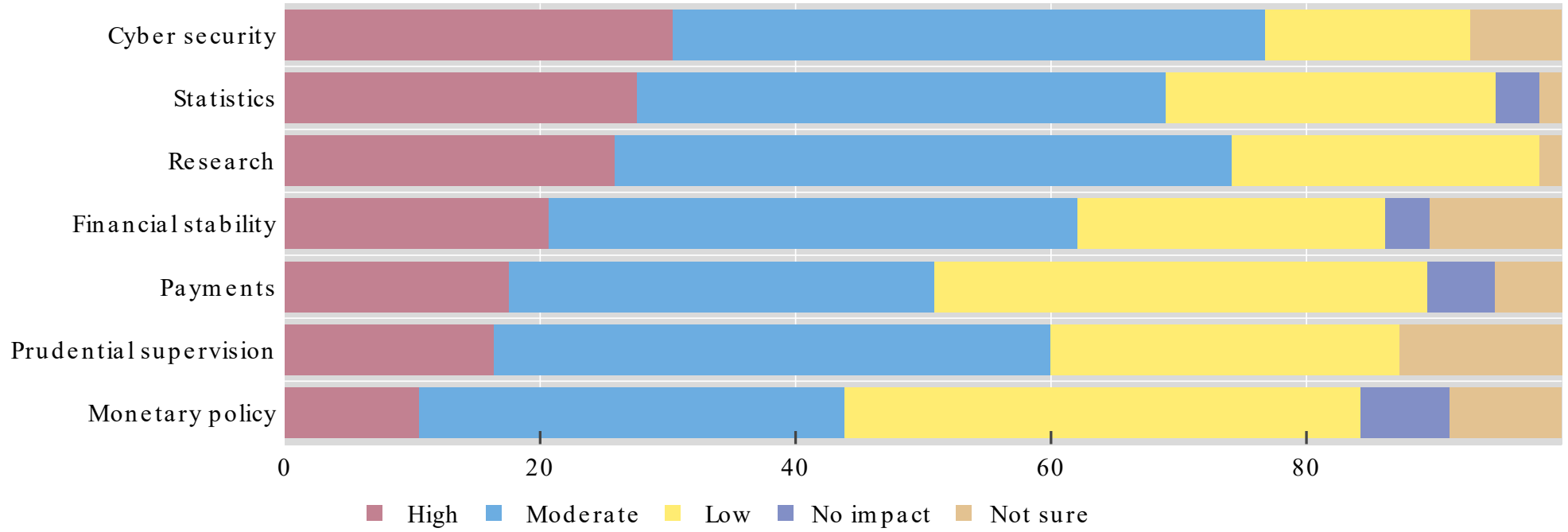
Source: IFC (2025).

2. AI is expected to have a significant impact in general, particularly in cyber security & research, and of course statistics…

Share of the expected impact from AI/ML (from "high" to "not sure") per each functional domain in the next two years

In per cent of respondents

Graph 3



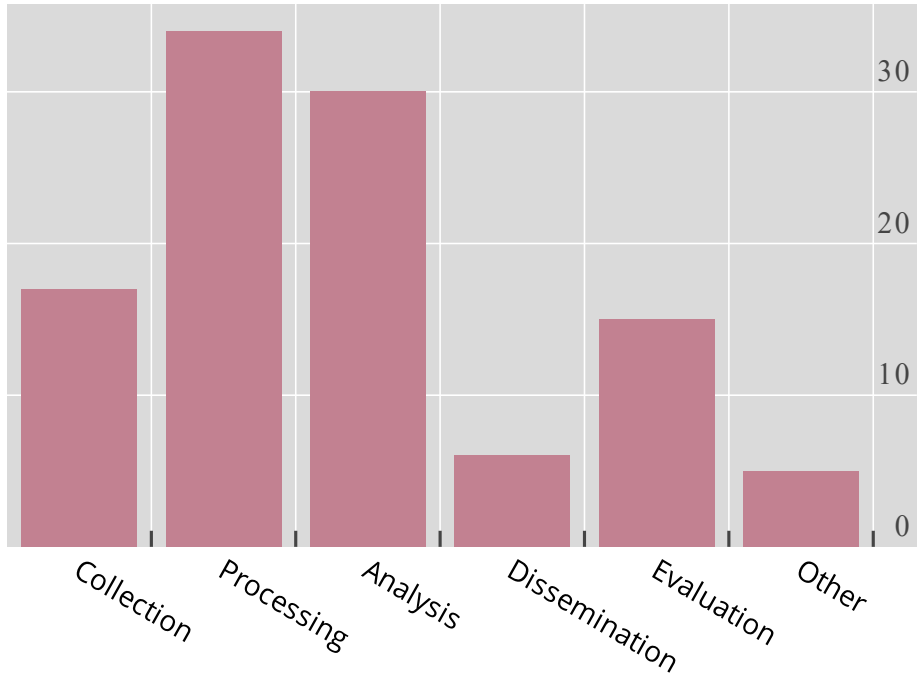
Source: IFC (2025).

2. … where the actual use of AI/ML mostly relates to data processing and analysis

Number of responses

Graph 4

A. Statistical applications of AI/ML across the phases of the data life cycle[1]



B. Large variety among the reported use cases

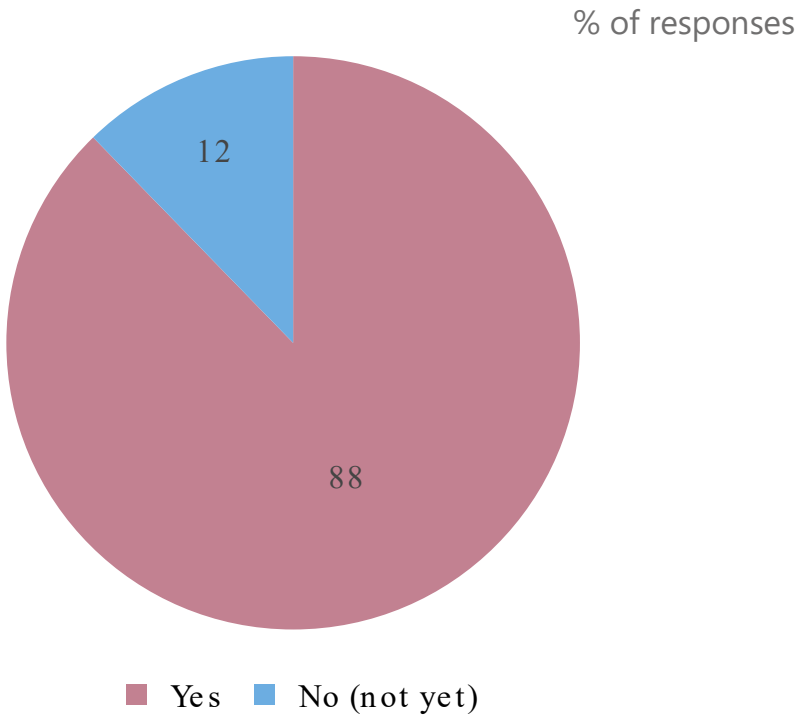
[1] For the main sequences of the production of official statistics as described in the Generic Statistical Business Process Model (GSBPM).

