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WHITE PAPER

Predictive analytics and beyond: The future of treasury with GenAI.

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Introduction

The treasury and capital markets are undergoing significant transformation, driven by the adoption of advanced AI technologies, particularly generative AI.

From the trading floor to the back office, AI systems are being utilized to enhance efficiency, streamline complex tasks and uncover valuable insights.

Generative AI (GenAI) is at the forefront of this revolution, evolving from a supportive role to becoming an essential tool in financial operations. This technology enables the extraction of insights from vast amounts of structured and unstructured data, automates repetitive tasks and provides precise predictive analytics. Additionally, AI enhances liquidity forecasting and hedging strategies while improving user satisfaction through personalized services.

Agentic AI, a more advanced form of AI, capable of autonomous task execution and complex problem-solving, is further revolutionizing the financial sector.

However, it is crucial to maintain human oversight and implement robust safeguards to ensure ethical and responsible AI use. This approach helps financial institutions mitigate risks and ensures that AI systems operate within ethical and legal boundaries. The disruptive nature of AI also raises important questions about regulation and governance in managing risks and preventing malicious use.

Looking across the business: GenAI for everyone

From front to risk to back, organizations are enhancing efficiency and user experience by handling routine tasks and customer interactions with GenAI.

In the treasury, conversational finance and task automation are leading the charge.

Conversational finance

Embedding natural language capabilities within interactive workflows and utilizing GenAI-powered assistants can streamline processes and enhance user experiences. Large Language Models (LLMs) are becoming essential tools for trading and analysis, providing quick, straightforward and user-friendly access to information. Traders can leverage these models to obtain real-time market data quotes or transaction details directly within their existing platforms. GenAI enables seamless access to data from databases and reports, using natural language, facilitating better decision-making and reducing workload for treasury staff.

Automated repetitive tasks

Generative AI can automate many routine tasks that occupy a significant portion of a treasury team's time. This includes data entry, reconciliation processes, report preparation and transaction tracking.

Additionally, AI can execute a sequence of tasks and automatically generate comprehensive reports based on these tasks. By automating these tasks, GenAI not only improves efficiency but also enhances the accuracy and reliability of financial data, allowing treasury teams to focus on higher-value activities such as market analysis, developing trading strategies and managing client relationships.

AI-driven insights and forecasts

A significant application of GenAI in a bank's treasury department is its capability to analyze, predict and navigate market trends.

Predictive analytics

Predictive analytics leverages AI to analyze vast amounts of data and provide actionable insights by identifying relevant patterns and correlations not easily found through human analysis. Traders receive tailored recommendations, such as suggestions for hedging strategies, investment opportunities, detailed reports on portfolio performance, and risk mitigation tactics.

Continuous monitoring allows AI to adjust hedging strategies in real time, re-evaluating exposure daily. These models can also anticipate the optimal time to roll over a position, ensuring informed decisions at the right moments based on market conditions and risk profiles, helping traders mitigate potential losses.

Scenario analysis enables users to run different financial scenarios and assess their potential impact on portfolios. Generative AI can create realistic financial scenarios for stress testing and scenario analysis, helping users understand how their portfolios might perform under various market conditions or economic events.

Moreover, Generative AI can prepopulate trades for execution, streamlining the trading process and reducing manual tasks. By integrating these advanced capabilities, banks can enhance their trading operations, reduce manual workloads, and improve overall decision-making efficiency.

Cashflow forecasting and liquidity management

Cashflow forecasting is crucial for treasurers to anticipate investment decisions and borrowing requirements, manage currency exposure and ensure that minimum capital requirements are met across short- and long-term horizons. Inaccurate cashflow forecasting can lead to unexpected cash shortages and increased borrowing costs, disrupting operations and elevating financial risk. It also reduces financial flexibility, potentially resulting in missed investment opportunities and damage to the company's credit rating.

GenAI can automate the forecasting process, reducing the time, errors and limitations of manual forecasting.

Indeed it can improve the accuracy of cashflow forecasting by digesting large volumes of data to identify correlations and patterns – complex behaviors that are traditionally hard to detect. With GenAI, cashflow forecasting becomes real-time, allowing treasurers to make dynamic adjustments to their liquidity positions. In the context of high market volatility and inflation, banks that can make accurate cashflow forecasts can better optimize their liquidity and make strategic investments.

