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Artificial Intelligence at the Intersection of Finance and Marketing: Transforming Customer Experience and Financial Decision-Making

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Abstract

Artificial intelligence (AI) is transforming how organizations understand customers, develop marketing strategies, allocate financial resources, assess risks and make business decisions. Although marketing primarily addresses customer relationships and finance evaluates profitability and financial sustainability, their decisions are interdependent. This conceptual paper examines how AI can connect marketing intelligence with financial decision-making to improve customer experience and organizational performance. Drawing on literature on AI in finance, marketing, customer experience and explainable AI, it retains an integrated framework comprising five dimensions: AI integration capability, customer intelligence, marketing effectiveness, financial decision quality and organizational performance. The paper proposes that AI-enabled customer intelligence can improve personalization and resource allocation, while combining marketing and financial analytics can support customer profitability assessment and risk-informed investment decisions. Organizational readiness and responsible AI governance are identified as conditions shaping these relationships. Seven propositions are advanced for future empirical testing. The framework offers a cross-functional perspective while acknowledging the limitations of conceptual research.

Keywords: artificial intelligence; finance; marketing; customer experience; customer intelligence; financial decision-making; responsible AI.

1. Introduction

Artificial intelligence enables organizations to process large datasets, recognize patterns, produce predictions and support decisions that otherwise demand substantial human effort. Its applications include customer service, recommendation systems, market analysis, fraud detection, credit assessment and financial forecasting (Bahoo et al., 2024; Davenport et al., 2020). As businesses adopt data-driven strategies, AI increasingly shapes connections between functions rather than only improving isolated tasks.

Marketing focuses on identifying customer needs, communicating value and sustaining relationships; finance focuses on investment, costs, risk, cash flows and profitability. These functions are linked because customer acquisition requires investment, customer retention affects future earnings and pricing influences demand and financial returns. Yet marketing teams may assess conversions and engagement while finance teams examine expenditure and return on investment. Without integrated information, organizations may struggle to identify the customers, campaigns and channels that generate sustainable value (Gupta et al., 2004).

AI offers a way to connect customer behavior with financial analysis through demand forecasts, churn predictions, customer segmentation and risk evaluation. However, technical capability does not guarantee good decisions. Weak data, high acquisition costs, opaque models and poorly coordinated processes may undermine outcomes. The research problem addressed here is therefore the limited conceptual integration of customer-focused marketing insights with financial decision processes. The paper examines AI applications, proposes a unified framework and considers managerial, ethical and research implications. Its guiding question is how AI-enabled customer intelligence can improve marketing and financial decisions together rather than independently.

2. Methodological Approach

This study adopts a conceptual research approach based on thematic synthesis of relevant academic literature. It does not collect primary data, undertake statistical tests or report measured organizational outcomes. Literature on AI in finance, AI-enabled marketing, customer experience, customer valuation and explainable AI was examined for its relevance to the relationship between marketing intelligence and financial decisions. The discussion synthesizes established applications, identifies cross-functional links and develops constructs and propositions. This is not an exhaustive systematic review or meta-analysis; accordingly, the proposed relationships require empirical assessment.

3. Literature Review

3.1. Artificial Intelligence in Finance

AI in finance supports credit scoring, fraud detection, investment analysis, portfolio management, customer service, risk assessment and forecasting. Bahoo et al. (2024) identify predictive analysis, classification and early-warning systems as important research themes. Machine-learning models can examine historical financial and contextual data to estimate demand, cash flows, default risk and potential business outcomes. Such estimates help managers compare options but are sensitive to data quality and changes in economic conditions.

AI can also detect unusual transaction patterns and prioritize suspected fraud for investigation. These applications may increase monitoring efficiency while introducing false alerts or unfair decisions. In financial services, customer segmentation and tailored recommendations directly connect risk-management processes with customer experience. Because consequential decisions must be justified, explainability, accountability and human review remain essential (Černevičienė & Kabašinskas, 2024).

3.2. Artificial Intelligence in Marketing

Marketing uses machine learning, natural language processing, recommendation systems and generative AI to identify customer preferences, personalize communication, plan campaigns and support service interactions. Davenport et al. (2020) explain how AI may reshape segmentation, targeting and managerial marketing decisions. Unlike broad demographic segmentation, AI-based analysis can combine purchasing, engagement and service data to recognize more detailed behavioral patterns.

