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Fast-track your modernization:

# Innovating with GenAI Tools and Services on AWS

Hybrid AI-human collaboration for improved  
decision-making and experiences

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*This eBook provides a POV into how financial institutions (FIs) can fast-track their modernization efforts with GenAI tools and services on AWS; ensuring seamless integration, scalability, and adherence to regulatory requirements.<sup>1</sup>*

In today's rapidly evolving financial landscape, banks and financial services firms are navigating a critical period of transformation. This transformation is driven by regulatory, operational, and competitive pressures. Amid this shift, Generative Artificial Intelligence (GenAI) offers a groundbreaking opportunity to reshape customer experiences, optimize operations, and enable hyper-personalization at scale.

## **AWS's Role in Financial GenAI Innovation**

Amazon Web Services (AWS) has emerged as a frontrunner in AI and GenAI innovation. Its continuously maturing capabilities support financial institutions with the tools and frameworks needed for rapid deployment, seamless scalability, and robust compliance. AWS provides a rich ecosystem of AI services, from predictive analytics to advanced language models, empowering banks to harness AI's potential with greater precision, security, and resilience.

## **Real-World Applications and Compliance**

The financial services industry has been at the forefront of leveraging cutting-edge technologies for innovation and operational efficiency. In recent years, the emergence of GenAI has captured the attention of FIs worldwide. These powerful AI models hold the promise of increasing productivity, reducing costs, and unlocking new avenues for innovation and growth. A real-world example is JPMorgan Chase Bank, which uses advanced machine learning (ML) and AI techniques for use cases like trading optimization, risk management, market insights, and complex data analytics.<sup>2</sup>

## **AWS Tools and Services for GenAI**

AWS offers a plethora of managed services in AI that banks and financial services institutions can use.

Amazon SageMaker, for example, is a fully managed service platform that brings together a broad set of tools to enable high-performance, low-cost ML for any use case. It supports leading frameworks and programming languages, streamlining ML workflows from experimentation to deployment. Some of the most relevant services include the following:

**1. Amazon SageMaker.** This fully managed service platform brings together a broad set of tools to enable high-performance, low-cost ML for any use case. FIs can take advantage of the hundreds of jumpstart frameworks to build, train, and deploy ML models using tools like Jupyter notebook, debugger, profilers, pipelines, and MLOps. It supports the leading frameworks, toolkits, and programming language libraries, such as PyTorch, TensorFlow, Apache MXnet, and R on SageMaker has the capability to completely automate and manage the entire AI/ML workflow. FI power users and ML experts can take advantage of the rich feature set of SageMaker across all phases of development, from experimentation to deployment and scaling. FIs can also use prebuilt models based on a specific use case, such as anomaly detection, classification, and prediction etc.<sup>3</sup>

**2. Amazon Lex.** This fully managed service for conversational AI uses advanced Natural Language Processing (NLP) capabilities to understand user intent and extract relevant information from user inputs. With Amazon Lex, banks can build chatbots and virtual assistants to handle common customer inquiries and tasks, such as checking account balances, transferring funds, or inquiring about loan rates, reducing workloads on human customer representatives and agents. Lex integrates with various messaging platforms, including Facebook Messenger, Slack, and Twilio, as well as custom applications. By leveraging Amazon Lex, FIs can provide more efficient and convenient self-service options, reduce operational costs, and improve

<sup>1</sup> American Banker. Advances in AI-powered Cloud Banking. Web link: [Advances in AI-Powered Cloud Banking | NTT DATA](https://www.americanbanker.com/technology/advances-in-ai-powered-cloud-banking/)

<sup>2</sup> Generative AI in Financial Services. Web link: [aws.amazon.com/financial-services/generative-ai/](https://aws.amazon.com/financial-services/generative-ai/)

customer satisfaction through natural and engaging conversational interfaces.<sup>4</sup>

**3. Amazon Comprehend.** This fully managed NLP service uses machine learning to extract insights and relationships from unstructured text data. Amazon Comprehend can be used for various use cases across different industries, including FI, particularly for financial document processing use cases and information extraction such as loan/account applications and regulatory reports, as well as sentiment analysis from news articles, and customer feedback and complaints. It can provide powerful NLP capabilities; however, it does not have a GenAI component.<sup>5</sup>

