INTEGRATING ESG INTO RISK MANAGEMENT: A THEORETICAL FRAMEWORK FOR FINTECH IN A CHANGING REGULATORY LANDSCAPE

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Abstract: *The growing prominence of environmental, social, and governance (ESG) risks in financial services is challenging the adequacy of traditional risk management theories, particularly in dynamic and innovation-driven sectors such as financial technologies (FinTech). This paper develops a conceptual framework for ESG risk management in the FinTech sector, informed by Institutional Theory. Through a critical review of the literature, it identifies the conditions, factors, and developments that have shaped the theory's evolution to accommodate ESG considerations over the past two decades. Institutional Theory provides a lens to understand how external pressures shape organizational behaviour and drive ESG integration into risk frameworks. The proposed framework demonstrates how these pressures are reshaping corporate practices and risk management in FinTech, while also highlighting sector-specific challenges and opportunities. By bridging theoretical analysis with regulatory dynamics, the paper contributes to a more adaptive and comprehensive risk management paradigm suited to the complexities of ESG in FinTech. The findings provide a foundation for further academic research and practical implementation of ESG-conscious risk strategies in technology-driven financial services.*

Keywords: *Institutional Theory, Risk Management, Environmental, Social, and Governance (ESG), Financial Technology (FinTech).*

JEL Classification: *G32, G18, M14, Q56.*

1. Introduction

The rapid rise of financial technologies (FinTech) has transformed the financial sector, bringing innovation and increased agility but also introducing new complexities in risk management, especially as environmental, social, and governance (ESG) considerations become central to business strategy and regulatory compliance. As ESG factors gain prominence among investors, regulators, and stakeholders, FinTech companies face mounting pressure to embed these criteria into their risk management frameworks to maintain legitimacy, competitiveness, and access to capital.

This paper aims to develop a conceptual framework demonstrating how theoretical approaches, particularly **Institutional Theory**, can inform and support ESG risk management practices in the FinTech sector. By examining the unique challenges and opportunities FinTech firms encounter in integrating ESG considerations, the study connects theoretical perspectives with evolving regulatory dynamics, offering insights that are both academically grounded and practically applicable to advancing ESG integration in this rapidly evolving industry.

2. Literature Review

Recent literature highlights two main themes in ESG integration for FinTech risk management. First, Institutional Theory plays a central role in explaining how external pressures-such as regulatory changes, investor expectations, and stakeholder demands-drive FinTech companies to embed ESG into their risk frameworks to maintain credibility and competitiveness (Scott, 2013; DiMaggio and Powell, 2000; Meyer and Rowan, 1977). This evolution is reinforced by the globalization of sustainability discourse and the expansion of ESG into investment decisions, compelling organizations to adapt their practices to new standards of legitimacy and responsibility (Latapí Agudelo et al., 2019; Ortas et al., 2015; Kotsantonis et al., 2016).

Second, the literature identifies both challenges and opportunities unique to FinTech. Key barriers include resource constraints, regulatory uncertainty, and ESG data gaps, which complicate effective adoption (Martiny et al., 2024; Baldini et al., 2018). However, FinTechs' agility and technological capabilities position them to lead in digital ESG solutions and market differentiation, particularly as European regulations increasingly mandate greater transparency and comprehensive sustainability reporting (Ortas et al., 2015; EU Fintechs, 2024; Directive (EU) 2022/2464)1.

3. Methodology

This research adopts a qualitative approach, conducting a critical review of academic literature on economic and risk management theories—particularly Institutional Theory—to explore its relevance and adaptation for ESG risk integration. The methodology involves an in-depth analysis of scholarly publications, regulatory documents, and industry reports to identify the conditions, factors, and developments that have shaped the theory's evolution in the context of ESG. This assessment provides key insights into how Institutional Theory has evolved to address ESG-related risks, with particular attention to its application in the FinTech sector.

4. Theoretical Evolution and ESG Integration: Conditions, Factors and Developments

4.1 Embedding ESG into Risk Management

Risk management has become a critical discipline for navigating the uncertainties of today's complex business landscape. As organizations operate in an increasingly interconnected world, the integration of ESG factors into risk frameworks has gained prominence. This shift underscores the need to broaden traditional risk approaches to encompass sustainability and social responsibility, both of which can significantly influence long-term viability and profitability.

While risk management incorporates various theoretical approaches, this paper focuses on **Institutional Theory** as a foundational framework for understanding how FinTech companies respond to external pressures and embed ESG considerations to support sustainable growth (Aven, 2016).