Source: IFC (2025).

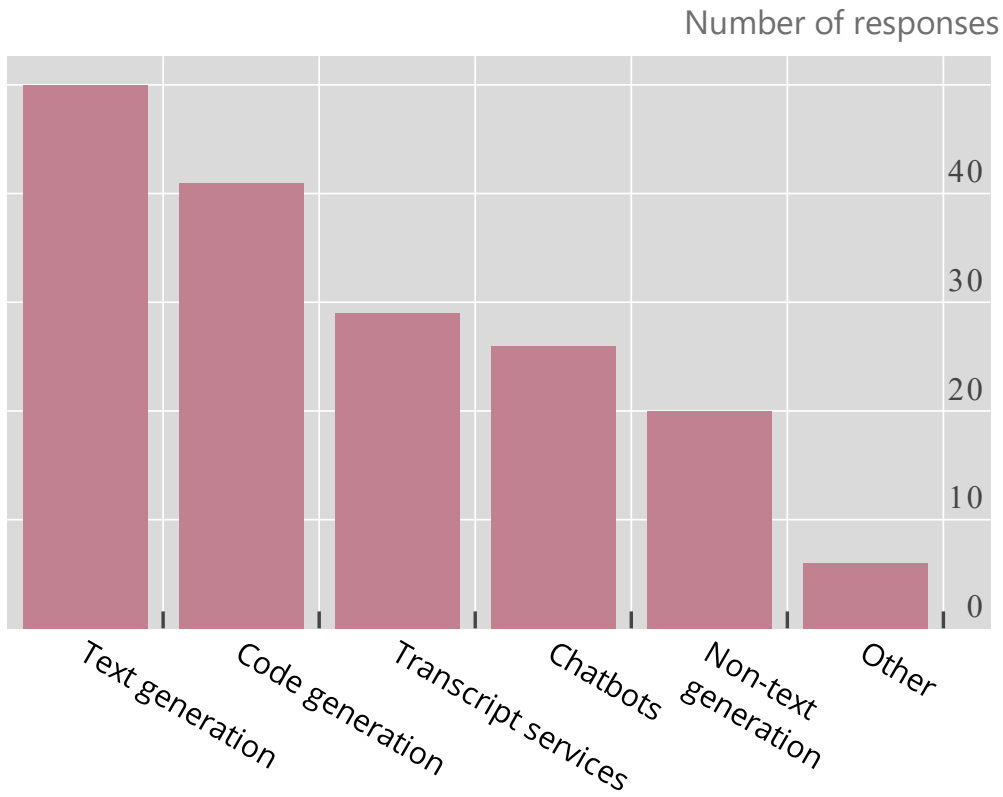
3. High expectations for using generative AI in central banks…

Graph 5

A. Almost all reporters use generative AI…



B. …especially for text and code generation

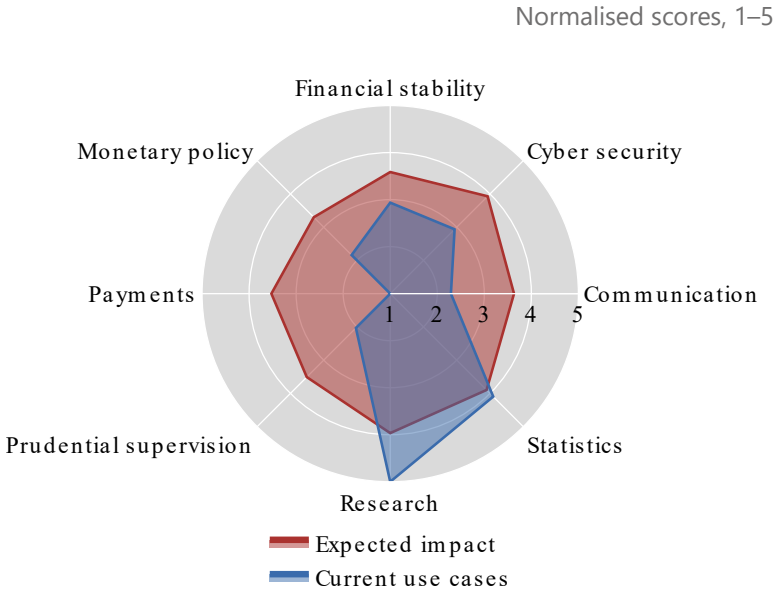


Source: IFC (2025).

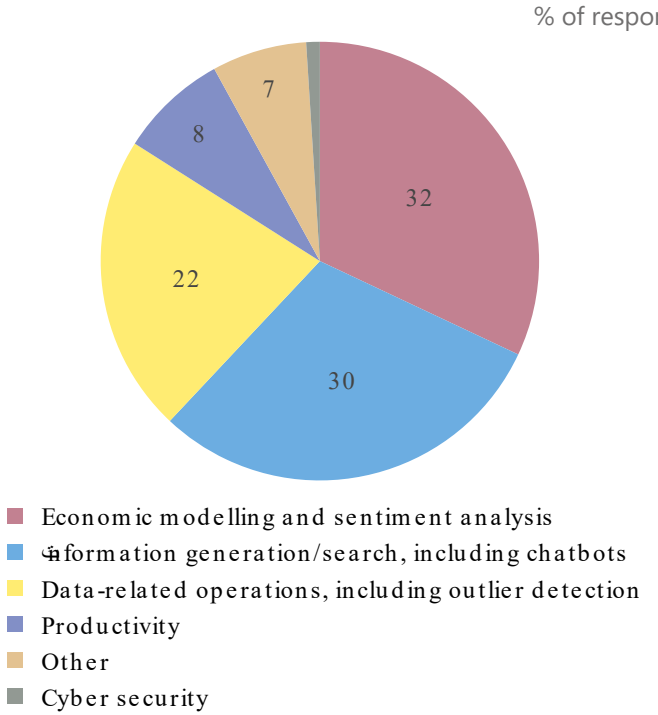
3. … but current applications remain limited and primarily relate to economic research, communication chatbots and statistics…

Graph 6

A. Expected impact and current applications of AI/ML[1]



B. Reported AI/ML use cases by application scope[2]



[1] Expected impact is calculated as the average of the responses rated on a scale from 1 to 5 (1 = not sure; 2 = not impactful at all; 3 = slightly impactful; 4 = moderately impactful; 5 = highly impactful). The number of current use cases is presented normalised on a scale from 1 (min) to 5 (max). [2] Pilot or ongoing use cases also included. Respondents could indicate more than one answer.