Personalized offers and recommendation engines can increase relevance, while chatbots can respond to routine queries along the customer journey (Peruchini et al., 2024). Nevertheless, extensive profiling may seem intrusive, and automated communication still requires brand safeguards and human supervision. The

strategic contribution of AI extends beyond automation to better customer understanding and more informed allocation of marketing resources.

3.3. Customer Experience and the Finance–Marketing Connection

Customer experience encompasses perceptions formed before, during and after purchase, across advertising, sales, digital channels and service encounters. Lemon and Verhoef (2016) emphasize that these touchpoints should be considered throughout the customer journey. AI-based customer intelligence can identify churn risk, likely renewals, changing preferences and opportunities for helpful intervention. Data use must nevertheless respect customer expectations, privacy and transparency.

Marketing activity requires financial resources, and its contribution depends on acquisition costs, conversion, contribution margins, repeat purchase and customer lifetime value. Gupta et al. (2004) demonstrate the importance of linking customer valuation with financial value. Strong engagement alone does not establish profitability; equally, short-term cost reductions can damage long-term relationships. Integrating marketing indicators with financial outcomes offers a more balanced basis for decisions.

4. AI Applications at the Intersection of Finance and Marketing

4.1. Predictive Customer Analytics

Predictive analytics estimates future customer behavior from available data, including purchase probabilities, demand patterns and customer churn. Marketing teams can use these predictions to choose retention messages, while finance teams can compare intervention costs with expected revenue. For example, a telecommunications provider could identify subscribers likely to leave, offer suitable retention support and assess whether the expected contribution from retained relationships justifies the expenditure. The value lies in evaluating customer relevance and economic viability simultaneously (Davenport et al., 2020).

4.2. Customer Lifetime Value and Profitability

Customer lifetime value (CLV) estimates the economic value of a relationship over a defined period, taking account of expected purchases, margins, retention and service costs; some models also discount future returns. AI can help predict future behavior, while financial information translates those predictions into expected value (Gupta et al., 2004). A frequently purchasing customer may be less profitable after discounts and servicing costs than a less active customer who remains loyal for longer. CLV estimates remain uncertain and must be updated as conditions change.

4.3. Intelligent Marketing Budget Allocation

AI can compare campaign responses, conversions and costs across segments and communication channels. Effective allocation should combine reach, engagement and retention with incremental revenue, acquisition cost, contribution margin and return on marketing investment. The objective is not mechanically to favor the campaign with the highest historical return: market saturation, strategic priorities, uncertainty and long-term brand value also matter. AI therefore informs, rather than replaces, managerial judgment.

4.4. Personalized Financial Products and Services

Banks, insurers and financial-service providers can identify customer needs from relevant transactions, preferences and service interactions. Marketing can tailor communication, while finance assesses

suitability, pricing, risks and expected returns. Integrated recommendations may improve relevance without overlooking financial sustainability. Since unsuitable targeting can harm customers, particularly in consequential financial decisions, firms should provide safeguards, clear explanations and appropriate human oversight (Černevičienė & Kabašinskas, 2024).

4.5. Fraud Prevention and Customer Trust

Fraud detection protects financial assets but also shapes customer experience. AI-based anomaly detection may support faster investigations, yet incorrectly blocked transactions can inconvenience customers and erode trust. Combining risk signals with proportionate customer-service processes allows organizations to protect accounts while communicating clearly and promptly. Financial security and customer experience should therefore be designed as complementary priorities.

5. Proposed Integrated Conceptual Framework

5.1. Framework and Constructs

The central contribution is a model connecting five constructs. AI integration capability is the ability to connect AI tools, reliable data, analytical infrastructure and employee expertise across business functions. Customer intelligence is the ability to interpret customer needs, purchasing patterns, engagement and probable future actions. Marketing effectiveness concerns acquisition, conversion, retention, service relevance and efficient resource use. Financial decision quality concerns timely, informed choices incorporating costs, risks, projected returns and uncertainty. Organizational performance encompasses potential longer-term outcomes such as profitability, operational efficiency, resilient relationships and improved allocation. These are proposed constructs, not measured findings.

