ECONOMIST IMPACT

Finance at the frontier

AI outlook in financial services

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Introduction

The financial services sector exemplifies both the challenges and opportunities presented by artificial intelligence (AI) and generative AI (GenAI). As one of the first industries to computerise and digitalise decades ago, financial firms have accumulated significant legacy debt and infrastructure complexity and intricacy, with multiple generations of hardware and software that are proving costly to manage. Stringent regulations necessitate detailed records and data integrity across systems, further complicating efforts to replace or upgrade legacy systems without adding risk and cost. Yet despite these challenges, the sector has successfully reimagined its complex digital estate for the AI era and, in many facets, is already a leader.

An Economist Impact survey, commissioned by Databricks, polled 715 technical executives and 385 data and AI technologists with titles such as data scientists, data engineers and enterprise architects. The survey included 150 respondents representing the financial services industry across 19 countries. Their views provide a top-down, executive perspective on AI strategy and performance, including the challenges the industry faces in adopting and scaling AI.

We found:

- **Financial services companies lead all industries for adoption both in internal and external deployment, with 94% experimenting or using GenAI within their business functions.**
- **Cybersecurity and threat detection are the top use cases, but respondents are also exploring AI to improve pricing, accelerate tech infrastructure migration and personalise products and services.**
- **Executives are using AI to inform decisions on risk management, market expansion, investment and capital allocation, and workforce planning.**
- **Data security, data quality and risk management were viewed as the most critical aspects of AI governance.**
- **Over 70% of companies believe their organisation has sufficiently implemented processes to ensure AI safety and compliance and feel well-positioned to secure AI talent.**

We'd like to thank the following executives for participating in interviews and sharing insights:

- **Chalee Asavathiratham,** former chief digital banking officer, **Siam Commercial Bank**
- **Kushal Chakrabarti,** chief data officer, **Opendoor**
- **Mohit Kapoor,** group chief technology officer, **Mahindra Group**
- **Jeff Martin,** senior vice president and chief data officer, **TD Bank Group**
- **Senthil Ramani,** global lead, data and AI, **Accenture**
- **Greg Ulrich,** chief AI and data officer, **Mastercard**

Scaling AI across the enterprise: key challenges for financial services

Finance's data-intensive nature makes it ripe for AI-driven innovation. Banks, insurers and investment companies hold data ranging from the historical performance of assets to customer history and engagement data. Mastercard, a credit card giant, for instance, processes a staggering 143 billion card transactions annually, according to the company's chief AI and data officer, Greg Ulrich. This provides a vast dataset that AI can analyse to derive valuable insights.

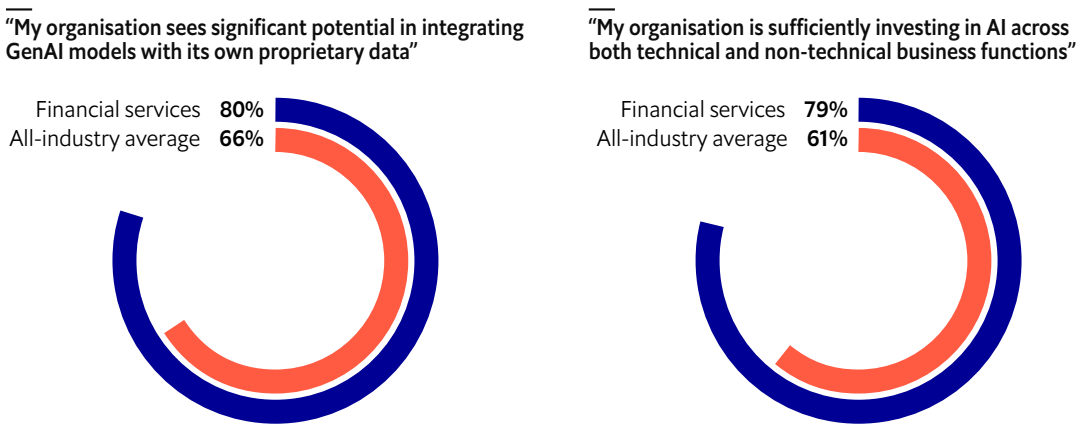
Indeed, finance respondents were by far the most likely in our survey to see significant potential in integrating GenAI models with their organisation's own proprietary data (80% agreed versus 66% overall) and to believe that their organisation is sufficiently investing in AI across both technical and non-technical business functions (79% agreed versus 61% overall).

