The Future of Banking with Trusted Generative AI

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The AI Revolution

Of all the technological innovations since the birth of the Internet, Artificial Intelligence (AI) is in a class by itself.

According to PwC's Global Artificial Intelligence study, AI could contribute up to $15.7 trillion to the global economy by 2030, as well as up to a 26% boost in GDP for local economies. Or as Chris Hyzy, Chief Investment Officer for Merrill and Bank of America Private Bank, puts it, "AI is going to transform the global economy as surely as electricity and the steam engine did in their own times."

"We see a lot of new technology, and we get very, very excited about new technology," said Greg Jacobi, GM and VP of Banking and Lending at Salesforce. "But the possibilities with generative AI are on par with the rise of the Internet."

Key AI Terms and Definitions

Large Language Model (LLM): A type of AI algorithm that uses large data sets to understand, summarize, generate, and predict new content. LLMs can answer customer service questions, create personalized outreach, assist client research, and even generate code.

Generative Pre-Trained Transformer (GPT): A neural network family that is trained to generate content. GPT models are pretrained on a large amount of text data, which lets them generate clear and relevant text based on user prompts or queries.

Hallucination: When a generative AI model produces new content that doesn't correspond to reality or its training data.

Explainability/Mechanistic Interpretability: Aspect of AI that ensures the system is doing the right thing (for example, following predetermined rules, such as adhering to established credit criteria).

Human in the Loop: Ensuring a human has oversight of a generative AI output and can give direct feedback to the model, in both the training and testing phases, and during active use of the system.

Ethical AI: AI that adheres to well-defined ethical guidelines regarding fundamental values, such as individual rights, privacy, nondiscrimination, and non-manipulation.

AI and Banking Today

Although the concept of AI has been around since the 1950s, banks didn't begin exploring AI for basic tasks like data management and customer service until the 1980s and 1990s. The explosion of big data and the refinement of machine learning led to more sophisticated AI applications.

With generative AI, we are now seeing AI move from being an operational to a core component of banking strategy.

> **"In our recent annual global survey of around 2,750 banks, 93% of the respondents said they are looking to adopt AI in some form. Over half of them have already implemented AI to some extent."**
>
> — **Philip Benton,** Principal Analyst, Financial Services at Omdia

Predictive vs. Generative AI

AI is the broad concept of having machines think and act like humans. But there are different types of AI, including predictive AI and generative AI, both of which help your teams work smarter and faster by automating routine tasks.

Predictive AI is designed to forecast outcomes based on historical data, and its primary goal is to predict future events or behaviors by analyzing patterns and trends.

Generative AI involves training a model to generate new data that is similar to the training data it was given. The output is typically some form of content – from text to images, to video, even computer code.

The Generative AI Difference

While generative AI also relies on historical data, its primary goal is to learn the underlying patterns that are not restricted to replicating past examples. With generative AI, you can potentially create new financial strategies, create diverse customer engagement materials, or even assist in product design.

> **"Generative AI levels the playing field for large and small institutions. Capacity is no longer the limiting factor for the quality of your products. Consumers will ultimately reap the benefits from this kind of disruption."**
>
> **— Greg Jacobi,** GM and VP of Banking and Lending at Salesforce

AI Benefits and Use Cases for Banking

With generative AI, both bank employees and customers are empowered with a powerful partner that drives better experiences all from natural language. Customers can receive hyperpersonalized offers based on data they shared about their financial needs and goals, or resolve complex service issues through self-service. Bankers might leverage a virtual assistant to compose personalized emails or guide clients to customized products in real time, just to name a few benefits.

Bank of America was one of the first banks to use AI to personalize the customer experience with its “Erica” virtual assistant. Hari Gopalkrishnan, Bank of America’s CIO of Retail, Preferred, Small Business and Wealth Technology, compared this experience of having an AI reach out proactively to tell you what your financial state is as “almost like an adviser in your pocket.”

Generative AI Benefits Across Lines of Business and Use Cases

Marketing: AI can create more personalized content, tailor messaging and offers, and automatically create web pages and campaigns, thereby increasing campaign effectiveness and ROI.

An example is **content creation.** Generative AI can produce subject lines and email body copy that resemble human writing. By combining this with customer behavior predictions forecasted by predictive AI, marketers can send timely and relevant communications that match customer needs to increase engagement.

Service: AI can auto-generate service responses, write case summaries, and create knowledge articles to expand knowledge across the bank.

An example is **automated customer service.** Generative AI can quickly craft the exact response customers need by combining knowledge culled from multiple articles and sources.

Using customer resolution data to analyze sentiment and patterns, service teams can accelerate chatbot training and expand automated, self-service capabilities.

Sales: AI can auto-generate client outreach, summarize interactions and next steps, and augment client and account research.

An example is **customer insights.** Generative AI can act like a personal data analyst assistant to uncover patterns and relationships in CRM data. Bankers are pointed toward high-value deals and deals likely to close. Even better, it adapts to changing deals and customer information in real time, so teams can modify their approach.

Compliance and IT: AI can auto-generate document summaries, produce code from natural language prompts, provide chat-based assistance and auto-completion for coding.

An example is **fraud detection and prevention.** Generative AI can be trained to simulate fraudulent activities and behavior. This can help teams enhance detection algorithms and protect against new patterns of fraud.