AI in operations

GenAI is improving bank treasury operations by optimizing workflows in several key areas.

Settlement matching

Settlement matching is a crucial part of the post-trade process in financial markets. It involves verifying and reconciling the details of a trade between the buyer and the seller to ensure that both parties agree on the transaction terms before the actual settlement occurs.

When a bank sends cash payment instructions, it is critical that the information and amounts are correct because the payment agent will settle as per instructions, without matching with the counterparty. Therefore, the bank must match the counterparty data before sending settlement instructions.

Generative AI can enhance settlement matching by automating repetitive tasks, reducing manual errors and speeding up the settlement process. This reduces discrepancies and ensures precise matching.

Reconciliation

Reconciliation is a critical process that ensures the accuracy and consistency of financial records. It ensures that the financial records of a business are correct and consistent with external records, such as bank statements, payment processor reports and other financial documents.

Generative AI enhances this process by rapidly identifying discrepancies and automating routine tasks, significantly reducing manual errors and improving efficiency. Additionally, it continuously learns and adapts, providing increasingly accurate and reliable reconciliation over time.

Audit and internal controls

GenAI significantly enhances the audit process by analyzing large datasets to identify anomalies and potential issues. It can also help in maintaining and monitoring internal controls to ensure the integrity of financial operations.

Continuous auditing by monitoring transactions and financial activities in real-time helps in detecting and addressing issues promptly, rather than waiting for periodic audits, ensuring ongoing compliance and reducing the risk of fraud.

Conclusion

Balancing the challenges and opportunities arising in the adoption of GenAI in treasury.

Data strategy and quality

Generative AI's success in treasury and capital markets hinges on access to high-quality data. A robust data strategy involves collecting data from various sources, integrating it seamlessly, and maintaining high data quality through cleansing, validation and enrichment.

Effective data governance is crucial, ensuring data integrity, privacy and security. This includes stringent data validation processes, maintaining data provenance, and adhering to regulatory standards to mitigate risks and ensure ethical and legal compliance.

Key components of effective data governance include continuously monitoring and improving data quality to ensure accuracy and reliability, protecting sensitive information and complying with data protection regulations such as GDPR and CCPA, ensuring responsible AI use by avoiding biases and maintaining transparency in decision-making, and adhering to industry standards and regulations to protect the bank from potential liabilities.

Validation

Validation is a critical step in ensuring the accuracy and reliability of AI models. This involves model testing to ensure they perform as expected under various conditions, performance monitoring to detect and address any issues promptly, and compliance checks to verify that AI models comply with regulatory requirements and industry standards. Moreover, ensuring AI models are explainable is crucial for building trust and transparency.

Incorporating a feedback loop is vital for continuous improvement. By collecting and analyzing user feedback, AI systems can learn from their performance, adapt to new data, and refine their predictions and recommendations, ensuring they remain accurate and relevant.

Without proper validation, AI models might make flawed decisions, leading to incorrect cashflow forecasts, poor liquidity management, and compliance issues. Validation is essential for maintaining the integrity and reliability of GenAI in treasury operations.

The time to act is now

Generative AI is revolutionizing various facets of treasury and capital markets, and its permanence in the financial sector is undeniable.

It is key for financial institutions and banks to begin exploring and understanding the potential benefits of this technology. The absence of complete solutions or comprehensive governance frameworks should not be seen as obstacles.

By taking the initiative now, banks can significantly enhance their decision-making processes and position themselves at the forefront of innovation.

About Teciem

Teciem is a global provider of front-to-back treasury and capital markets software solutions, serving banks and financial institutions of all sizes. We deliver award-winning solutions for trading lifecycle and risk management, helping clients to operate seamlessly across asset classes and global markets. Built on decades of domain expertise, our solutions – Kondor, Summit, Opics, Sophis, Fusion Invest and Fusion Risk – are trusted by more than 340 financial institutions (and many of their subsidiaries) worldwide, including a majority of the top 100 global banks.

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