




# The Harmony Gap

Finding the financial upside in uncertainty

FIS



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# Research overview

Today's executives are facing greater uncertainty than ever before in managing their businesses. From navigating global trade wars and interest rate volatility to staying ahead of increasingly sophisticated cyber and fraud threats, organizations are being challenged on every front as they seek growth opportunities in a rapidly changing marketplace.

Customer expectations for convenient, friction-free service continue to rise. While digital technologies are enabling businesses to serve these customers and expand into new markets for their products and services, those same technological advancements have led to an unbundling of financial functions around the world, creating massive inefficiencies for organizations wanting to do business outside their own borders.

To quantify the financial impact of these disruptive forces on organizations' money lifecycle, FIS® collaborated with Oxford Economics to survey more than 1,000 senior business and technology leaders of large organizations in the U.S., the U.K., and Singapore.

The average organization is losing nearly \$100 million each year due to various tension points within the financial technology ecosystem. Executives report that cyberthreats, fraud, and regulatory complexity represent the largest sources of stress in their money lifecycle, particularly when moving funds through payment systems, card networks, and wherever else money is in transit.

Together, the two surveys provide a first-ever picture of exactly how much financial disharmony is costing organizations.



# Key highlights

- Cyberthreats and fraud are key drivers of disharmony.
- Tension in the money lifecycle is resulting in significant financial losses.
- Complexities in money movement create inefficiencies.
- Banks lead the way in preparedness.
- Fintech investments result in tangible benefits.

## Average cost of disharmony:



# About the global money lifecycle

To understand how inefficiencies in financial systems can impact an organization's bottom line, it's important to have a clear picture of how the global money lifecycle works.

There are three distinct stages in the flow of money across the global economy.

- **Money at Rest:** Money enters the financial lifecycle as bank deposits, where it is held in savings, ledger, and corporate treasury accounts.
- **Money in Motion:** Money is moved through the system via credit and debit accounts, card networks, and ACH and real-time payments.

- **Money at Work:** Money is put to work by asset management firms, who trade, lend, or swap.

The financial lifecycle can be considered *in harmony* when money moves seamlessly across these stages, resulting in cost efficiencies for businesses and seamless service for customers. In reality, however, the financial lifecycle is frequently in disharmony because of various obstacles and blockages along the way. These occur when organizations — and their customers — experience friction or critical tension points such as fraud, cyberthreats, human errors, operational inefficiencies, and regulatory complexities that impede the flow of money and transactions.

These sources of tension can translate to significant hard-dollar costs for businesses. In addition to the financial and reputational costs of security breaches and financial fraud, inefficiencies in the money lifecycle can lead to missed opportunities for growth and innovation, resulting in lost organizational momentum.

The reverse is also true: by addressing these stress points in their money lifecycle through the targeted application of technology, organizations can make better strategic use of their limited resources to pursue growth opportunities while increasing their operational efficiency.



**Harmony** refers to a state in which money moves seamlessly within or across the three stages of the money lifecycle.



**Disharmony** refers to friction or critical tension points within or across the three stages of the money lifecycle.



**Tension** refers to the causes of strain within the financial technology ecosystem, including cyberthreats, fraud, and operational inefficiencies, for example. These causes of strain can significantly hinder organizational growth and innovation.

# Survey results

Section 1:

Impact of disharmony by source, industry, and money lifecycle phase

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Section 2:

Financial technology investment priorities

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Section 3:

Opportunities realized through technology investments

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Section 4:

Benefits and challenges of investments in AI and embedded finance



# Section 1: Impact of disharmony by source, industry, and money lifecycle phase

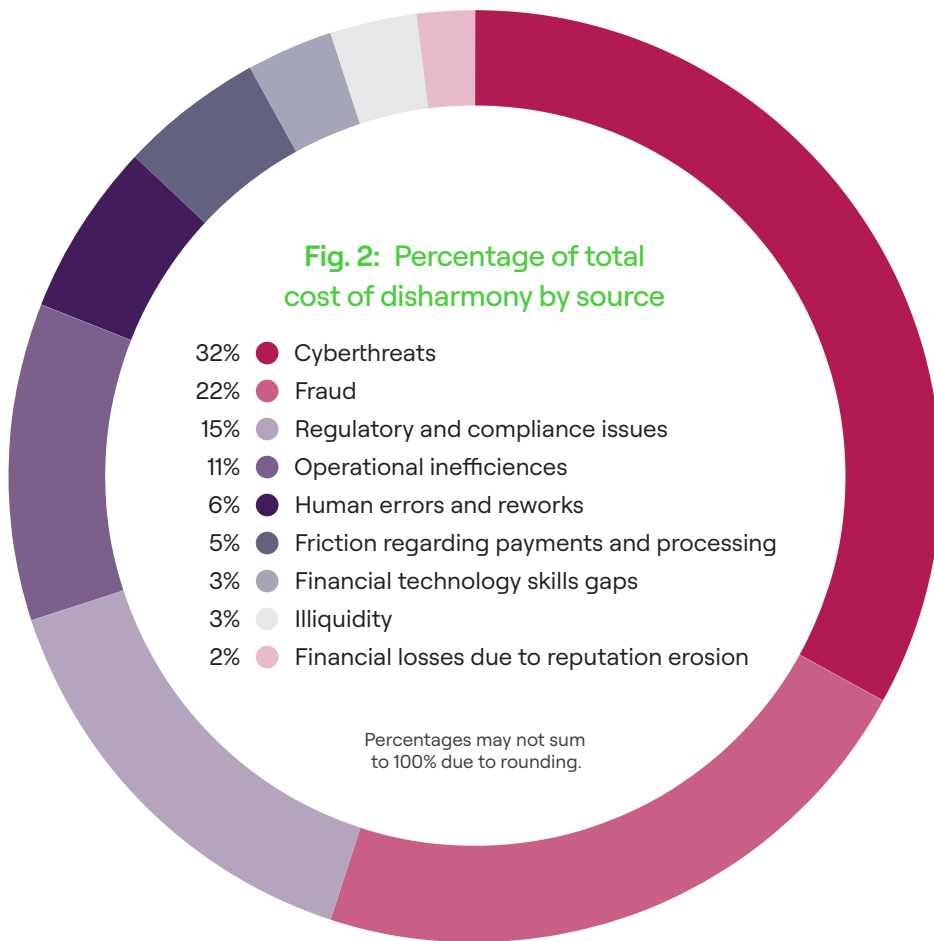
## 1.1 Cyberthreats, financial fraud, regulatory compliance, and operational inefficiencies lead the list of organizational tension points.

