



Navigating the Financial Ecosystem: A Guide for Non-Financial Firms

**Bank & Finance
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Preface

In recent years, the boundaries between finance, technology, and the real economy have become increasingly blurred. Liquidity crises, cyberattacks, supply-chain disruptions, and regulatory shifts now reverberate through global markets with unprecedented speed. Events once confined to financial institutions rapidly affect manufacturers, exporters, retailers, and households.

This report—*Navigating the Financial Ecosystem: A Guide for Non-Financial Firms*—emerges from that reality. It builds on the analytical foundation developed in the **Bank & Finance Deep-Dive Series (2023–2025)**, which has examined the transformation of global finance through five interdependent layers: **Information, Infrastructure, Innovation, Integration, and Governance**. Together, these layers form the architecture of a complex financial ecosystem that underpins modern economies.

While previous studies in the series focused on systemic stability, this volume translates the framework into **practical insights for non-financial firms**. Its goal is simple yet ambitious: to help companies understand how the financial ecosystem affects their strategic decisions—and how they can turn that understanding into competitive advantage.

Traditionally, corporate risk management centered on operational and market risks, but growing interconnection now exposes firms to **ecosystem risks**—from data integrity and payment infrastructures to digital innovation, global capital flows, and regulatory change—that rarely act in isolation; they interact, amplify, and sometimes cascade across sectors and borders.

By viewing finance as an **ecosystem rather than a sector**, companies can better anticipate where vulnerabilities lie, how shocks may propagate, and where opportunities for innovation and resilience emerge. Each layer of the ecosystem—

- **Information:** the flow of data and trust,
- **Infrastructure:** the plumbing of finance and payments,
- **Innovation:** the adoption of new financial technologies,
- **Integration:** the web of global capital and liquidity, and
- **Governance:** the rules and norms that sustain legitimacy—offers both a lens of analysis and a lever for action.

This report is written for **executives, boards, and policymakers** seeking to bridge strategy and finance in an age of systemic interdependence. It proposes diagnostic tools, stress-testing methods, and management checklists that translate complex global dynamics into actionable decisions at the firm level. It also highlights how resilience—once seen as defensive—is now a source of strategic differentiation.

At Bank & Finance, we believe that understanding the financial ecosystem is no longer the domain of financiers alone. It is a shared responsibility—and an opportunity—for every organization that seeks to thrive amid uncertainty, complexity, and change.

Dr. Alberto Ortiz Bolaños

General Director

Bank & Finance Consulting Group

Mexico City, October 2025



Table of Contents

Preface

Executive Summary

1. Introduction and Strategic Context

- 1.1 From Financial Users to Ecosystem Participants
- 1.2 What the Financial Ecosystem Is and Why It Matters
- 1.3 The Real-Economy Transmission Mechanism

2. The Information Layer: Competing on Truth, Transparency, and Trust

- 2.1 Information as a Strategic Asset
- 2.2 Key Risks in the Information Layer
- 2.3 Strategic Levers for Firms
- 2.4 Managerial Checklist

3. The Infrastructure Layer: The Hidden Plumbing of Corporate Finance

- 3.1 Financial Infrastructure Dependencies
- 3.2 Risks and Bottlenecks
- 3.3 Strategic Levers for Firms
- 3.4 Managerial Checklist

4. The Innovation Layer: Financial Technologies and Corporate Adaptation

- 4.1 The Transformation of Corporate Finance
- 4.2 Opportunities and Threats
- 4.3 Strategic Levers for Firms
- 4.4 Managerial Checklist

5. The Integration Layer: Global Capital, Local Exposure

- 5.1 Financial Globalization and Fragmentation
- 5.2 Transmission of Global Liquidity
- 5.3 Strategic Levers for Firms
- 5.4 Managerial Checklist

6. The Governance Layer: Regulation, Policy, and Reputation

- 6.1 Expanding Regulatory Perimeters
- 6.2 The Geopolitical Dimension
- 6.3 Strategic Levers for Firms
- 6.4 Managerial Checklist

7. Integrating the Layers: The Financial Ecosystem Exposure Map

- 7.1 Cross-Layer Vulnerabilities
- 7.2 Building the Firm's Ecosystem Exposure Map
- 7.3 Sectoral Illustrations