**4. Amazon Fraud Detector.** This fully managed service uses machine learning to identify potentially fraudulent online activities. It is designed to help organizations detect fraud in real time and protect against various types of fraud, such as online payment fraud, identity fraud, and account takeover



**Through this comprehensive exploration, we aim to provide a roadmap FIs can use to navigate the intricate landscape of GenAI adoption.**

attempts. While Amazon Fraud Detector does not directly use GenAI, it leverages ML models and advanced data analysis techniques to detect fraud patterns. It learns from existing data to identify anomalies and potentially fraudulent activities. FIs can use Amazon Fraud Detector for use cases such as online payment fraud detection, identity fraud detection, money laundering detection, and monitoring account activities.<sup>6</sup>

When it comes to GenAI, perhaps the most important service offering is Amazon Bedrock, which is described in the next section.

<sup>3</sup> Amazon SageMaker. Web link: [aws.amazon.com/sagemaker/](https://aws.amazon.com/sagemaker/)

<sup>4</sup> Amazon Lex. Web link: [docs.aws.amazon.com/lex/](https://docs.aws.amazon.com/lex/)

<sup>5</sup> Amazon Comprehend. Web link: [docs.aws.amazon.com/comprehend/](https://docs.aws.amazon.com/comprehend/)

<sup>6</sup> Amazon Fraud Detector. Web link: [docs.aws.amazon.com/frauddetector/](https://docs.aws.amazon.com/frauddetector/)

# FI GenAI development using Amazon Bedrock

Amazon Bedrock is a fully managed service that allows you to build, deploy, and scale generative AI solutions quickly and cost-effectively.<sup>2,7</sup> It is designed to make it easier for developers and data scientists to create and iterate on GenAI models without worrying about the underlying infrastructure or the complex steps involved in training and serving these models. Here are some of the salient features of Amazon Bedrock:

- 1. Managed GenAI model training.** Bedrock provides a managed environment for training large generative AI models, such as language models, image generation models, and other types of generative models. It abstracts away the complexities of setting up and managing the infrastructure required for training these models.
- 2. Scalable and cost-effective.** Bedrock automatically scales the compute resources needed for model training, enabling larger models to be trained more efficiently. It also helps optimize costs by automatically scaling resources up or down based on workload.
- 3. Integration with other AWS services.** Bedrock seamlessly integrates with other AWS services, such as Amazon SageMaker (for machine learning), Amazon S3 (for data storage), and AWS Lambda (for serverless computing). This allows end-to-end GenAI pipelines to be built within the AWS ecosystem.
- 4. Secure and compliant.** Bedrock provides built-in security features, such as data encryption, secure networking, and access control, to help ensure data and model privacy and security. It also supports compliance with industry standards and regulations.
- 5. Model deployment and inference.** Once GenAI models are trained, Bedrock deploys them for inference (generating new outputs) with just a few clicks. It supports real-time inference and batch

inference, making it suitable for a wide range of use cases.

Banks and financial institutions can take advantage of Amazon Bedrock when it comes to deploying and scaling GenAI solutions in the following ways:

- 1. Natural language processing applications.** Bedrock can be used to train and deploy large language models for tasks such as text generation, summarization, sentiment analysis, and question-answering. All are relevant for customer service, compliance, and content generation in the financial sector.
- 2. Synthetic data generation.** GenAI models can be used to create synthetic data, such as financial transaction records, customer profiles, or scenario simulations. Each can be valuable for training other ML models, testing, and risk analysis.
- 3. Personalized content and recommendations.** GenAI models can be used to generate personalized financial reports, investment recommendations, or marketing content tailored to individual customers or client segments.
- 4. Risk modeling and forecasting.** Generative models can be trained on historical data to generate simulations and scenarios for risk modeling, stress testing, and forecasting financial metrics or market conditions.
- 5. Fraud detection and anomaly detection.** GenAI models can be used to identify anomalies or unusual patterns in financial data, which can be useful for detecting fraud, money laundering, or other suspicious activities.

By leveraging Amazon Bedrock, FIs can accelerate their GenAI initiatives, scale their models more efficiently, and integrate these models into their existing AWS-based infrastructure and workflows.