The executives surveyed report that, on average, each organization is losing **\$98.5 million** per year<sup>1</sup> due to disharmony in their money lifecycle. This amount equates to **\$8.2 million every month, \$1.9 million every week, \$270,000 per day, or about \$11,200 every hour.**

**Fig. 1: Estimated average annual cost of disharmony by source**

| Source of tension                          | Average annual cost (U.S. \$ millions) |
|--|--|
| Cyberthreats                               | \$31.7                                 |
| Fraud                                      | \$21.6                                 |
| Regulatory and compliance issues           | \$14.9                                 |
| Operational inefficiencies                 | \$11.0                                 |
| Human errors and reworks                   | \$6.2                                  |
| Friction regarding payments and processing | \$4.9                                  |
| Financial technology skills gaps           | \$3.3                                  |
| Illiquidity                                | \$2.9                                  |
| Financial losses due to reputation erosion | \$2.0                                  |
| <b>Total</b>                               | <b>\$98.5</b>                          |

<sup>1</sup> The annual loss from disharmony is a *self-reported* estimate of costs per organization provided by a respondent based on the total sources of tension in their organization, including fraud and cyberthreats; errors, reworks, and inefficiency; payment and illiquidity challenges; regulatory compliance issues; and financial technology skills gaps.



Cyberthreats, fraud, regulatory and compliance costs, and operational inefficiencies are the costliest sources of tension for organizations surveyed.

**Cyberthreats** alone result in an average annual organizational loss of \$31.7 million, according to executives surveyed. Indeed, 88% of the surveyed organizations rate cyberthreats as a significant tension point, with more than a third (35%) calling it their top concern. In addition to causing significant reputational damage, data breaches disrupt operational processes and compromise data integrity that can lead to lost customer trust.

**Financial fraud** and **regulatory compliance** represent the second- and third-largest sources of tension for the organizations surveyed. The executives report that financial fraud causes their organizations an average annual loss of \$21.6 million, while regulatory compliance accounts for \$14.9 million in annual losses due to the sheer complexity of reporting requirements.

**“I’d probably start with cyber, because for me, that’s table stakes. If something goes wrong, it can have incredibly dramatic consequences affecting finances, regulatory compliance, and customer perceptions of your business.”**

Martyn Atkinson, CIO, Lloyds Banking Group

Other sources of tension reported by the surveyed executives include the following:

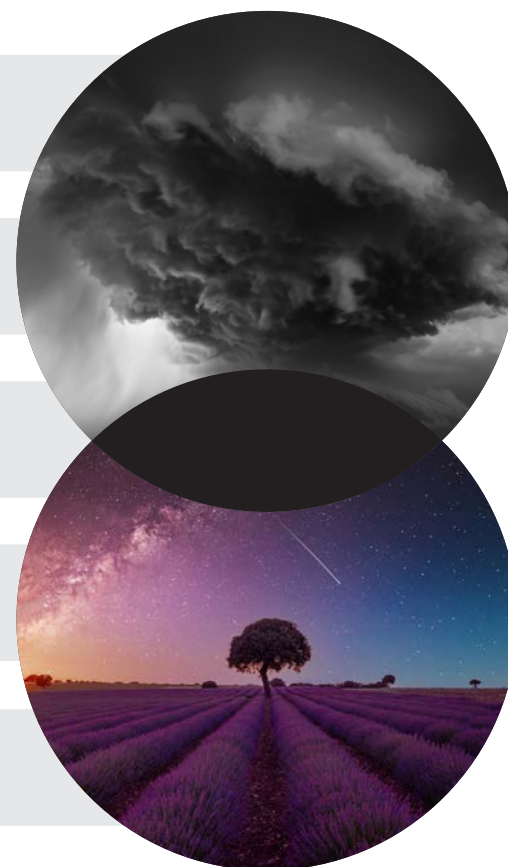
Operational inefficiencies due to outdated or unintegrated processes (\$11 million in average annual losses)

Human errors caused by manual data entry mistakes or miscommunication (\$6.2 million in average annual losses)

Friction in payment processes caused by outdated systems and channel inefficiencies (\$4.9 million in average annual losses)

Skills gaps in financial technology due to inadequate employee training (\$3.3 million in average annual losses)

Illiquidity due to poor cash flow management (\$2.9 million in average annual losses)



## 1.2 Sources of disharmony vary somewhat by industry.

Sources of disharmony by industry largely mirror the overall findings, with some key exceptions:

- Executives who work in the **Tech/Big Tech** industry report that financial fraud (28%) represents their biggest source of tension, ahead of cyberthreats (24%).
- Within **Financial Services**, a higher percentage of survey respondents cite illiquidity due to cash flow management issues (5%) as a significant source of losses in their money lifecycle.
- Executives in the **Insurance** industry cite regulatory reporting and compliance issues (20%) as the second largest source of tension, ahead of financial fraud (17%). Human errors (9%) also represent a slightly greater source of tension for insurers than for other surveyed industries.
- Cyberthreats represent a larger percentage (35%) of tension for executives in the **Fintech** industry than the other sectors surveyed, while friction in payment processes (3%) represents a lower source of losses compared to other industries.

To learn if the sources of disharmony in your organization align with industry findings, view this interactive dashboard.

[VIEW DASHBOARD](#)

**Fig. 3: Average percentage of sources of tension by industry**

| Category                                   | Average % of source of tension as a % of total tension |                      |                 |                |
|--|--|----------------------|-----------------|----------------|
|  | Financial services                                     | Technology/ Big Tech | Insurance       | Fintech        |
| Cyberthreats                               | 30%  | 24%                  | 32%             | 35%            |
| Fraud                                      | 20%  | 28%                  | 17%             | 22%            |
| Regulatory and compliance issues           | 14%  | 21%                  | 20%             | 19%            |
| Operational inefficiencies                 | 12%  | 14%                  | 11%             | 9%             |
| Human errors and reworks                   | 6%   | 2%                   | 9%              | 5%             |
| Friction in payments and processing        | 6%   | 7%                   | 5%              | 3%             |
| Financial technology skills gaps           | 5%   | 2%                   | 3%              | 3%             |
| Illiquidity                                | 5%   | 0%                   | 1%              | 3%             |
| Financial losses due to reputation erosion | 2%   | 2%                   | 2%              | 3%             |
| <b>Total</b>                               | <b>\$93.6M</b>   | <b>\$113.6M</b>      | <b>\$104.8M</b> | <b>\$64.4M</b> |

Percentages in **red** are higher than the comparison group.

Percentages in **purple** are lower than the comparison group.

### 1.3 Money-in-motion phase drives greatest sources of friction in the money lifecycle.

When asked to identify *where* they experience the greatest sources of friction, slightly more than half (51%) of the surveyed organizations cited the *money-in motion* phase of the money lifecycle.

This phase, which encompasses activities such as payment processing and money transfers, is particularly vulnerable to

discord due to the complexity of managing financial transactions across multiple parties, geographies, currencies, and payment gateways.

Fintech providers, financial services firms, and Big Tech companies reported the highest levels of tension in the money-in-motion phase.