8. The Ecosystem Stress-Testing Framework

8.1 Scenario Construction

8.2 Measuring Impact

8.3 Interpreting Results and Building Foresight

9. From Risk to Strategic Advantage

9.1 Building Ecosystem Intelligence

9.2 Turning Foresight into Value

9.3 Institutionalizing Ecosystem Intelligence

10. Conclusions and Recommendations

10.1 Key Takeaways from the Five Layers

10.2 Strategic Recommendations for Firms

10.3 Implications for Boards and Policymakers

10.4 The Road Ahead

11. References

12. Appendices

Appendix A. Methodology and Data Sources

Appendix B. Glossary of Terms

Appendix C. Source–Exhibit Matrix

Appendix D. Financial Ecosystem Exposure Dashboard Template

Appendix E. Board Briefing Supplement – “Navigating the Financial Ecosystem”

List of Figures

- Figure 1** From Financial Risk to Strategic Advantage
- Figure 2** Report Roadmap and Methodology
- Figure 3** The Five-Layer Financial Ecosystem and its Transmission Channels to Firms
- Figure 4** Information Integrity Value Chain for Firms
- Figure 5** Corporate Financial Plumbing: Key Nodes and Vulnerabilities
- Figure 6** Adoption Curve of Financial Innovation by Non-Financial Firms
- Figure 7** Financial Spillover Pathways to Firms
- Figure 8** Mapping the Global Regulatory and Policy Landscape
- Figure 9** Cascade Diagram: Inter-Layer Risk Propagation
- Figure 10** Corporate Ecosystem Stress-Testing Loop
- Figure 11** Ecosystem Awareness and Firm Performance
- Figure 12** The Five Layers Revisited: From Risk to Strategic Advantage

List of Tables

- Table 1** Channels Linking Financial Ecosystem Risks to Corporate Outcomes
- Table 2** Information-Layer Self-Assessment Matrix
- Table 3** Infrastructure-Layer Dependency and Resilience Map
- Table 4** Innovation Readiness and Ecosystem Engagement
- Table 5** Integration-Layer Risk Management Toolkit
- Table 6** Governance-Layer Compliance and Policy Exposure Map
- Table 7** Financial Ecosystem Exposure Matrix
- Table 8** Stress-Test Scenario Summary and Response Triggers
- Table 9** Institutionalizing Ecosystem Intelligence
- Table 10** From Awareness to Action: A Firm-Level Roadmap

List of Boxes

- Box 1** Case Study: Cyber-attack on European Airlines & Airports – September 2025
- Box 2** When the Pipes Freeze: The March 2020 Market Dislocation
- Box 3** AI in Corporate Risk Management – Promise and Pitfalls
- Box 4** Emerging-Market Manufacturer: Surviving a Dollar Shortage
- Box 5** Corporate Reputation and the Cost of Non-Compliance
- Box 6** Ecosystem Exposure in the Energy Sector
- Box 7** Case Illustration: Simulating a Dual Shock
- Box 8** Example: CFO Dashboard for Ecosystem Monitoring



List of Acronyms

AI	Artificial Intelligence
BIS	Bank for International Settlements
BoE	Bank of England
CFO	Chief Financial Officer
COSO	Committee of Sponsoring Organizations of the Treadway Commission
CSRD	Corporate Sustainability Reporting Directive
ERC	Ecosystem Risk Committee
ESG	Environmental, Social, and Governance
EU	European Union
FSB	Financial Stability Board
FX	Foreign Exchange
GRI	Global Reporting Initiative
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IT	Information Technology
OECD	Organisation for Economic Co-operation and Development
PwC	PricewaterhouseCoopers
R&D	Research and Development
TCFD	Task Force on Climate-related Financial Disclosures



Executive Summary

When Collins Aerospace's systems crashed in September 2025, airlines couldn't board passengers. When March 2020's liquidity froze, solvent companies couldn't pay suppliers. Why? Because non-financial firms no longer just **use** finance—they **depend** on an ecosystem few executives truly understand.

