

AI at Scale in the Financial Services Industry

December 2025

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Introduction



Role of AI in FS



AI Use Cases

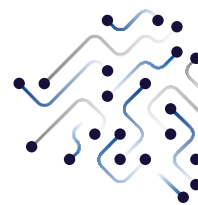


Risks and Regulations



Way Forward

AI Reshapes Financial Services by Replacing Manual, Rule-based Activities with Intelligent, Data-driven Decision-making



Financial services (FS) firms, including banks, insurers, and asset managers, use artificial intelligence (AI) to enhance automation, efficiency, and personalization across operations. In 2024, global AI investment in FS reached USD 38.4 Bn, and is projected to grow to ~USD 190.3 Bn by 2030. This growth is being driven by agentic systems, with investments expected to surpass USD 80 Bn by 2034.

AI-driven Transformation of Financial Services

Traditional Challenges

AI-driven Advancements

Rule-based systems and manual operations with a slow detection window

Fraud Detection and Risk Management

Real-time transaction monitoring, anomaly detection, predictive risk scoring, and pattern recognition

Limited by human capacity, manual paperwork, long turnaround times, and rising costs

Claims Processing and Underwriting

Streamlining the administrative process, detecting anomalies, increasing efficiency, and automating workflows

Rigid processes, limited communication channels, and fragmented experiences

Customer Experience and Personalization

Tailored product recommendations and customer retention with digital advisors

Manual payment reconciliation prone to human error

Payment and Transaction

Faster processing, enhanced security, and greater accessibility for transactions

Rule-based methods, extensive manual intervention, and complex market dynamics

Trading and Asset Management

Improve portfolio allocations, predict market movements, and price estimations

Inefficient and costly, human review of transactions, heavy staffing, and slow process

Regulatory Compliance and AML*

Automating monitoring and improving compliance processes and operational efficiency

As AI automates operations across FS functions, it is reshaping banks and insurers into agile, insight-led organizations. Over half of financial professionals now use GenAI, highlighting its growing influence across the sector.

*AML: Anti-money Laundering

In Banking and Payments, AI Delivers Measurable Gains in Productivity, Revenue, and Security



AI is no longer a future promise— it is reshaping the financial sector. From banking and payments to insurance, capital markets, and wealth management, institutions are realizing tangible improvements in efficiency, productivity, and customer engagement while driving growth, cost optimization, and stronger risk controls.



Banking

AI improves the speed of document processing, compliance checks, and customer interactions

30% productivity gains expected by 2028

6% rise in global banking revenue expected by 2027



Payments

AI enhances payment security and efficiency through advanced fraud detection, transaction screening, and identity verification

20% CAGR growth expected in AI-driven payments between 2022 and 2027

~50% of e-commerce transactions are projected to be AI-powered soon



In North America, 46% of financial institutions (FIs) use AI for **scam detection**, 44% for **transaction fraud**, and 37% for **identity verification**

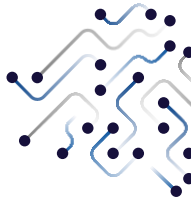
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“As much as we have been using it for years, it feels like we’re on the precipice of a serious step change in terms of the art of what is possible, not only in terms of productivity, but also increasingly personalizing the interactions our customers have with us.”

— **Marianne Lake, CEO of Consumer and Community Banking, JPMorgan Chase**

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Across Financial Domains, It Drives Efficiency and Cost Savings, Creating a More Agile Ecosystem



Insurance

AI increased efficiency in underwriting, improves risk modeling, and enhances policy accuracy through advanced analytics

29% of working hours in insurance can be automated using GenAI by 2030

10–20% increase in insurance conversion rates due to AI as of 2025

Up to **USD 160 Bn** in savings projected for Property and Casualty (P&C) insurers by 2032



Capital Markets

AI powers algorithmic trading, portfolio optimization, and risk analytics while enhancing risk management and compliance

USD 1.26 Tn AUM managed by robo-advisors globally in 2025

Up to **40%** reduction in transaction costs for select trades as of 2025

USD 35 Bn market size projected for AI in trading by 2030



Wealth Management

AI automates operations, enhances client relationships, and enables personalized financial planning and portfolio management

54% of investment managers use AI in strategy and research

USD 6 Tn in assets expected to be managed by AI-led platforms by 2027

~92% wealth management firms advance in AI adoption

A Growing Number of Firms Deploy AI to Automate Operations, Strengthen Risk Control, and Personalize Customer Engagement...



AI technologies, including machine learning, generative AI, and agentic AI, are transforming financial services by automating key functions such as fraud detection, risk management, underwriting, and compliance. They enable instant payments, predictive portfolio management, and hyper-personalized customer experiences across banking, insurance, payments, capital markets, and wealth management. The following examples highlight how select institutions are applying AI across these domains.

AI Use Cases in FS



Fraud Detection and Risk Management

J.P.Morgan

Uses behavioral biometrics and real-time analytics to cut scam losses by 40%



mastercard.

