FINANCIAL SERVICES INDUSTRY GROUP

ARE WE THERE YET?

THE REALITY OF AI USE IN BANKING AND FINANCIAL SERVICES

ALVAREZ & M

LEADERSHIP. ACTION. RESULTS.℠

CONTENTS

01/ OVERVIEW

Artificial intelligence (AI) is profoundly transforming the workings of many industries and financial services is no exception.

From the hyper-personalization of customer experiences to AI-enhanced investment advice, exploration of its potential uses has been rife.

Much of the hype in the last 12-18 months has centered around the capabilities of tools enabled by Large-Language Models (LLMs) – such as ChatGPT – and the use cases in consumer-facing applications. But contrary to popular perception, the most significant AI deployment has been taking place not at the frontlines, but in the middle – and back-office functions of financial institutions.

This trend is confirmed by our in-depth conversations with senior digital and data AI initiative leaders reporting directly into boards and C-level executives in the industry. For this report, A&M spoke with executives including chief digital, data and security officers at major players in the banking and financial services sector in the U.K., the European Union and the Middle East. Our takeaways from these direct interviews have helped inform our analyses of the main uses of AI in the field currently, as well as the opportunities and pitfalls that lie ahead for the financial services industry.

While these decision-makers recognize the immense potential of AI, they also acknowledge its current challenges stemming from both the evolving maturity of the technology and the maturity of business adoption within the industry. Sophisticated and infallible customer-facing AI may be the ultimate goal, but the path to get there is not without considerable risks and regulatory challenges. For example, recent news reports noted a global banking regulator's comment that banks must anticipate risks from using AI in their operations as part of their day-to-day governance[1].

However, AI is already offering vast benefits behind the scenes. Financial institutions are leveraging AI to streamline operations, enhance efficiency, mitigate risks and reduce costs.

Given the immense potential of AI, it is important to get the early steps right. The financial sector's spending on AI is set to more than double by 2027, according to the International Monetary Fund citing IDC data[2].

In this report, we will discuss how AI is transforming behind-the-scenes action at financial firms and the key challenges in extending its adoption to the frontlines. We will highlight the qualities of a digitally mature financial institution in relation to AI and what steps must be taken before the widespread adoption of customer-facing AI applications becomes a reality.

The financial sector's spending on AI is set to more than double by 2027, according to the International Monetary Fund citing IDC data.

1 Banks told to anticipate risks from using AI, machine learning | Reuters

2 AI's reverberations across finance, Jeff Kearns| IMF

02/
AI DECODED

ML refers to algorithms that have been trained to solve a single predefined task.

AI has entered mainstream discourse in the past couple of years and terms associated with the technology, such as Generative AI (GenAI) and Machine Learning (ML) are often used loosely and interchangeably. As such, we will provide a brief review of the terminology for clarity and explain the capabilities and differences between the main types of AI being used in the financial sector.

AI is an umbrella term that broadly refers to the ability of computers to learn and perform tasks normally associated with human intelligence, such as reasoning, complex problem solving and context-based decision-making.

GenAI and ML are two of the well-known subsets of AI technology. GenAI refers to AI that is capable of learning patterns from extremely large datasets and applying it to synthesize new content in various forms, including text, images, audio and synthetic training data. It does not necessarily enhance data quality unless it is trained to do so as a use case e.g. remapping data to be more consistent.

ML refers to algorithms that have been trained to solve a single predefined task. This "narrower" form of AI uses large volumes of data to recognize patterns and predict outcomes. Financial firms have worked on this capability for years based on learning from advanced data teams and analytics tools on customer data sets, corporate data sets and the integration of external data.

SUBSETS OF ARTIFICIAL INTELLIGENCE

GENERATIVE AI

What it does: Generate new and original content based on a training set. Can be applied to a multitude of use cases

Approach: Capable of creativity

Examples of financial services use cases: Co-pilots, conversational tools, computer code generation, code documentation, synthetic data creation

Training data: Uses very large and potentially multi-modal datasets

Stage of adoption in financial services: Nascent

Transparency / Auditability: Low

MACHINE LEARNING

What it does: Predict outcomes and make decisions based on patterns seen in training data for a single predefined use case

Approach: Reliant on data patterns

Examples of financial services use cases: Predictive analytics, fraud detection, credit scoring, risk assessments

Training data: Uses (large volumes of) historical labelled data

Stage of adoption in financial services: Has been deployed by the finance industry for years

Transparency / Auditability: Depends on choice of algorithm

03/
CURRENT AREAS OF AI FOCUS

In our discussions with stakeholders, we found that the primary areas of focus for banks and financial institutions when it comes to AI are those that are simple but productive.