Generative AI Challenges

Banks should establish strict governance as well as a dedicated compliance framework for generative AI, ensuring that these systems are not just effective but also legally sound. Some challenges – and how to address them – include:

- **Risk management:** Banks should develop generative AI models in tandem with risk experts to tailor outputs to regulatory standards.
- **Data privacy and security:** Banks must enforce strict data governance policies, use advanced encryption methods, safeguard against using public LLMs, and continuously update their security protocols to ensure that employees don't share sensitive customer data.
- **Bias and fairness:** Regular auditing of generative AI models is essential to check for bias, risk of hallucinations, or language toxicity. Training these systems with diverse datasets, and establishing guidelines to ensure decisions are fair and equitable, are crucial steps.
- **Change management:** Integrating generative AI into existing banking infrastructures requires a strategic change management approach, encompassing clear communication, stakeholder engagement, and a phased implementation of generative AI models.
- **AI expertise:** Banks should invest in continuous upskilling and training programs to build AI expertise across their workforce, while also tapping into new talent pools through collaborations with academic institutions and tech companies

Building a Trusted, Responsible, Generative AI Strategy

Responsible AI is AI with "good intentions" – and designing, developing, and deploying AI with good intentions is the best path forward for earning trust. Below are five key guidelines for the development of trusted generative AI:

1. Accuracy: Deliver verifiable results that balance accuracy, precision, and recall in the models by training models on your bank's trusted, customer data. Communicate when there is uncertainty about the veracity of the AI's response and enable users to validate these responses.

2. Safety: Make every effort to mitigate bias, toxicity, and harmful output by conducting bias, explainability, and robustness assessments. Protect the privacy of any personally identifying information present in the data used for training and create guardrails to prevent additional harm.

3. Honesty: Respect data provenance and ensure that you have consent to use the data. Banks must also be transparent that AI has created content when it is autonomously delivered.

4. Empowerment: There are some cases where it is best to fully automate processes but there are others where AI should play a supporting role to the human – or where human judgment is required. Identify the appropriate balance to "supercharge" human capabilities and involvement.

5. Sustainability: Develop right-sized models where possible to reduce your carbon footprint. When it comes to AI models, larger doesn't always mean better: In some instances, smaller, better-trained models outperform larger, more sparsely trained models.

Guidelines for building trust

- Be responsible
- Be accountable
- Be transparent
- Be empowering
- Be inclusive

Getting Started with Implementing Your Strategy

Set clear objectives: Define what you want to achieve, and ensure alignment with your business goals and ethical standards. Be sure to develop metrics and thresholds for success, such as error rate and latency during pilot projects. Establish regular monitoring of AI systems to measure performance against objectives as well, and be prepared to iterate on your strategy based on feedback and measured outcomes.

Engage stakeholders: Involve them from the start, and bring in people from various departments, whether directly or indirectly involved. You want the most holistic view of AI's potential impact as possible.

Assess technology needs and infrastructure: Identify the types of generative AI (like natural language processing, image generation, etc.) that are most relevant to your objectives. Determine if the current IT infrastructure can support generative AI's computational demands or if upgrades are necessary.

Assess data readiness: Evaluate the quality and quantity of your data and improve data collection and management processes if necessary. Ensure that data governance and ethical standards are in place to handle data responsibly.

Data Security and Human Oversight

Despite the best safeguards against fraud or data leakage, the reality is that bad actors exist. Banks need to be extra cautious and diligent to ensure quality and limit risk.

This includes:

- Conducting regular security audits and updates, and keeping software current to best protect against new threats.
- Reviewing relevant regulations regarding data privacy, intellectual property, and AI ethics.
- Developing or updating policies that reflect ethical AI usage, especially in the context of generative models that can create new content.

Also imperative is striking the right balance between automated processes and human oversight. Start with automating smaller, low-risk tasks, then gradually scale up as the system proves its reliability and efficiency.

> **"Whenever new technologies emerge, I think firstly about the consumer or end user. The majority of (AI) technology uses thus far have been beneficial to the back office and middle office, but very little has occurred in terms of AI use cases for front end customers. If you focus too much on the back end, then you're going to lose customers and waste all that time making things more efficient. You need to innovate on the front end as well."**
>
> — **Philip Benton,** Principal Analyst, Financial Services, Omdia

Vendor selection

- **Evaluate ethical standards:** Choose vendors who share your commitment to ethical AI practices.
- **Assess technical expertise:** Ensure the vendor has the necessary technical expertise and experience in implementing AI responsibly.
- **Consider long-term support:** Look for vendors who offer robust support and maintenance post-implementation.

Implementation

- **Take an iterative approach:** Allow employees to experiment with generative AI on internal systems, so they can grow more comfortable and build their skill set.
- **Continuously monitor and evaluate:** Regularly monitor generative AI systems, and their outputs, to ensure they operate as intended and adhere to ethical standards.
- **Conduct employee training:** Educate employees on how to interact with AI systems and understand their outputs.

Why Now for Generative AI

Generative AI will fundamentally change the banking industry – and society – in a positive way. New roles will be created, such as generative AI security or generative AI customer service. Generative AI can make it easier to help customers with long-term financial planning, decide when to pay off their mortgage, or how to grow their retirement savings.

The immediate imperative is to learn and keep up with the pace with which generative AI technology is moving. Find the places in your organization where generative AI will produce the most benefit.

For banks, acting now will offer the opportunity to start small, iterate and learn, and quickly benefit from the efficiencies generative AI drives. Start by identifying pain points in your customer and employee journey to understand where generative AI can produce the most benefit to your organization.

By improving personalization and customer experiences, banks can future-proof and grow business over the long-term.

"Let your mind wander and say, how do we put generative AI to work in a meaningful way for the business? If you spend some time understanding those concepts and how generative AI can improve experiences for your customers, then you can't help but get super excited really fast."

— Greg Jacobi, GM and VP of Banking and Lending at Salesforce

About Salesforce for Financial Services

Salesforce is the world's #1 AI customer relationship management platform. Our purpose-built banking solutions – spanning retail, commercial, mortgage and lending, and corporate investment banking – are designed to help organizations grow and maintain trusted relationships, personalize engagement, and scale service, while reducing operational costs.

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