Fig. 4: Organizations experience the most friction when money is in motion

Q. At which stage of your organization's money lifecycle do you experience the most significant tension?

Money in motion

(e.g., payments and money transfers)

51%

Money at work

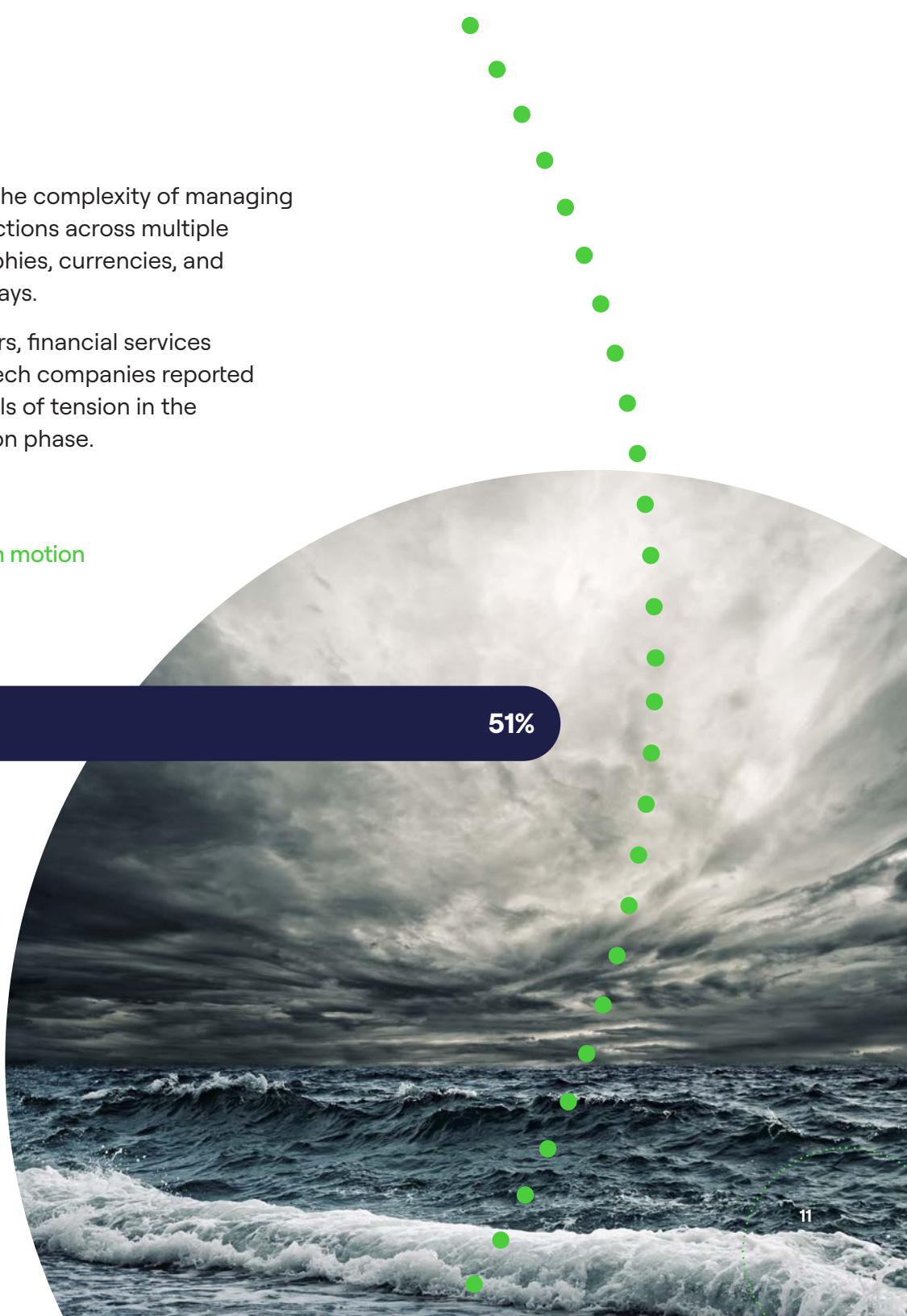
(e.g., investing, trading, and lending)

29%

Money at rest

(e.g., savings accounts)

21%



## 1.4 Financial services spotlight

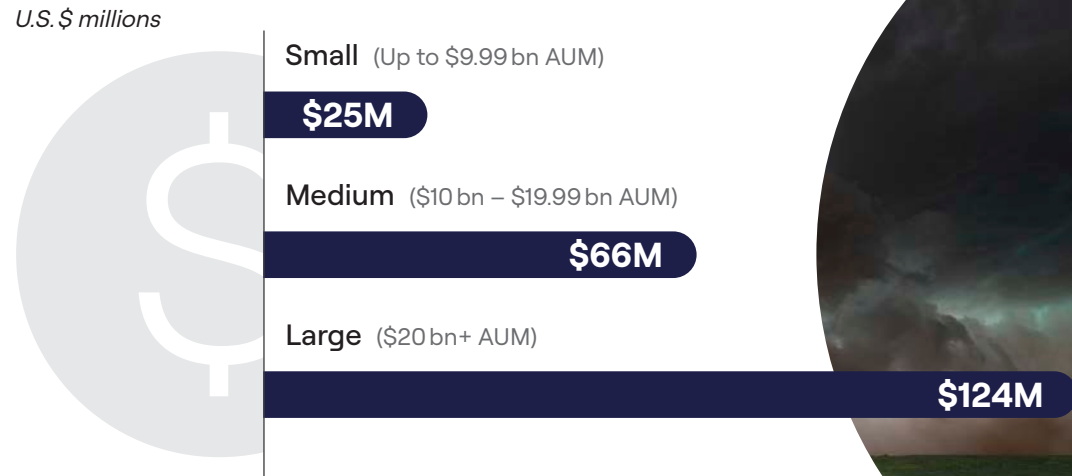
Given the particular importance of the money lifecycle within the financial services industry, FIS and Oxford Economics analyzed the impact of disharmony on the different sectors operating within this industry.

By size, large financial services organizations — those with more than \$20 billion of assets under management (AUM) — report an average of \$124 million in annual losses resulting from tension in their money lifecycle. Medium-sized financial services organizations with between \$10 and \$20 billion of AUM report an average of \$66 million in annual losses from financial disharmony, while smaller financial services organizations with under \$10 billion of AUM report \$25 million of annual losses from tension in their money lifecycle.

