Fintech Embraces GenAI

A transformative year ahead in 2025

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Report by Barclays
Group Innovation
and Partnerships Office

Generative AI (GenAI) has taken 2024 by storm.

Two-thirds of the 500 fintech companies surveyed by Barclays say it is significant to their growth plan in 2025.

It's not just talk – in 2024 venture investments in GenAI increased by 192% compared to 2023.[1] And the returns speak for themselves, as 69% of survey respondents located across UK and US find that GenAI is cost effective.

To better understand where GenAI in fintech is headed, Barclays asked fintech leaders who are using GenAI in various capacities to contribute their thoughts on the technology's applications, model choices and barriers to adoption.

With these important gleanings from 2024, this report looks forward to the **GenAI trends we may expect in fintech across 2025**.

1. TechCrunch

Technology as a partner, not a takeover

As GenAI models became more sophisticated and accessible across 2024, fintechs were eager to adopt the technology, to either gain a competitive edge or simply avoid being left behind in the digital dust.

Survey findings showed that 30% of fintechs use GenAI for general productivity, knowledge management and decision-making, and 27% use it for sales and marketing. New products and features (23%) and compliance (21%) were the least selected use cases.

Only 5% of seed stage companies use GenAI for risk management, although that percentage rose throughout the funding stages.

FIGURE 1

What is your business currently using GenAI for?

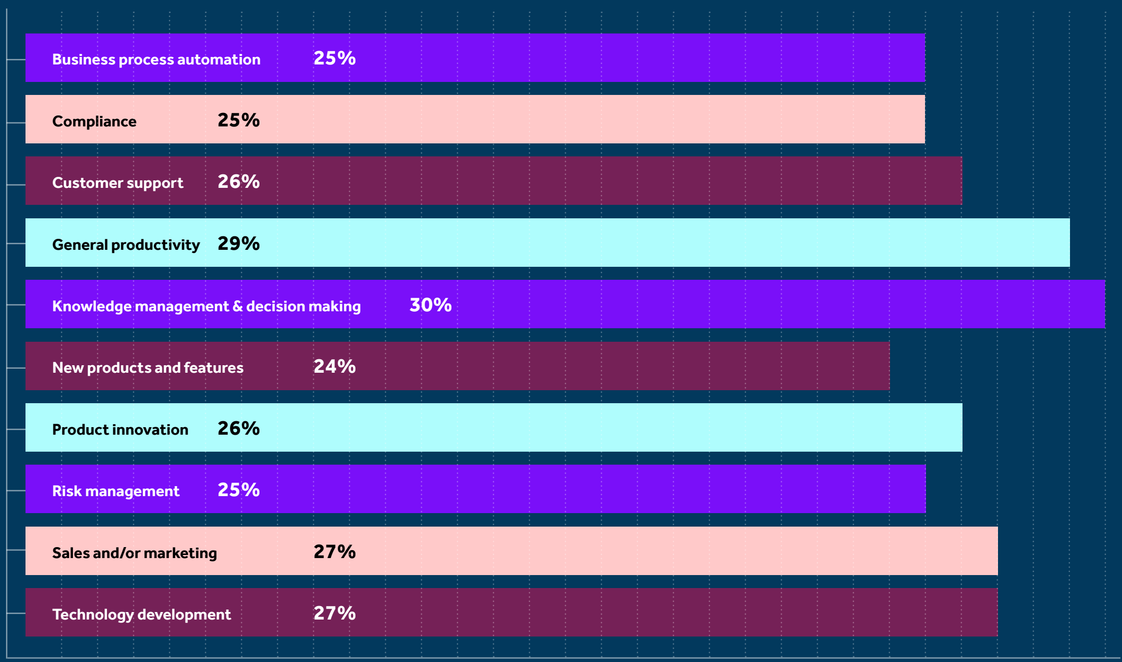


FIGURE 2

% of firms using GenAI for more than one year

Banking	Wealth and asset mgmt	Insurance	Payments	Lending	Digital assets	Fraud / FinCrime	Regtech	Capital Markets
50%	54%	48%	50%	47%	49%	43%	48%	44%

Experimentation and adoption will continue...