As one of the first industries to computerise decades ago, the financial sector has seen many organisations develop complex architectures due to legacy systems and redundancies from upgrades, mergers and acquisitions. This complexity often results in data silos, limited data portability and mixed overall data quality. Moreover, legacy systems are not built for scale and are costly to maintain, requiring specialised knowledge and skills. This makes it harder to leverage data stored in different workspaces and formats, with inconsistent controls and governance, which in turn limits the use of AI. The sector's spending on legacy payments technology alone is projected to reach over US$58bn by 2028, up from US$36.7bn in 2022, according to IDC Financial Insights.[1]

In this context, financial institutions are adopting a use case–based approach to AI, carefully weighing the potential to extract value from vast, unstructured data against the high costs of cloud storage and data management overheads. This measured approach reflects a broader caution about over-investing in speculative use cases and the importance of building flexibility and agility into data systems.

Figure 1: Optimism about AI adoption in the financial sector

Percentage who agree



Source: Economist Impact

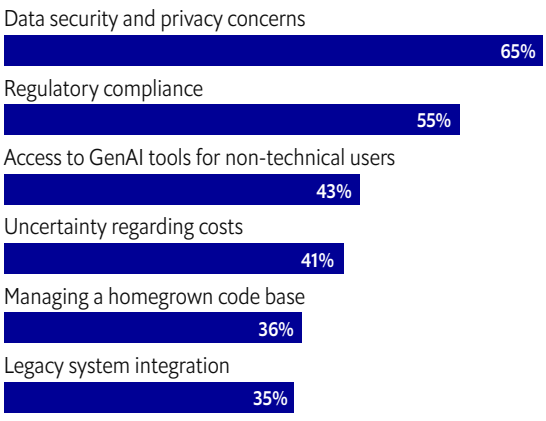
[1] https://episodesix.com/hubfs/offers/downloads/IDC_InfoBrief_2023/Episode%20Six%20InfoBrief_Future%20Ready%20Payment%20Platforms.pdf

However, the challenges are not just technical. Companies must also ensure that AI implementations comply with existing and emerging regulations. As organisations begin using AI to inform key decisions, outputs must align with regulatory-compliant risk models, explains Jeff Martin, senior vice president and chief data officer at TD Bank Group. Indeed, 55% of finance sector respondents identified regulatory compliance as one of their biggest challenges to scaling AI-led processes across their organisations. The use of AI in financial products and services has attracted particular scrutiny, with bodies like the US Consumer Financial Protection Bureau closely examining algorithms and decision-making processes for compliance with fair lending and anti-discrimination laws.[2]

Meanwhile, data security was identified as the biggest challenge to scaling AI in the finance sector, cited by 65% of respondents (see figure 2). Despite these challenges, 71% of finance respondents believe their organisation has implemented sufficient processes to ensure AI safety and compliance (compared with 59% globally), reflecting the sector's relative maturity when it comes to AI implementation.

Figure 2: Biggest challenges faced in scaling AI, machine learning and GenAI across financial services organisations

Percentage who selected each (multiple answers were accepted)



Source: Economist Impact

Trends and use cases driving AI adoption

Fortifying against fraud

Financial services leads all other industries in both the internal and external deployment of GenAI, according to our survey, with enhancing cybersecurity and threat detection the top use case, followed closely by the automation of workflows. Over the next three years, respondents expect fraud detection and compliance/risk management to be the areas of most significant AI exploration (see figure 3) as institutions respond to a rise in financial crime.[3]

