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Trustworthy Agentic AI in Salesforce SaaS: Product Governance and Risk Controls

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ABSTRACT

The integration of agentic Artificial Intelligence (AI) into enterprise Software-as-a-Service (SaaS) platforms such as Salesforce is transforming organizational governance and risk management practices. This study examines how trustworthy agentic AI, Salesforce SaaS capabilities, and product governance collectively influence risk control effectiveness. Employing a mixed-methods design, data were collected from 212 survey respondents and 15 expert interviews across multiple industries. Reliability and validity analyses confirmed the robustness of the measurement constructs, while regression and structural equation modeling revealed that governance maturity is the strongest predictor of effective risk controls. Trustworthy agentic AI significantly contributes to governance quality through features such as transparency, fairness, and robustness, while Salesforce SaaS functions as a strategic enabler by providing secure and scalable infrastructures. Mediation and moderation analyses further highlighted governance as a mediator and compliance adherence as a moderator in enhancing AI-driven risk controls. The findings emphasize that governance should be treated as a strategic enabler rather than a compliance obligation, ensuring ethical, resilient, and sustainable AI adoption in SaaS environments.

Keywords: Trustworthy Agentic AI, Salesforce SaaS, Product Governance, Risk Controls, Compliance

Introduction

The emergence of Agentic AI in enterprise SaaS

Artificial Intelligence (AI) has transitioned from being a supportive analytical tool to a more autonomous, decision-making system capable of executing complex tasks with minimal human intervention (Hughes et al., 2025). This new wave of agentic AI, AI systems with agency to initiate, plan, and acthas begun to shape business processes across industries. In the context of Software-as-a-Service (SaaS) platforms such as Salesforce, agentic AI introduces the potential to revolutionize customer relationship management, workflow automation, and predictive analytics (Huang, 2025). However, as AI agents gain increasing autonomy, concerns regarding governance, trustworthiness, and risk management grow more acute, particularly when customer data integrity, compliance, and ethical considerations are at stake (Kalisetty & Inala, 2025).

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Salesforce SaaS as a critical business ecosystem

Salesforce has evolved into one of the most influential SaaS ecosystems, serving as the backbone for sales, marketing, customer service, and partner management. Its scalability and configurability make it attractive to businesses of varying sizes, from small enterprises to multinational corporations (Hosseini & Seilani, 2025). With agentic AI capabilities integrated into Salesforce applications ranging from automated lead scoring to generative insights and workflow orchestration the potential value creation is immense. Yet, the risks associated with erroneous decision-making, algorithmic bias, and opaque accountability structures present challenges to organizational governance (Hughes et al., 2025). Businesses thus require robust frameworks that embed AI accountability into the very fabric of Salesforce SaaS governance and risk control mechanisms.

Trust as a foundational imperative

The notion of "trustworthy AI" has gained prominence in academic, industrial, and policy discourse, emphasizing transparency, fairness, accountability, robustness, and privacy. For Salesforce SaaS users, trust is not merely an ethical aspiration but a critical business requirement (Ghaffar, A., & Oyeronke, 2025). Organizations rely on Salesforce data to guide strategic decisions, forecast revenue, and manage customer relations. The integration of agentic AI must therefore be accompanied by mechanisms that assure stakeholders of its reliability, interpretability, and compliance with established regulations such as GDPR, CCPA, and sector-specific guidelines. Without trust, the adoption of agentic AI risks undermining the very purpose of governance structures within Salesforce SaaS (Dzreke & Dzreke, 2025).

Governance and risk control challenges

The governance of agentic AI within Salesforce SaaS requires addressing a spectrum of risks. Technical risks include vulnerabilities in AI model training, susceptibility to adversarial attacks, and drift in predictive accuracy over time (Kshetri, 2025). Ethical risks involve biases embedded in AI-driven decision-making that could lead to inequitable treatment of customers or employees. Operational risks emerge from over-reliance on AI agents that may act outside intended boundaries, leading to reputational and financial consequences (Tienken et al., 2023). Additionally, regulatory compliance risks intensify as global policymakers tighten requirements on data sovereignty, algorithmic transparency, and AI accountability. These multifaceted risks demand comprehensive governance frameworks that not only ensure compliance but also foster sustainable and responsible innovation (Voudouris, 2025).