<sup>2</sup> Generative AI in Financial Services. Web link: [aws.amazon.com/financial-services/generative-ai/](https://aws.amazon.com/financial-services/generative-ai/)  
<sup>7</sup> Amazon Bedrock. Web link: [aws.amazon.com/bedrock/](https://aws.amazon.com/bedrock/)

## Off-the-shelf foundation models for FIs

Amazon Bedrock offers a broad choice of models from leading AI companies, including AI21 Labs, Anthropic, Cohere, Meta, and Mistral AI. It also offers in-house multimodal commercial models from Amazon such as Titan. The table below provides a summary of key foundational models available in

Amazon Bedrock and their key features with sample use cases.

The next section describes some of the important Amazon managed services features that can greatly enhance and customize foundations and models in FI use cases.

Model	Provider	Key Features	Use Cases
<b>Jamba 1.5</b>	<b>AI21 Labs</b>	<ul style="list-style-type: none"> <li>State Space Model (SSM) transformer model</li> <li>Offers scale, accuracy, and cost -efficiency</li> </ul>	<ul style="list-style-type: none"> <li>Text summarization</li> <li>Information extraction from lengthy documents such as company reports and market analysis</li> <li>Term sheet generation</li> </ul>
<b>Claude 3.x</b>	<b>Anthropic</b>	<ul style="list-style-type: none"> <li>200K token context window (above market standard)</li> <li>Outperforms GPT 4.0 across many benchmarks</li> </ul>	<ul style="list-style-type: none"> <li>Advanced reasoning</li> <li>Vision analysis</li> <li>Code generation</li> <li>Multilingual processing</li> <li>High-speed operations</li> <li>Claims decisioning (insurance)</li> </ul>
<b>Command</b>	<b>Cohere</b>	<ul style="list-style-type: none"> <li>128K context window</li> <li>Robust data privacy and security measures</li> <li>Multilingual performance</li> </ul>	<ul style="list-style-type: none"> <li>Text summarization</li> <li>Capturing key points in emails, financial reports, or customer call recordings</li> <li>Querying knowledge databases</li> <li>AI assistant to analyze complex data</li> </ul>
<b>Llama 3.x</b>	<b>Meta</b>	<ul style="list-style-type: none"> <li>Open-source foundational model with varying sizes (small, medium, large)</li> <li>128K context window</li> <li>Easily customizable</li> </ul>	<ul style="list-style-type: none"> <li>Image-text retrieval</li> <li>Visual grounding</li> <li>Question answering</li> <li>Text summarization and classification</li> <li>Sentiment analysis and nuance reasoning</li> <li>Language modeling</li> <li>Dialog systems</li> <li>Code generation</li> </ul>
<b>Large</b>	<b>Mistral AI</b>	<ul style="list-style-type: none"> <li>Transparent and customizable, which is appealing to enterprises with compliance and regulatory requirements</li> <li>Fast inference speed, low cost</li> </ul>	<ul style="list-style-type: none"> <li>Text summarization</li> <li>Understanding structure and organizing information</li> <li>Question answering</li> <li>Code completion</li> </ul>
<b>Titan</b>	<b>Amazon</b>	<ul style="list-style-type: none"> <li>Responsible AI: built-in support for detecting and removing harmful content from data</li> <li>Customization features</li> <li>Exclusive to Bedrock</li> </ul>	<ul style="list-style-type: none"> <li>Text generation</li> <li>Text summarization</li> <li>Semantic search with retrieval augmented generation (RAG)</li> <li>Responsible use of AI</li> </ul>

# GenAI (Bedrock) Model: Model import, domain-specific customization, evaluation, and fine-tuning

- *Custom model import.* This Bedrock feature lets financial institutions and other enterprises import custom external models and open-source models, such as Llama and Mistral. This feature also lets users access these models through the same APIs as other inbuilt Bedrock models without the need for self-managed infrastructure.
- *Developer experience.* Bedrock provides a wide range of foundational models and a studio playground where developers can switch between multiple foundational models and experiment with

these models for different use cases. Developers can also evaluate the best model for using visual metrics, such as accuracy, helpfulness, precision, and bias.

- *Fine-tuning.* FIs can use Bedrock to customize foundational models with techniques such as instruction fine-tuning and parameter-efficient fine-tuning. All this can be done with a few clicks and no-code or low-code interfaces in a secure environment. Customer-managed encryption keys help prevent leakage of sensitive data.