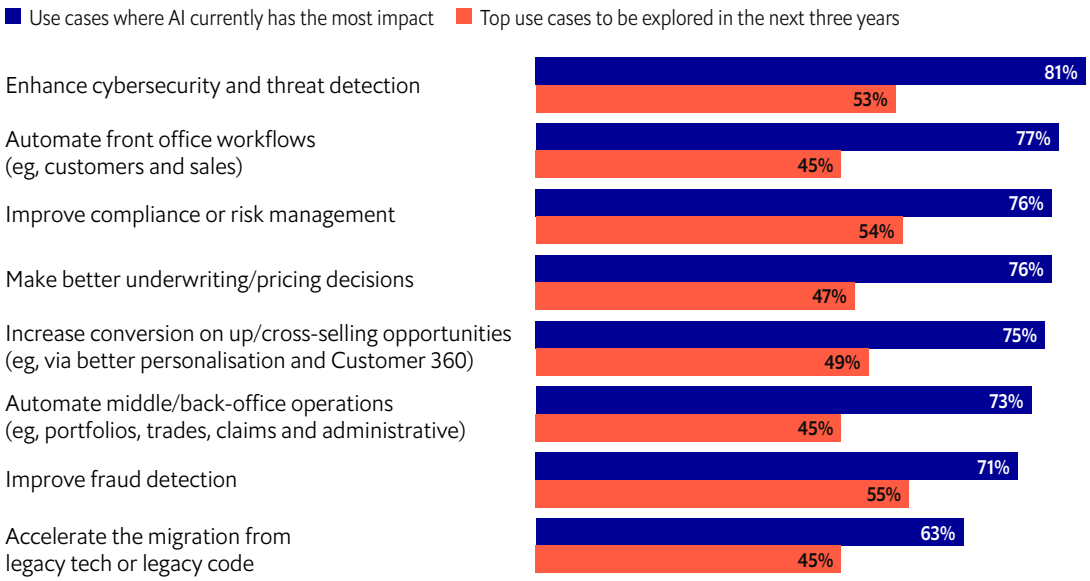
In 2024 Mastercard launched a GenAI model designed to help banks better assess suspicious transactions on its network. The company claims this proprietary technology can materially improve fraud detection.

GenAI can scan an unprecedented one trillion data points to predict whether a transaction is likely to be genuine or not, building on the firm's existing ability to analyse account, purchase, merchant and device information in real time.

Greg Ulrich, chief AI and data officer, Mastercard

[2] https://www.ey.com/en_us/insights/forensic-integrity-services/ai-discrimination-and-bias-in-financial-services
[3] https://www.weforum.org/stories/2024/04/interpol-financial-fraud-scams-cybercrime/

Figure 3: Top use cases now and in the future



Source: Economist Impact

Personalising the customer experience

Personalisation is a second critical trend driving AI use cases in the sector. AI-powered chatbots have become increasingly prevalent across customer service functions as a way to personalise experiences and give users quick answers to their queries. Chatbots improve over time as they receive feedback, although one crucial question is how much patience customers have for mistakes or incorrect advice. AI agents that can reason and take action are on the rise and may prove one of the most enduring real-world manifestations of the GenAI revolution. But in sensitive areas like finance, companies need to strike a careful balance between automation and human oversight.

At Canadian bank TD, call centre operators have access to a GenAI bot but must decide whether to pass its answer on to a customer. "At TD, we approach GenAI use cases by focusing on developing solutions that support our colleagues, which helps us learn and refine our thinking about future use cases, including those for customer applications," says Mr Martin.

Customer service chatbots could reach parity with humans by 2026, according to Chalee Asavathiratham, former chief digital banking officer at Thailand's Siam Commercial Bank. The bank envisions call centres running on 80% machines with humans intervening where needed in 20% of calls.

Improving lending decisions

Although process optimisation may be the low-hanging fruit of AI for financial services, "if [productivity gains are] all you focus on, it's destined to fail," cautions Kushal Chakrabarti, chief data officer at online real-estate firm Opendoor.

AI can drive higher-value opportunities across core activities like credit scoring, loan underwriting and real-time processing.

"Applying for a loan becomes unlocking, if you will, a pre-calculated credit number. So the loan process becomes much more streamlined, much easier. Using data, we were able to gather all this information about a person's creditworthiness much more precisely than [with] traditional forms. You can use thousands of features to identify credit-worthiness, how they use money. That was a big turning point in terms of the use of data."