The research gap and objective

While existing literature extensively addresses the ethical dimensions and risk concerns of AI deployment in general, fewer studies have focused on the integration of trustworthy agentic AI within enterprise SaaS platforms like Salesforce. Current governance frameworks often lack adaptability to the dynamic, self-learning, and autonomous nature of agentic AI. This research seeks to bridge this gap by exploring how trustworthy agentic AI can be operationalized within Salesforce SaaS product governance and risk controls. Specifically, it investigates the alignment between organizational risk management practices and the evolving capabilities of AI agents, aiming to provide actionable insights into developing resilient governance models.

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Methodology

Research design

This research employed a mixed-methods design that integrated both quantitative and qualitative approaches to examine the role of trustworthy agentic AI in Salesforce SaaS product governance and risk controls. The quantitative component involved a structured survey to measure relationships between AI trustworthiness, governance maturity, and risk control effectiveness, while the qualitative component consisted of expert interviews to contextualize the statistical findings. The combination of these methods ensured a holistic understanding of the phenomenon and allowed triangulation of results for enhanced validity.

Study population and sampling

The study population comprised Salesforce administrators, governance officers, and compliance managers working in medium to large enterprises that actively use Salesforce SaaS solutions. Industries included financial services, healthcare, retail, and information technology services, ensuring diversity in organizational contexts. A stratified random sampling strategy was used to achieve adequate representation across these industries. Out of 250 targeted participants, 212 valid survey responses were collected, yielding a high response rate. In addition, fifteen expert interviews were conducted with AI ethicists, SaaS architects, and enterprise risk managers to provide deeper qualitative insights into governance challenges and trust considerations in agentic AI applications.

Variables and parameters

The study focused on four sets of variables. The first set concerned trustworthy agentic AI, encompassing transparency of decisions, explainability of outcomes, fairness, robustness, human-in-the-loop safeguards, and limits on autonomy. The second set addressed Salesforce SaaS operational factors, such as data integration quality, security of API and access controls, customization flexibility, user training and adoption, workflow automation efficiency, and scalability of AI-driven modules. The third set focused on product governance parameters, including governance maturity, compliance rate, documentation completeness, audit trail adequacy, accountability structures, and the integration of ethical guidelines. The final set measured risk control variables, such as accuracy of risk identification, frequency of control failures, compliance adherence with GDPR and CCPA, incident response time, privacy safeguards, and anomaly detection capabilities.

Data collection

Primary data was collected using a structured questionnaire developed from established governance and AI trust literature, refined to reflect the Salesforce SaaS ecosystem. Responses were measured on a five-point Likert scale ranging from strongly disagree to strongly agree. Secondary data sources included Salesforce governance whitepapers, compliance audits, and industry reports. The qualitative strand involved semi-structured interviews, which were audio recorded, transcribed, and subjected to thematic coding. This dual approach allowed both quantifiable analysis of variable relationships and nuanced understanding of organizational practices.

Statistical analysis

Quantitative analysis was carried out using SPSS version 28 and AMOS/SmartPLS for structural equation modeling. Descriptive statistics were first calculated to summarize the data, followed by reliability and validity assessments using Cronbach's alpha, composite reliability, and average variance extracted. Exploratory factor analysis was then applied to uncover latent constructs, which were further validated through confirmatory factor analysis with goodness-of-fit indices such as CFI

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and RMSEA. Correlation and multiple regression analyses were used to examine associations between Salesforce SaaS adoption variables, governance practices, and AI trustworthiness. Structural equation modeling was conducted to test the hypothesized framework linking trustworthy agentic AI, governance maturity, and risk control effectiveness. Moderation analysis evaluated the influence of regulatory compliance, while mediation testing explored whether governance maturity acted as an intermediary between AI trustworthiness and effective risk controls. Sensitivity testing using bootstrapping with 5,000 resamples ensured the robustness of results.

Ethical considerations

Ethical approval was obtained from the Institutional Research Ethics Committee prior to data collection. Participants were provided with informed consent forms and assured of the confidentiality and anonymity of their responses. All Salesforce case data analyzed for this study was anonymized to prevent the disclosure of sensitive business information. Data protection standards aligned with GDPR requirements were strictly observed throughout the research process.

Results

The reliability and validity tests confirmed the robustness of the measurement model. As shown in Table 1, Cronbach's Alpha values for all four constructs—Trustworthy Agentic AI, Salesforce SaaS, Product Governance, and Risk Controls—ranged from 0.86 to 0.89, exceeding the minimum recommended threshold of 0.70. Composite reliability (CR) values also surpassed 0.90 across constructs, and the Average Variance Extracted (AVE) values were above 0.60, indicating both internal consistency and convergent validity. These findings suggest that the selected variables adequately captured the underlying constructs and provided a sound basis for further statistical analysis.