# GenAI (Bedrock) Prompt Flow: Prompt engineering, human-in-the-loop and vector databases (RAG)

- *Prompt engineering and custom workflows.* Financial institutions might create custom workflows for tasks like document processing, fraud detection, and customer service, each of which might involve multiple models and services. Amazon Bedrock provides visual interfaces to create custom workflows linked with specialized prompts and business services. This removes the need to write custom code and offers an easy visualization of the entire workflow. Available features can also help in sharing or collaborating on custom prompts that might facilitate developers in faster time to market.
- Amazon recently released Bedrock Prompt Flows a managed service that provides low-code/no-code solution for creating, testing, and development complex GenAI workflows using an intuitive visual builder. Using Prompt Flows Banks and FSIs can seamlessly integrate foundation LLMs, prompts, vector databases, and many other AWS services into their GenAI application.

- *Human in the loop.* Another important aspect is to have human-in-the-loop processes to ensure accuracy and prevent hallucination or foundational models. Bedrock offers multiple ways of doing this, such as model, output review, feedback, integration into workflows, interactive, refinement, and confidence thresholds. (Bedrock documentation explains each of these techniques.)
- *Retrieval augmented generation (RAG).* FIs often need specialized use cases that are grounded on their proprietary documents, which provide the source of truth to the large language models (LLMs). To that end, Bedrock provides retrieval of mentor generation, or RAG. Using a managed service called Knowledge Base, RAG can be backed by a variety of secure private vector databases. Raw data can be ingested in the form of archives in an S3 bucket, SharePoint pages, Salesforce databases, and Confluence pages. As an alternative, FIs can choose to connect an existing enterprise vector database, such as Redis, Aurora, MongoDB, and Pinecone.

# Trends in GenAI implementation and usage in FIs

The above features help FIs reach the next level of maturity while deploying innovative GenAI solutions at scale in a secure and trusted environment.

Industry research shows that most FIs are adopting GenAI for a multitude of business factors, the most notably of which include:

1. Improving productivity/efficiency of business processes by augmenting human workflows with GenAI tools
2. Gaining a competitive advantage and avoid the fear of missing out on GenAI offerings
3. Cutting costs and reducing IT budgets and leveraging AI/ML-based workflows

Recent data shows that 71% of banks are increasing their IT budgets to incorporate GenAI and that 63% are highly ambitious regarding their GenAI strategy.<sup>8,9</sup> The same survey also finds that most respondents think GenAI will be integrated to create a collaborative AI-human workflow in one of the following deployment scenarios:

- *Autonomous agents and agentic workflows.* Perhaps the most promising recent development in GenAI is the rise of vertical AI agents and agentic workflows. These agents use NLP (such as the English language) to interface with human users to trigger the automation of manual tasks such as document processing, text summarization, code generation, and tool usage. Not only that, but the LLMs behind these agents can also help with advanced concepts like reasoning, decomposing complex queries into simpler blocks, and using chain of thought for problem solving. Amazon Bedrock facilitates

the creation of such agents using foundational models that can be easily configured for a bank or other financial company using custom knowledge bases (discussed later in this paper). Additionally, Bedrock agents can automate tasks using serverless lambda functions and external API integration for business functions. Some notable agentic workflow use cases are ticket routing and management in DevOps, intelligent customer-facing chatbots, sentiment analysis, and complex data processing.

- *API integration.* An important aspect of GenAI adoption is the ability to connect AI tools with existing software and databases. Bedrock has two flavors of this capability. Bedrock agents (as discussed in the previous paragraph) feature such API integration with custom code/tools, OpenAPI schema, and AWS API Gateway using an Action Group. Also, a custom GenAI workflow itself can be exposed as an external API using an API Gateway for external systems to call to. Using these integrations, agents can act as intelligent intermediaries between users and back-end systems, automating complex workflows by providing natural language interfaces to existing APIs.
- *Hybrid integrations.* This type of implementation combines GenAI with existing systems. This approach might not involve deep integrations as API integrations. Instead, it is more of a collaborative framework, where a business process switches between existing workflows and expedites certain mundane tasks with GenAI (for example, using commercially available services such as ChatGPT and Claude).