Maps cardholder-merchant activities, analyzes transactions, and boosts fraud detection by ~20%



Automated Claims Processing and Underwriting



Tractable

Streamlines insurance operations by automating damage assessment and fraud detection



ZURICH

Uses AI to speed up insurance processes, cutting review time by 58X and settling claims in 13 minutes



Customer Experience and Personalization

Goldman Sachs

Uses AI to personalize credit scoring, enabling instant loan approvals and improving customer service



Uses AI to analyze transactions and cash flow to instantly assess customer eligibility for loans or credit



Payment and Transaction Advancements

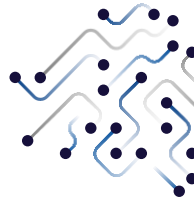


Connects ~2 Bn users globally through cross-border payments with partners such as Unified Payments Interface (UPI), Mercado Pago, and Tenpay Global



Streamlines payments by automating invoicing, detecting fraud, and improving efficiency and security

...While Driving Real-time Efficiency, Predictive Insights, and Stronger Compliance



AI Use Cases in FS



Predictive Analytics for Trading and Asset Management

BLACKROCK

Unifies risk analytics, portfolio management, and market insights to optimize trading and asset management



Supports investment research and risk analysis to improve trading and asset decisions



Regulatory Compliance and AML



Uses AI to monitor transactions, detect suspicious activities, and strengthen compliance and anti-money-laundering (AML) efforts



Uses AI to detect money laundering, assess customer risk, and automate regulatory reporting



As Role of AI Expands Across Financial Services, Regulators are Trying to Keep Pace with Emerging Risks



AI drives automation and personalization across financial services while raising concerns around data privacy, fairness, and accountability. Strong governance and global oversight are needed to manage these risks and protect consumers.

Key Risks and Challenges

Risk Areas	Description
Governance and Compliance Risk	AI advances faster than the regulations, creating oversight gaps. New laws, such as the European Union Artificial Intelligence (EU AI) Act, aim to tighten the control
Data Privacy Concerns	Use of sensitive data raises breach, transparency, and trust risks without a strong governance
Accuracy and Hallucination Risk	Poor inputs or low explainability can lead to wrong decisions, customer distrust, and legal issues
Market Correlation Risk	AI models can trigger uniform trading patterns, increasing systemic and market volatility

Regulatory Response

Global authorities, such as the Bank for International Settlements (BIS), the International Monetary Fund (IMF), and the Organization for Economic Co-operation and Development (OECD), are developing unified AI governance frameworks to manage cross-border risks.

In December 2024, BIS proposed a six-pillar model emphasizing governance, data oversight, model risk, and third-party supervision. The framework remains in a consultative stage, serving as guidance for regulators and financial institutions rather than a binding global standard.

With global regulators establishing the groundwork for responsible AI, the onus now shifts to financial institutions to turn compliance into a source of competitive advantage. The way forward lies in developing a unified, enterprise-wide AI strategy that enables scalable innovation while maintaining transparency, regulatory alignment, and long-term resilience.

Notable AI Regulations



AI is regulated under the EU AI Act

AI use monitored by – Federal Reserve, SEC, CFPB, OCC, FDIC



AI regulations mandated and updated by the Monetary Authority of Singapore

Broader AI regulatory guidelines are under development



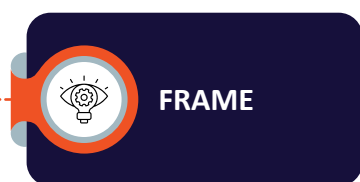
A Structured and Responsible AI strategy is Key to Sustainable Transformation in Financial Services



In line with the global financial sector priorities, the FIRST Roadmap outlines a clear path for the responsible integration of AI across banking, insurance, and capital markets. It offers practical insights to help institutions balance innovation with risk management, ensuring regulatory compliance, operational resilience, and long-term value creation from AI adoption.

FIRST

Framework For AI-led Transformation in FS



FRAME

Vision and Strategic Context for AI

Establish a clear, company-wide vision for AI adoption that evaluates current capabilities, defines clear objectives for AI integration across business functions, and prioritizes areas where AI can generate substantial enterprise value



INTEGRATE

Data and Technology Infrastructure

Invest in secure, cloud-native systems and robust machine learning operations (ML Ops) to meet the FS regulatory demands, while enhancing data integration to power AI-driven risk assessment, trading, and personalized financial products



REDESIGN

Processes and Offerings

Automate compliance, credit scoring, underwriting, and claims processing, while deploying AI-driven chatbots, robo-advisors, and personalization engines to enhance customer engagement and operational efficiency across FS channels



SAFEGUARD

Governance and Secure AI Use

Strengthen AI governance to align with FS regulations and ensure ethical risk management, model transparency, and auditability, while implementing advanced fraud detection and AML controls to protect assets and data integrity



TRANSFORM

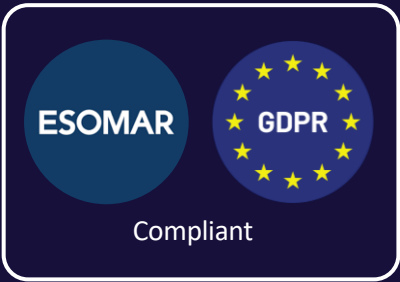
Scale Culture, Talent, and Business Model

Build a data-driven culture by re-skilling employees in AI and analytics, partnering with fintechs, regtechs, and insurtechs, and scaling new models such as embedded and decentralized finance (DeFi) to deliver greater value

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