Middle – and back-office functions, historically characterized by manual processes, paperwork and data-intensive tasks, are the most common targets of AI transformation, be it in process automation, risk management optimization or improving compliance processes. Front office, however, is less so. One executive characterized the reality of customer-engaged AI in financial services at present as something that "everyone is talking about, but no one is really doing."

> **"The reality is nowhere close to the hype."**

There are a number of reasons why the adoption of AI that interacts with customers has not yet taken off in the financial services industry. "The reality is nowhere close to the hype," one executive told us, "None of the successes (in AI) have happened quickly and it is very easy to underestimate the data requirements."

FINANCIAL SERVICES BUSINESS FUNCTION	CUSTOMER SERVICES (FRONT OFFICE)	PROCESS-DRIVEN FUNCTIONS (MIDDLE OFFICE)	BACK OFFICE
CURRENT STAGE OF AI ADOPTION IN FINANCIAL SERVICES	WEAK/MODERATE	MODERATE/STRONG	STRONG
OBSERVATIONS AND INDUSTRY EXAMPLES	Augmentation cases ("agent in the loop") are proving feasible and are growing in adoption. These can be uses such as spotting selling opportunities, sentiment analysis or providing scripts/ prompts. However, AI interaction with customers has significantly less traction. While several banks have deployed AI-enabled chat tools for help and support, there is little evidence as yet of AI being an interface between a customer and their financial accounts. Many challenges, regulatory and otherwise, remain. In our assessment, we are at least two years away from such functionality becoming well established. We also expect that recent developments in agentic AI workflows will play an important role in this time window.	Solutions span from robotic process automation (RPA) all the way to GenAI capabilities that allow users to access process documentation, automate underwriting and compliance, as well as key work steps to alleviate manual interventions. There are also strong solutions in fraud detection and prevention. Other use cases being considered include the creation of pitch books and the analysis of market data.	Solutions primarily leveraging AI-powered augmentation capabilities to support corporate-based workers. We see use in IT engineering, to support the development of code to build projects such as filling data product definition, lineage and metadata, and automatically generating code tests and synthetic data. We also see cases in automating underwriting processes and in compliance and regulatory reporting.

While the potential is vast, here are some of the main risks and concerns that are holding back widespread customer-engaging AI in the front office:

DATA SOVEREIGNTY

Concerns that customer data is taken out of permitted locations or countries. There may be country legislation or corporate restrictions limiting where cloud providers can be located. Given the lack of large tech companies in the EU, "digital sovereignty" is a particular concern among some lawmakers in the bloc i.e. ensuring that AI technology providers are not forced to give access to data to foreign governments, which would violate certain EU regulation and citizen rights.

CLIENT CONFIDENTIALITY

Worries that customer data may be compromised by lack of sufficient security, destroying trust and breaking multiple regulations.

THIN CONTROL BOUNDARIES

The thin line between where financial guidance stops and advice begins can make it challenging for AI to take over certain customer-facing interactions. If a customer is being advised to make a certain decision, the advisor needs to be qualified and the research on the customer's financial position needs to be of good quality, so it can be shown that the advice was good and compliant with regulations.

COMPLEXITY OF INTERACTION

We are still some way away from customers being comfortable with the idea of complex financial interactions and decisions handled by machines. Our conversations with executives confirmed that while AI can be deployed to some extent to inform, customers currently still reach a point at which they want human interaction.

AI HALLUCINATIONS

Sometimes, LLM-based tools such as GenAI chatbots can produce outputs that are inaccurate or nonsensical due to limitations in the model or its training data. The phenomenon can have significant consequences in real world situations, making it imperative to take steps to mitigate it (such as ensuring high quality training data through augmentation, external tool use, efficient fine-tuning and obviously frequent testing with domain specific benchmarks and stringent QA/QC controls).