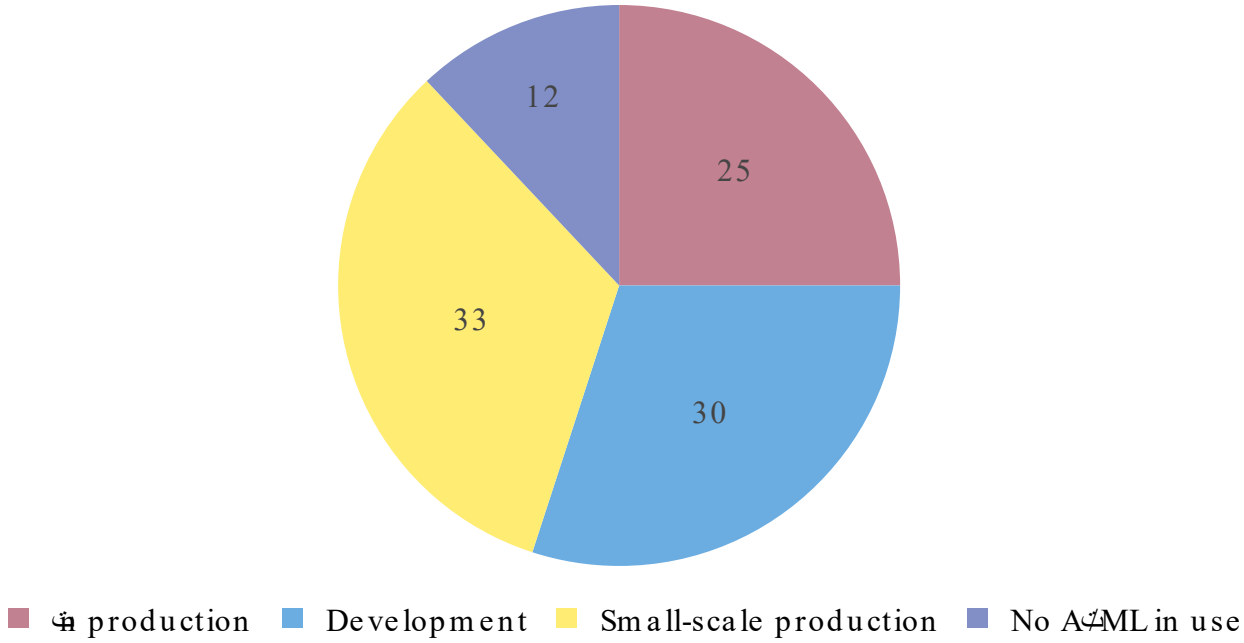
Source: IFC (2025).

3. … and mostly by exploring AI/ML techniques, with limited use for day-to-day operations

Percentage of respondents indicating each state of AI/ML adoption

In per cent

Graph 7

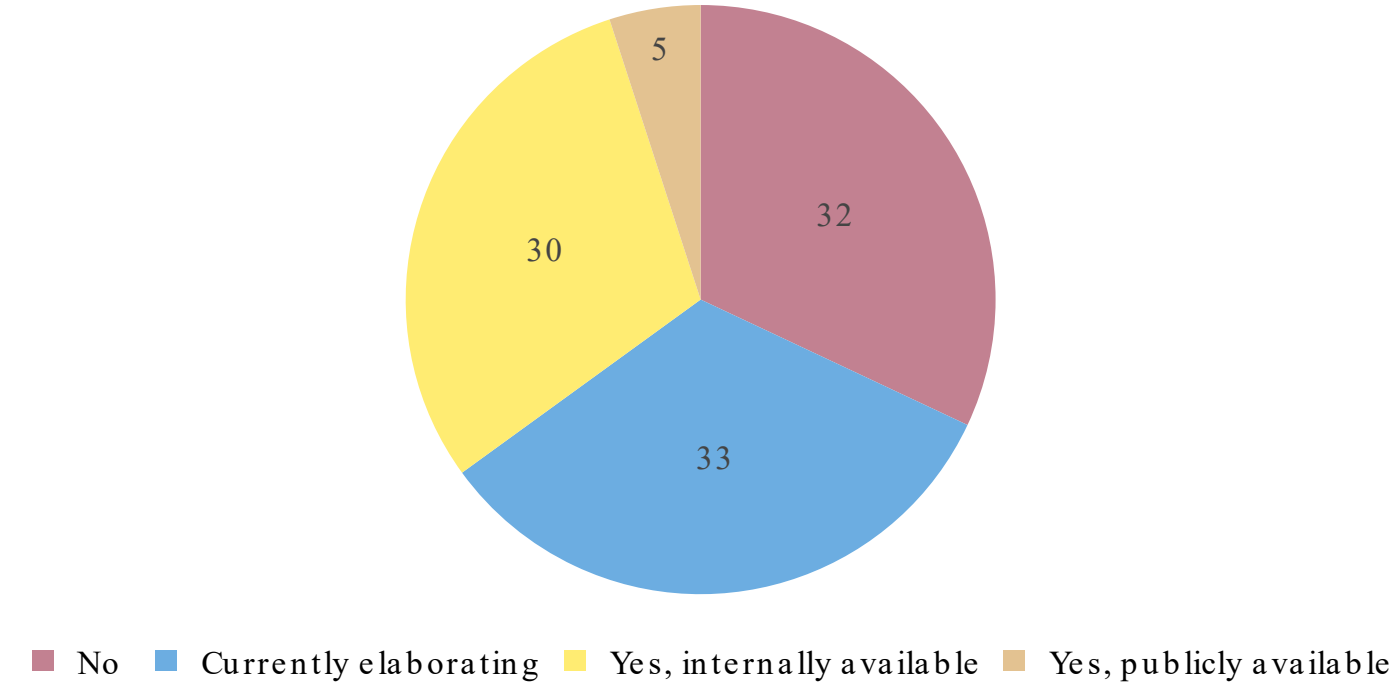


Source: IFC (2025).

