



EUROPEAN CENTRAL BANK

EUROSYSTEM

Key insights from DG-M outreach initiative focused on artificial intelligence



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Bond Market Contact Group

Directorate General Market Operations

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Summary and key take-aways

DG-M carried out an outreach initiative to gather information on counterparties' involvement in innovation activities related to AI...



Invitations and meeting overview

- **Fourteen invites** sent to members of **ECB Market Contact Groups**
- **Nine meetings** held with **BMCG**, **MMCG**, and **FXCG** members from **11 April and 10 May 2024**
- Participants from **sell-side, buy-side** (asset managers), and operators of **market data services**



Meeting preparation and structure

- Six high-level AI-related questions shared with participants **before meetings**
- Questions aimed to **assess AI use cases and maturity** of innovation initiatives in the industry



Participant engagement and meeting dynamics

- Roles of participants varied; **skilled AI experts at most meetings**
- Meetings conducted in an **informal, semi-structured format**

...where the following key take-aways were identified regarding the industry's adoption and practical applications of AI

Sell-side trading



- **Textual data** is used for machine learning analyses to extract information from large volumes of documents (e.g., Bloomberg chats, analyst reports)
- Generative AI opens new avenues, but applications are still at an **exploratory stage**

Buy-side trading



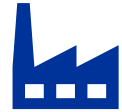
- AI supports **systematic trading** of hedge funds and alpha generation
- Yet, **questions remain about the practical integration of AI** applications with canonical algorithmic strategies

Retail banking



- AI is used for **credit acceptance, pricing and personalisation**
- Anticipated to automate **Know Your Client applications** and **client communications**

Wholesale banking

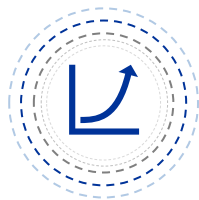


- AI expected to enhance **productivity**
- Reducing the time to finalise **lending agreements** by automatically filling in relevant data in loan applications

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Key aspects of AI applications

Influence and perceptions of AI



Increased productivity

- AI is primarily seen as a **productivity enhancer**
- Participants focus on **efficiency gains** in their workstreams
- While predictive ML has been largely adopted, **applications of generative AI** are mostly **in exploratory phase**



Growing number of applications

- Process automation, **textual summaries** of various information sources
- **Chat bots** for customer-facing activities or help desk
- Automated trading in **ideation stage**



Little revenue generation (yet)

- Talk about significant **potential of generative AI as a groundbreaking technological advancement**
- **Concerns over unrealistic expectations** leading to a potential bubble
- **Risk of investment in AI projects** that may not yield immediate or tangible financial returns

Development and implementation



Sandbox preferred

- Participants are welcoming **safe sandbox environments** when deploying LLMs to keep data internal
- Some even work on their **own proprietary LLMs** to reduce their reliance on providers



Dependence on third parties

- Risk of **vendor lock-in**, with a few **big tech companies dominating the industry**
- Competing interests identified in relation to **cost effectiveness** on the customer side, while providers aim to boost **product usage and fees**



No common approach to governance and talent acquisition

- Participants are in **different stages** regarding their adoption and integration of AI into their frameworks
- There is **significant variation** in terms of HR and financial investments in AI across firms
- Most participants work with a **small central team** for governance and **decentralised** teams for implementation
- Some created **new organisational units, specifically recruiting AI talent**

Deployment and security concerns



Deployment Concerns

Complexity of integration with existing systems

High initial costs and resource allocation

Gen AI not **interacting directly** in markets yet

Trust issues and fear of **hallucinating generative AI**



Security Concerns

Data protection and privacy risks

Vulnerabilities to **cyber-attacks** and breaches

Human involvement to control certain Gen AI systems

Ensuring compliance with **regulatory requirements**