<sup>8</sup> Sibos 2024. Web link: [sibos.com/](https://sibos.com/)

<sup>9</sup> "Human X Machine." Money 20/20. Web link: [us.money2020.com](https://us.money2020.com)

# FI domains and categorization of GenAI uses cases

FI Domain	Areas Where GenAI Can Bring Impact
Payments	<p>Front-end improvements: More streamlined online checkout processes, improved/automated customer support and engagement, more personalized transaction experiences,</p> <p>Back-office improvements: Optimized working capital decisions through better value-added insights, improved ability to accurately forecast cash, more efficient fraud detection and prevention, more real-time analytics and reporting, enhanced security measures,</p> <p><b>Front-end Enhancements:</b></p> <ul style="list-style-type: none"><li>• Streamlined online checkout experiences through AI-driven process optimization.</li><li>• Enhanced, automated customer support and engagement with personalized recommendations and AI chatbots.</li><li>• Improved transaction experiences using real-time, AI-generated insights for customized user interactions.</li></ul> <p><b>Back-office Improvements:</b></p> <ul style="list-style-type: none"><li>• Optimized working capital management through predictive analytics, enabling better cash flow forecasting and liquidity planning.</li><li>• Advanced fraud detection and prevention powered by AI, reducing false positives and increasing accuracy in real-time.</li><li>• Enhanced security measures and compliance reporting using AI-driven monitoring and automated anomaly detection.</li></ul> <p><b>Challenges and Concerns:</b></p> <ul style="list-style-type: none"><li>• Compliance with evolving regulatory frameworks for AI-enabled payment processes.</li><li>• Integration complexities with existing legacy payment systems and new AI solutions.</li><li>• Privacy and security issues arising from increased data use in AI models.</li></ul>

# FI's domains and categorization of GenAI use cases

FI Domain	Areas Where GenAI Can Bring Impact
<b>Wealth Management</b>	<p><b>Client Experience Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Accelerated, AI-enhanced financial advisory for real-time, accurate, and personalized recommendations.</li> <li>• Automated generation of documents such as investment proposals and portfolio rebalancing suggestions.</li> <li>• Enhanced onboarding processes through streamlined data entry, verification, and client engagement automation.</li> </ul> <p><b>Operational Improvements:</b></p> <ul style="list-style-type: none"> <li>• Efficient handling of investment documentation and reports using generative AI, reducing time and effort.</li> <li>• Improved client insights with predictive analytics for better portfolio management and decision-making.</li> <li>• Enhanced security in client interactions through intelligent AI-driven monitoring and risk assessments.</li> </ul> <p><b>Challenges and Concerns:</b></p> <ul style="list-style-type: none"> <li>• Regulatory compliance issues related to AI-generated financial advice.</li> <li>• Privacy and data protection concerns due to increased use of client data in generative models.</li> <li>• Integration complexities with existing legacy systems and processes.</li> </ul>
<b>Fraud and FinCrime</b>	<p><b>Threat Landscape and Attack Evolution:</b></p> <ul style="list-style-type: none"> <li>• More Sophisticated Attacks: Increased frequency and diversity in attack vectors, including a notable rise in phishing attempts; 46% of respondents report a surge in AI-driven fraud.</li> <li>• Enhanced Impersonation: Use of advanced AI techniques like voice cloning to imitate trusted individuals, increasing the risk of identity fraud.</li> <li>• Exploitation of AI Vulnerabilities: Leveraging flaws in AI models, especially in chatbots, to craft sophisticated attacks that bypass standard detection mechanisms.</li> </ul> <p><b>Defensive Enhancements:</b></p> <ul style="list-style-type: none"> <li>• Enhanced fraud detection capabilities using generative models to analyze patterns and predict fraudulent activities with higher accuracy.</li> <li>• Advanced social engineering defenses through AI-driven behavioral analysis to identify and block suspicious activities.</li> <li>• Improved detection evasion tactics using AI to simulate genuine interactions, making fraudulent attempts harder to distinguish.</li> </ul>

# FI's domains and categorization of GenAI use cases

FI Domain	Areas Where GenAI Can Bring Impact
Fraud and FinCrime	<p><b>Challenges and Concerns:</b></p> <ul style="list-style-type: none"><li>Escalating compliance demands due to evolving fraud tactics and new regulatory requirements.</li><li>Increased risks related to privacy breaches and misuse of AI for malicious purposes.</li><li>Balancing the effectiveness of AI in fraud prevention with potential exploitation by cybercriminals.</li></ul>