The proposed sequence is AI integration capability → customer intelligence → marketing effectiveness → financial decision quality → organizational performance. AI integration may also directly enhance financial decision quality. Organizational readiness—leadership support, skills, data quality and process alignment—and responsible AI governance—privacy, fairness, transparency, security and human oversight—condition the overall process. Feedback from customer responses and financial results may influence subsequent decisions. The sequence represents possible relationships rather than demonstrated causation.

5.2. Propositions for Future Research

P1. Greater AI integration capability is positively associated with customer intelligence, because integrated tools and data may improve recognition of customer patterns.

P2. Customer intelligence is positively associated with marketing effectiveness through more relevant targeting, personalization and retention.

P3. Marketing effectiveness is positively associated with financial decision quality when campaign outcomes are assessed alongside costs, margins and future value.

P4. AI integration capability is positively associated with financial decision quality through better availability and timeliness of financial and customer information.

P5. Financial decision quality is positively associated with organizational performance when decisions appropriately balance risks, returns and strategic goals.

P6. Organizational readiness strengthens the relationship between AI integration capability and business outcomes by supporting practical adoption.

P7. Responsible AI governance strengthens the sustainability of AI-enabled marketing and financial decision-making by protecting fairness, accountability and customer trust.

These propositions form an agenda for quantitative studies, interviews, organizational case studies and longitudinal research rather than findings established by the present article.

6. Discussion and Managerial Implications

The framework positions AI as a cross-functional organizational capability, not merely a collection of technologies. Predictions about customer response gain business meaning when assessed against acquisition cost, expected contribution and long-term value. Financial decisions, in turn, may become more customer-informed when they account for preferences, service quality and retention. Improving predictive accuracy alone is insufficient if departments act on incompatible measures or employees do not understand model limitations (Davenport et al., 2020; Gupta et al., 2004).

Managers should connect campaign data, customer relationship records, sales, service costs and financial measures under clear data-governance rules. Performance assessments should balance customer and financial indicators rather than relying only on clicks, impressions or short-term sales. Organizations should develop employee skills, assign responsibilities and create regular collaboration between marketing, finance, technology and risk functions. AI outputs should serve as decision-support evidence, with human review where mistakes could materially affect customers.

Implementation should begin with a defined business problem and measurable objectives. Managers can evaluate both short-term efficiency and longer-term results, including retention, trust, profitability and risk-adjusted returns. A phased approach can help organizations manage financial constraints and refine models before wider deployment. Neither greater personalization nor better customer satisfaction should be presumed to produce higher profits in every setting; these links require contextual evaluation.

7. Challenges and Ethical Considerations

Combining customer and financial datasets increases privacy and cybersecurity risks, making access control, retention limits, data minimization and lawful use important. Historical biases in training data may produce unfair customer targeting, pricing or financial eligibility outcomes. Explainable AI and traceable decision records are particularly relevant where individuals need to understand or challenge decisions (Černevičienė & Kabašinskas, 2024).

Excessive automation can encourage employees to accept predictions uncritically, even when customer behavior or economic conditions change. Models therefore require monitoring, periodic reassessment and escalation routes. Organizational silos, inconsistent performance measures, implementation expenses and shortages of skilled staff also limit adoption. Responsible governance should combine technical controls with accountable leadership, cross-functional coordination and meaningful human oversight.

8. Research Gaps and Future Directions

Future research should test whether AI integration across marketing and finance yields different results from adoption within separate functions. It should assess whether customer experience improvements

translate into retention, lifetime value or profitability, and whether these relationships differ across banking, insurance, retail, telecommunications and e-commerce. Organizational readiness and responsible governance merit testing as moderators of the proposed relationships. Surveys, comparative cases and longitudinal organizational data could illuminate both initial implementation effects and more durable outcomes. Researchers should establish appropriate construct measures and designs before interpreting causal relationships.

9. Conclusion

AI can support forecasting, risk assessment and fraud prevention in finance, and segmentation, personalization and engagement in marketing. The original argument of this paper is that their greatest strategic promise may arise when customer intelligence and marketing outcomes are integrated with financial analysis. The proposed framework links AI integration capability, customer intelligence, marketing effectiveness, financial decision quality and organizational performance, while acknowledging readiness and responsible governance as important conditions. Rather than claiming empirical proof, the paper provides a conceptual basis for evaluating when integrated AI may strengthen customer relationships and financially sustainable decisions. Future evidence is needed to establish the direction, magnitude and circumstances of the proposed relationships.

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