Chalee Asavathiratham, former chief digital banking officer, Siam Commercial Bank

These core activities are being reshaped by AI, which financial institutions are increasingly using to analyse alternative data sources. To streamline credit decisioning, banks are consolidating diverse datasets and investing in AI-powered tools that enable them to develop sophisticated credit scoring and risk models. Fintech start-ups are at the forefront of this trend with companies like Upstart[4] and ZestFinance[5] using algorithms to parse social media activity to assess creditworthiness and expand access to 'thin file borrowers' who have little or no credit history. But banks are also adopting the technology.

India's Mahindra Group, for instance, feeds both publicly available data, such as landholdings, with information gathered by on-ground loan officers, such as the number of cows owned by a family, into an algorithm. By generating credit scores through this method, credit is being extended to previously unbanked customers. With real-time processing, banks can also monitor transactions instantly for faster credit risk analysis and loan approvals. In insurance, Accenture says it helped a company achieve US$100m of top-line growth in its underwriting department in less than six months by adopting GenAI, according to Senthil Ramani, Accenture's global lead for data and AI.

"We used to think of GenAI as a productivity boost in underwriting—we thought we could do the job with fewer people," he explains. "But when we used [it], we were able to do far more underwriting, bring in more submissions to court and do better ratios."

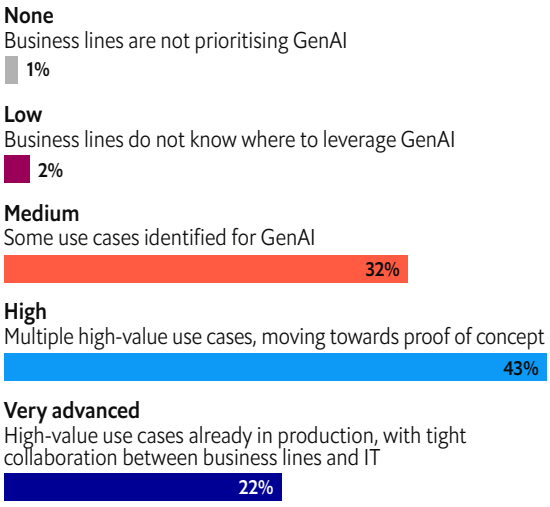
[4] https://www.upstart.com/our-story
[5] https://www.zest.ai/

Future-facing finance

Looking ahead, however, as AI technologies mature and regulatory frameworks evolve, we can expect to see more widespread and innovative applications of AI across the financial services landscape. Indeed, demand for GenAI across business lines within the sector is highly advanced, with most organisations reporting multiple high-value use cases either already in production (22%) or moving towards proof of concept (43%).

Figure 4: Demand for GenAI is in high gear

Level of demand for GenAI from organisations' various lines of business



Source: Economist Impact

It comes as little surprise, then, that the financial services sector has made more progress than any other at democratising GenAI;

No other sector has adopted Gen AI as extensively across business lines as financial services —especially in areas like sales and marketing, legal and human resources.

While our survey suggests that other sectors are poised to catch up in adopting GenAI for internal use cases over the next three years, financial services is expected to maintain leadership in using GenAI for external use cases as the technology spreads further into core business activities.

As financial services firms continue to embrace AI, a comprehensive approach to data security and governance is crucial to overcoming challenges with siloed data and inflexible technical debt. Organisations must remain agile in building and updating AI-powered use cases.

"Don't be too confident about where the future of AI is going. Be sure to be ready, flexible and agile."

Jeff Martin, senior vice president and chief data officer, TD Bank Group

Securing AI talent remains a priority for the industry, an area where it has demonstrated significant advantages:

73% of financial services respondents agreed that their organisation is successful in acquiring the expertise it needs, compared with just 53% on average across other industries.

To achieve scale, market-leading firms will be looking to seamlessly integrate AI into existing systems, whether acquired or built in-house. This holistic strategy will enable financial institutions to fully leverage AI across their enterprise while maintaining security and adaptability.

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