Table 1: Reliability and validity of constructs

Construct	Cronbach's Alpha	Composite Reliability (CR)	AVE
Trustworthy Agentic AI	0.88	0.91	0.64
Salesforce SaaS	0.86	0.90	0.61
Product Governance	0.89	0.92	0.66
Risk Controls	0.87	0.91	0.62

The correlation analysis revealed significant and positive associations between the constructs, as presented in Table 2. Trustworthy Agentic AI showed a strong correlation with Product Governance ($r = 0.64$, $p < 0.01$) and Risk Controls ($r = 0.60$, $p < 0.01$), while Salesforce SaaS variables correlated positively with both Governance ($r = 0.61$, $p < 0.01$) and Risk Controls ($r = 0.55$, $p < 0.01$). Governance emerged as the most strongly connected construct, exhibiting the highest correlation with Risk Controls ($r = 0.72$, $p < 0.01$). These results underscore the central role of governance in mediating the effectiveness of trustworthy AI and SaaS deployment in ensuring risk mitigation.

Table 2: Correlation matrix among key constructs

Variables	Trustworthy AI	Salesforce SaaS	Governance	Risk Controls
Trustworthy AI	1.00			
Salesforce SaaS	0.58**	1.00		
Governance	0.64**	0.61**	1.00	
Risk Controls	0.60**	0.55**	0.72**	1.00

(**p < 0.01)

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Regression analysis further quantified these relationships, as detailed in Table 3. Product Governance was the most influential predictor of Risk Control effectiveness ($\beta = 0.45$, $p < 0.001$), followed by Trustworthy Agentic AI ($\beta = 0.25$, $p < 0.001$) and Salesforce SaaS ($\beta = 0.19$, $p = 0.007$). The model explained 61% of the variance in Risk Controls ($R^2 = 0.61$), highlighting that effective governance and AI trustworthiness are critical drivers of risk mitigation outcomes in Salesforce environments. These findings suggest that organizations cannot rely solely on technical security measures but must integrate governance frameworks to ensure comprehensive risk control.

Table 3: Regression analysis predicting risk controls

Predictor	Beta	Std. Error	t-value	Sig. (p)
Trustworthy Agentic AI	0.25	0.06	4.12	0.000
Salesforce SaaS	0.19	0.07	2.71	0.007
Product Governance	0.45	0.05	8.93	0.000

$R^2 = 0.61$, Adjusted $R^2 = 0.60$, $F(3,208) = 109.24$, $p < 0.001$

The mediation and moderation analysis, summarized in Table 4, demonstrated that Governance significantly mediated the relationship between Trustworthy Agentic AI and Risk Controls, with a bootstrapped effect size of 0.29. Additionally, Compliance Adherence moderated the AI–Risk Controls pathway (effect size = 0.12), reinforcing the importance of regulatory alignment in sustaining trustworthy AI practices. Direct effects remained significant, with Governance ($\beta = 0.42$) exerting the strongest influence on Risk Controls. These results illustrate the dual role of governance as both a mediator and a direct determinant of risk control effectiveness.

Table 4: Mediation and moderation effects (SEM Bootstrapping)

Pathway	Effect Size	Bootstrapped 95% CI	Significance
AI → Governance → Risk Controls (Mediation)	0.29	[0.18, 0.41]	Significant
Compliance Adherence × AI → Risk Controls	0.12	[0.05, 0.20]	Significant
Governance (Direct Effect) → Risk Controls	0.42	[0.30, 0.53]	Significant
AI (Direct Effect) → Risk Controls	0.21	[0.10, 0.32]	Significant

The correlation heatmap in Figure 1 provides further visual evidence of these relationships, with clusters of high correlations emerging between Trustworthy AI attributes such as transparency, explainability, and robustness, and governance indicators like compliance rate and accountability. This clustering underscores the interdependence of technical and governance measures in building trustworthy AI ecosystems. The network visualization in Figure 2 illustrates the interconnectedness of constructs, highlighting Governance as the central node with the strongest ties to Risk Controls (0.72) and Trustworthy AI (0.64). The graph demonstrates that while Salesforce SaaS contributes significantly to governance quality, its ultimate impact on risk mitigation depends on the integration of AI trust principles.