4. Most central banks do not have or are only just elaborating on their governance frameworks for using AI…

In per cent of respondents

Graph 8

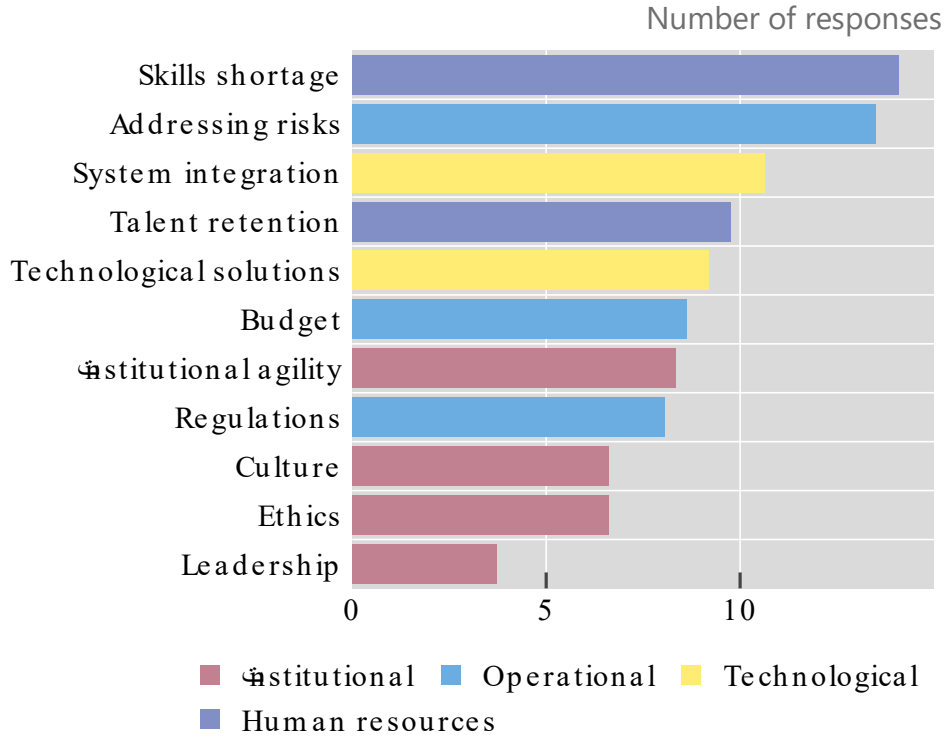


Source: IFC (2025).

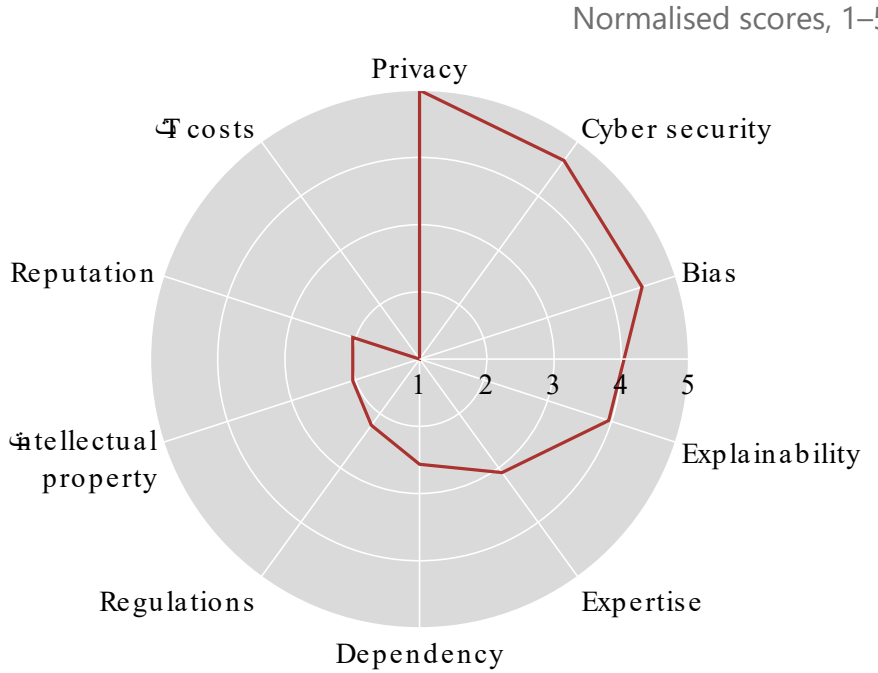
4. … despite significant challenges and risks in adopting AI/ML

Graph 9

A. Skills shortage and addressing risks are key barriers



B. Privacy, cyber security and biases are top concerns[1]



[1] Normalised scores from 1 to 5 (1 = not sure; 2 = not impactful at all; 3 = slightly impactful; 4 = moderately impactful; 5 = highly impactful).

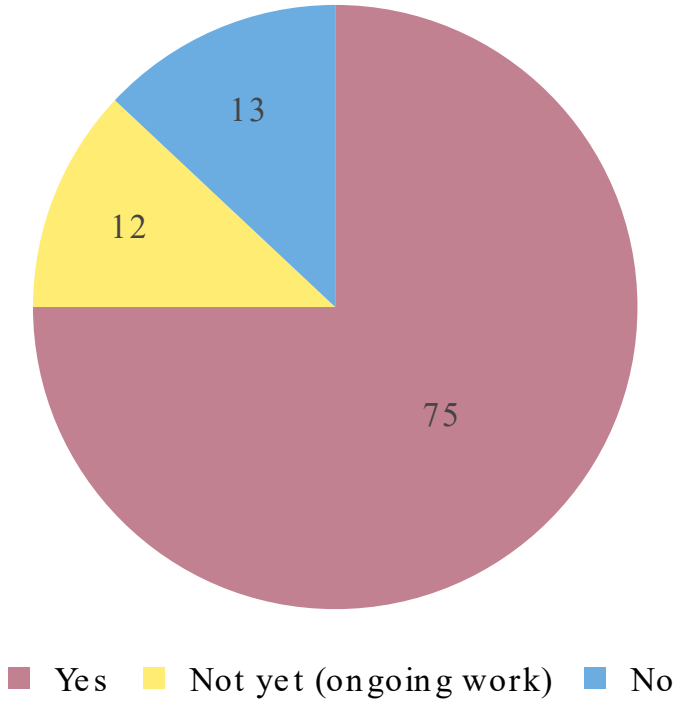
Source: IFC (2025).