Finance has become the connective tissue of the global economy. For non-financial firms, the stability, accessibility, and transparency of the financial system now shape every strategic decision—from sourcing and investment to innovation and reputation management.

Yet few corporate leaders see the financial system for what it truly is: an **ecosystem** of interdependent layers—**Information, Infrastructure, Innovation, Integration, and Governance**—that continuously interact and evolve. Shocks in one layer can quickly cascade across others, affecting liquidity, operations, and trust.

This report provides a **strategic guide** for non-financial firms to understand, measure, and manage their exposure to this financial ecosystem. Drawing on the analytical architecture developed in the **Bank & Finance Deep-Dive Series (2023–2025)**, it translates complex macro-financial dynamics into **practical tools** that firms can use to strengthen resilience and competitiveness.

1. Purpose of the Report

The goal of *Navigating the Financial Ecosystem* is not to turn executives into financiers, but to enable them to:

- I. **Understand** how the financial ecosystem influences corporate performance.
- II. **Diagnose** their firm's exposure to shocks across the five layers.
- III. **Integrate** resilience and foresight into strategy and governance.
- IV. **Leverage** ecosystem intelligence as a source of sustainable advantage.

In doing so, the report bridges two worlds: the prudential language of financial stability and the operational realities of corporate management.

2. Structure and Methodology

The report follows the logic of the **Five-Layer Financial Ecosystem Framework**, developed and refined by Bank & Finance. Each chapter explores one layer through a consistent structure:

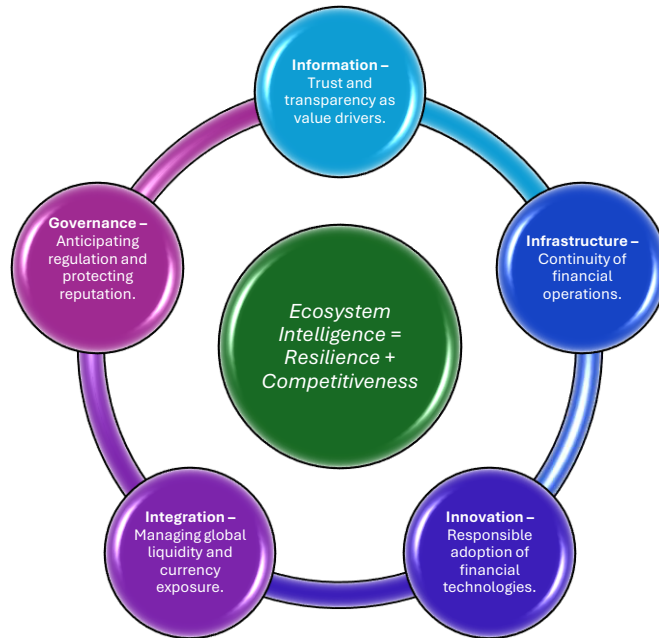
- An explanation of its relevance to firms.
- The main risks and dependencies involved.
- Strategic levers and management checklists.
- Case studies and figures illustrating practical applications.

Section 7 integrates all layers through the Financial Ecosystem Exposure Map, providing a panoramic view of inter-layer linkages, while Section 8 introduces an Ecosystem Stress-Testing Framework that

helps firms simulate and prepare for compound shocks. Section 9 then moves beyond risk, showing how “ecosystem intelligence” can deliver lasting strategic advantage.

Figure 1 summarizes the core insight that mastering the financial ecosystem allows firms to transform risk management into a strategic capability.

Figure 1 – From Financial Risk to Strategic Advantage



Source: Bank & Finance elaboration based on BIS (2023); FSB (2024); IMF (2024).

Figure 2 depicts how the report moves from conceptual understanding to practical implementation, guiding firms from awareness to the institutionalization of ecosystem intelligence.

