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AI in Finance

Unlocking Strategic Value Beyond Automation

1. Introduction

In today's rapidly evolving financial landscape, the integration of artificial intelligence (AI) has emerged as a critical factor for organizations seeking to maintain a competitive edge. As businesses strive to enhance operational efficiency, improve decision-making, and deliver superior customer experiences, AI presents a transformative opportunity. Despite AI's clear potential, many organizations still face difficulties in translating adoption into tangible value, struggling with strategic alignment, implementation success, and the identification of high-impact use cases. This often leads to substantial investments without corresponding returns.

This point of view explores the current status of AI in the Finance function, highlighting the motivation for companies to invest in this technology and the barriers that hinder effective integration. It examines key use cases that illustrate the practical applications of AI and outlines a strategic approach for organizations to successfully navigate their AI journeys. By focusing on actionable insights and best practices, this document aims to empower finance leaders to harness the power of AI, driving innovation and achieving sustainable growth in an increasingly data-driven world.

2. Status Quo of AI in Finance

Leading companies of today are increasingly motivated to implement AI due to the numerous benefits it offers. One of the primary advantages is the **potential for enhanced productivity and faster time-to-value**, as AI automates repetitive tasks, freeing up valuable human resources for more strategic initiatives. The 24/7 availability of AI solutions, such as chatbots or AI agents, can significantly improve customer service and operational efficiency. Moreover, AI promises to enhance forecasting accuracy, streamline budgeting processes, and ensure better compliance with accounting standards. Many organizations hope that by improving risk management and reducing manual errors through automated data entry and report generation, AI will lead to substantial cost savings and empower more sophisticated company decision processes.

While AI has been a broadly and intensively discussed topic for the last years, the adoption of it remains a complex and often misunderstood endeavor within the Finance function. Driven by the pressure to implement AI rapidly, many decision-makers understand its potential but **struggle to determine how to apply it effectively to create real value**. This uncertainty around the right strategy, governance, and execution approach often leads to fragmented initiatives and high investments with limited returns. Whereas new AI technologies continue to emerge, Gartner reports that several AI technologies, such as generative AI, have already moved past the peak of the hype cycle *(Gartner, "2024 Hype Cycle for Emerging Technologies Highlights Developer Productivity, Total Experience, AI, and Security," August 21, 2024)*. This indicates that **organizations should now focus on practical implementation** rather than chasing the latest trends.

A common misstep is for companies to begin their AI journey by searching for use cases without first establishing a clear strategy or understanding of their specific needs. This reactive approach can lead to ineffective deployments and missed opportunities. Instead, organizations should **start by identifying their business challenges** and then explore how AI can address those needs, ensuring a more targeted and effective application of technology.

In 2024, the adoption of artificial intelligence has surged, with 72% of companies integrating AI into at least one business function, up from 55% the previous year *(Statista, "AI Adoption Among*

Organizations Worldwide", 2024). Despite this growth, Gartner reports that while many AI technologies are piloted, only 1 out of 5 makes it to full deployment. Additionally, **less than 10% of functions like finance**, human resources, procurement, and legal **have successfully implemented generative AI** technology *(Gartner, "Trending Questions About Generative AI," March 20, 2024)*. This statistic underscores a significant gap between interest and actual adoption, highlighting the need for a more thoughtful approach to implementation.

On a more positive note, the use of traditional / specialized AI (e.g. Predictive Modeling, Data Mining, Time Series Analysis, etc.) has a proven track record, particularly in the area of forecasting. AI-supported models are enabling organizations to achieve more frequent and accurate results with less effort, thereby enhancing decision-making capabilities. As companies continue to navigate the complexities of AI adoption, **focusing on established classical AI applications** may provide a more immediate pathway to realizing the benefits of this transformative technology in finance.

3. Use Cases

The following illustration provides an overview of the most common use cases and use case groups within the Finance function, indicating their current maturity.

