

# Beyond the hype: AI in financial services

A collection of real-world examples



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## A turning point for financial services

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The growing sophistication of artificial intelligence (AI) has produced shockwaves around the world and has led to new possibilities for value creation in the financial services sector. It is predicted that approximately 30% of the operating profit in the banking industry will be attributed to AI.<sup>1</sup> This is very likely to create disruption in the market and unleash new competition from challengers.

The reality is that many organizations will struggle to adapt, as the organizational size and complexity of their technology estate in the financial services sector are difficult to change. To thrive, companies need a platform that can inherently adapt in an era of constant disruption, allowing them to incorporate the innovation that is powering the future of AI.

This guide—which is part of a series of executive guides from Red Hat—is for leaders who are interested in real-world examples of AI implementation for enterprise. It features customer stories that are intended to help them plan their AI adoption strategy and [navigate an era of constant innovation](#).

- ▶ The overall value of AI at stake for the banking industry alone is approximately US\$1.2 trillion.<sup>1</sup>
- ▶ Generative AI could add US\$200 to US\$340 billion in new value.<sup>1</sup>

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<sup>1</sup> [“Capturing the full value of generative AI in banking.”](#) McKinsey & Company, 5 Dec. 2023.

## Three potential obstacles across financial services

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The real power of any disruptive technology occurs when it is fully integrated into the way businesses, customers, and employees interact with each other and how value is created. This was true when electronic trading revolutionized financial markets, and when digitalization transformed the consumer banking business. These shifts created new revenue streams and significantly reduced costs while changing the competitive landscape.

The rapid evolution of AI has given rise to powerful language models and AI agents that are poised to reshape financial services once again. This will eventually change customer engagement and unlock new levels of efficiency in operations while creating new commercial pressures for incumbents. AI is poised to catalyze more frequent and profound change, which will demand increased levels of adaptiveness, but organizations will need to first overcome these 3 obstacles of AI adoption.

### 1. Cost

The cost of model training, tuning, deployment, and integration limits the products and services that AI can be applied to.

### 2. Complexity

Skill shortages, bespoke infrastructure requirements, and a lack of accessible data are making it difficult to apply AI at scale.

### 3. Risk

Immature tools across the model lifecycle can limit where and how businesses across financial services choose to deploy AI.

*"At least 30% of generative AI projects will be abandoned after proof of concept by the end of 2025, due to poor data quality, inadequate risk controls, escalating costs or unclear business value."<sup>2</sup>*

## Lowering the barrier to AI across the organization

Overcoming these obstacles will be essential for the industry to more broadly adopt AI and for organizations to realize its full potential across financial services.

### ▶ Reduce cost

A modern AI platform is needed to optimize hardware consumption, streamline model management, and minimize the cost of integrating AI into applications. This opens opportunities to apply AI in areas that were not commercially feasible before.

### ▶ Minimize complexity

A combination of skill development and the right AI platform can close skill gaps, streamline infrastructure management, enhance collaboration, and accelerate delivery.

### ▶ Decrease risk

Trust and safety are critical for any disruptive technology to become widely adopted by employees and customers. Manual controls are difficult to scale and can be ineffective. Investments in quality, security, and governance are essential for widespread adoption.

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<sup>2</sup> Gartner. ["Gartner Predicts 30% of Generative AI Projects Will Be Abandoned After Proof of Concept By End of 2025."](#) 29 Jul. 2024.

## Practical examples where AI is remaking financial services

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*"AI and machine learning aren't new technologies in themselves—their building blocks have been around for quite a few years. The real trick is coming up with new creative ways to train these algorithms—improving their performance, making them more precise, and using them to transform the way our entire industry operates."<sup>3</sup>*

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### Thomas Zschach

Chief Innovation Officer, SWIFT

**By applying AI to its onboarding process, Banco Galicia has cut verification times from days to minutes with 90% accuracy.<sup>4</sup>**

*"This more automated process allowed us to save around 40% in operating costs and be the first in a series of projects using AI."<sup>4</sup>*

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### Erico Behmer

Chief Information Officer, Banco Galicia

### Combating financial crime

Criminals are becoming extremely adept at concealing their identities and evading detection. In response, organizations must continuously evolve their models to reduce false positives and more accurately detect problematic transactions. Federated learning and synthetic data are emerging as key tools.

### Detecting transactional anomalies in financial market infrastructure

SWIFT has 11,000 members sending millions of transactions across the network every day.

In 2022, SWIFT recognized the need for a highly scalable and security-focused architecture that would allow them to continually adapt and stay ahead of bad actors.

The company built a high-performance AI platform and tailored machine learning (ML) models that allow for more precise analysis with fewer false positives to investigate and reject messages to repair. In the future, AI could facilitate automatic correction of input errors, optimize routing options for payments, and streamline processing in many other ways.

### Reshaping customer onboarding

The rapid evolution of AI has the potential to fundamentally reshape not only how organizations interact with their customers, but also streamline the underlying processes. It is expected that conversational agents will become more powerful and reduce servicing costs. However, there are also significant opportunities in customer acquisition and onboarding, along with advisory, where AI will have a lasting effect.