Figure 2 – Report Roadmap and Methodology

Methodology	Section
Understand	1. Introduction and Strategic Context
	2. The Information Layer: Competing on Truth, Transparency, and Trust
	3. The Infrastructure Layer: The Hidden Plumbing of Corporate Finance
	4. The Innovation Layer: Financial Technologies and Corporate Adaptation
	5. The Integration Layer: Global Capital, Local Exposure
	6. The Governance Layer: Regulation, Policy, and Reputation
Integrate	7. Integrating the Layers: The Financial Ecosystem Exposure Map
Stress-Test	8. The Ecosystem Stress-Testing Framework
Adapt	9. From Risk to Strategic Advantage
Institutionalize	10. Conclusions and Recommendations

Source: Bank & Finance elaboration based on Deep-Dive Series methodology (2023–2025).

3. Main Findings

- I. **Financial ecosystems determine corporate outcomes.** Shocks in liquidity, data, or regulation can rapidly affect sales, supply chains, and credit conditions.



- II. **Non-financial firms are active participants, not passive users.** They shape and are shaped by the financial system through their data practices, financing structures, and compliance behavior.
- III. **Risks are interconnected across layers.** Cyber failures, policy shifts, and innovation gaps often reinforce one another, creating compound vulnerabilities.
- IV. **Resilience can be measured and managed.** By mapping exposures and stress-testing scenarios, firms can quantify their ecosystem dependencies and prepare responses.
- V. **Ecosystem intelligence is a strategic asset.** Firms that integrate financial foresight into their governance and planning achieve lower volatility, higher trust, and better long-term performance.

4. Takeaway Messages for Decision-Makers

Dimension	Traditional View	Ecosystem-Aware View
Finance	External environment	Strategic architecture shaping every decision
Risk	Isolated events to be mitigated	Interconnected shocks to be anticipated
Resilience	Defensive measure	Source of competitive advantage
Governance	Compliance obligation	Enabler of legitimacy and long-term value
Information	Reporting requirement	Core asset underpinning trust and valuation
Strategy	Finance as support function	Finance as operating system

5. Navigation Guide:

- **CEOs and Board Directors:** Focus on Sections 1, 7, 9, and 10 for strategic context, integration frameworks, and governance recommendations.
- **CFOs and Treasurers:** Prioritize Sections 3-5 and 8 for infrastructure dependencies, innovation adoption, global exposures, and stress-testing.
- **Risk Officers and Compliance Teams:** Deep-dive into Sections 2, 6, 7, 8, and Appendix D for data governance, regulatory mapping, and dashboard templates.
- **Strategy and Operations Leaders:** Engage with Sections 4, 7, and 9 to understand innovation imperatives, cross-layer vulnerabilities, and competitive advantage pathways.

6. Conclusion

The financial ecosystem has become the operating system of the global economy. Firms that understand its architecture—and their place within it—gain clarity, foresight, and influence. This report offers them the concepts, tools, and practical steps to do so.

For corporate leaders, the message is simple but profound:

“Resilience is not about avoiding turbulence; it is about learning to navigate it.”



1. Introduction and Strategic Context

Non-financial firms often see finance as background noise — a support function or a set of constraints imposed by banks and markets. Yet in today’s world, finance is not merely an external environment: it is the **infrastructure that underpins every strategic decision**. When liquidity tightens, data networks fail, or new regulations reshape access to capital, the effects are immediate and tangible. The “financial ecosystem” is the architecture through which these forces interact.

This section explains why firms must understand that ecosystem, how its structure has evolved, and what it means for strategy and resilience.

1.1 From Financial Users to Ecosystem Participants

For decades, corporate strategy textbooks treated finance as an *input*: firms sought funding to pursue growth, hedge risks, or manage working capital. But the past fifteen years have demonstrated that the financial system’s architecture can itself become a source of disruption (Haldane, 2015; FSB, 2023). Episodes such as the global financial crisis (2008–09), the pandemic liquidity freeze (2020), or the bank runs in 2023 showed that financial shocks propagate quickly into supply chains, employment, and innovation investment.

Non-financial firms are therefore participants—not mere users—of the financial ecosystem. They depend on its infrastructure for payments and credit; on their information layer for market trust; and on their governance for predictable rules. When any of these layers malfunction, the real economy feels the impact through higher financing costs, reduced confidence, and interrupted operations.

Key message: Firms no longer operate *in* the economy and *around* finance; they operate *within* the financial ecosystem.