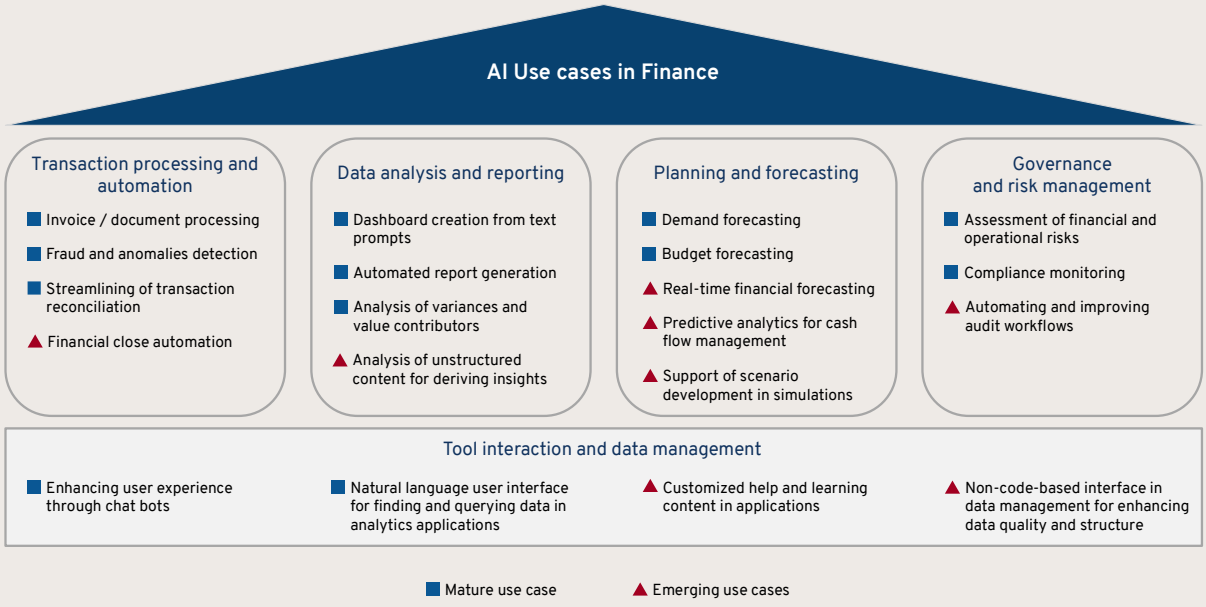

Figure 1: Overview of use case groups for AI in Finance.

The following selected use case groups explain the benefits and the context of utilization of AI in more detail.

A) Use Case Group: Fraud & Anomalies Detection, Compliance Monitoring

According to Gartner *("Applying AI – Business Domains", February 28, 2024)*, fraud detection, anomaly identification, and financial compliance monitoring **rank among the top five use cases** for deployment within the finance domain by leading organizations. The volume of transactions and the amount of data stored in data centers have surged dramatically in recent years *(Statista,*

Petroc Taylor, 'Volume of Data/Information Created Worldwide', November 21, 2024). This exponential increase, combined with insufficient transparency regarding stored financial data, can also allow fraudulent activities to go undetected. Additionally, as regulatory requirements become increasingly complex, organizations are facing significant challenges in tracking, documenting and fully adhering to these newly imposed rules.

Ensuring the accuracy of financial data is critical, as it forms the foundation for financial reporting and various finance-related activities. However, addressing **data quality issues and rectifying financial errors can be very labor-intensive**, often resulting in increased costs and extended timeframes. Additionally, compliance monitoring poses its own challenges, as organizations must navigate complex regulations and ensure adherence, which can also be resource-intensive and time-consuming.

To address these challenges, **AI-driven compliance systems can automate the tracking** of regulatory changes and assess organizational practices against these standards. By utilizing natural language processing (NLP) and machine learning (ML), AI can analyze regulatory documentation and internal policies to identify compliance gaps, enabling proactive resolutions. By quickly scanning and classifying regulatory texts, AI ensures accurate comprehension of context and enhances the interpretation of complex requirements that previously required manual effort.

Moreover, AI continuously monitors transactions and communication for indicators of non-compliance. ML-algorithms can examine historical data to identify patterns and anomalies that may suggest fraud, duplicate payments, mispayments, or labeling errors. Chatbots powered by GenAI can assist finance teams in querying transaction data and resolving discrepancies in real-time. Through aggregation of various data sources, **AI can identify errors or mismatches**, which may not be obvious to a human's eye, also predicting the likelihood of non-compliance incidences based on past events.