4. As a first step, restrictions and policies are developed to ensure the safe and ethical use of AI in central banks…

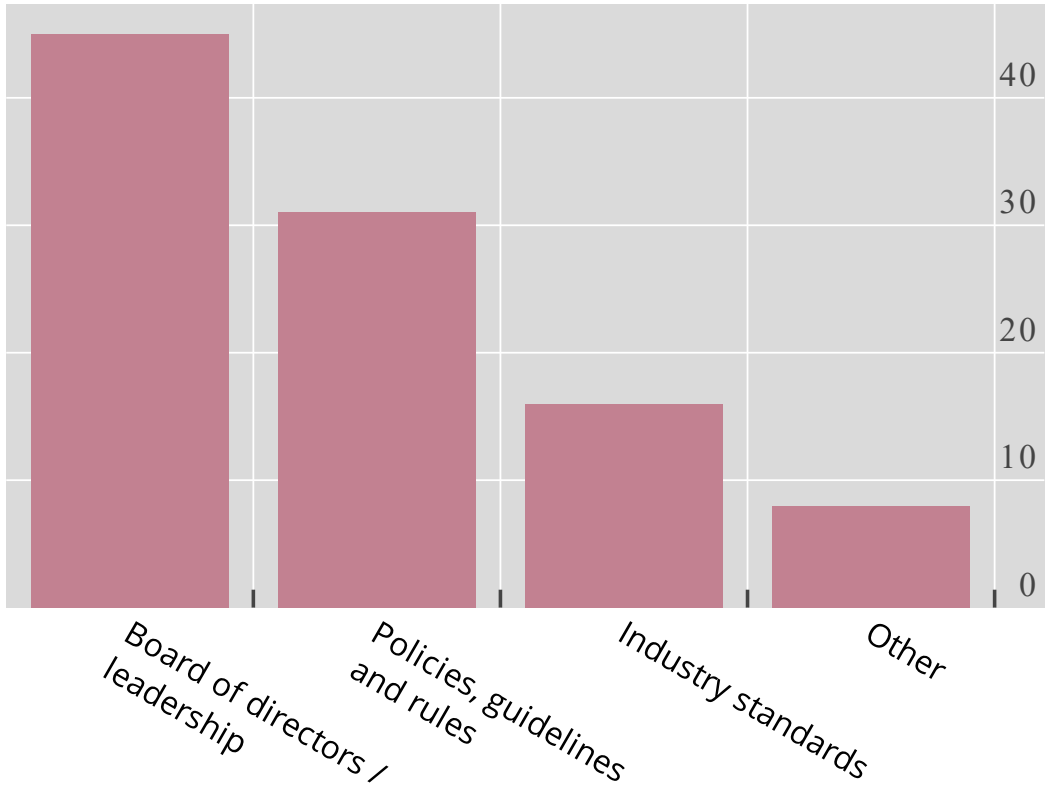
In per cent of respondents

Graph 10

A. Most central banks have restrictions on AI tools



B. Boards of directors often oversee responsible AI



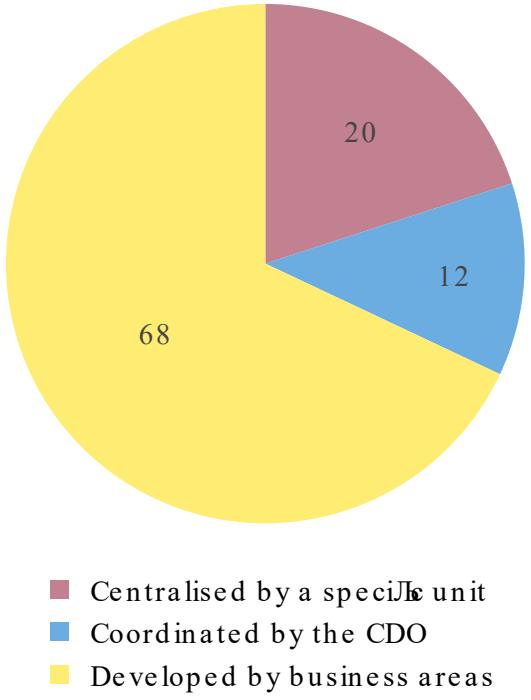
Source: IFC (2025).