4.2 Institutional Theory in ESG Context

Institutional Theory, originally developed in sociology and now widely applied in economics and risk management, explains how organizational behavior is shaped by the institutional environment in which it operates, including formal rules, informal norms, and cultural expectations (Scott, 2013). In the context of ESG, integration can be viewed as an outcome of institutional forces that encourage conformity to emerging standards of legitimacy and responsibility (DiMaggio and Powell, 2000). The theory provides a valuable lens for understanding the motivations behind organizational adoption of ESG factors within risk management frameworks.

According to Institutional Theory, as introduced by Meyer and Rowan (1977), organizations frequently adopt practices that reflect dominant social norms, cultural beliefs, and regulatory demands to build credibility, enhance their reputation, and secure access to resources. The theory suggests that firms are influenced not only by internal objectives but also by the broader institutional environment, which exerts pressure to conform to accepted norms and practices. This perspective helps explain why many firms have embraced ESG considerations as part of their core business practices, responding to external pressures, such as regulatory shifts, investor priorities, and broader societal expectations.

4.3 Conditions Facilitating ESG Integration

Several key conditions have facilitated the integration of ESG considerations into Institutional Theory frameworks:

- **Globalization of sustainability discourse:** Sustainability has evolved into a global concern, driven by scientific consensus on climate change and increasing visibility of social inequalities. Academic contributions, international policies and significant social and political events have shaped its understanding. This shift was reinforced in the 2010s by the Paris Agreement and the 2015 Sustainable Development Goals, which established a new social contract where corporations are expected to contribute actively to global sustainability efforts. (Latapí Agudelo, Jóhannsdóttir and Davídsdóttir, 2019).
- **Expansion of ESG into investment and financial markets:** Institutional investors have begun integrating ESG into their screening and valuation processes, creating economic incentives for legitimacy through ESG (Ortas, Álvarez and Garayar, 2015). Kotsantonis et al. (2016) highlight the growing importance of ESG data in investment decisions, which further compels organizations to integrate ESG considerations into their risk management frameworks. Additionally, Palma-Ruiz et al. (2020) illustrate how institutional pressures are accelerating the growth of socially responsible investing, reinforcing the broader momentum for ESG integration. Aligning with institutional norms not only enhances competitiveness but also helps attract capital in a rapidly evolving financial landscape.
- **Stakeholder activism and transparency demands:** Civil society, customers, and employees are increasingly holding companies accountable for ESG outcomes, treating sustainability as a legitimacy issue rather than just a performance metric (Baldini et al., 2018). Aven (2016) underscores the need to evolve risk assessment practices to encompass broader considerations beyond traditional financial metrics. As stakeholders increasingly demand transparency and accountability regarding sustainability issues, organizations must adapt their risk management strategies to address these emerging concerns. This shift signals a growing recognition that ESG risks can significantly impact long-term organizational performance and reputation, prompting a redefinition of how such risks are conceptualized and managed.

4.4 Factors Influencing ESG Integration

Various key factors have driven the integration of ESG considerations into theoretical constructs:

- **Mimetic isomorphism through market emulation:** In sectors such as FinTech, where uncertainty is high, firms often imitate industry leaders with strong ESG reputations in an effort to gain legitimacy, mitigate reputational risk, and attract capital (DiMaggio and Powell, 2000). This behaviour is particularly prevalent when ESG factors are linked to financial performance, as demonstrated by Friede et al. (2015). Similarly, Liu et al. (2020) found a positive relationship between corporate environmental responsibility and financial performance among Chinese listed companies.

- **Normative pressures from professional communities:** The standardization of ESG disclosure frameworks by international bodies has created normative expectations that ESG practices should be part of responsible governance. These pressures emerge from shared values among organizations and professional associations within the financial industry. The proliferation of voluntary frameworks, such as those by the International Sustainability Standards Board (ISSB), Sustainability Accounting Standards Board (SASB), and Global Reporting Initiative (GRI), establishes industry norms that shape organizational behaviour even in the absence of formal regulations (Weaver, 2025). As these standards become increasingly institutionalized, organizations face growing pressure to adopt ESG practices to maintain credibility within their professional communities (ISO, 2024).
- **Regulatory pressures:** ESG-related regulations, have created binding obligations for firms to report and manage sustainability risks. Organizations that fail to integrate ESG into risk frameworks risk reputational, financial, and regulatory consequences (Aven, 2016). Aligning with institutional norms and evolving European regulatory frameworks enhances resilience, stakeholder trust, and long-term sustainability (Timuș and Timuș, 2022). The paper discusses European ESG regulations in greater detail in a subsequent section.

4.5 Recent Developments in ESG Integration Literature and Practice

Recent advances in integrating ESG within institutional theory are reflected in both academic research and organizational practice. Scholars increasingly frame ESG as a new institutional logic, positioning it as a foundational set of norms and values that shape organizational legitimacy and behaviour, much like traditional logics such as profit maximization or efficiency (Baldini et al., 2018). However, the literature also highlights the need for further research on how firms manage conflicting institutional logics, particularly when sustainability goals and traditional business priorities clash (Dahlmann and Grosvold, 2017).