By integrating these capabilities, organizations can transition from a reactive to a proactive compliance approach, effectively mitigating risks and fostering a culture of compliance and awareness.

B) Use Case Group: Predictive Financial Forecasting and Simulations

This use case is a good example of how traditional / specialized AI and generative AI work together.

Predictive models based on machine learning are available on the market for quite a while. They represent a further evolutionary step compared to the manual forecasting enabled by expert opinion or traditional statistical forecasting that relies on firmly defined statistical models. Predictive forecasting facilitated by ML is a game changer through its automatic adaptability to the underlying data, scalability to handle large datasets and the ability to capture complex, non-linear relationships between variables, which traditional models often struggle with.

Nowadays, **ML-based predictive models** are an integral part of the planning tools available on the market. They are **neatly integrated into the planning data models** and offer preconfigured model types optimized for addressing a specific group of business questions. Some examples of such model types are classification, time series and regression analysis. These can forecast

event occurrence, project financial and non-financial metrics in a certain period of time and indicate their dependency on other variables.

A typical use case in the Finance area is **revenue forecasting**. A company can use ML algorithms to analyze historical sales data, seasonal trends, promotional activities, and external factors (like economic indicators or weather patterns) to forecast future revenue. Improved revenue predictions help the company optimize inventory levels, manage cash flow, and plan marketing strategies more effectively.

In the context of **scenario modeling**, GenAI provides an even more advanced solution. Based on the input given by the user, it can process internal business data, as well as external data such as news or social media and highlight the most relevant strategic concerns, trends, and drivers of uncertainty. The results are used by planners to prepare their simulation scenarios. By applying predictive forecasting in the individual scenarios and organizing and presenting their outcomes, AI supports the finance team to gain the understanding of potential risks and opportunities in the most efficient way. Based on the insights gained, organizations can develop contingency planning and risk management strategies.

Organizations with advanced data platforms can take advantage of real-time data integration, processing and analytics. By **integrating continuous data streams from various sources** into the predictive forecasts and scenario modeling, organizations are best supported to make timely, informed decisions based on the latest data, enhancing responsiveness to internal and external changes, and increasing financial performance.

C) Use Case Group: Transaction Reconciliation and Automation

AI can significantly enhance financial operations by streamlining transaction reconciliation and automating the financial closing process. By leveraging advanced algorithms and NLP, organizations can improve accuracy, reduce processing times, and facilitate better decision-making in their financial activities.

In transaction reconciliation, AI can **automate the matching of transactions across various financial systems**, ensuring efficiency and accuracy. Automated data matching capabilities allow AI to analyze transaction data from multiple sources, such as ERP systems and bank statements, to identify discrepancies and match records automatically. Machine learning algorithms can learn from historical data, continually improving matching accuracy over time. Additionally, NLP enables GenAI to process unstructured data, like invoices and emails, extracting relevant transaction details to enhance the reconciliation process.

On the financial close side, **GenAI can automate repetitive tasks** involved in the closing process, such as data aggregation, report generation, and variance analysis. By integrating with existing financial systems, GenAI ensures seamless data flow, reducing the need for manual intervention. It can generate real-time financial reports, providing stakeholders with up-to-date insights that facilitate quicker decision-making. GenAI also enhances compliance by automatically generating documentation and maintaining an audit trail of all transactions and adjustments made during the closing process.

The expected benefits of implementing GenAI in these areas include increased efficiency, improved accuracy, cost savings, and enhanced decision-making. Organizations can **significantly reduce the time spent on reconciliation and closing** processes, allowing finance

teams to focus on strategic activities. The enhanced data matching and anomaly detection capabilities **minimize errors and discrepancies**, while automation **reduces labor costs** associated with manual tasks. Timely and accurate financial reports empower executives with the necessary information for informed decision-making.

4. Approach

Implementing AI effectively in organizations requires strategic planning, careful prioritization of use cases, and agile project management **to maximize benefits and manage risks efficiently**. By fostering cross-departmental collaboration and balancing the composition of chosen AI techniques (traditional AI vs. generative AI), businesses can enhance cost control and optimize their AI deployment. But a successful implementation of GenAI also requires careful consideration of **integration with existing financial systems**, **change management** to prepare finance teams for the transition, and **robust data security measures** to protect sensitive financial information. By adopting GenAI for transaction reconciliation and financial close automation, organizations can transform their financial operations, **achieve greater efficiency, accuracy, and compliance** while gaining strategic insights that drive business growth.