04/ POSITIVE IMPACT

WHERE AI IS YIELDING MAXIMUM BENEFIT

While the use of AI in the front office is still at a nascent stage, various business functions of financial institutions are already benefiting from the technology. Here are some compelling use cases where ML and GenAI technologies are making a significant impact in other parts of the organization:

TECH AND CODING

Leveraging GenAI to enhance engineering capacity. By using AI, financial services firms can automate code generation and documentation, create synthetic data, optimize algorithms and make software development more efficient. This can speed up project timelines and ensure consistency in coding.

HR TRAINING AND ONBOARDING

New employees can be brought up to speed with AI-powered onboarding tools that can provide quick access to relevant information, training modules and skill development resources. GenAI can also enhance training and upskilling for existing staff.

AI algorithms can also be used to analyze job applications and CVs, filtering for relevant skills, experience and qualifications. By using AI to automate the initial recruitment process, financial institutions can effectively review a large number of job applications in a shorter span of time, boosting their talent identification rate.

RISK AND COMPLIANCE

AI is proving useful in the field of fraud detection. ML models, for example, can analyze customer activity and transaction patterns, flagging any suspicious activity. This allows financial institutions to focus on genuine threats, minimizing unnecessary customer alerts and potentially reducing the provisions set aside for fraud payouts.

GenAI, meanwhile, can assist in financial crime investigations by gathering relevant information, drafting initial letters and streamlining the investigative process. This can expedite the investigation and help ensure compliance with regulatory requirements.

OPERATIONS AND PROCESS DOCUMENTATION

Operations staff have long had to deal with extensive process documentation in the financial services sector. AI solutions provide easy and quick access to specific tasks, eliminating the need to review thousands of documents manually. This improves operational efficiency and reduces human errors.

COMMERCIAL AND MARKETING

AI can turbocharge marketing and commercial campaigns for organizations. It can optimize email marketing by personalizing content, improving clickthrough rates and enhancing customer engagement. GenAI tools can also tailor in-app banners, ensuring relevant campaigns and promotions reach the right customer at the right time.

05/
AI'S POSITIONING WITHIN THE ORGANIZATION

We have found that where and how AI sits within the financial institution is key to determining the kind of impact the technology can have on its overall operations. We have identified two main approaches that companies can take when it comes to the organizational structure relating to AI – centralized and federated.

In a centralized approach, the following business aspects are typically centralized:

CORE INFRASTRUCTURE PROVIDER

The central owner typically sources infrastructure from major cloud providers such as Google, Microsoft and AWS. This infrastructure is then made available to either the central capability team or federated users across the institution. Additionally, agreed AI services can be directly consumed from the cloud provider to uphold role-based access control (RBAC), data privacy and security policies.

AGGREGATION OF USE CASES

Centralized team aggregates various AI use cases and oversees governance. It ensures consistency and alignment with organizational objectives.

SEED FUNDING

Centralized team provides initial funding for AI initiatives. This includes governance and development efforts.

The benefits of a centralized approach are that it ensures a high degree of reliability and a unified project management tracking system. Centralized teams also contribute significantly to the institution's internal AI knowledge base, driving awareness, education and best practices. On the flip side, it requires significant investment upfront and can create bottlenecks without strong collaborative efforts and lead to data-access challenges for cross-cutting initiatives. Limited contextual understanding by central decision-makers can also lead to business units feeling disempowered.

A federated approach, on the other hand, displays the following characteristics:

INDIVIDUAL UNIT AUTONOMY

- In a federated AI model, individual teams have the autonomy to take decisions related to the development and use of technology in their area. The autonomy exists within agreed terms and teams are connected into a smaller, less dominant, centralized core.

NEEDS-BASED IMPLEMENTATION

- Teams can choose how to implement AI solutions based on their specific needs. This may lead to special use cases or applications that can be integrated more easily into the relevant business unit.