Most fintech businesses began using GenAI within the last year, with 53% of respondents stating they started using the technology in their products and services in the last six to 12 months. Only 43% fintechs have successfully adopted more than half of the use cases tested, indicating a high degree of experimentation.

But some companies began implementing GenAI before the boom: 46% of firms have been using GenAI in their products and services for over 12 months, particularly firms in payments, as well as wealth and asset management.

Of the 111 surveyed wealth and asset management companies, 54% have been using GenAI solutions for more than a year, with only one company having used it for over two years. The most mature AI applications are in client engagement, while other areas, such as AI-driven investment personalisation, are still evolving.[2]

but some sectors are lagging,for good reason.

Two sectors have seen a slower adoption rate: 48% of Regtech companies adopted GenAI over a year ago and 55% of FinCrime companies adopted it less than a year ago.

A combination of regulatory scrutiny, data sensitivity, and high-stakes outcomes create a uniquely challenging environment for GenAI adoption within these areas:

- The black-box nature of many GenAI solutions limits explainability[3] and prevents adoption for regulatory use cases.
- The requirement to handle highly sensitive data in KYC and FinCrime use cases make solutions vulnerable to cybersecurity attacks and regulatory breaches.
- GenAI errors could lead to severe mistakes in identifying criminal activity.

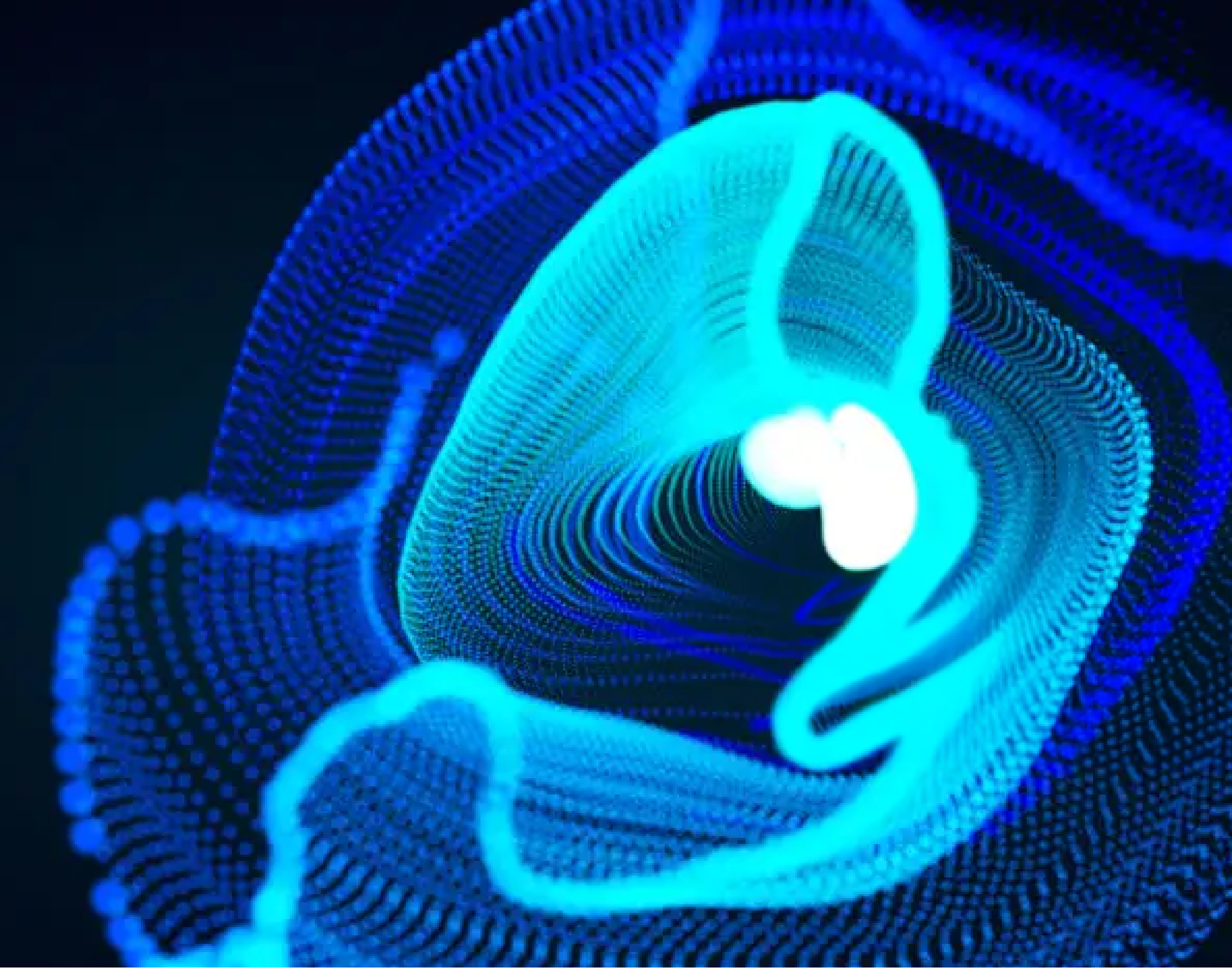
Regtech and FinCrime fintechs are likely taking a measured approach to implementation, prioritising building robust, compliant AI systems for critical functions like transaction monitoring and customer verification, over speed of deployment.