Strategic and Organizational Aspects

When implementing new AI use cases within an organization, it is essential to maintain a strategic and holistic view. Decision-makers should develop a comprehensive strategic roadmap for **AI implementation that avoids silos**, as certain use cases can benefit multiple teams simultaneously.

While it may be tempting to focus on enhancing existing processes for immediate gains, it is crucial to **balance operational and strategic use cases** to secure long-term advantages for the organization. While data and technology are no longer solely the responsibility of the CTO, the CFO should act as a sponsor and facilitator, driving the impact of AI implementations in close collaboration with the CTO.

Organizations are advised to adopt a **hybrid AI implementation approach**, where decentralized domains actively engage in AI initiatives, supported centrally by an AI Center of Excellence (AI CoE). This structure offers numerous benefits for both implementation and long-term operations. Doing so, an AI CoE can significantly reduce costs and streamline the implementation process. It serves as a hub of expertise, consolidating resources and knowledge to prevent duplication of efforts across the organization, ensuring consistency in AI strategies and methodologies for more efficient resource use.

Empowering a small **team of AI champions**, along with members of the finance organization, and ensuring budget availability will significantly accelerate the initialization phase of AI initiatives. These champions are equipped to drive innovation and maintain alignment with the organization's strategic goals. Moreover, the AI CoE should maintain **close collaboration with Data & Analytics and IT departments**, enabling seamless integration of AI solutions into existing systems. This collaboration is crucial for building scalable AI models that can be adapted and improved over time. The AI CoE also plays a vital role in knowledge distribution, as these employees will eventually transfer their expertise to other functions, fostering a culture of continuous learning and innovation across the organization. This hybrid structure, combining a strong core of AI experts with decentralized, AI-enabled teams, ensures a smooth start and excellent scalability.

Once the AI roadmap is defined and the AI CoE is established, **CFOs must ensure that talent is available** within the organization. This involves identifying critical skills, enabling and training current employees, and acquiring external resources to ensure long-term success. By fostering a culture of continuous development, organizations can adapt to evolving AI demands. Additionally, strategic partnerships with educational institutions can help maintain a steady pipeline of skilled talent.

Identification and Prioritization of Use Cases

The value of AI for business is realized through use cases supporting business objectives. Purely technical use cases evaluating the technology are not oriented towards business value generation and should be avoided.

The first step in **determining the relevant use cases** to implement is identification. This is a joint effort of business, data and AI professionals and is typically achieved through workshops. In such workshops an approach could be the following.

1. Start with an explanation and common understanding of the main benefit categories that come with AI, such as managing complexity, automation, content generation or tool interaction.

2. Brainstorm on the relevant business objectives where AI could help.

3. Align on the expected benefits from AI for each of the objectives and derive one or more use cases. In general, a business goal could be addressed by several AI use cases.

4. Group the use cases into categories and identify synergies between the use cases. This will be useful during prioritization and planning.

The second step is prioritization. The use cases are rated along the perspectives of business value, feasibility and risks. Here are some criteria to consider:

- **Business value:** strategic priority, revenue increase, cost savings, resolution of current pain points

- **Feasibility:** readiness of technology, data access and quality, availability of required skills, organizational readiness

- **Risks:** potential data privacy breaches and hallucinations, low performance and transparency, early stage use case maturity

The overview of the result is typically presented in a prioritization matrix. The portrayal below is inspired by approaches from Gartner *(“How to Pilot Generative AI”, 2023) and McKinsey (“Gen AI: A guide for CFOs”, 2023)*.