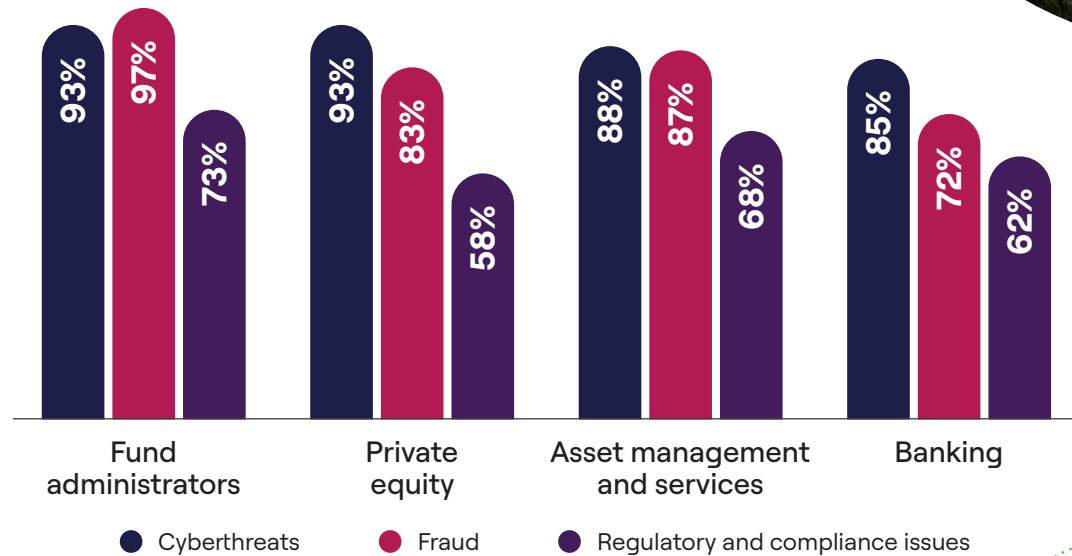
By industry type, fund administrators report the greatest impact from stress points within their money lifecycle. Nearly all (97%) fund administrators say they are impacted by fraud, while 93% say they are impacted by cyberthreats. Nearly three-quarters (73%) of fund administrators say they are impacted by regulatory and compliance issues, the highest percentage of all the sectors surveyed.

Meanwhile, a high percentage of private equity firms (93%) also report being impacted by cyberthreats. Interestingly, the banking sector reports the lowest levels of impact from financial disharmony across all sectors of the financial services industry.

**Fig. 5: Estimated average annual cost of disharmony for financial institutions by Assets Under Management (AUM)**



**Fig. 6: Top 3 sources of tension for financial institutions**





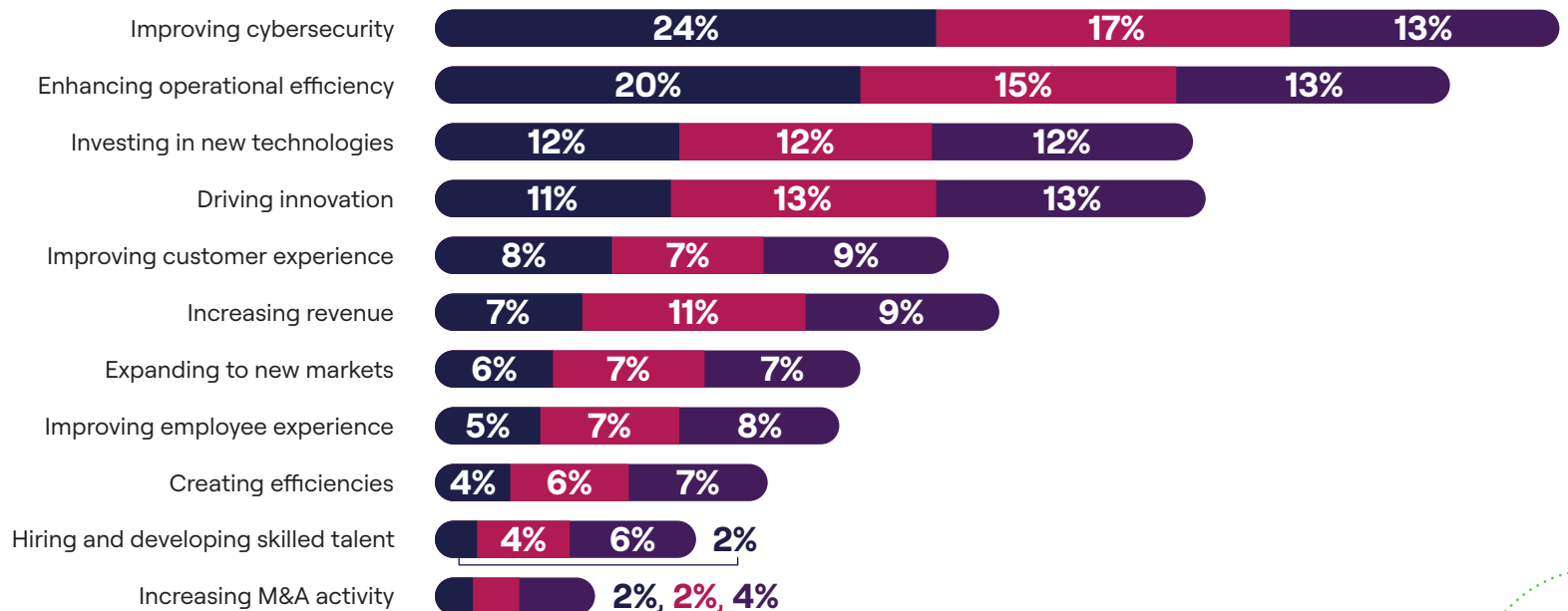
## Section 2: Financial technology investment priorities

### 2.1 Cybersecurity defense and operational efficiency top the list of technology priorities.

The FIS-Oxford Economics survey revealed that organizations across multiple industries prioritize strategic investments in leading-edge technology to address the sources of discord and losses in their money lifecycles.