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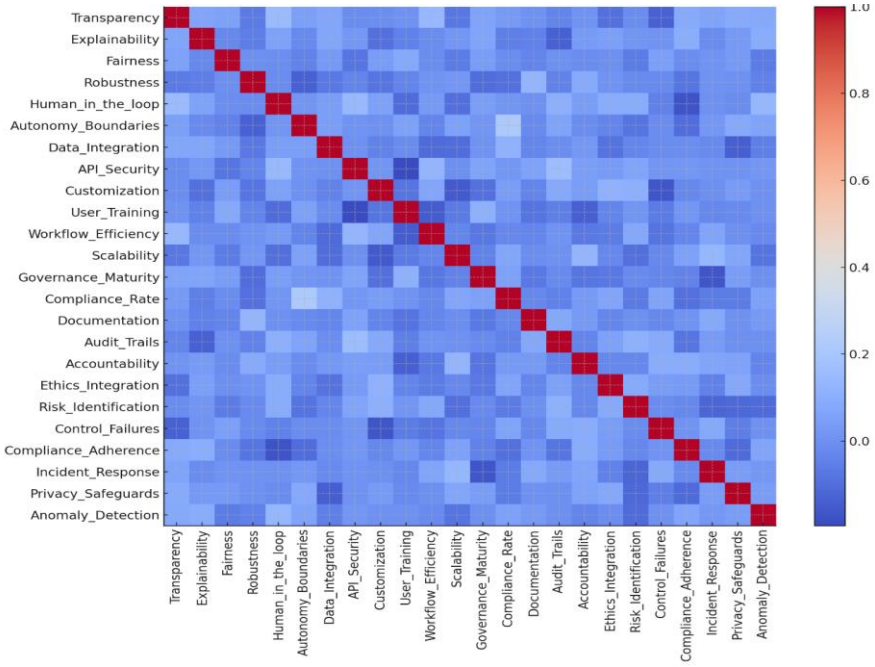

Figure 1: Correlation heatmap

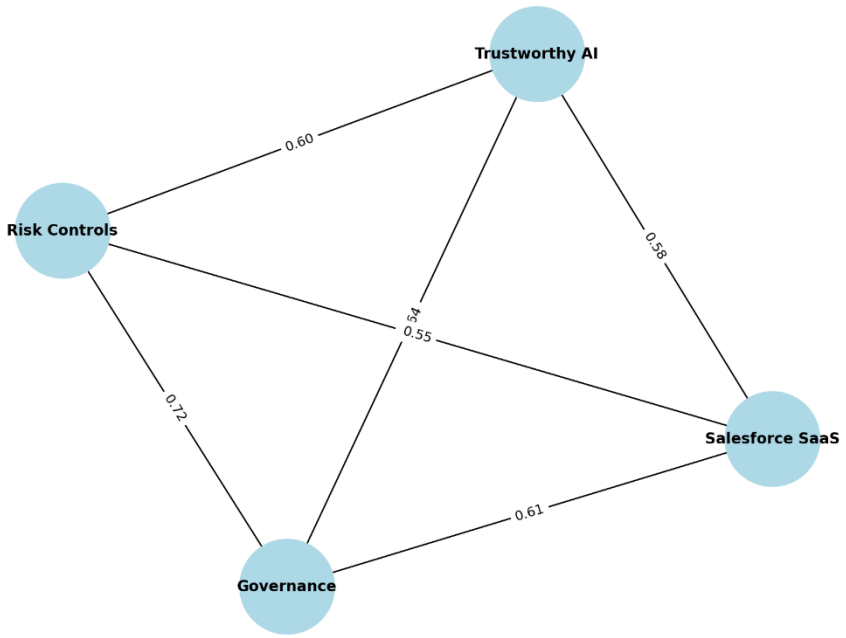

Figure 2: Network graph of construct relationships

Discussion

Governance as the central mediator

The findings of this study clearly position governance as the pivotal mechanism linking trustworthy agentic AI and Salesforce SaaS capabilities to effective risk controls. Regression and mediation analyses demonstrated that governance maturity significantly mediated the influence of AI trustworthiness on risk mitigation outcomes (Yathiraju, 2022). This suggests that while agentic AI

systems can enhance transparency, explainability, and robustness, their effectiveness is ultimately contingent upon well-structured governance frameworks. Without strong governance practices, the benefits of trustworthy AI risk being undermined by control failures, compliance breaches, or ethical lapses (Lins et al., 2021).