1.2 What the Financial Ecosystem Is and Why It Matters

The **financial ecosystem** refers to the interdependent system of information, infrastructure, innovation, integration, and governance that enables modern finance to function (Bank & Finance, 2025).

Each layer performs a distinct role:

- **Information Layer:** Generates, validates, and transmits financial data, prices, and trust signals.
- **Infrastructure Layer:** Provides the “pipes” of payments, settlement, and credit intermediation.

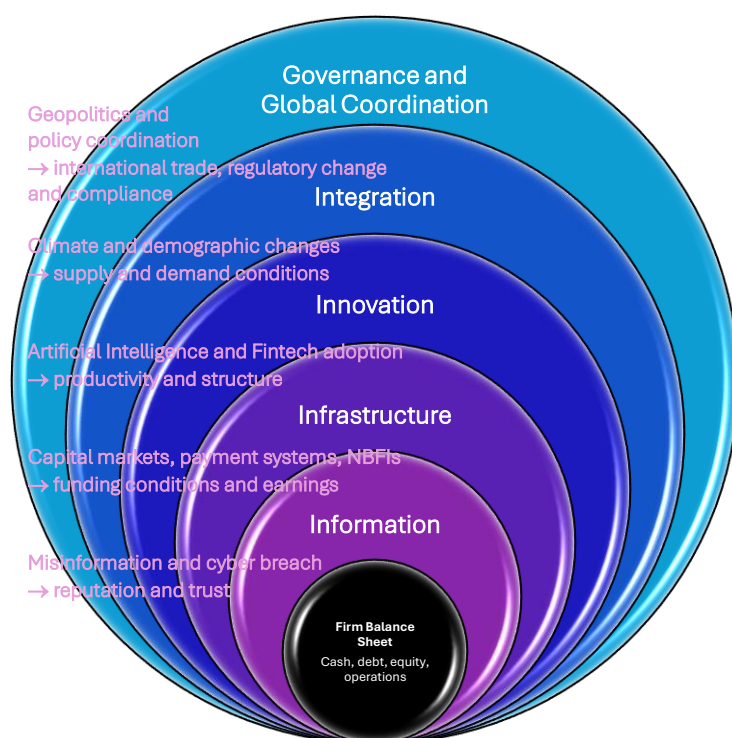
- **Innovation Layer:** Introduces new instruments, platforms, and technologies that reshape financing.
- **Integration Layer:** Connects global markets, investors, and currencies, transmitting liquidity and volatility.
- **Governance Layer:** Sets the rules, standards, and oversight mechanisms that sustain stability and legitimacy.

These layers are not isolated; they **interact constantly**, forming feedback loops. For example, a cyber-incident in the information layer can disrupt infrastructure, trigger market sell-offs, and prompt new regulation.

Conversely, innovation in payments or digital assets can improve efficiency but also challenge governance.

Figure 3 visually conveys how shifts in any layer affect firms' financing, operations, and competitiveness.

Figure 3 – The Five-Layer Financial Ecosystem and its Transmission Channels to Firms



Governance and Global Coordination Layer – The institutional and political order that frames global finance, including financial geopolitics, macro-financial vulnerabilities, and the challenges of global coordination and standards.

Integration Layer – The web of global capital and liquidity that links currencies, investors, and cross-border funding, transmitting financial conditions internationally.

Innovation Layer – The frontier of technological change, encompassing financial innovations such as open finance, artificial intelligence, and quantum technology that redefine opportunities and risks.

Infrastructure Layer – The operational backbones of the financial system, including capital markets, sovereign debt markets, payment systems, digital currencies, non-bank financial institutions (NBFIs), and physical infrastructure finance.

Information Layer – The foundations of trust, integrity, and security in financial information flows, including the quality of data, the integrity of truth, the containment of fraud, and the resilience of digital systems.

Source: Bank & Finance (2025).



Understanding these interconnections helps firms anticipate where shocks might emerge and how they might cascade across systems.

1.3 The Real-Economy Transmission Mechanism

Financial shocks reach non-financial firms through multiple, often subtle, **transmission channels**.