**Fig. 7: Top financial technology strategic priorities ranked**

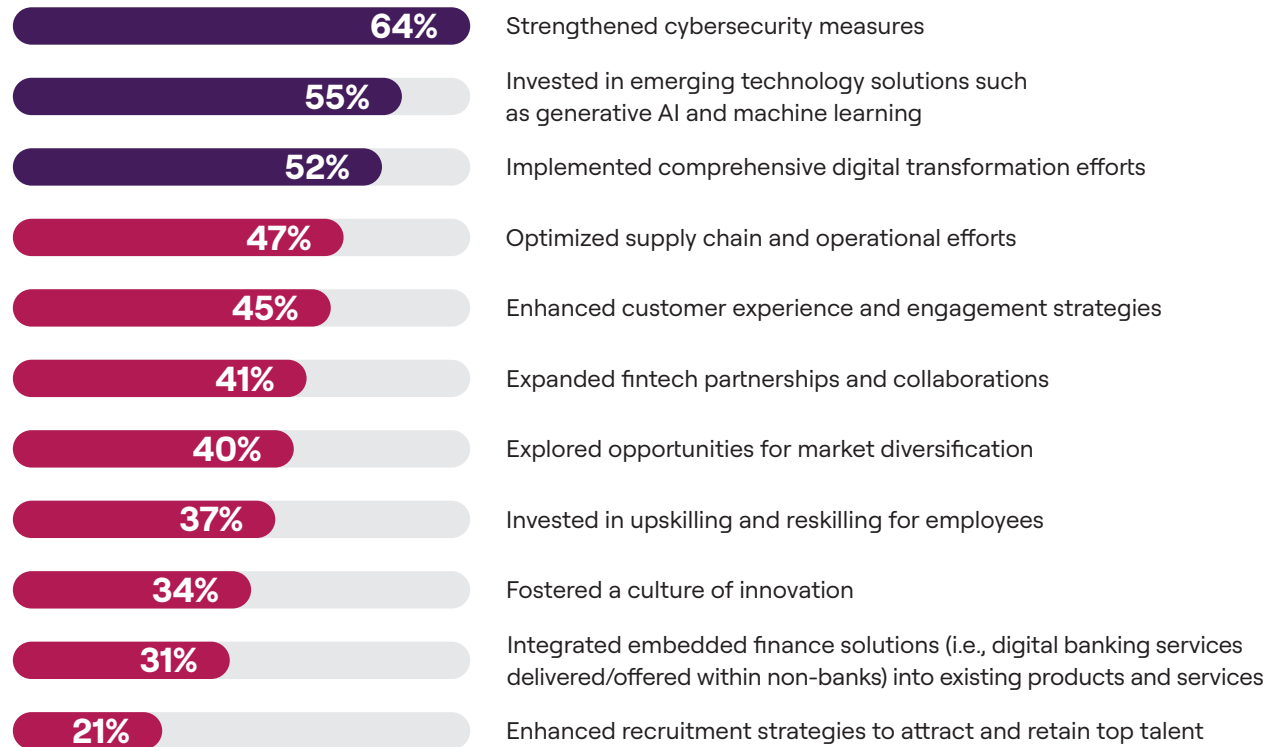
- Top 1
- Top 2
- Top 3



Nearly one in four (24%) executives surveyed said that improving their cybersecurity defenses was their top technology priority over the coming year. Another 20% of executives said that enhancing operational efficiency was their top priority for their financial technology investments over the next 12 months.

Indeed, many organizations have already made investments to address vulnerabilities in their money lifecycle. Almost two-thirds (64%) of executives surveyed said they have taken measures to strengthen their cybersecurity posture. More than half (55%) of respondents said they have invested in emerging technology solutions such as GenAI and machine learning, and more than half (52%) have implemented digital transformation initiatives. Optimizing their supply chains, enhancing customer experience and engagement strategies, and expanding their fintech partnerships also ranked high among executives' technology priorities.

**Fig. 8: Initiatives taken by organizations to achieve strategic priorities**



**“Our investments... aim to ensure that, in the future, success isn’t determined by how many people we hire or how much technology we deploy. Instead, it’s about using intelligent solutions that tackle issues like fraud, money laundering, or other crimes. That’s where our focus lies, and the importance of these solutions is growing.”**

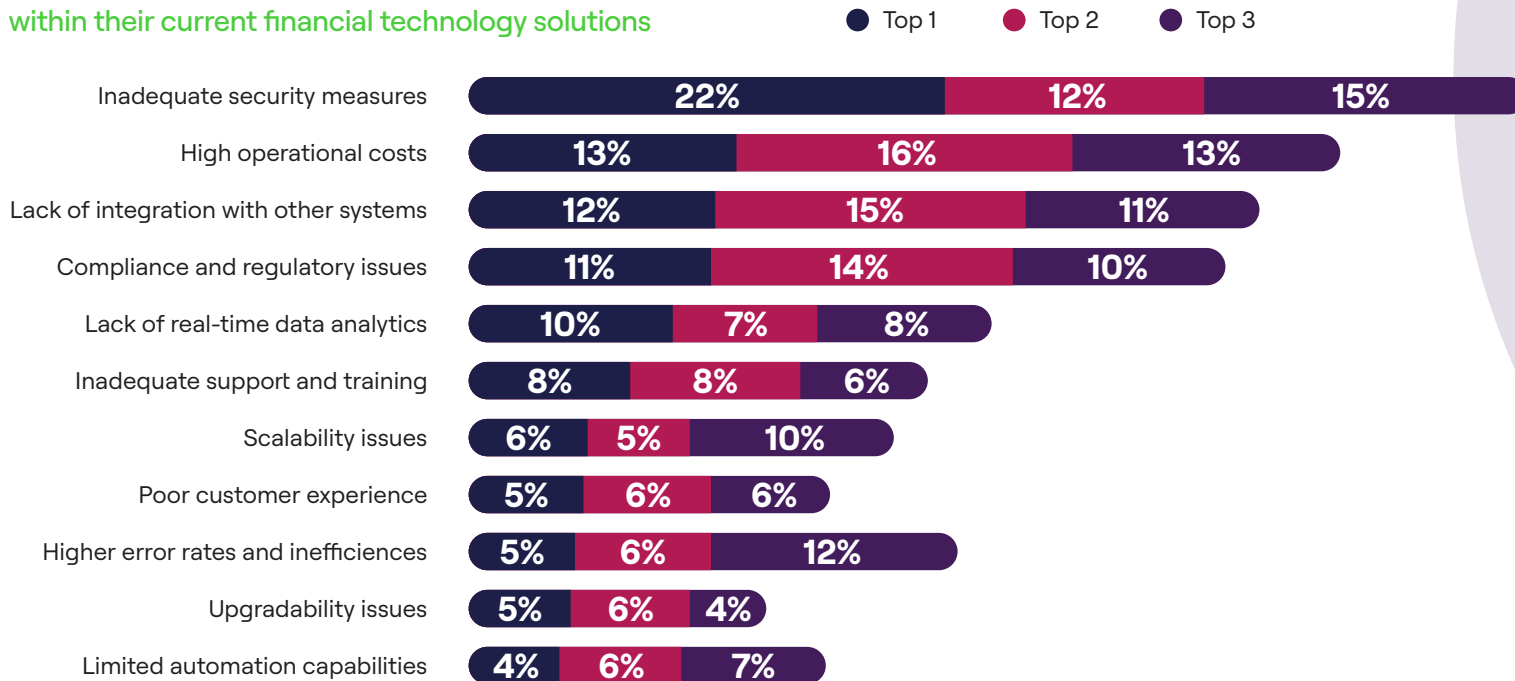
Neeraj Naresh Kumar, Head of ESG & Data Technology, Standard Charter Bank

## 2.2 Current fintech solutions are falling short in data protection.

When it comes to purchasing financial technology, executives surveyed rank cybersecurity and data protection capabilities as their number one criterion (28%) for selecting a new solution. Regulatory compliance adherence was the second most important criterion (18%), followed by customer experience enhancement (15%), operational efficiency (11%), and ease of integration with existing systems (11%).

In light of these priorities, it appears that many fintech solutions in the marketplace are falling short. Survey respondents report that inadequate security measures were the most significant challenge they face with their current technology (22%). Other significant challenges include high operational costs (13%), lack of integration with other systems (12%), and compliance and regulatory issues (11%).

**Fig. 9: Most significant challenges faced by organizations within their current financial technology solutions**



**Fig. 10: Organizational efforts to address fraud minimize employee training**

**Q. Please select which of the following statements applies to your organization.**



My organization has measures in place to address fraudulent activities as they arise.



My organization has no measures in place to address fraudulent activities as they arise.

My organization regularly trains employees on fraud and cybersecurity awareness.



My organization does not regularly train employees on fraud and cybersecurity awareness.

### 2.3 Employee awareness training is not a significant priority despite growing fraud and cyberthreats.

The survey revealed a gap between organizations' desire to enhance their cyber/fraud defenses and their focus on enhancing employee awareness of such threats.

While 88% of executives surveyed said that their organizations have measures in place to address fraudulent activities as they arise, only slightly more than half (53%) of respondents said that they conduct regular employee training on fraud and cybersecurity awareness.