4. …but AI is managed in a decentralised way, calling for coordination

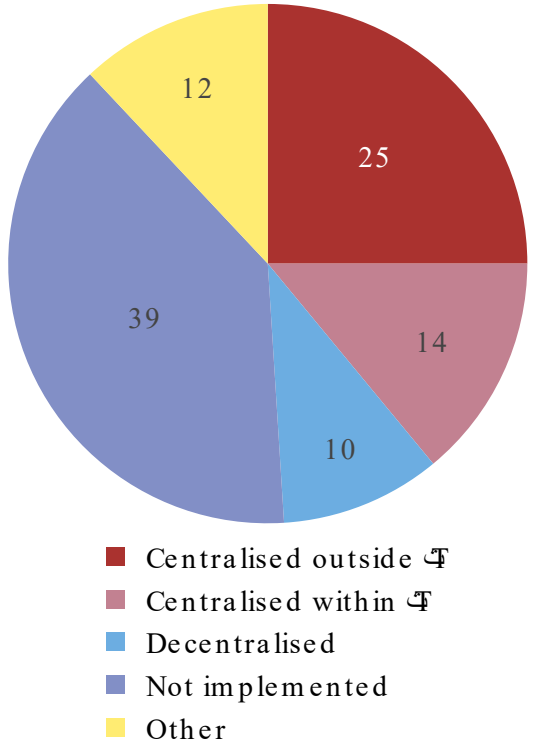
In per cent of respondents

Graph 11

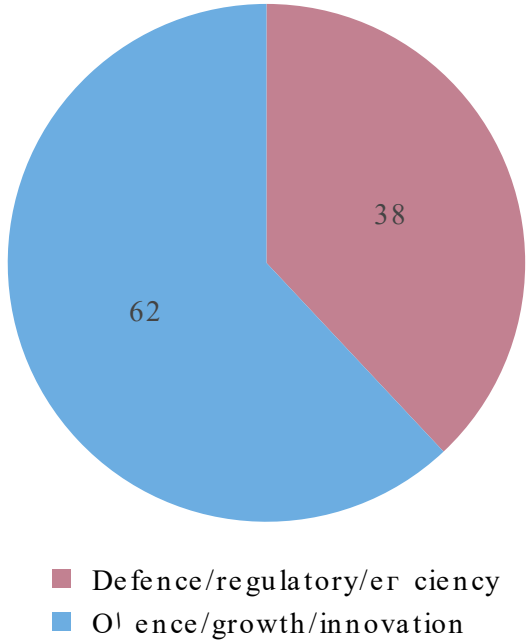
A. AI/ML projects are mostly developed at the level of business areas…



B. …suggesting that bank-wide AI governance structures are still in development…



C. …although central functions such as the CDO can help coordinate and promote innovation

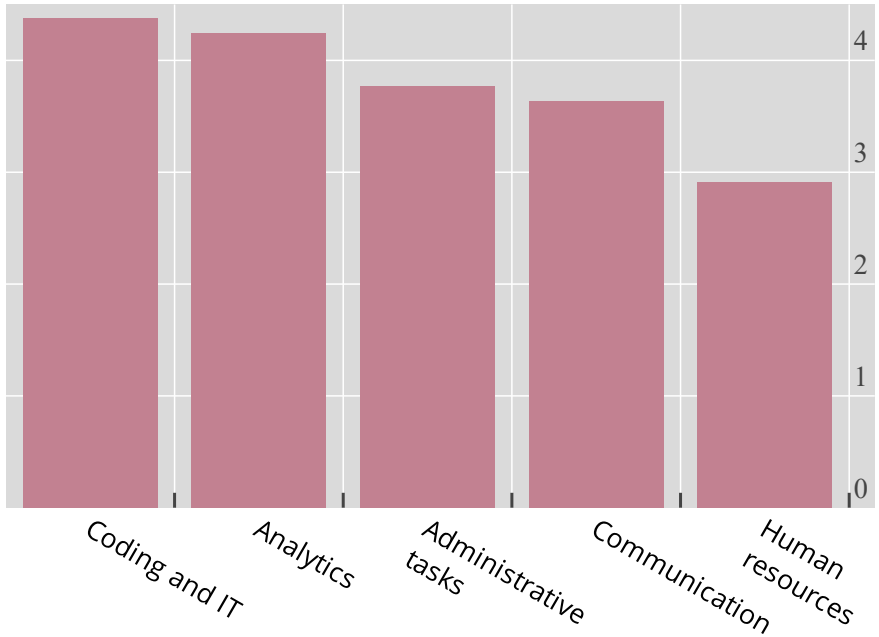


Source: IFC (2025).

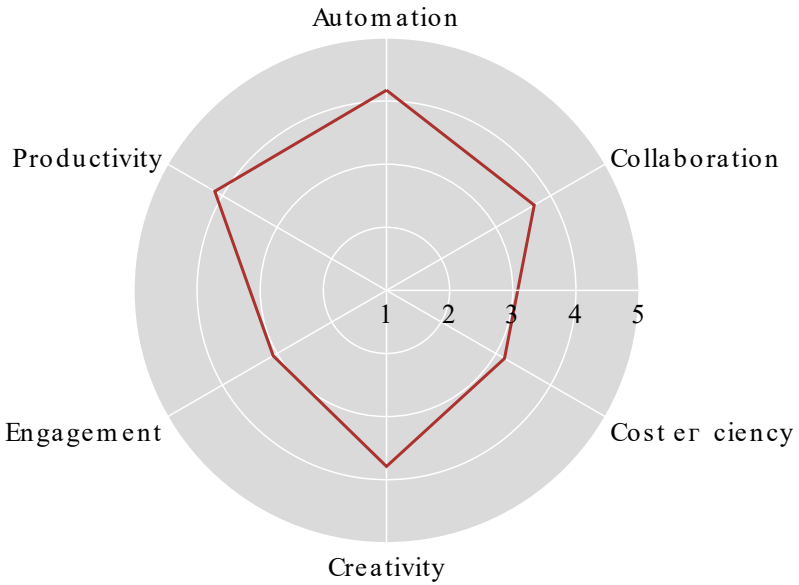
5. AI has a key impact on IT, esp. by driving automation / productivity in programming and data analytics…

Normalised scores, 1–5 Graph 12

A. AI's largest impact is expected to be in coding and analytics



B. Automation and productivity are the most anticipated benefits



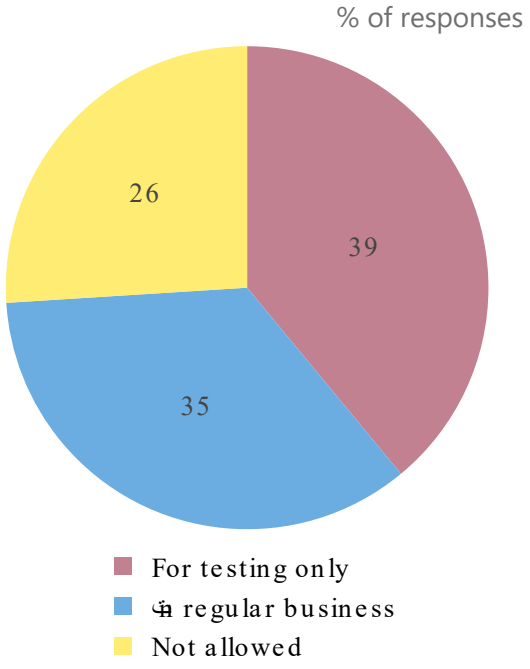
[1] Normalised scores from 1 to 5 (1 = not sure; 2 = not impactful at all; 3 = slightly impactful; 4 = moderately impactful; 5 = highly impactful).

Source: IFC (2025).