The advantage of a federated approach is that teams are more agile in their response to any changes or improvements that can be made to the AI tools deployed within the business unit. Business units have less dependency and more autonomy in decision-making. Teams can also draw upon specialised expertise in their respective business units to come up with use cases. The main challenge of this approach is ensuring consistency across teams and issues of scalability due to different methods used across the wider organization. Further downsides include possible fragmentation and duplication as well as difficulty in accessing relevant data that is outside the team's immediate purview.

In our discussions with financial sector executives, we found that a centralized approach is the most common. We observed that some of the more digitally mature financial institutions have set up hub and spoke models for AI that work with various business areas. Virtually none are as yet deploying a pure-play federated approach, although the more tech-advanced institutions believe it is the next step in the evolution of AI in their organization.

3 EU AI Act: First regulation on artificial intelligence

Downsides to a federated approach include possible fragmentation and duplication

WHAT AI DEPLOYMENT LOOKS LIKE IN A DIGITALLY MATURE BANK

In our experience, financial institutions with higher digital maturity and a culture of experimentation and innovation display the following characteristics when it comes to AI:

- Broad definition of AI, with use cases within their institution clearly mapped out
- Established data teams with a track record of data science and data engineering to build applications at scale
- Cognizant of the risks and challenges associated with AI deployment to a large user base
- Strong grasp on data quality and data governance
- Clear understanding of the upcoming regulatory requirements (for example, the EU AI Act[3])
- AI roadmap in place for the next few years
- AI-powered toolkits and digital business platforms

06/

RECOMMENDATIONS FOR GREATER AI ADOPTION

Ultimately, successful AI integration in all aspects of a financial institution requires aligning corporate strategy with customer demands and regulatory requirements. So, what is needed to move the industry towards better adoption, especially in the front office?

Based on our interactions with executives for this report, as well as our extensive experience working with financial institutions, solution providers and vendors, we recommend a three-pronged philosophy:

Adopt

well-evidenced cases that are easier to embrace and highly parameterized. For example, in technical productivity, sales and marketing.

Configure

cases where customer response cannot be controlled, but guardrails can be put in place. For example, while building out a chatbot.

Construct

individual cases where required. For example, bespoke cases to trial, such as summarizing loan extension rationales to accelerate credit committees.

06/ RECOMMENDATIONS FOR GREATER AI ADOPTION

More specifically, when adopting this philosophy, there are many actions that financial services firms can take to achieve AI success:

1 Begin adopting GenAI at scale to boost productivity in your IT functions and in sales and marketing by rolling out augmentation to early adopters

EXAMPLE USE CASES

- Use of Gen AI for coding assistants and for the documentation of legacy code bases such as COBOL
- Support of functional testing
- Creation of synthetic data for sales and marketing scenario analysis

2 Build organizational muscle through focused executive learning sessions and hands-on AI use cases supported by expert partners

3 Yes, it's time to start configuring that chatbot! Experiment with customer facing solutions to understand the limits of what is currently possible

EXAMPLE USE CASES

- In lending, AI can help customers with Q&A and nudge them on refinancing needs
- In customer support, the AI can answer common customer queries on products or instantly handle general FAQs

4 Think through the operating model and governance changes necessary to deploy and scale-up GenAI services

EXAMPLE REAL LIFE MODEL

- Adoption of domain specific benchmark data sets for Quality Assurance and Control
- Adoption of guard rails and best practices to ensure compliance with upcoming regulation
- Use of a prioritization framework

5 Examine best use cases for front-office deployment, once middle – and back-office capabilities are achieved

EXAMPLE USE CASES

- Enterprise level use cases across financial crime (FinCrime), know your customer (KYC) areas
- Augmentation tools for enhanced workplace productivity (e.g. onboarding time to employee usefulness)
- Knowledge management (usage of LLMs to allow access to enterprise level processes and data – specifically for operational areas – e.g. HR operations, IT self-services, compliance operations)
- Deployment of chatbots into functional areas to improve operational work tasks e.g. FinCrime, KYC, credit decisioning