# Challenges and barriers to GenAI adoption by FIs

As with any disruptive technology, the widespread adoption of GenAI is not without its challenges. From financial constraints to regulatory hurdles and the unrelenting pressure of staying competitive, FIs must navigate a complex landscape to harness the full potential of these cutting-edge technologies. The following challenges highlight the obstacles that could impede the seamless integration of GenAI into existing operations and processes:

## 1. Financial hurdles.

Tight budgets can make the upfront investment in GenAI technologies seem daunting. Ongoing maintenance and operational costs add to the financial burden, potentially hindering widespread adoption.

## 2. The AI arms race.

As AI capabilities rapidly evolve, organizations face immense pressure to keep pace with their competitors by integrating the latest advancements. Failure to do so could create a strategic disadvantage, which often fuels a relentless pursuit of AI supremacy.

## 3. Navigating the regulatory labyrinth.

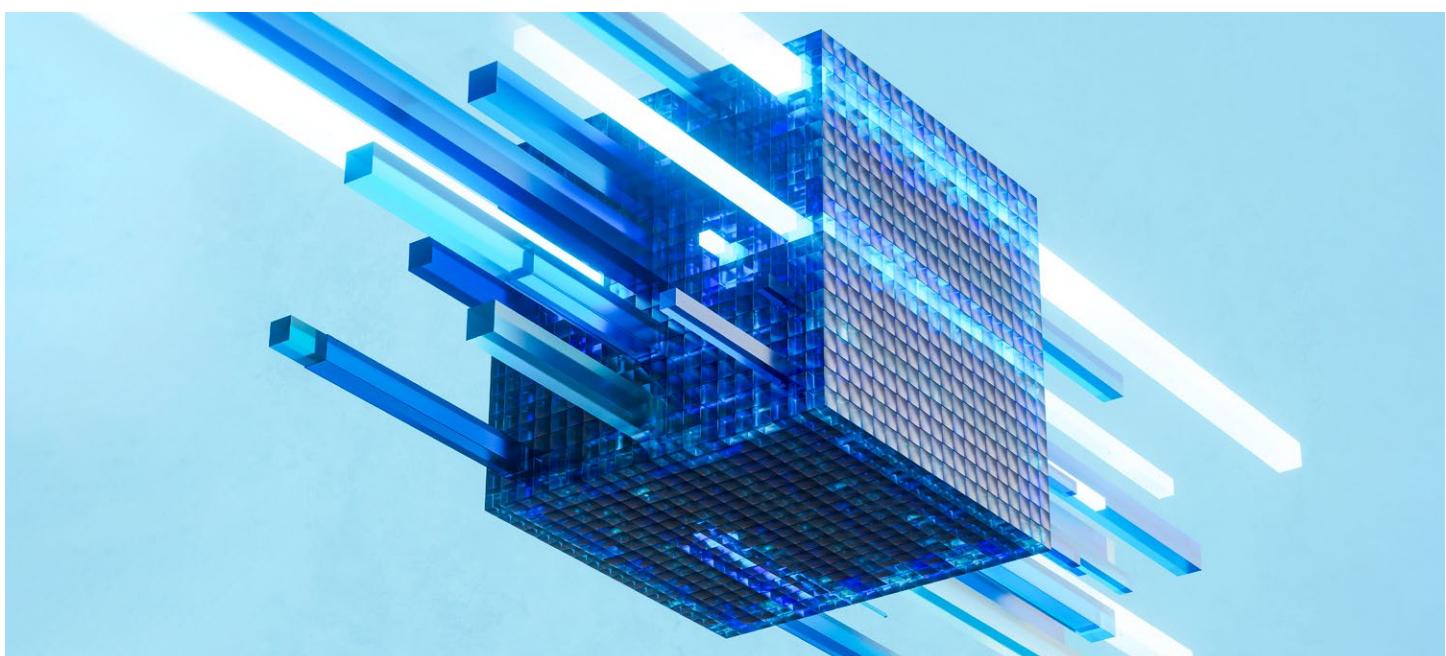
Data sovereignty, privacy regulations, and compliance requirements are formidable obstacles. Organizations must meticulously navigate this complex landscape, ensuring adherence to ever-evolving rules and guidelines while safeguarding sensitive data against misuse or breaches.