These include changes in credit availability, investor sentiment, payment reliability, currency movements, and compliance costs. Recognizing these channels enables executives to strengthen their corporate balance sheets and operating models before vulnerabilities crystallize (Borio et al., 2020; Claessens & Kose, 2018).

Table 1 presents the channels linking financial ecosystem risks to corporate outcomes. Each ecosystem layer transmits distinct types of risk and opportunity to the real economy. Awareness of these channels allows firms to convert potential shocks into strategic foresight.

Table 1 – Channels Linking Financial Ecosystem Risks to Corporate Outcomes

Ecosystem Source	Transmission Channel	Typical Firm Impact	Strategic Response
Information breakdown	Loss of data integrity, ratings errors, misinformation	Reputational damage, investor mistrust	Strengthen data governance and disclosure
Infrastructure disruption	Payment or clearing failures, bank outages	Liquidity stress, delayed supplier payments	Diversify cash-management channels
Financial innovation shock	Rapid adoption of new platforms or tokens	Obsolescence of legacy processes	Engage in pilot partnerships, build flexibility
Integration volatility	FX or interest-rate swings, capital-flow reversals	Higher funding costs, earnings volatility	Hedge exposures, maintain liquidity buffers
Governance shift	New regulations, sanctions, ESG mandates	Compliance cost, market access risk	Align early with evolving standards

Source: Bank & Finance elaboration based on BIS (2023); IMF (2024); FSB (2023).

Summary of Lessons from Section 1

1. **Finance is a system of systems.** The financial ecosystem comprises five interdependent layers whose behavior affects every firm's operating environment.
2. **Non-financial firms are embedded participants.** Their resilience depends on how well they understand and manage exposures to each layer.



3. **Awareness is a strategic capability.** Firms that map ecosystem linkages—credit, data, infrastructure, and regulation—gain a first-mover advantage when conditions change.

The next section will explore each layer in turn, starting with the **Information Layer**, where trust, transparency, and truth form the foundation of every financial relationship.

2. The Information Layer: Competing on Truth, Transparency, and Trust

Finance begins with information. Prices, ratings, disclosures, and digital signals allow markets to allocate resources and assess risk. When that information is **reliable**, firms gain access to capital and market confidence; when it is **distorted or lost**, trust evaporates, liquidity dries up, and even well-run businesses can suffer.

For non-financial firms, the **Information Layer** of the financial ecosystem determines how they are perceived by lenders, investors, regulators, and customers. It shapes the cost of capital, the credibility of their ESG claims, and their vulnerability to cyber risks. In a digital economy, *information integrity* has become as critical as financial solvency.

2.1 Information as a Strategic Asset

Historically, information was treated as a reporting function—an obligation to regulators and shareholders. Today it is a **strategic differentiator**. Firms that produce consistent, verifiable, and decision-relevant data earn a “trust premium” in markets (Bozovic & Hadfield, 2021). Those that neglect data integrity face reputational penalties and higher financing costs.

Reliable information supports three pillars of competitive strength:

1. **Access to Finance:** Credit ratings, audited statements, and ESG metrics determine funding conditions.
2. **Operational Efficiency:** Internal data governance ensures accurate pricing, planning, and performance measurement.
3. **Reputation and Stakeholder Trust:** Transparent reporting builds brand equity and social license to operate.

As financial systems become more data-driven, **transparency and truthfulness** are no longer optional—they are sources of value creation.

2.2 Key Risks in the Information Layer

Information risks arise when data is manipulated, incomplete, or compromised. Three are particularly salient for non-financial firms:

- **Cyber Vulnerability:** Increasing interconnection exposes firms to data breaches and ransomware that can disrupt operations and erode trust.
- **Misinformation and Greenwashing:** Inaccurate ESG or sustainability claims damage credibility and may lead to regulatory sanctions (OECD, 2023).
- **Data Fragmentation:** Inconsistent internal systems create conflicting signals, undermining strategic coherence and external reporting quality.

Box 1 highlights how breaches in the Information Layer directly translate into financial losses and trust erosion. Also, it demonstrates how a cyber event originating in the *Information Layer* cascaded into the *Infrastructure Layer* (operational paralysis), affected the *Integration Layer* (network connectivity and investor flows), and tested the *Governance Layer* (disclosure and accountability). The case reminds non-financial firms that resilience of digital and data infrastructures is no longer a technical detail but a strategic determinant of value.