What’s the story behind these numbers?

The data suggests that firms are more comfortable with using GenAI tools to support human expertise, rather than relying on them to make high-impact decisions that affect customer and regulatory requirements.

Nevertheless, verbal descriptions of use cases point to some interesting edge cases, such as digital twins and simulation (optimisation of real-world processes), as well as energy management (optimising consumption and reducing waste), which might indicate innovation trends to watch out for in 2025.

2. CB Insights
3. A-Team Insight



Agentic AI is ready to make decisions in 2025

While GenAI excels at creating content and analysing patterns based on prompts, Agentic AI takes this further by independently executing complex tasks and making decisions without constant human supervision.[4]

With this next wave of AI evolution on their heels, Regtech and FinCrime startups might need to solve their challenges swiftly to help protect customers from bad agents using this same technology to their malicious advantage.

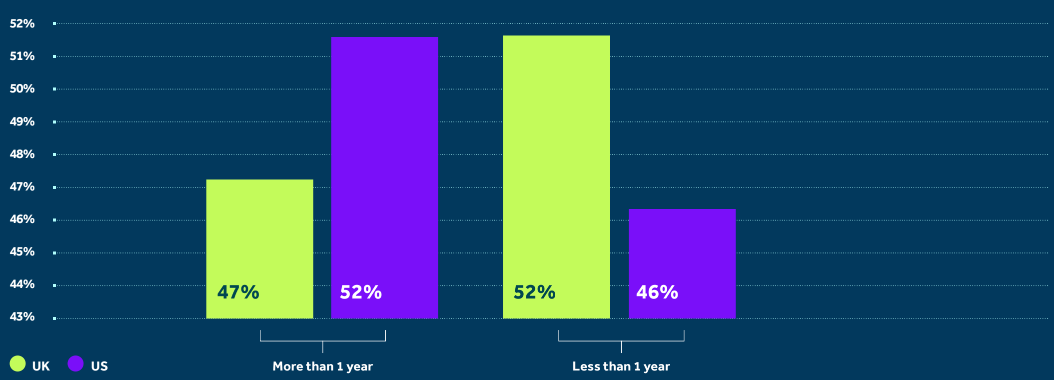
4. World Economic Forum

US adoption seems to be outpacing the UK...

Overall, adoption started earlier in the US compared to the UK, with 51% of US fintechs having used GenAI for more than a year, compared with 42% of UK fintechs.

This is not surprising, seeing as US companies attracted over 89% of all VC investment into AI in 2024.[5] The US has also significantly increased its dominance of global fintech activity, capturing 41% of all fintech deals in 2023 – its highest share since 2016.[6] The convergence of investment into fintech and AI suggest favourable conditions for building a more robust pipeline for AI fintech innovation and talent.