### Streamlining customer onboarding for business banking clients

Before opening a corporate account at Argentina's Banco Galicia, clients had to visit a branch to physically submit a series of legal documents containing corporate and accounting information, which would then be digitized and subsequently evaluated by legal, risk, and compliance specialists. It took approximately 20 days to authorize the registration of a new account or update an existing client's account information.

Now that the bank is analyzing documents in a nearly real-time process, new corporate clients can open and start using their account in minutes, while continuing to meet the bank's risk and compliance requirements.

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<sup>3</sup> ["Unlocking the power of AI."](#) SWIFT, 12 May 2022.

<sup>4</sup> Red Hat case study. ["Banco Galicia onboards new corporate customers in minutes with intelligent NLP platform."](#) accessed 24 Feb. 2025.

*"Red Hat OpenShift AI provides a streamlined environment that enables our data scientists to build and deploy more robust and secure models."*<sup>5</sup>

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**Okan Çetinkaya**

CDO – CAO, DenizBank

### Powering AI innovation at a leading global bank

An enterprise data and AI platform, purpose-built to drive innovation at scale. Designed for use by engineers, data scientists, and business analysts, it is important in the development of leading AI models while boosting safety and responsibility.

### Creating new opportunities in lending

More sophisticated risk modeling and the use of alternative data, along with behavioral analysis, has already led to changes in the lending industry. It has helped to more accurately predict repayment and generate new revenue streams. The incorporation of language models into underwriting has reduced operating costs. The rise of smart contracts and the incorporation of agentic AI promises further streamlined lending across financial services.

### Scaling AI across the enterprise

Türkiye's DenizBank created a market-leading AI platform for its data scientists and engineers that would improve time-to-market while delivering AI/ML process cost savings. The bank automated data science pipelines, provided self-service capabilities, and optimized model serving, so that it could more efficiently scale AI across the enterprise.

The bank has more than 120 data scientists spread across different business lines, innovating across areas such as marketing, lending, credit cards, and risk. With this new platform, DenizBank is able to not only streamline model development, deployment, and integration, but also to tap into the powerful open source communities that are shaping the future of AI.

[Learn more](#)

### Enhancing the customer experience

AI agents are poised to reshape the customer experience in banking by making services more intelligent, intuitive, and personalized. From proactive bill reminders to real-time cash flow optimization, AI can anticipate customer needs and provide tailored financial insights that simplify decision-making and take actions on behalf of customers.

Analyzing time-series data and identifying actionable patterns, AI helps create more accurate predictions that allow banks to offer tailored propositions, detect potential issues before they arise, and provide proactive financial guidance.

Customers no longer have to navigate their finances alone—agent-driven insights help them stay ahead, manage their money effortlessly, and achieve their financial goals with confidence.

Beyond automation, AI enhances engagement by enabling more responsive, personalized interactions, whether through conversational agents, smart recommendations, or more thoughtful digital banking experiences. By delivering safeguarded and highly tailored services, AI helps elevate customer satisfaction and trust to create a future where banking is not just efficient, but truly customer-centered.

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<sup>5</sup> Red Hat case study, "[DenizBank transforms AI operations and empowers innovation](#)," 16 Jan. 2025.

## Future opportunities in financial services

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### Banking

The way a bank operates and engages with its customers and employees will look very different over the next 5 years. The accelerated pace in which customers are comfortable adopting new technology will add pressure for banks to keep up with the pace of change. Internally, powerful models and agents will be able to take on more complicated tasks and begin to radically transform how work gets done.

- ▶ **Servicing:** Conversational agents will take on more difficult tasks. AI agents will be integrated more deeply into banking channels.
- ▶ **Lending:** AI will become more powerful and effective at evaluating and optimizing tailored product offerings, pricing, and risks.
- ▶ **Payments:** Movement towards real-time cash management with advanced models for transaction optimization and reconciliation.
- ▶ **Advisory:** More sophisticated models will take on tasks such as information gathering, summarization, and recommendations.

### Insurance

Increasing operational costs, new competitive pressures, and volatile climate risks are straining profits for insurers around the world. Access to new sources of data along with the decreasing cost of model development open up new opportunities for insurers to adopt AI more broadly across their business and facilitate new levels of operational efficiency.

- ▶ **Claims:** Models for documents, images, videos, and sensors will speed up approvals and settlements.
- ▶ **Underwriting:** Will streamline approvals by more accurately understanding personal and business data.
- ▶ **Policies:** Increasingly tailored policies and dynamic pricing based on real-time data and more sophisticated risk modeling.
- ▶ **Servicing:** Conversational agents will take on more difficult tasks. Agents will be integrated more deeply into insurance channels.

## Financial markets

The rapid evolution of AI is helping firms better manage risk and cope with the inherent volatility in financial markets. The growing sophistication of language models and AI agents are creating new opportunities in portfolio rebalancing and order book predictions. Reducing the cost and complexity of AI will help organizations unlock new levels of efficiency as market conditions change.