## 4. Overcoming internal resistance.

Introducing AI into an organization can cause cultural resistance, skepticism, and ethical concerns. Addressing issues such as AI bias, transparency, and accountability is crucial for building trust and facilitating a smooth transition.

## 5. Operational concerns.

Seamlessly integrating and building AI solutions into existing technology stacks presents operational challenges. Organizations must ensure compatibility, scalability, and resilience while managing the complexities of data pipelines, model deployment, and ongoing maintenance.



# GenAI (Bedrock) safety features and guard rails

Data privacy and security: Various mechanisms must be adopted to secure data at rest, while in transit, and at the time during execution. Bedrock has an inbuilt capability where all training and fine-tuning happens on a private copy of a model. This means that customer data is not shared with model providers, nor is it used to improve any base model. Additional mechanisms, such as AWS Private Link, could be used to establish private connectivity between the customer's virtual private cloud and Amazon Bedrock without exposing the traffic to the internet. For applicable industries, compliance standards, such as PCI, ISO, SOC, and GDPR, should also be in scope.

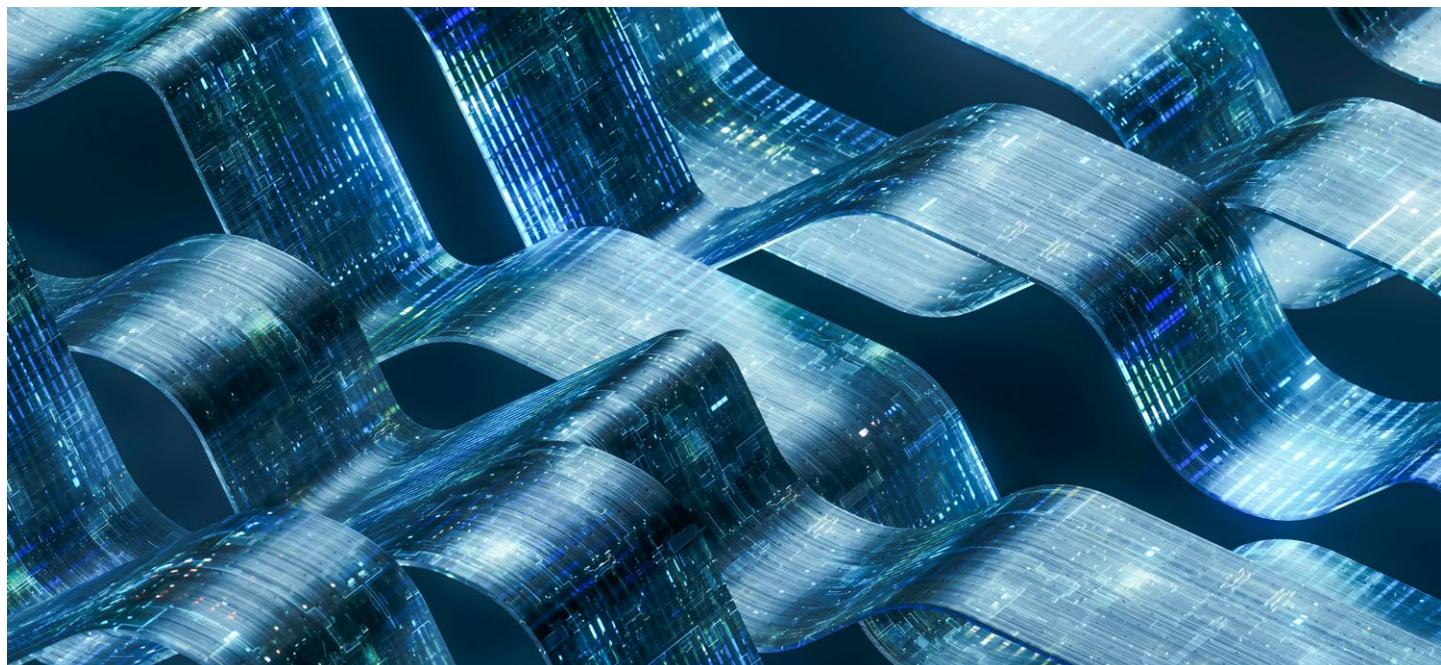
Besides the above, good security hygiene principles involve using encrypted communication with SSL/TLS protocols, enabling multifactor authentication (MFA) for an added layer of protection, and using managed security services such as Amazon Macie and Amazon GuardDuty for security features like anomaly detection.

