Beyond uncertainty: A modern data architecture unlocks operational excellence in 2025

Make capital investment work harder with innovative technology for efficiency across the financial ecosystem.

Executive summary

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.

Businesses are losing out on an average of $98.5 million a year as a consequence of cyberthreats, fraud, regulatory hurdles and operational inefficiencies, according to landmark new research from global financial technology leader FIS® (NYSE: FIS) in collaboration with Oxford Economics.

Research of more than 1,000 business leaders across six industries quantified the impact of disruptions and inefficiencies across the money lifecycle, revealing a stark paradox: while 55% of respondents reported that their companies have invested in generative AI and machine learning to meet their strategic objectives, 56% have not yet achieved the expected market agility, with 73% citing the high cost of implementation and maintenance as an obstacle to AI automation, as well as 58% citing integration challenges as their primary barrier.

A notable trend among the executives and business leaders surveyed was the significant investments their organizations are planning to make in AI and automation technologies.

- Showing signs of optimism despite obstacles, 56% of respondents said their companies plan to employ AI to increase their organization's agility in response to market dynamics, while 48% anticipated it would enable them to gain new customers.

This reveals a fundamental truth: a sophisticated data architecture has become the critical differentiator for alternative investment success. The research, surveying 1,000 senior executives, shows that despite widespread technology adoption, firms struggle with three core challenges:

1. **Data acquisition: 51%** face data quality issues and are still grappling with paper documents, with an explosion in data and no 100% digital scenario on the horizon, previous generation Optical Character Recognition (OCR) and Robotic Process Automation (RPA) tools are struggling to keep up.
2. **Data harmonization: 37%** struggle with system connectivity, with more complex products and services, as well as the push to new distribution channels, interoperability is seen as a critical barrier to scaling.
3. **Data consumption: 64%** lack expertise, highlighting the challenges in hiring and retaining talent with the right blend of business and technical skills.

Organizations with a robust data architecture and citizen development framework, demonstrate faster decision-making, reduced inefficiencies and superior performance during volatile periods. The question isn't whether to invest, but how quickly to build a strategic foundation that will make capital investment work harder to unlock growth.

The integration imperative

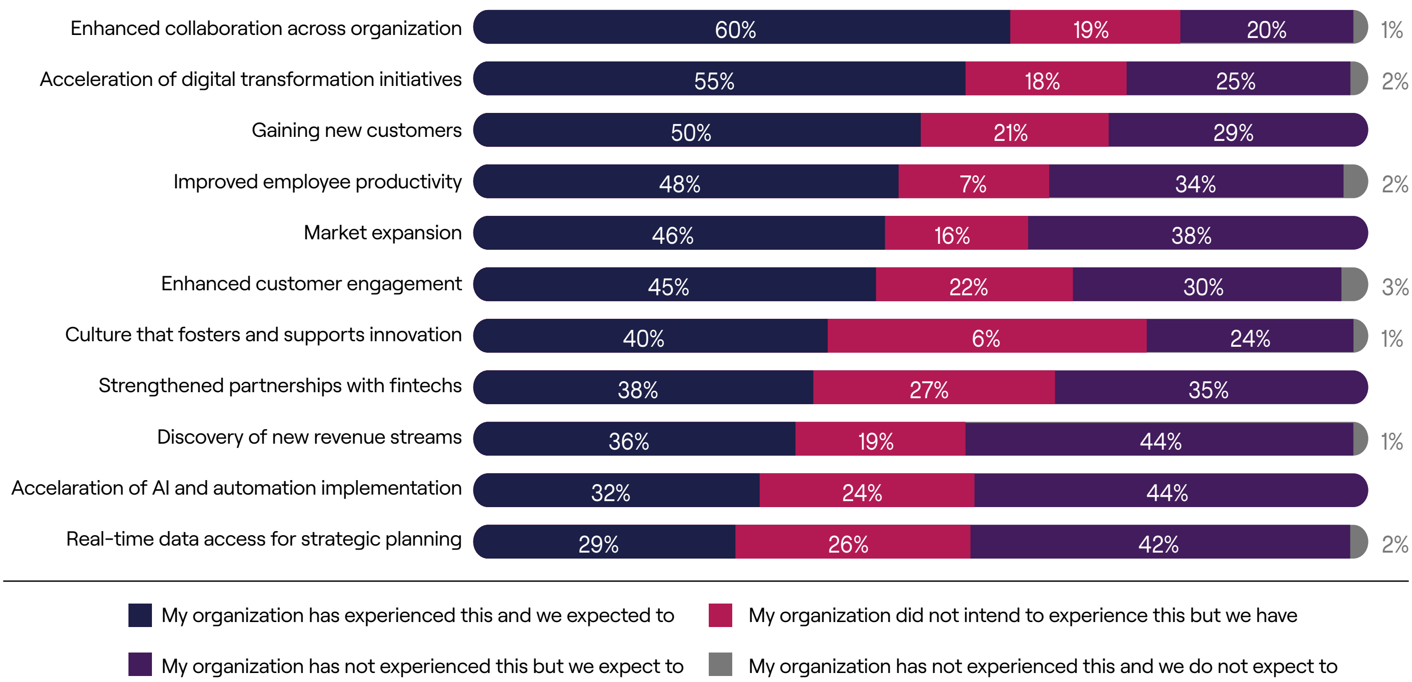
Picture a European hedge fund during August 2024's yen carry trade unwind. The fund's artificial intelligence (AI) analytics should have provided early warnings. Instead, its collection of fragmented trading and risk systems delivered conflicting signals, while legacy workflows delayed critical data updates. The result: preventable losses.