FIGURE 3
GenAI Adoption - UK vs US



...but it's rooted in different reasoning.

When asked to identify challenges they anticipate in the future with the increased adoption of GenAI in fintech, more UK companies see compliance with regulations as a key challenge (28% vs 23%).

The EU Artificial Intelligence Act[7] became the first comprehensive regulation on AI by a major regulator and tightened the safeguards by outlining the parameters of gathering, utilisation and preservation of personal data, and categorising AI applications by risk level with respectto the health, safety and fundamental rights of people.

Meanwhile, fintechs in the US are more likely to see user trust (25% vs 15%) and the need to manage systemic risks (26% vs 17%) as barriers to wider adoption of GenAI. US firms' greater focus on developing proprietary models (40% vs 33%) means they're encountering these challenges firsthand, while UK firms may still be at earlier stages of adoption where such issues are less apparent.

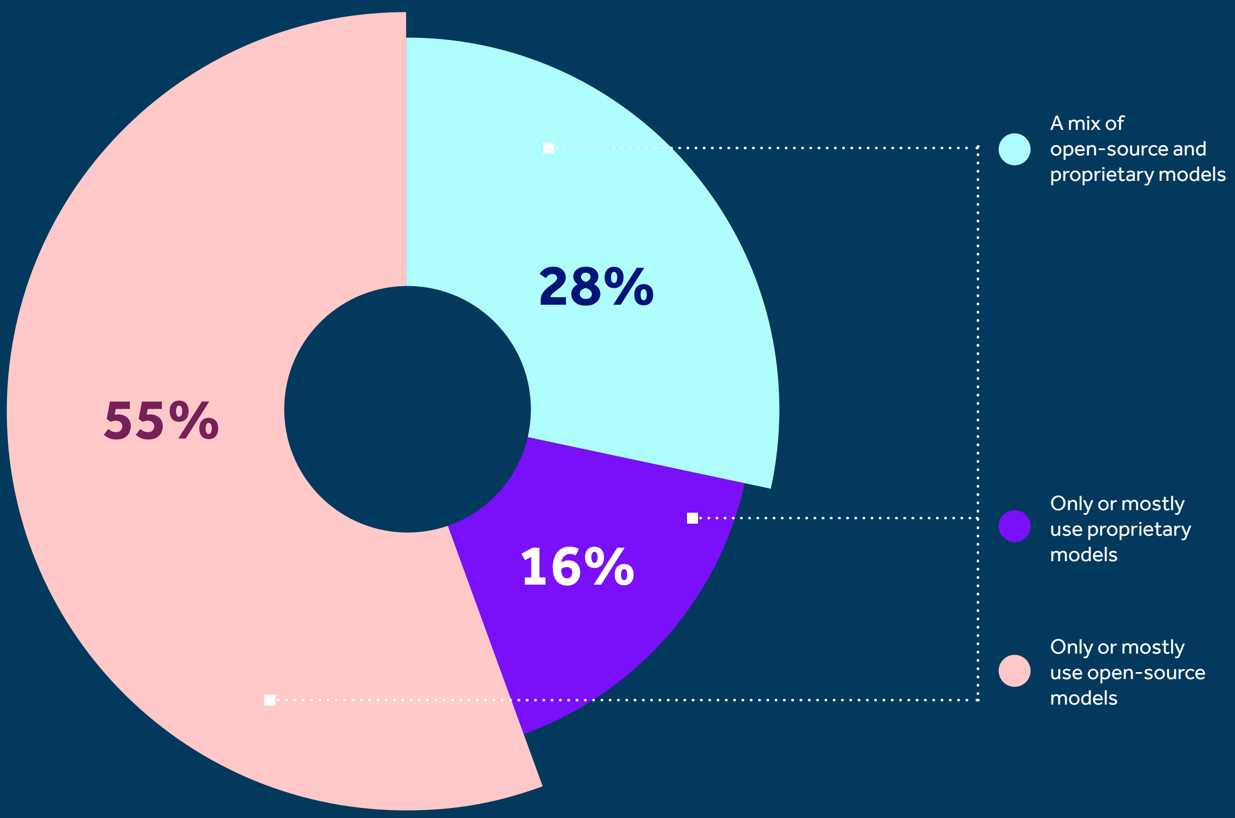
5. TechCrunch
6. CB Insights
7. EU Artificial Intelligence Act

One size does not fit all

What is the model approach to adoption? When it comes to selecting their GenAI models, most fintechs lean towards open source.