**“Employees need to be trained to handle the increasing sophistication of technology used to commit cybercrime... Organizations have to invest consistently in training employees to avoid the fakes, attacks, and false payments.”**

Stacey Hadash, former Market Executive,  
Global Commercial Banking, Bank of America

## 2.4 Banks lead the way among financial services firms in their organizational readiness to address financial disharmony.

Among financial services organizations, banks appear to be best prepared to address inefficiencies in their money lifecycle because of their investments in financial technology. The majority of bank respondents (80%) say they have made significant progress in their adoption of fintech and feel they are well prepared to handle challenges in their financial technology ecosystem because of their investments.

Asset management firms are also well along in their investment journeys, with 70% of respondents reporting significant progress with their fintech investments and saying they are prepared to handle future technology challenges. By contrast, private equity firms feel less confident in their fintech strategies, with less than half (45%) of respondents reporting at least moderate progress in their fintech journeys.

Fig. 11: Private equity lags in financial technology adoption

Q. How would you describe your organization's progress in its adoption of financial technology?

'Very' and 'Moderately advanced' responses only

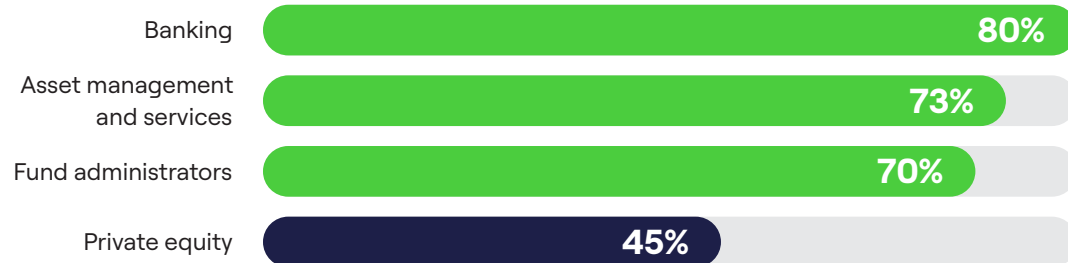


Fig. 12: Banking leads in preparedness to handle financial technology challenges

Q. How prepared is your organization to handle challenges within its financial technology ecosystem?

'Very well' and 'Moderately prepared' responses only



Financial services organizations include survey responses from Banking, Asset Management and Services, Fund Administrators, and Private Equity organizations. n = 301



## Section 3: Opportunities realized through technology investments

Executives were asked what beneficial opportunities they have realized through their investments in financial technology.

A majority of the respondents (60%) said that their technology investments had resulted in enhanced collaboration across their organizations. More than half (55%) of the organizations cited an acceleration of digital transformation initiatives, and half said they have gained new customers as a result of increased investment in financial technology.

Other opportunities realized through technology investments include improved employee productivity (cited by 48% of respondents), market expansion (46%), enhanced customer engagement (45%), and a culture that fosters innovation (40%).

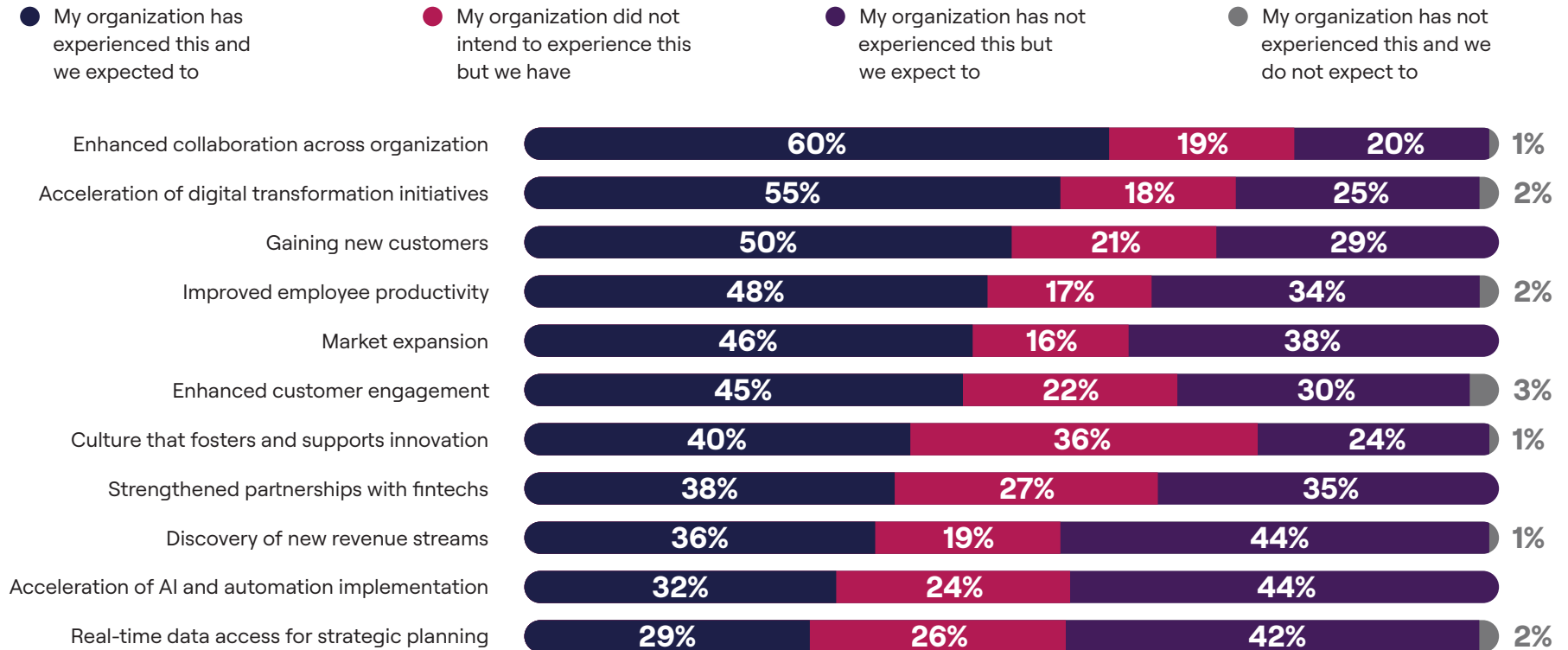
Many of these benefits were unexpected. For example, more than half (56%) of respondents said they were surprised by the increased agility to market changes that they have realized through their technology investments.

**“The approach to building a bank today is architecturally different from before; it’s not simply about creating a digital version of the existing mode. The real challenge isn’t that architects can’t grasp this new architecture, but rather that everyone needs to be open to redesign it from the ground up.”**

Alastair Campbell, former Group Head of Strategy, NatWest

**Fig. 13: Expected and unexpected opportunities from fintech investments**

**Q. What opportunities have you experienced as a result of increased investment in your financial technology? Were those opportunities expected or unexpected?**





## Section 4: Benefits and challenges of investments in AI and embedded finance

Executives were asked about their investments in emerging technologies such as AI, machine learning, and embedded finance.