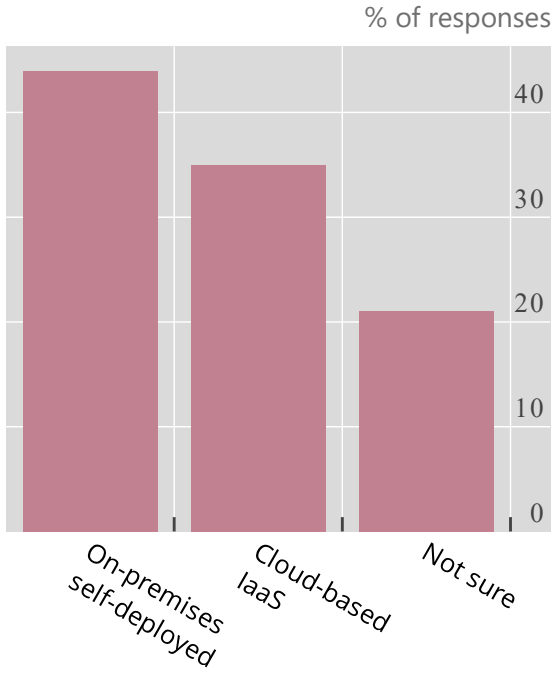
5. … leading central banks to test/use cloud services despite a preference for on-premises solutions…

Graph 13

A. Access to cloud services is being progressively adopted…



B. …but on-premises solutions are the top architectural choice for AI/ML…



C. …although several options are being evaluated by central banks

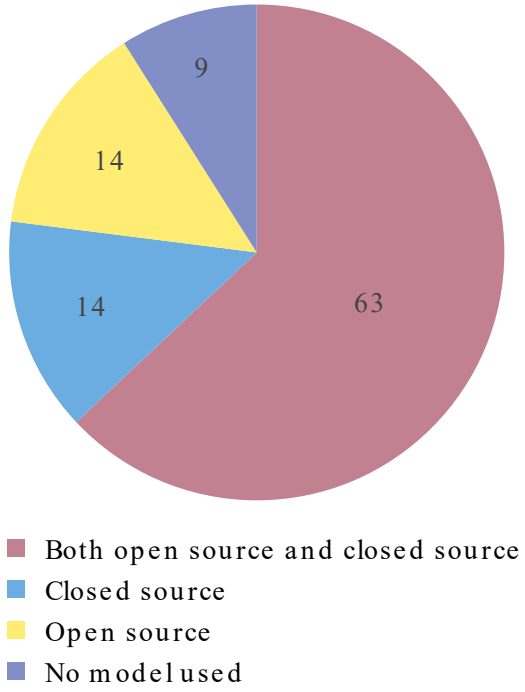
Source: IFC (2025).

5. … and to use closed AI models and increasingly open source ones for cost and dependency reasons

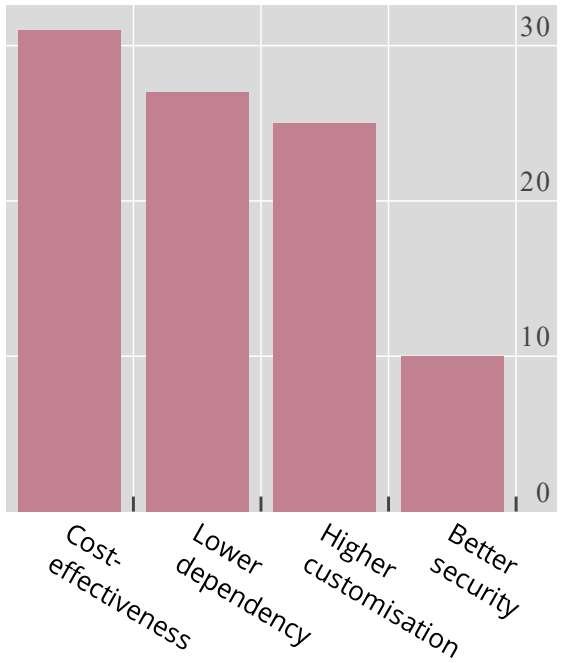
In per cent

Graph 14

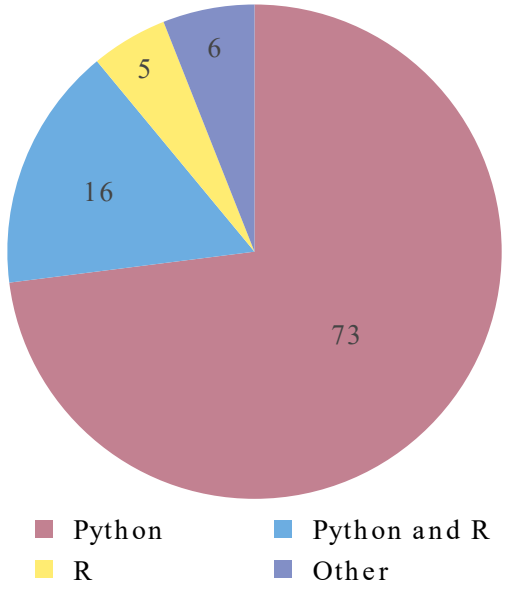
A. Both closed and open source models are used



B. Cost-effectiveness and lower dependency are critical factors in choosing open source AI



C. Python is the top programming language for AI/ML



Source: IFC (2025).

6. Making the most of AI in central banks: a roadmap…

Graph 15

Acting as data curators
Ensuring high-quality, well-documented, and machine-readable data.

Improving the global data infrastructure
Facilitating data access, sharing and collaboration on data, models and tools.

Advancing user literacy
Building AI expertise through knowledge-sharing and talent strategies.