- ▶ **Trading:** Increased use of AI agents across the trading lifecycle to optimize trading strategies and improve efficiencies.
- ▶ **Liquidity:** Powerful liquidity forecasting by simulating markets will decrease risk exposures, check for adequate liquidity, and improve market stability.
- ▶ **Portfolio management:** Increasingly sophisticated models to optimize portfolios based on cost, risk, environment effects, and other objectives.
- ▶ **Market intelligence:** New language models to better understand market sentiment from new sources of unstructured data.

## Risk and compliance

Meeting compliance obligations and managing risk have become increasingly difficult. Evolving regulations, changing market conditions, and new operating risks are increasing cost and complexity. Advancements in AI are creating new opportunities to better manage risk while reducing costs. This is being powered by language models and agentic frameworks, coupled with a more cost-effective and supportive platform.

- ▶ **Risk management:** Enhanced insights into portfolio risk, margin impacts, and liquidity risk through agent-based simulations.
- ▶ **Regulatory reporting:** Streamlined reporting through document retrieval and extraction of key information.
- ▶ **Financial crime:** Increased accuracy and reduction of false positives through adaptive risk models that learn from new patterns.
- ▶ **Information security:** Real-time assessments of assets to identify vulnerabilities, accurately identify threats, and accelerate remediation.



## What lies ahead

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We have entered a new generation in financial services that will have a profound effect on customers, partners, and employees. The rapid evolution of AI has the potential to fundamentally reshape customer and employee engagement and lead to new levels of operational efficiencies. However, challenges of cost, risk, and compliance, along with varying levels of business and technology readiness, are headwinds that will need to be overcome.

Below are 4 areas we believe will be focal points in the near future as organizations seek to adopt AI across their business and maximize its outcome.

### What are AI agents?

Software that uses AI to perform tasks with little or no human interaction.

#### Why do they matter?

Can drastically reduce operating costs, create new value streams, and transform the back office. Agents have grown in sophistication and are able to take on higher order tasks with reinforcement learning and reasoning.

### What are small language models?

Language models that are fine-tuned for specific uses and designed to be more compact and efficient.

#### Why do they matter?

Provides greater levels of control, accuracy, speed, and reliability for specific uses, such as customer support, advisory, and market research. Can significantly reduce infrastructure costs and energy consumption.

### What is federated learning?

A type of ML where multiple groups train a model collaboratively without sharing data.

#### Why does it matter?

Federated learning can enable potent models with new levels of accuracy without sharing data, while addressing data sovereignty requirements. An example is in the area of financial crime where banks work together on a model, but the data remains private.

### What is AI safety and security?







































Prevent unintended or harmful consequences of AI and protect it from attacks from bad actors.

#### Why does it matter?

Fairness, explainability, transparency, accuracy, and reliability are critical for safety. Individuals, organizations, and society must be protected against harm through effective risk management.

## The importance of a robust ecosystem

History has shown that navigating disruption is only possible when it is surrounded by a robust ecosystem of technologies that fit for a particular purpose. This reduces cost and makes technology more accessible. The digital revolution wouldn't be feasible without the networking effect of the internet. Open source has created a similar networking effect around key technologies that are powering innovation in the cloud and now AI. The rapid evolution of AI is powered by the collective effort of open source communities and models, along with the rich ecosystem built around them.

<b>Applications</b>           					
<b>Services</b>            					
<b>Servers</b>    					
<b>Cloud infrastructure</b>     					
<b>Hardware accelerators</b>   					
<b>Communities</b>   					

[Learn more](#)

What Red Hat can do for you

We believe that in order for AI to be truly transformative, it needs to be based on an AI platform that is cost effective, ubiquitous, and supported by a broad ecosystem. We build products in communities and create partnerships around the world to make AI more approachable and accessible to all.

Red Hat AI

The Red Hat® AI portfolio provides a consistent and comprehensive AI platform solution that helps reduce time to market while decreasing the operational cost and risk of delivering AI products across the organization. This solution allows for efficient use of any infrastructure and supports the creation of fit-for-purpose models with your data without unnecessary complexity or cost.

Red Hat AI Consulting

Collaborate with Red Hat AI experts to plan and identify key business objectives and create a strategic roadmap to reach your AI goals, including steps to lower operational costs, optimize resource use, enhance scalability, and accelerate AI innovation. Establish foundational capabilities—including an AI platform and AI skills—while delivering business value.

Red Hat AI ecosystem

Integrate your choice of tools with less cost and risk. Extend the value of your investment by plugging in new capabilities—now and in the future. Run on the hardware of your choice with the performance and reliability you expect. Maximize the benefits of AI across your organization with leading consultancies across the globe.

Capture the opportunity ahead

Work side-by-side with Red Hat experts to create a smart roadmap for success. Envision using Red Hat AI in your environment and learn about its capabilities. With Red Hat’s AI experts, you can define attainable objectives, establish a modern AI platform, build transformative skills, fine-tune pilot use cases, and reduce cost and complexity.

Let’s get started.



About Red Hat

Red Hat is the world’s leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. [A trusted adviser to the Fortune 500](#), Red Hat provides [award-winning](#) support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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