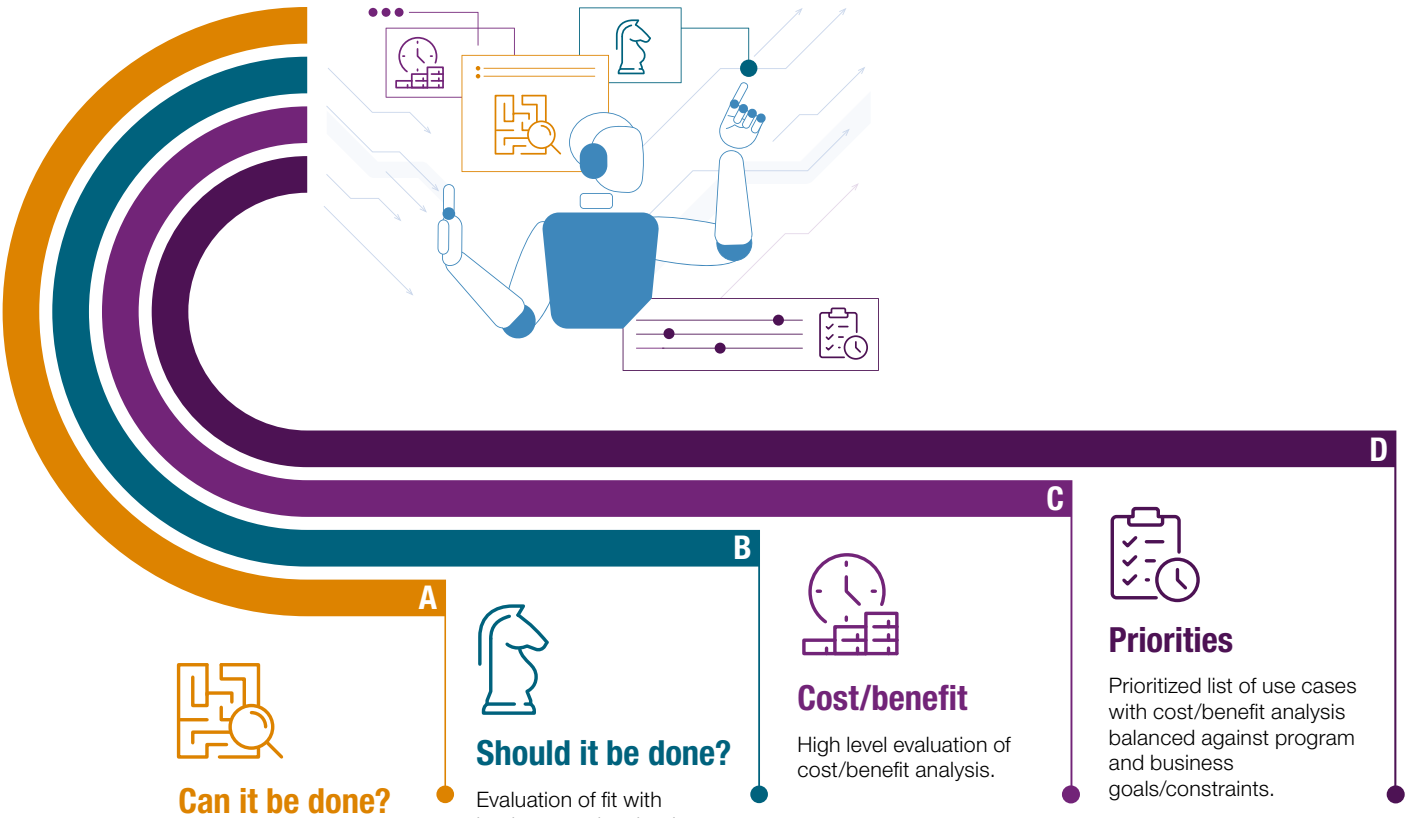
07/

PRIORITIZATION FRAMEWORK

PRIORITIZATION FRAMEWORK FOR AI USE CASES

A practical prioritization framework is essential to pinpoint the best use cases for AI application. The framework must consider whether AI can solve the use case, whether the objectives – revenue, product and so on – are clear and if it can be executed at an appropriate cost.

We recommend a simple management process that takes use cases systematically through these query points.



08/
LOOKING AHEAD

In conclusion, AI is transforming the financial landscape with tools to boost operational excellence, streamline processes and cut costs. While the spotlight is on front-office functionality, actual AI engagement with customers is considered a risky endeavor by most, and a majority of current initiatives in the financial services sector are instead focused on deployment in the middle and back offices.

