




# Harnessing the Power of Generative AI in Financial Services Compliance

## THE UNREALIZED POTENTIAL OF GENERATIVE AI IN FINANCIAL SERVICES

Despite Large Language Models' (LLMs) astonishing ability to interpret information and create substantive responses to inquiries, their transformative potential in the financial services market remains largely aspirational. Financial institutions and fintech companies are enthusiastic about the technology, but feel constrained by explicit AI-related regulatory rules and internal perceptions of risk.



**K**ey U.S. regulatory bodies—such as the Federal Reserve (Fed), the Securities and Exchange Commission (SEC), the Office of the Comptroller of the Currency (OCC), and the Federal Deposit Insurance Corporation (FDIC)—have developed rigorous standards to control AI deployment within financial services. These requirements, while essential for reducing risk and staying in compliance, create a high barrier for institutions to realize AI-driven benefits. For financial institutions, successfully integrating generative AI means adhering to strict guidelines, including:

1. **Explainability and Transparency** – Ensuring AI systems are interpretable and transparent.
2. **Robust Risk Management** – Comprehensive frameworks to manage risks through assessment, governance structures, accountability, and responsibility.
3. **Model Risk Management** – Requirements for model validation, continuous monitoring, and thorough documentation.
4. **Data Quality and Privacy** – Enforced standards for data governance, accuracy, and adherence to privacy requirements.
5. **Regulatory Compliance** – Adherence to regulations including consumer protection (e.g., fair lending, UDAP, TILA, FCRA, and privacy laws) and financial crime prevention (anti-money laundering).
6. **Third-Party Risk Management** – Compliance with vendor and third-party risk management protocols.
7. **Cybersecurity Standards** – Adherence to cybersecurity and operational resilience requirements.

Unsurprisingly, as a result of these complex regulatory compliance obligations, financial institutions are fundamentally conservative when it comes to compliance

activities and the adoption of new technologies. And with a disruptive technology such as large language models, these requirements have led some financial institutions to err on side of complete caution and prohibit AI usage altogether, viewing the regulatory landscape as too complicated and risky to navigate. Yet, this cautious stance, while seemingly prudent in the short term, creates the existential risk of falling behind and allowing competitors to gain the paradigm changing advantages that AI can deliver. Organizations that successfully integrate generative AI within these regulatory guard rails gain a significant competitive edge over those that simply avoid the technology.

### USING AI PROPERLY CAN CREATE TREMENDOUS ADVANTAGE OVER COMPETITION

JPMorgan Chase provides one example of a bank finding a way to create a market advantage with AI. While retaining human oversight and accountability, Chase has implemented artificial intelligence and machine learning through their proprietary program COiN (Contract Intelligence). Launched in 2017, COiN uses machine learning to analyze and interpret complex legal documents, significantly reducing the time and labor required to review contracts. For instance, COiN can analyze thousands of contracts in seconds, a task that would have taken human lawyers approximately 360,000 hours annually by the bank's estimate. This has allowed JPMorgan to increase efficiency, reduce operational costs, and reallocate human resources to higher-value tasks, enhancing their profitability and service quality in areas like commercial lending. Reference: <https://d3.harvard.edu/platform-rectom/submission/jp-morgan-coin-a-banks-side-project-spells-disruption-for-the-legal-industry/>

JPMorgan's progressive embrace of technology balances the impact and transformative nature of AI but with guardrails. End customers are not directly exposed to and do not interact with the AI system. It creates huge internal efficiencies, retains human-based review of final results, and does not compromise security or privacy.

### YOU DON'T HAVE TO BE JPMORGAN TO USE AI: IMPLEMENTING LARGE LANGUAGE MODELS IN COMPLIANCE

By focusing first on using AI tools in low-risk, non-decision making, non-customer interactions, every financial services institution can start to benefit from AI. Regulatory compliance functions are an area in which banks, finance companies, and capital market firms can achieve massive benefits from using generative AI while complying with the latest guidance from regulators on AI usage and their own risk appetite.

### WHY COMPLIANCE RISK MANAGEMENT IS THE IDEAL USE CASE FOR GENERATIVE AI

Compliance is a strategic function well-suited for generative AI adoption due to its limited direct consumer interaction, lack of sensitive data processing, and language-heavy nature. Generative AI can support compliance functions by:

1. **Reducing Exposure to Customer Data** – Compliance AI does not engage in customer decision-making, pricing, or external communications.
2. **Minimizing Zero System Integration** – Zero integration requirements lower operational risks and ensure compatibility with existing systems.
3. **Strengthening Consumer Protections** – By streamlining compliance processes, AI helps reduce potential consumer risk through improved regulatory adherence.
4. **Addressing Staffing Shortages** – Generative AI can assist with workloads, offering a valuable resource in departments often stretched thin.
5. **Enhancing Response Speed** – Compliance teams gain efficiency, delivering faster, verified responses to compliance-related inquiries.
6. **Language-Based Task Optimization** – As language-based tools, large language models (LLMs) excel in processing regulatory text, drafting responses, and improving document management.