In practice, ESG is being formalized through the adoption of reporting standards and governance structures. Yet, there remains a need for companies, especially agile and fast-moving FinTechs, to fully internalize ESG values beyond formal compliance and embed them into their organizational culture and day-to-day decision-making (ISO, 2024).

5. European ESG Regulatory Landscape for Fintech

As noted, regulatory pressure is a major driver of ESG integration into theoretical models. The European Union (EU) has been at the forefront of developing comprehensive regulatory frameworks for sustainable finance. These legislative initiatives have been characterized by a transition from voluntary to mandatory ESG disclosure, driven by concerns about reporting inconsistencies, greenwashing, and social washing practices.

The European Green Deal is central to the EU's sustainability strategy, targeting climate neutrality by 2050. It offers an overarching framework encompassing several key regulations, with the following being particularly relevant to the Fintech sector:

- **Corporate Sustainability Reporting Directive (CSRD):** Expands ESG reporting requirements for all large and listed companies, requiring FinTech companies to disclose detailed sustainability impacts (Directive (EU) 2022/2464).

- **Sustainable Finance Disclosure Regulation (SFDR):** Mandates financial institutions, including FinTech firms, to disclose how sustainability risks are considered in their financial products (Regulation (EU) 2019/2088).
- **Corporate Sustainability Due Diligence Directive (CSDDD):** Introduces mandatory due diligence obligations for large companies, requiring FinTechs to identify, prevent, and mitigate adverse human rights and environmental impacts across their operations and value chains (Directive (EU) 2024/1760).
- **EU Taxonomy Regulation:** Provides criteria to classify environmentally sustainable economic activities, guiding FinTech companies in aligning with sustainability objectives (Regulation (EU) 2020/852).

Together, these regulations demonstrate the EU's commitment to embedding sustainability into the financial sector and the wider economy.

6. Challenges and Opportunities of ESG Integration for FinTech

FinTech companies face distinct challenges and opportunities when integrating ESG considerations into their risk management frameworks.

Challenges:

- **Resource constraints:** ESG integration can be costly and complex for small or early-stage FinTechs, which often lack the compliance capacity and financial resources needed to effectively manage ESG performance (Martiny et al., 2024).
- **Regulatory uncertainty:** ESG regulations often target large firms, leaving many FinTechs uncertain about their specific obligations (Directive (EU) 2024/1760).
- **Data and measurement gaps:** FinTechs frequently struggle with collecting and analyzing ESG data due to the lack of standardized metrics and methodologies (Baldini et al., 2018).

Opportunities:

- **ESG as a market differentiator:** Strong ESG credentials can attract impact investors, partners, and ethically minded customers (Ortas, Álvarez and Garayar, 2015).
- **Tech-enabled ESG solutions:** FinTechs can lead in developing digital tools for ESG reporting, carbon tracking, or ethical investing (EU Fintechs, 2024).
- **Agility and adaptability:** FinTechs can integrate ESG faster than legacy institutions if driven by purpose and leadership (BDO, 2022).

As seen above, the unique position of FinTech companies at the intersection of finance and technology creates both specific challenges in ESG integration and distinctive opportunities to lead in this space.

7. Conclusions

This paper highlights several key findings:

- **Integration of ESG in risk management:** ESG considerations are becoming an essential part of risk management, with growing complexity in decision-making and an increasing focus on long-term, multi-criteria risks like environmental impact, social issues, and governance factors.
- **Challenges and opportunities for FinTech:** While FinTech firms face regulatory uncertainties and limited resources, they possess unique opportunities to lead in the ESG space due to their flexibility and innovative capabilities.

- **The need for evolution of theories:** Traditional economic and risk management theories must further evolve to reflect the growing significance of ESG. These theories need to incorporate new dimensions like deep uncertainty, long-term perspectives, and complex stakeholder relationships to remain applicable.

Integrating ESG into risk management is no longer optional. This paper contributes to theoretical advancement by reinterpreting foundational theories through an ESG lens, proposing a conceptual framework aligned with regulatory dynamics, and presenting a typology to guide practical application in FinTech. These insights lay the groundwork for developing ESG-oriented risk strategies that are both theoretically grounded and responsive to real-world pressures, providing a robust foundation for FinTech companies to implement resilient and responsible ESG practices.

For practitioners, the proposed framework offers actionable guidance for embedding ESG into risk management processes, helping FinTech companies navigate regulations, enhance stakeholder trust, and achieve long-term sustainability. Future research should aim to further refine and empirically validate this framework across different FinTech contexts, ensuring that ESG risk strategies remain adaptive amid evolving regulations and stakeholder expectations.

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