We consider true front-office implementation that includes customer engagement to be at least two years away. We do expect that “chat servicing” AI will improve, although the financial services industry is still some way away from performance and task-based AI deployment.

In the meantime, regulatory oversight will also likely firm up for the use of AI in banking and financial services. Organizations must ensure they are equipped with the right strategies, funding and technical expertise, including at the executive level, to harness the full potential of AI. They must foster a culture of innovation, openness and collaboration. At the same time, understanding the limitations and risks of the evolving technology, as well as monitoring regulatory developments, will be crucial. Careful consideration of how all these factors align with the organization’s values and objectives will ensure the best results in the long run.

Organizations must ensure they are equipped with the right strategies, funding and technical expertise

09/

HOW A&M CAN HELP

RAPID START AI SERVICES

A&M's Rapid Start AI services help companies implement AI use cases and generate value in a fast and easy way. We have a dedicated team of experts with deep operational, industry and technology experience, who can work closely with you to kick-start your GenAI journey.

The biggest questions companies are asking about AI are:

- What part of it is hype and what genuinely drives value?
- How do I test GenAI and prove value?
- How do I de-risk my first steps into GenAI?
- New commercial solutions are coming and developing rapidly. What should I be using?
- Can I benefit from GenAI even if I have legacy systems?

A&M's approach adopts the following principles:

- De-risk by starting small
- Transform retail, SME and wealth customer journeys, especially in lending, with more informed and targeted credit risk models
- Rapid start to a POC in four weeks and prove the benefits case
- Scalable approach and scalable technology
- Understand any quick wins leveraging your existing software vendors

RAPID START APPROACH

WEEK 1

Use cases

- Stakeholder interviews to review workflows and pain points
- Ideate and prioritize high-impact AI use cases based on business goals
- Develop requirements
- Understand current system landscape

WEEK 2

Buy/build

- Data interrogation
- Select pilot use case
- Evaluate potential use cases against commercial systems and the possibility of bespoke developments leveraging A&M accelerate

WEEK 3

Develop Proof of Concept (POC)*

- Configure AI solution
- Build POC
- Generate samples
- Gather feedback and iterate

WEEK 4

Value & Sprint

- Measure Value from the POC and build business case
- Define implementation plan
- Define roadmap

*dependent on data interrogation for data quality and use case assurance

To transition from Rapid Start to higher levels of maturity, A&M helps companies incrementally build capabilities while measuring value and formalizing an adoption program.

CONTACTS

AUTHORS

Pierre Legrand
Managing Director

+44 (0)795 148 5522
plegrand@alvarezandmarsal.com

Faisal Ahmad
Managing Director

+44 743 591 7325
fahmad@alvarezandmarsal.com

Michael Eiden
Managing Director

meiden@alvarezandmarsal.com

Jean Laurent Poitou
Managing Director

+33 67 57 43 397
jlpoitou@alvarezandmarsal.com

Andy Reid
Managing Director

areid@alvarezandmarsal.com

Wayne Brown
Senior Director

+44 (0)7557 028336
wayne.brown@alvarezandmarsal.com

ABOUT ALVAREZ & MARSAL

Companies, investors and government entities around the world turn to Alvarez & Marsal (A&M) for leadership, action and results. Privately held since its founding in 1983, A&M is a leading global professional services firm that provides advisory, business performance improvement and turnaround management services. When conventional approaches are not enough to create transformation and drive change, clients seek our deep expertise and ability to deliver practical solutions to their unique problems.

With over 10,000 people across six continents, we deliver tangible results for corporates, boards, private equity firms, law firms and government agencies facing complex challenges. Our senior leaders, and their teams, leverage A&M's restructuring heritage to help companies act decisively, catapult growth and accelerate results. We are experienced operators, world-class consultants, former regulators and industry authorities with a shared commitment to telling clients what's really needed for turning change into a strategic business asset, managing risk and unlocking value at every stage of growth.

Follow A&M on:

To learn more, visit: **AlvarezandMarsal.com**

ALVAREZ & MARSAL

LEADERSHIP. **ACTION. RESULTS.**℠