The survey indicates such problems are widespread. The research shows that while financial firms have invested in AI and machine learning in a bid to leverage their data analysis and signaling possibilities:

- **56%** have not achieved the market agility they expected
- **48%** failed to realize their customer acquisition goals
- **43%** still have not realized targeted revenue streams

The root cause isn't technology; it's the foundation beneath it. Having a modern, unified data architecture to underpin firms' trading and risk management tools has become a strategic imperative.

Figure 1: The technology investment-outcome gap



Challenge 1: From fragmentation to integration

Modern trading operations demand precision across multiple asset classes and time zones. Yet 51% of firms struggle with data quality, particularly when dealing with unstructured documents given many term sheets, confirmations and regulatory filings still arrive as PDFs.

With an ever-growing amount of data to process, hiring more bodies is no longer sufficient, nor economically viable. Optical character recognition and robotic process automation-based technologies, which have been deployed in the last 5-10 years, are now giving way to modern AI which can understand the context and relationships within documents, not just extract text.

Instead, industry leaders are implementing:

- Semantic understanding of complex financial documents
- Natural language voice processing for compliance
- Real-time validation at point of capture

Implementing data improvement transformations produces measurable outcomes, including significant reductions in trade breaks, faster regulatory reporting and improved P&L accuracy through real-time position marking.

A holistic, cross-asset framework for order, portfolio and risk management offers investment firms a further edge. Instead of data silos scattered across disparate trading, risk and compliance systems, a single, multi-strategy, multi-asset class ecosystem can consolidate data to provide complete views of desk- and enterprise-level positions. Advanced trading and risk management tools fed by real-time data will help stakeholders make informed decisions about portfolio adjustments, trading strategies and capital allocation to stay within defined risk tolerances and enable investments to work harder to deliver alpha.

Challenge 2: Scaling alternative markets

Once exclusive to institutions, modern technology is now driving a wave of democratization in alternative strategies. Seeing new and diversified fundraising opportunities, many private equity firms are rolling out semi-liquid funds and hedge funds are offering separately managed accounts and creating products that cater to wealth platforms. European ELTIF structures and U.S. interval funds offer new vehicle options. Minimum investments have dropped from millions to thousands. But democratization brings exponential increases in operational complexity.

The harmonization challenge encompasses:

- Accommodating multi-class structures with varying terms
- Cross-border compliance requirements
- Diverse investor reporting standards

Research shows almost 40% of firms are exploring market diversification, yet 37% struggle with the requisite system connectivity. To be successful, firms need:

- Master data management to support exponential investor growth
- Automated workflows in place of paper-based processes
- Modern architecture that enables distribution partnerships and multi-asset cross-asset and front-to-back platform integration

Challenge 3: AI-ready foundations – from investment to implementation

Despite 73% of the Oxford Economics survey respondents citing high AI costs and 64% lacking expertise, accelerating AI adoption is a priority for alternative investment firms. The solution lies in democratizing data access.

Low-code/no-code platforms can transform business users into "citizen data scientists" by breaking down traditional barriers through:

- Visual workflow builders
- Pre-built AI models
- Natural language querying

It enables portfolio managers to build custom analytics without technical support dependency; risk managers to create real-time dashboards; and compliance teams to automate surveillance.

Maintaining the governance-performance connection will be critical. Data lineage ensures explainable AI, while audit trails satisfy regulatory scrutiny across jurisdictions.

Conclusion: The data advantage in an uncertain world

The three data pillars – acquisition, harmonization, consumption – should form an integrated ecosystem. Research validates this approach: 60% experienced enhanced collaboration through technology investment, while 49% fostered data-driven cultures.