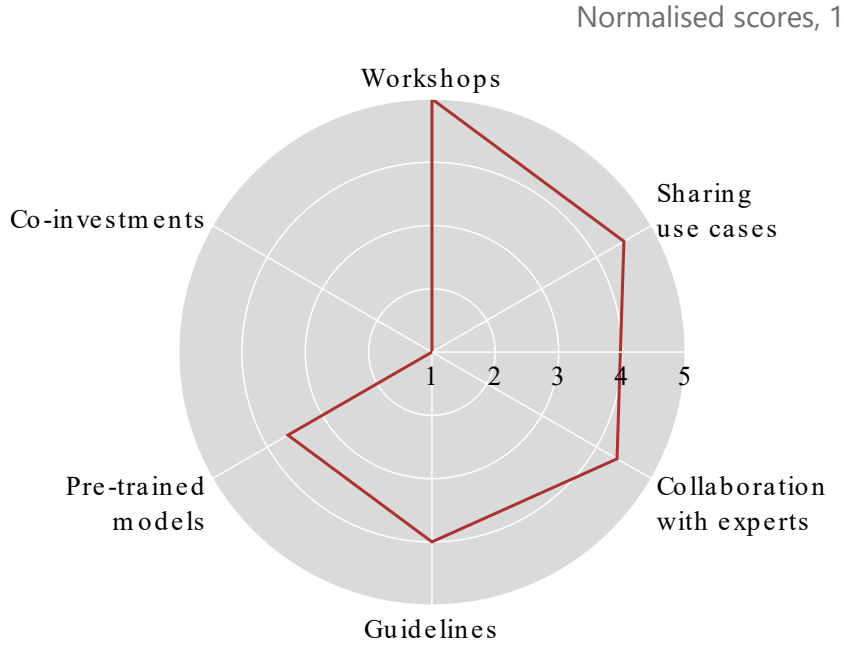
Modernising data processes and systems
Adopting modern, metadata-driven and scalable platforms and fostering interoperability through standards.

Source: IFC (2025).

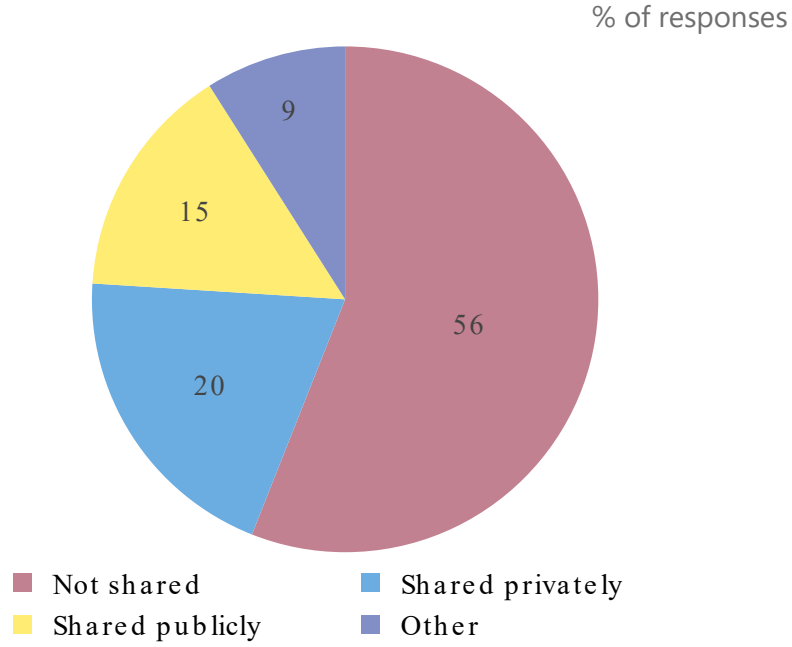
6. … calling on collaboration, cooperation and sharing…

Graph 16

A. Sharing knowledge, code and use cases is a priority…[1]



B. …yet most central banks do not share AI/ML code or models[2]



[1] Normalised scores from 1 to 5 (1 = not sure; 2 = not impactful at all; 3 = slightly impactful; 4 = moderately impactful; 5 = highly impactful).
[2] Respondents could indicate more than one answer ("Not shared" = no code is shared outside or within the central bank; "Shared privately" = code is shared within the central bank only or with similar national authorities; "Shared publicly" = code is shared with the public, including through the institution's website).

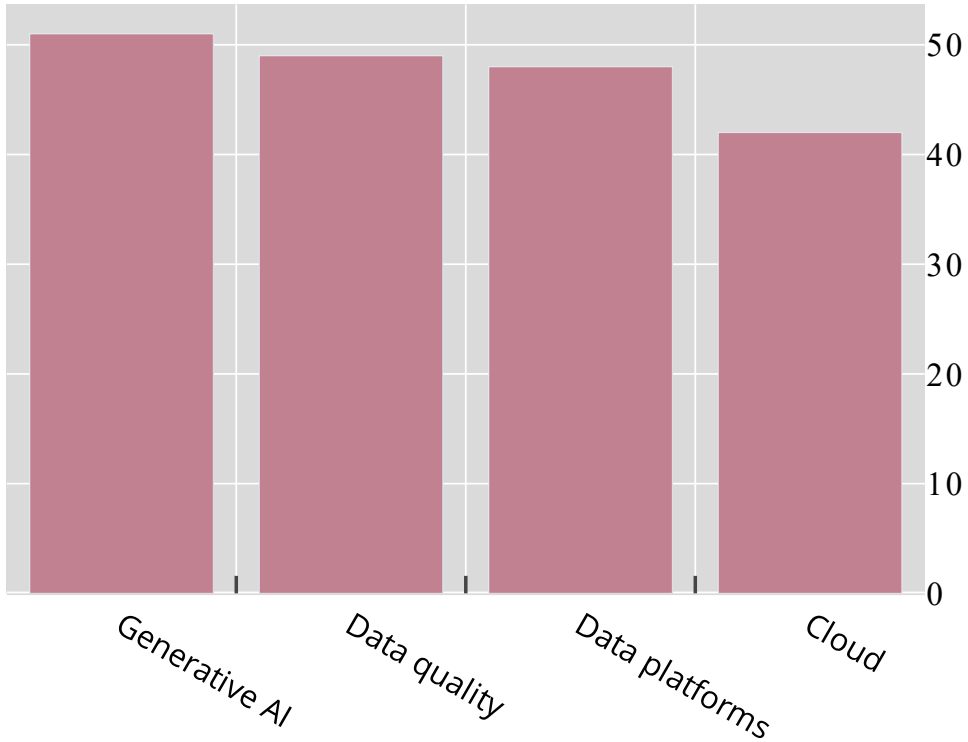
Source: IFC (2025).

6. … with a focus on GenAI, data quality, platforms and the cloud

Number of responses

Graph 17

A. Generative AI, data platforms, data quality and cloud as priorities in the near future



B. Other priorities also include quantum computing and cyber security

Source: IFC (2025).

Thank you!!

Questions?

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→Reference Publication:

Governance and implementation of artificial intelligence in central banks

IFC Report, no 18, April 2025

by Douglas Kiarelly Godoy de Araujo, Rafael Schmidt, Olivier Sirello, Bruno Tissot and Ricardo Villarreal

Available at **https://www.bis.org/ifc/publ/ifc_report_18.pdf**