Over 55% say they only or mostly use open-source models and almost 28% of firms use a mix of open-source and proprietary models. Almost two in five firms (37%) are developing their own bespoke GenAI models (e.g. fine-tuning and/or training large language models with new data).

FIGURE 4
Fintech preference for Open Source Vs Proprietary GenAI Model



So far, bespoke models suit some needs more than others

WealthTech leads the way for developing bespoke models (49%), 14% ahead of insurance, the sector with the lowest buy-in.

Interestingly, companies that primarily serve high-net-worth customers - think white-glove, hands-on treatment - were the least likely to develop their own models (36%). Fintechs servicing mass-market consumer audiences were among those most likely to develop their own models, along with fintechs servicing large corporates in financial services or non-financial B2B clients.

This may suggest that bespoke models are more likely to be used to democratise wealth and asset management products for the consumer mass market. 2025 will see if that is the case – applications for bespoke models are often being kept under wraps to protect competitive advantage, as rival companies are using similar GenAI solutions to generate similar innovative results.

Best fit is largely sector-dependent

One in three fintech firms (33%) identified performance and accuracy as a key factor when choosing a GenAI model. For large fintechs (250+ employees), reputation and trust have equal weighting to the performance and accuracy of the model itself (both important to 34% of this sample).

In the Regtech and FinCrime segments, community support and collaboration are a key factor, potentially indicating the need for broader alignment in these areas (e.g. between geographies and regulatory regimes) rather than individual solutions working in isolation.

Cost cuts into a firm's consideration

While finding the right approach to adopting GenAI takes time, fintechs have reported seeing clear benefits, as 69% of respondents find that GenAI is cost-effective. Almost three in four fintechs (74%) feel GenAI is cost-effective in their current operations, although that sentiment is buoyed by large (80%) and late stage fintechs (series C+, 85%).

Cost may be less of a concern for specific sectors, which forecast more immediate returns. For example, 39% of digital assets companies say increased revenue is the key benefit of spending time and money implementing GenAI.

2024 lessons raised cautionary flags

Despite GenAI's potential, fintechs have flagged legitimate concerns that will affect outcomes in 2025:

1. **Not enough cooks in the kitchen:**
Skills shortages are the most common concern across all fintechs (32%), whether small, large and early stage (pre-seed to series A) firms.

2. **Playing catch-up:**
Playing catch-up: Firms serving mass-market consumer audiences, such as wealth/asset management and lending startups, are most worried about the risk of being left behind by competitors, with more than one in three (35%) sharing this concern.

3. **Full disclosure on the label:**
Firms in fraud and FinCrime are concerned about the risk of AI-washing accusations (marketing tactics that exaggerate how much AI is used in a product), with 35% identifying it as a primary concern. Banking, wealth/asset management and lending firms also identify it as one of their top concerns.

4. **Security matters:**
Cybersecurity threats are the top concern for companies serving corporates in financial services (36%), and one of the top concerns for capital markets (37%) and all medium-size companies surveyed (33%).

2025 will see GenAI framed by guardrails...

To tackle the uncertainty that comes with adopting GenAI, firms should seek to:

Tackle bias:

While around 30% plan to launch a new product or service incorporating GenAI and a similar number plan to incorporate GenAI into an existing product or service, they're conscious of biased models that produce inaccurate decisions, raising ethical concerns. The autonomous nature of Agentic AI could exacerbate systemic challenger further in 2025, by acting unpredictably, making irreversible decisions and not acting in accordance with human values.[8] To minimise bias, fintechs are prepared to collaborate both internally and within their industries, scrutinising data sources and maintaining human oversight.