AI model governance: FIs should use advanced tools and components from Bedrock for modeling, versioning, tracking, and governance to ensure that the adopted

models meet regulatory requirements.

Ethical AI and bias mitigation: Responsible and ethical AI is paramount for enterprise-scale GenAI deployments. To that end, FIs should incorporate multiple features when deploying their solutions. First, in-house or custom models should be fine-tuned and the parameters trained in such a manner that filters out all harmful and malicious content. Second, Bedrock foundational models should take advantage of the guardrails capability, where user inputs are evaluated and model responses adhere to specific policies, as well as provide an additional layer of safeguards regardless of the underlying model.

Continuous monitoring, compliance and auditability: Extensive logging and monitoring should be adopted for improving and implementing governance and auditor capabilities. Some of the mechanisms offered by Amazon are cloud, watch log, and metrics dashboards; a cloud trail to monitor API activity; and archiving, GenAI, metadata, requests, and responses in S3 buckets. Bedrock also offers a feature called abuse detection that auto-identifies some offensive content in the prompts and tokens.



# Current fintech companies and partners hosted on the AWS ecosystem

The below table highlights some illustrative examples of GenAI deployment at scale in large-scale banks and fintechs<sup>10</sup>

Fintech/Bank/ FI	Services/Components/ Models	Use Cases
<b>Nomura</b>	AWS Bedrock, with Llama models	Firm-wide usage, including text summarization and code generation
<b>nCino</b>	AWS Bedrock with Anthropic Claude	Internal knowledge base, document extraction summarization Call center automation with self-service bot
<b>SBI Insurance</b>	Amazon Kendra, Bedrock with Claude	Internal knowledge retrieval engine for insurance documents and policies
<b>Crypto.com</b>	Amazon Bedrock with Claude (sentiment analysis) and SageMaker (fine-tuning custom models)	AI-powered sentiment analysis
<b>Jefferies</b>	Amazon Bedrock, SageMaker and Amazon Q	Enables Salesforce traders and bankers to deliver better insights and advice to clients
<b>MasterCard</b>	Various AWS AI/ML services	AI-enabled fraud detection
<b>NatWest Bank</b>	Amazon SageMaker with various in-house ML models	Message personalization, reducing fraud and enhancing overall customer wellbeing
<b>Nasdaq</b>	Amazon Bedrock and Lambda	Nasdaq Sustainable Lens: Document analysis from vast databases
<b>Starling Bank</b>	AWS Bedrock	Customer service and product recommendations

<sup>10</sup> AWS Customer Success Stories. Web link: [aws.amazon.com/solutions/case-studies](https://aws.amazon.com/solutions/case-studies)

# Summary: The future of GenAI in finance with AWS

By leveraging AWS Bedrock and implementing these safety measures, FIs can confidently adopt and scale GenAI applications while maintaining the necessary security, compliance, and ethical standards the industry requires.

Implementing GenAI in banks and financial services institutions is no longer just about experimentation; it is about tangible results. With AWS's highly mature AI and GenAI offerings, FIs can move beyond proofs of concept to fully operationalize AI at scale, driving real business outcomes. AWS has consistently demonstrated its

commitment to the financial services industry by advancing AI governance, enhancing security, and enabling seamless integration across core banking operations. FIs that adopt AWS's GenAI solutions can not only optimize current processes but also anticipate market shifts, deepen customer relationships, and explore new revenue streams. As the financial services sector continues to evolve, organizations that partner with AWS for GenAI adoption will be at the forefront — innovating, improving agility, and securing long-term success in an AI-driven future.



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AI21 Labs Jamba. Web link: [ai21.com/jamba](#)

Claude vs. ChatGPT. Web link: [zapier.com/blog/claudie-vs-chatgpt/](#)

Llama 3.2: Revolutionizing edge AI and vision with open, customizable models.

Weblink: [ai.meta.com/blog/llama-3-2-connect-2024-vision-edge-mobile-devices/](#)