Overall, organizations are embracing emerging technologies to address inefficiencies and disharmony in their money lifecycle. More than half (55%) of respondents say they are investing in innovative solutions like AI and machine learning to achieve their strategic objectives.

The investment landscape around AI and automation is mixed, with organizations reporting both **benefits** from their investments and **challenges** in implementing the technology.

### Key benefits

- Nearly 80% of executives surveyed have experienced enhanced fraud detection and risk management capabilities along with the ability to offer more personalized customer offerings through their AI investments.
- Three-quarters of respondents report experiencing accelerated process innovation, and 72% note improved employee engagement due to AI initiatives.

### Key challenges

- Nearly three-quarters (73%) of respondents cite the high cost of AI and machine learning implementation and maintenance as a primary obstacle.
- Lack of in-house expertise in these technologies is another concern (64%) among executives, and 58% of respondents struggle with integrating these technologies with existing systems.

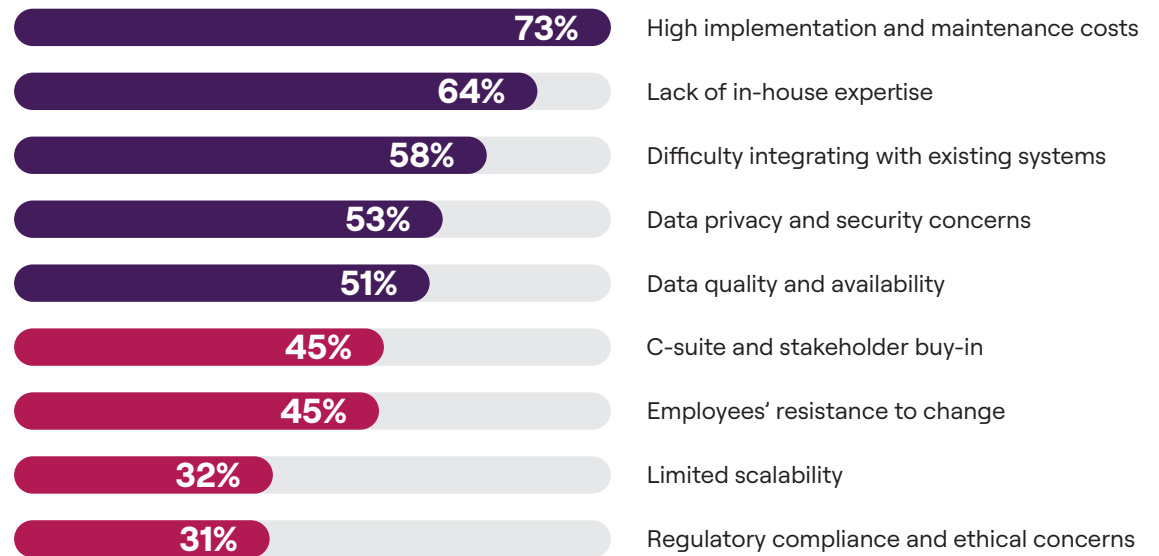
Organizations are optimistic about leveraging AI and automation to achieve their business objectives. More than half (56%) of executives surveyed plan to leverage AI to increase agility in response to market dynamics. Roughly half (48%) of respondents anticipate gaining new customers, and 43% expect to uncover new revenue streams from AI investments.

Regarding embedded finance, organizations are still early in the adoption curve. Slightly more than a quarter (26%) of respondents say they are leveraging embedded finance solutions to enhance their customer experience. About 70% of respondents say they are making some use of embedded finance solutions but are seeing inconsistent or limited benefits from their investments. However, organizations that integrated embedded finance solutions report generating, on average, 8.5% of sales growth.

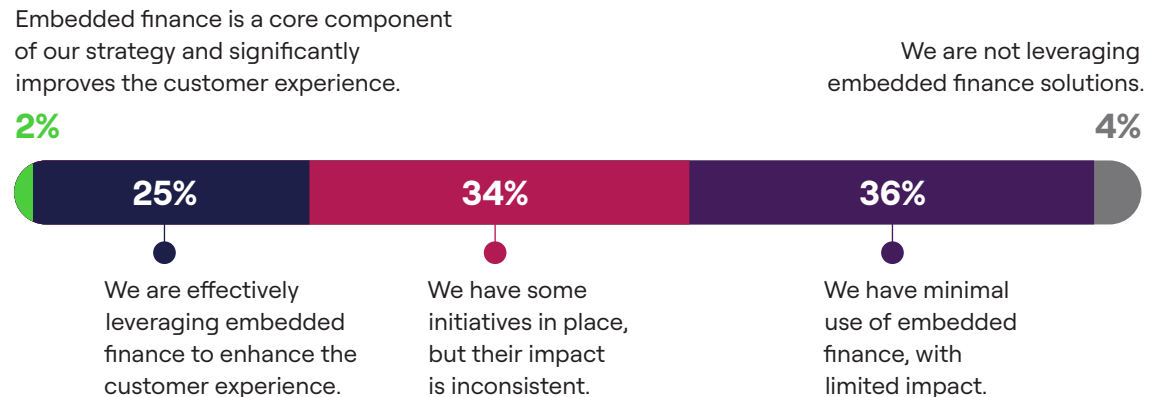
Organizations are optimistic about the potential impact of embedded finance solutions. Nearly three-quarters (74%) of respondents say they expect to enhance customer retention and loyalty through embedded finance investments. More than two-thirds (68%) of executives surveyed say they expect to enhance their customer experience and engagement through embedded finance solutions, while 59% expect to increase their revenue streams with embedded finance.

**Fig. 14: High costs and lack of expertise hold back AI and automation adoption**

**Q. What are the most significant challenges you have faced in your organization's adoption of AI and automation (including generative AI and machine learning) in your current financial processes?**