Successful implementation requires sequencing, with a focus on:

- Immediate term: High-precision data acquisition tools
- Medium term: Scalable harmonization layer
- Long term: Democratized consumption platforms

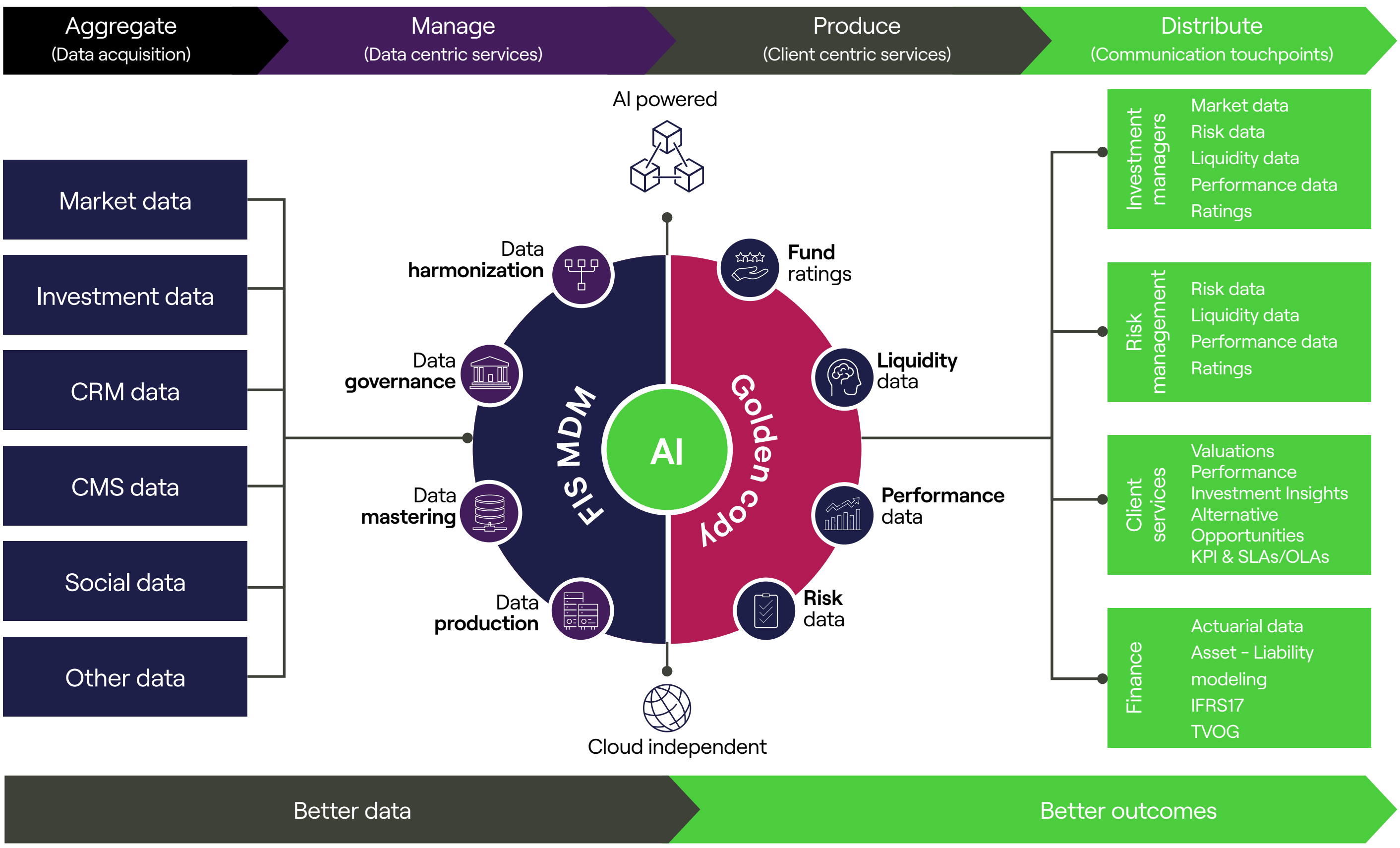
When done well, the return on investment is compelling, materializing through faster market response, reduced manual processes and improved ability to capture opportunity. And as investors diversify globally, multi-jurisdictional complexity makes a flexible data architecture even more essential.

The urgency is clear: competitive windows are narrowing. Early adopters establish compounding advantages while regulatory sophistication increases. Organizations that recognize data architecture as foundational will outperform peers across all market conditions.

The question isn't whether to invest in data capabilities, but how quickly you can build the integrated foundation that transforms AI potential into measurable business advantage.

Source: **FIS and Oxford Economics The Harmony Gap: Finding the Financial Upside in Uncertainty study**.

Figure 2: Data value chain



Money at rest Money in motion Money at work™

FIS investment management ecosystem makes your money work harder by unlocking streamlined technology for greater efficiencies.

Our technology powers the global economy across the money lifecycle.

Money at rest

Unlock seamless integration and human-centric digital experiences while ensuring efficiency, stability, and compliance as your business grows.

Money in motion

Unlock liquidity and flow of funds by synchronizing transactions, payment systems, and financial networks without compromising speed or security.

Money at work

Unlock a cohesive financial ecosystem and insights for strategic decisions to expand operations while optimizing performance.

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