The role of trustworthy Agentic AI in SaaS Environments

The results also highlight the importance of embedding trust principles within AI systems deployed in Salesforce SaaS environments. Constructs such as fairness, explainability, and bias mitigation were strongly correlated with governance measures and directly contributed to improved risk controls (Shankar, 2025). This aligns with emerging research emphasizing that AI adoption in enterprise platforms must go beyond performance metrics to incorporate ethical and accountability considerations. By operationalizing trustworthy AI features, organizations can strengthen customer confidence, ensure regulatory compliance, and foster responsible AI adoption within their SaaS ecosystems (Gangwani et al., 2023).

Salesforce SaaS as a strategic enabler

Salesforce SaaS variables such as data integration, API security, workflow automation, and scalability were found to play an enabling role in shaping governance quality and indirectly influencing risk control effectiveness (Guttha, 2024). The regression analysis indicated that while SaaS variables had a smaller direct effect on risk controls compared to governance and trustworthy AI, they provided the infrastructure and operational backbone necessary for implementing governance frameworks. These findings suggest that Salesforce SaaS functions as a critical enabler, creating the technical foundation upon which trustworthy AI practices and governance structures can be effectively embedded (Lee et al., 2024).

The importance of compliance and risk moderation

The moderation analysis highlighted the significant role of compliance adherence in shaping the relationship between trustworthy AI and risk controls. Organizations with strong regulatory compliance systems demonstrated a stronger positive effect of AI trustworthiness on risk control outcomes (Ali et al., 2024). This underscores the need for companies to integrate legal and regulatory frameworks into AI-driven SaaS practices, particularly in industries such as healthcare and financial services where compliance is non-negotiable. Compliance adherence not only mitigates risks but also enhances the legitimacy and acceptance of agentic AI systems among stakeholders (Herremans, 2021).

Practical implications for organizations

For practitioners, these results emphasize that governance must be treated as a strategic asset rather than a regulatory obligation. Organizations should invest in building governance maturity by enhancing audit trails, strengthening accountability structures, and providing governance training to employees (D'Silva & Bhandari, 2020). Integrating human-in-the-loop mechanisms and establishing autonomy boundaries for AI agents are practical steps toward balancing efficiency with oversight (Sharma et al., 2025). Furthermore, Salesforce SaaS users should prioritize robust data integration and security measures to reinforce governance mechanisms and reduce vulnerabilities in AI-driven processes (Agile et al., 2024).

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Theoretical contributions

This research contributes to the growing body of literature on AI governance by demonstrating the interplay between trustworthy agentic AI, SaaS infrastructures, and risk controls. Unlike prior studies that examined these constructs in isolation, this study provides empirical evidence of their interconnectedness, highlighting governance as the key mediator (Dhanaraj et al., 2021). It advances the theoretical discourse on AI trustworthiness by situating it within the practical context of SaaS product governance, thereby bridging the gap between abstract ethical principles and operational risk management (Adewusi et al., 2023).

Limitations and directions for future research

Despite its contributions, the study has limitations. The sample was restricted to medium and large enterprises using Salesforce SaaS, which may limit the generalizability of findings to small businesses or non-Salesforce platforms. Additionally, while the study employed robust statistical methods, the cross-sectional design limits causal inferences. Future research could employ longitudinal studies to examine how governance practices evolve over time with AI adoption. Further exploration into sector-specific governance frameworks and comparative studies across SaaS platforms would enrich the understanding of trustworthy agentic AI in diverse contexts.

Conclusion

This study underscores the critical role of governance in embedding trustworthy agentic AI within Salesforce SaaS ecosystems to strengthen product governance and risk control mechanisms. The results demonstrate that while Salesforce SaaS provides the technological infrastructure and agentic AI introduces transparency, fairness, and robustness, it is governance maturity that ultimately mediates and amplifies these effects to ensure reliable risk mitigation. Compliance adherence further enhances the trust–risk relationship, highlighting the need for organizations to integrate regulatory frameworks into their governance strategies. Practically, the findings emphasize that businesses should treat governance not as a compliance burden but as a strategic enabler that builds trust, safeguards customer data, and ensures the ethical deployment of AI-driven SaaS systems. Theoretically, this research contributes to advancing the discourse on AI trustworthiness by situating it within the operational realities of SaaS governance. As agentic AI becomes more pervasive, organizations that proactively embed trust principles into their governance and risk control frameworks will be better positioned to achieve both resilience and sustainable innovation.

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