### INTRODUCING NUCOMPLY: THE EXPERT COMPLIANCE ASSISTANT

NuComply meets all of the criteria banks need to stay within the guardrails while achieving significant organizational impact. NuComply provides explainable and transparent responses to compliance questions, policy and marketing material reviews, regulatory change impact assessments, and other inquiries while always citing the relevant regulatory references. Having the citation within each response ensures a “trust but verify” approach aligning with regulatory requirements and allowing compliance teams to validate responses quickly and confidently.

### USING THE TRANSFORMATIONAL POWER OF GENERATIVE AI, NUCOMPLY INSTANTLY PROVIDES:

- **Trusted Answers:** Get immediate answers to regulatory and internal policy questions, saving time and reducing compliance risk.
- **Inter-jurisdiction Analysis:** Compare regulatory obligation differences for each jurisdiction in which you operate.
- **Automated Policy Assessments:** Effortlessly assess policies against both federal and state regulations to ensure compliance.
- **Marketing Communication Review:** Ensure all consumer-facing marketing materials comply with regulatory standards.
- **Individualized Regulatory Change Assessments:** Receive personalized assessments of regulatory changes that affect each specific institution.
- **Policy and Procedure Generation:** Auto-generate policies, procedures, risk controls, and other essential documents tailored to each institution's needs.
- **100% Document Testing:** Conduct comprehensive testing (not just sampling) on all new and already-issued loan documents and other products to ensure they meet all regulatory requirements.

Large language models, when thoughtfully deployed in the financial services industry, offer a future where compliance is not just a regulatory requirement but a strategic advantage. With tools like Nucomply, financial institutions can safely unlock the potential of AI, bridging the gap between vision and reality in a compliant, risk-smart way.

# NUARCA LABS –FOUNDED AND OPERATED BY BANKING REGULATORY EXPERTS

## RAFFI FESTEKGIAN MANAGING PARTNER



Raffi Festekjian leads strategic growth at NuArca LLC and Empyrean Solutions. A fintech pioneer, he co-founded PCI Corporation, a compliance solutions leader, later acquired by Wolters Kluwer, where he served as President and CEO of its Finance, Risk & Compliance group. Raffi holds an MBA from Northwestern University's Kellogg School and resides near Boston, MA.

## TODD COOPER CEO & CO-FOUNDER



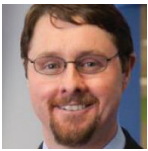
Todd Cooper has over 20 years of experience in fintech, focusing on developing platforms that tackle regulatory and risk challenges. As NuArca's CEO, he drives innovation for clients of all sizes. He previously held leadership roles at Wolters Kluwer and PCI Corporation. Todd earned a Master's from Emerson College and is based in Greater Boston.

## JAMIR AZHER CTO & CO-FOUNDER



Jamil Azher guides NuArca's tech strategy with 25+ years of experience advising Fortune 100 companies. He has authored books on application lifecycle management and held key roles at Wolters Kluwer and Microsoft. Jamil earned a Master's in IT from Harvard and a Bachelor's from Caltech. He is based in the Bay Area and supports South Asian innovation.

## JB SLOAN EVP PM & CO-FOUNDER



James "JB" Sloan has been with NuArca Labs from the start, focusing on AI and previously blockchain solutions.

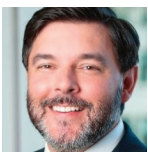
With 15+ years of experience, he has worked with top banks on compliance software and held product roles at Pegasystems and Wolters Kluwer. JB holds a Master's in Information Systems from Northeastern and lives near Boston.

## KEN CARANGELO CHIEF OPERATING OFFICER



Ken Carangelo brings 30+ years of operations and technology experience, including roles in the Navy, Deloitte, PCI Corporation, and Wolters Kluwer. Before NuArca, he led Legendary Applied Analytics, later acquired by WarnerMedia/AT&T. Ken holds an MBA from Dartmouth's Tuck School and a BA from Harvard, residing near Boston.

## JAMES THOMAS ADVISORY BOARD MEMBER



James Thomas, a former litigation partner at Arnold & Porter LLP, specializes in securities fraud and regulatory enforcement. He has represented corporations and executives in litigation and SEC investigations. James holds an M.A. from Indiana University, a B.A. from Mercer, and a J.D. from George Washington University. He lives in the DC area.

## TIMOTHY BURNISTON ADVISORY BOARD MEMBER



Tim Burniston has 45+ years of compliance expertise, including 35 years with federal agencies like the Federal Reserve and FDIC. He later led risk consulting at Wolters Kluwer and continues to advise on financial regulation. Tim holds an MBA from George Washington University and a BA from Gettysburg College, splitting time between DC and Florida.

## ABOUT NUARCA LABS

NuArca Labs was founded in 2016 by proven and experienced compliance tech professionals each with 20+ years of experience delivering mission critical systems to banks and other financial services institutions. NuArca Labs also has solutions in capital markets and energy royalties.



A NuArca Labs Solution

LEARN MORE ABOUT NUCOMPLY AND OUR OTHER AI & LLM SOLUTIONS BY CONTACTING US TODAY:

[www.NuArca.com](http://www.NuArca.com) | [info@NuArca.com](mailto:info@NuArca.com) | (617) 415-7714