

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



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### **Directorate General Market Operations**



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 Al 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



- 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



- Al supports **systematic trading** of hedge funds and alpha generation
- Yet, questions remain about the practical integration of Al

applications with canonical algorithmic strategies



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



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



Key aspects of Al applications

# Influence and perceptions of AI



### **Increased productivity**

- > Al 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 Al 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

Data protection and privacy risks

High initial costs and resource allocation

Vulnerabilities to cyber-attacks and breaches

Gen AI not interacting directly in markets yet

Human involvement to control certain Gen Al systems

Trust issues and fear of hallucinating generative Al

Ensuring compliance with regulatory requirements

# Background

### Questionnaire to counterparties

- 1. What are the big pain points you have identified as being use cases that AI can resolve?
- 2. Could you describe any of your (non-confidential) flagship AI initiatives or important proof of concepts?
- 3. What are the main benefits, costs, and risks with your current AI endeavours?
- 4. What is your team structure and different roles and skills in your Al/innovation teams (e.g., Hub and Spoke)? Central or decentral or hybrid?
- 5. How do you measure the impact/success of your AI initiatives?
- 6. How do you collect business requirements and how do you ensure continuous alignment between IT and business over the full life cycle of an innovation project?