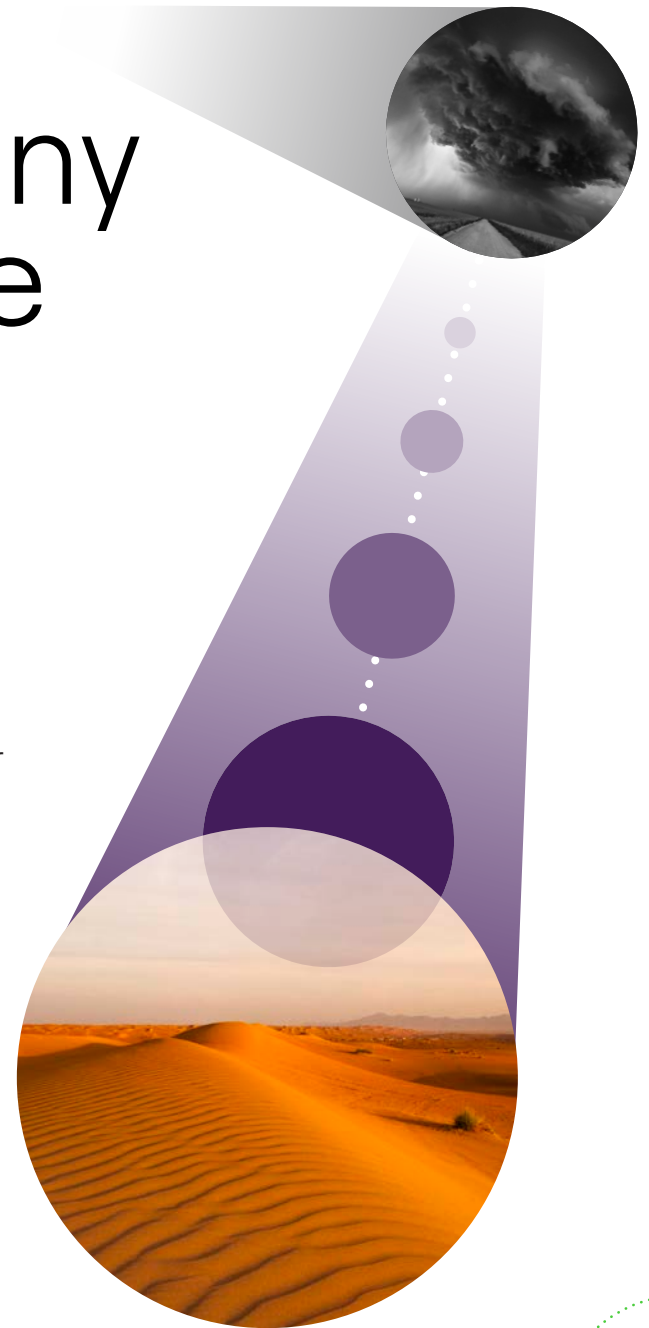
**Fig. 15: How organizations are leveraging embedded finance**



# A roadmap for addressing disharmony in the money lifecycle

From its vantage point serving the technology needs of organizations across the full ecosystem of the global economy, FIS suggests that organizations take a strategic, multi-step approach to address disharmony in their money lifecycle.

- **Identify key tension points:** Begin by identifying key areas within your operations that are stifling innovation while increasing costs and risks, including fraud and cyberthreats, common sources of inefficiencies and errors, payment and illiquidity challenges, regulatory compliance issues, and gaps in financial technology skills.
- **Leverage financial technology to lower risk and boost efficiency:** Based on the biggest sources of operational risk and inefficiency, prioritize your investments in technologies such as AI, machine learning, data analytics, and embedded finance, paired with improved employee training.
- **Forge strategic fintech partnerships:** Consider how and where partnerships with fintech firms can add to your organizational expertise and accelerate innovation while freeing up resources for strategic growth initiatives.
- **Focus on the customer:** View all strategic priorities and technology investments through the lens of how they will reduce friction, enhance security, and improve the experience at every point in your customers' journey with your organization.



By identifying and addressing sources of losses in their money lifecycle through the strategic application of leading-edge technology, organizations can reduce risk, enhance operational efficiency, and free up resources to drive innovation and sustainable growth, ensuring their success in a rapidly evolving marketplace.

## Insights from respondents on addressing disharmony in the money lifecycle

How can business leaders address disharmony in their money lifecycle? Our survey respondents provided some insights.

- “For knowledge transfer on emerging technologies, my organization is fostering partnerships with fintech firms.”
- “We are fully embracing digital transformation to modernize our infrastructure, leverage cloud-based technologies, and integrate AI and automation.”
- “A centralized management platform... helps us to manage a varied number of clients and protect their data.”
- “Utilizing advanced threat intelligence platforms provides insights into emerging threats specific to the financial systems and helps us address them.”
- “We are implementing advanced fraud detection systems by utilizing machine learning algorithms to identify and flag suspicious transactions in real time.”

# About the research

In partnership with FIS, Oxford Economics conducted two separate surveys, each involving 501 C-suite executives and business leaders at organizations directly involved in financial technology decision-making in the U.S., the U.K., and Singapore. The first pulse survey, conducted

in October and November 2024, identified tensions — “disharmony” — stemming from issues such as fraud, cyberthreats, human errors, operational inefficiencies, and regulatory complexities, while also exploring the potential growth opportunities these challenges might present. The second

survey, conducted in November and December 2024, collected detailed insights into how organizations are implementing strategies to mitigate disharmony. Data for both surveys was collected using computer-assisted telephone interviewing (CATI) and online methodologies.

## PULSE SURVEY DEMOGRAPHICS

N = 501

### Geography

United States: 45%  
United Kingdom: 45%  
Singapore: 10%

### Industry

#### Financial institutions (60%)

- Banking: 33%
- Asset management and services: 14%
- Private equity: 7%
- Fund administrators: 6%

#### Non-financial institutions (40%)

- Technology/Big Tech: 20%
- Fintech: 8%
- Insurance: 8%
- Auto lenders: 2%
- Government: 2%

### AUM for financial institutions

Less than \$5 billion: 4%  
\$5 billion to \$9.99 billion: 18%  
\$10 billion to \$19.99 billion: 15%  
\$20 billion or more: 63%

### Revenue for non-financial institutions

Less than \$5 billion: 47%  
\$5 billion to \$19.99 billion: 34%  
\$20 billion or more: 19%

## FULL-LENGTH SURVEY DEMOGRAPHICS

N = 501

### Geography

United States: 45%  
United Kingdom: 45%  
Singapore: 10%

### Industry

#### Financial institutions (60%)

- Banking: 32%
- Asset management and services: 14%
- Private equity: 8%
- Fund administrators: 6%

#### Non-financial institutions (40%)

- Technology/Big Tech: 20%
- Fintech: 8%
- Insurance: 8%
- Auto lenders: 2%
- Government: 2%

### AUM for financial institutions

Less than \$5 billion: 8%  
\$5 billion to \$9.99 billion: 13%  
\$10 billion to \$19.99 billion: 18%  
\$20 billion or more: 61%

### Revenue for non-financial institutions

Less than \$5 billion: 34%  
\$5 billion to \$19.99 billion: 39%  
\$20 billion or more: 27%

### About FIS

FIS is a financial technology company providing solutions to financial institutions, businesses and developers. We unlock financial technology that underpins the world's financial system. Our people are dedicated to advancing the way the world pays, banks, and invests, by helping our clients confidently run, grow, and protect their businesses. Our expertise comes from decades of experience helping financial institutions and businesses adapt to meet the needs of their customers by harnessing the power that comes when reliability meets innovation in financial technology. Headquartered in Jacksonville, Florida, FIS is a member of the Fortune 500® and the Standard & Poor's 500® Index. To learn more, visit [FISglobal.com](https://www.fisglobal.com). Follow FIS on LinkedIn, Facebook and X (@FISglobal).

### About Oxford Economics

Oxford Economics is the world's foremost independent economic advisory firm. Covering over 200 countries, over 100 industrial sectors, and 8,000 cities and regions, we provide insights and solutions that enable clients to make intelligent and responsible business decisions faster in an increasingly complex and uncertain world. For more information, visit [www.oxfordeconomics.com](https://www.oxfordeconomics.com).

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