Ensure security is a key part of development plans:

Firms can also future proof by investing in cybersecurity to avoid issues posing a threat to the safe use of AI. To ensure the integrity of data and client trust, there are many risks to consider, including data retention policies and bias.[9] But the reality of these risks contradicts a recent IBM survey, where executives reported that only 24% of GenAI projects have security baked into them.[10]

Balance the old with the new:

There has been a massive surge in AI skills education: In the global workforce, enrolment in GenAI courses has surged by 866%.[11] But firms have shared a concern that fintechs may stop investing in retraining and upskilling existing employees, who play a crucial role in effective AI implementation. 27% intend to hire new staff with specific AI expertise, but companies should also empower all their existing employees to experiment with GenAI tools to build their knowledge and discover new use cases supported by a strong governance framework. To this point, just five months after Spanish bank BBVA distributed 3,000 ChatGPT enterprise licenses among its employees, 83% have incorporated ChatGPT into their daily routine and have created 3,000 adaptations of the tool for specific tasks, such as financial analysis and solving legal questions.[12]

8. UC Berkeley
9. Forbes
10. IBM
11. Coursera
12. Finextra

...still, the benefits are too great to ignore.

As we look toward 2025, GenAI has evolved from an emerging technology to a strategic imperative, with two-thirds of companies viewing it as crucial for growth. The fintech sector is leading this charge, particularly in B2B markets where 77% of firms see GenAI as a significant growth driver.

The next frontier is Agentic AI, which will initially focus on small, structured internal tasks.[13] While implementation costs will remain high in 2025, the technology shows promise across multiple areas - from streamlining operations to enhancing security and transparency in financial institutions.[14] The economic impact of this evolution will be substantial. On a broader economic scale, Agentic AI is expected to contribute between $2.6 trillion and $4.4 trillion annually to global GDP by 2030.[15]

While this report focused on the UK and US, other emerging economies could win big in 2025, as Agentic AI presents an opportunity to leapfrog traditional infrastructure constraints. However, success in 2025 will depend on strategic implementation and careful consideration of use cases that deliver maximum value for the investment required. The encouraging trend of 33% of fintechs engaging with consumers to understand their needs must increase to ensure solutions address real market demands rather than just technological capabilities.

To quote Harvard Business Review, ***'Value is created but not captured – at least not for long.'*** [16]

FIGURE 5

Which of the following actions does your business plan to take over the next year?

33%	Engage with customers to understand their needs and preferences for AI-driven services
31%	Invest in third-party Gen AI technology/capabilities
29%	Hire staff with specific AI expertise
31%	Launch a new product or service incorporating Gen AI
29%	Incorporate Gen AI into existing product or service
33%	Upskill existing staff on Gen AI technologies and applications
31%	Invest in our own proprietary Gen AI technology/capabilities
0%	N/A - there are no actions our business plans to take over the next year regarding Gen AI

13. MIT Sloane Management Review
14. CB Insights
15. The Financier
16. Harvard Business Review

Editor notes

Barclays ran a nationally representative online survey of 502 fintech companies in the UK and US with the research agency Instinctif. The research sample comprised 502 participants, with a balanced representation from the UK (50%) and the USA (50%). The gender distribution was predominantly male (77%), with females making up 23%. The age range of participants was diverse, with the majority falling between 35-44 years (61%), followed by 45-54 years (22%) and 25-34 years (12%). The sample included professionals from various company sizes: small (18%), medium (45%), and large (37%). Participants held key roles such as C-Level Executives (32%), Heads of Product (28%), and Heads of Technology (40%). The funding stages of their companies ranged from pre-seed to series A (35%), series B (30%), and series C or later (35%). The end users of these companies spanned across different markets, including financial services, fintech, and non-financial services.

Are you a fintech?
Do you have an opinion?

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Get in touch

About the authors

Group Innovation & Partnerships work collaboratively across Barclays' business units, technology, and functions to drive strategic innovation across Barclays.

We bring the best of our external ecosystem together to benefit Barclays, delivering strategic insights, best-in-class partnerships, and we explore, design and build innovation for Barclays.

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