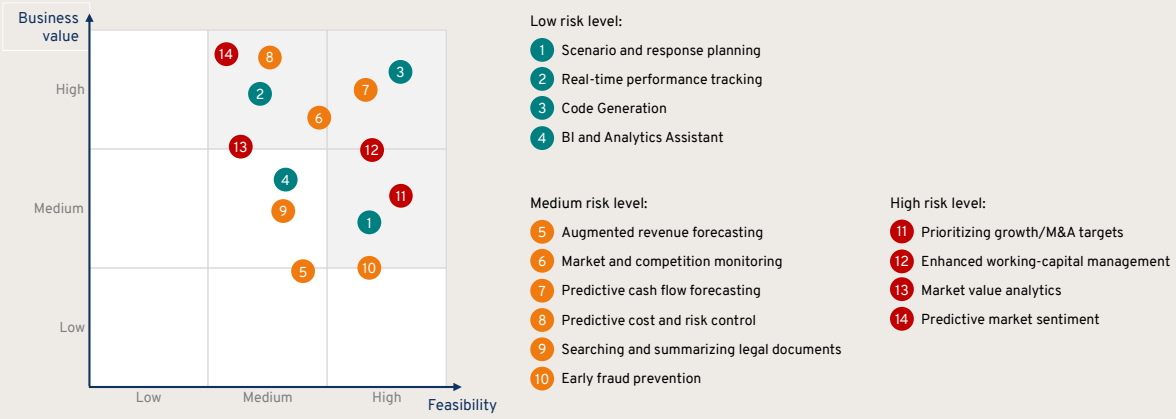

Figure 2: Example for a prioritization matrix.

It is recommended to start with a very limited number of use cases with high business value, high feasibility and manageable risks. A good example is already productive business applications with AI potential, due to possible lower infrastructure investments and exhaustive knowledge of the data.

Project Management & Implementation Approach

In the context of project management and implementation, an effective approach emphasizes a **“fail quick and cheap” philosophy**, enabling teams to learn from failures without incurring significant costs. This strategy encourages rapid prototyping and iterative testing, allowing for adjustments based on early feedback.

To enhance effectiveness, it is essential to **combine GenAI with more traditional / specialized AI techniques**. This complementary approach of techniques helps mitigate potential limitations of GenAI, such as hallucinations, by fostering a balanced ecosystem of AI systems that complement each other. The result is improved accuracy, quality, and performance, leading to reduced overall costs.

Cost control and success metrics play a vital role for AI implementation projects. Establishing transparency early in the process – by sharing existing use cases and ongoing solutions across teams – addresses cost concerns and fosters informed decision-making. **Involving Financial Operations (FinOps) teams is key to impacting and controlling costs** throughout the project. Their insights can guide budgeting and resource allocation, ensuring that financial implications are considered at each stage. Additionally, incorporating measures to prevent or reduce the risk of hallucinations, while implementing GenAI, represented by invented or incorrect content, is a major consideration. To reduce this risk, methods such as retrieval-augmented generation (RAG) for pre-processing and post-processing verification against a trusted knowledge base can be applied. Together with ensuring privacy, such measures are crucial for managing the risks of AI applications effectively, enabling a significant reduction of costs and other damage caused by realized risks.

While fine-tuning models and implementing Service Level Management (SLMs) can offer benefits in the future, it is important to recognize that these processes are complex and can be costly to initiate. Therefore, a **strategic approach prioritizes foundational elements** that support cost management and risk mitigation while laying the groundwork for more advanced techniques as the project evolves.

5. Conclusion

In conclusion, the integration of AI within the finance function presents a **transformative opportunity for organizations** willing to embrace it strategically. While many organizations struggle with the practical challenges of implementing and scaling AI, the potential benefits, including higher productivity, stronger compliance, and more accurate forecasting, are too significant to ignore.

To successfully navigate this complex landscape, companies must prioritize a clear understanding of their specific needs and develop a comprehensive AI strategy that aligns with their business objectives. By **focusing on high-value use cases** and leveraging existing data, organizations can move beyond the hype and achieve tangible results.

The examples of fraud detection, predictive forecasting, and transaction automation illustrate how AI can not only streamline operations but also empower finance teams to make informed decisions based on real-time insights. Furthermore, adopting a hybrid approach that **combines GenAI with traditional / specialized AI methods** can enhance accuracy and mitigate risks.

Ultimately, fostering a culture of collaboration and continuous learning will be essential. By investing in talent and establishing a **domain-composed AI Center of Excellence**, organizations can ensure that they are well-equipped to harness the full potential of AI, driving innovation and maintaining a competitive edge in an increasingly data-driven world. As the finance landscape continues to evolve, those who proactively embrace AI will be best positioned to thrive in the future.

Want to know more about our transformative and successful AI approach for your organization? Then reach out to our experts – we're here to support you on your AI journey.

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