Box 1 – Case Study: Cyber-attack on European Airlines & Airports – September 2025

In mid-September 2025, a ransomware attack targeting **Collins Aerospace**, a major provider of passenger-processing systems for multiple European airports—including London Heathrow, Berlin Brandenburg, and Brussels Airport—caused widespread operational disruption across Europe’s aviation network (Reuters, 2025).

The breach disabled key components of the company’s cloud-based *MUSE* platform, which manages check-in, boarding, and baggage-tagging for dozens of airlines. Airports and ground-handling firms were forced to revert to manual procedures; Brussels Airport cancelled nearly 75 flights over the weekend and requested further cancellations on Monday to ease congestion. Although flight-safety systems were unaffected, the episode stranded thousands of passengers and eroded public confidence in airline digital resilience.

Market reaction was swift: airline share prices in affected carriers briefly dipped 2–4 percent, insurers announced a review of cyber-coverage terms, and regulators opened inquiries into third-party technology dependencies. For firms across sectors, the incident underscored how a single vendor failure can propagate through multiple ecosystem layers.

Key Lessons:

1. Vulnerabilities often reside in **support-service infrastructure** rather than core operations. Critical suppliers can become single points of failure.
2. **Information-layer shocks** (data breaches) quickly evolve into **financial-layer consequences**—higher costs, reputational loss, and investor scrutiny.
3. **Preparedness and transparency**—through contingency plans, redundant systems, and open communication—determine how fast confidence is restored.

Source: Bank & Finance elaboration based on Reuters (2025) “Cyberattack causes flight delays, cancellations at Brussels Airport,” 20 September 2025; SecurityWeek (2025) “European airport cyberattack linked to HardBit ransomware,” 21 September 2025; OECD (2024).

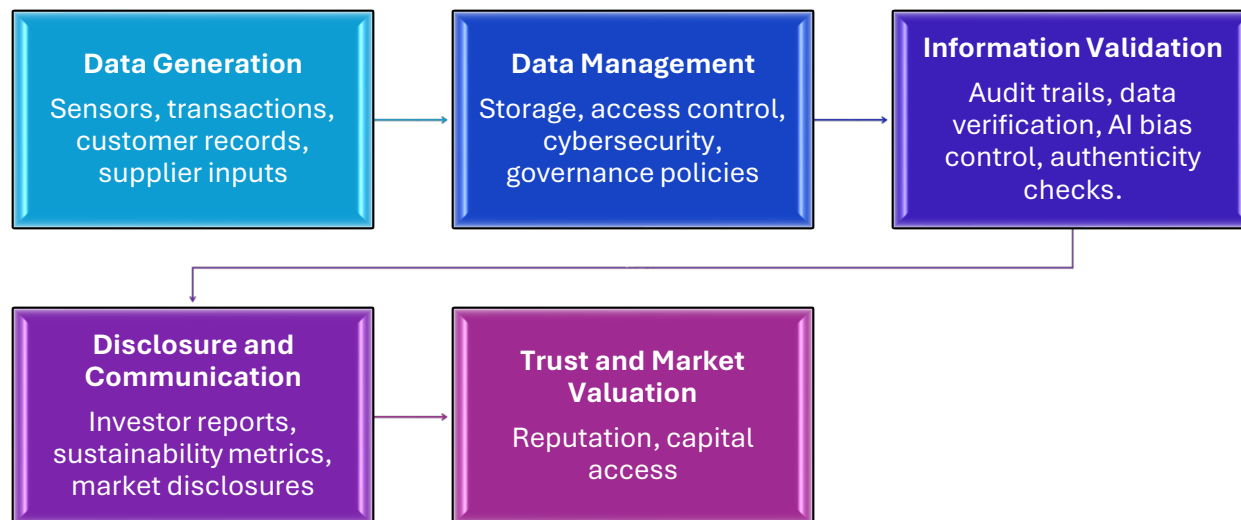
2.3 Strategic Levers for Firms

Leading firms treat information governance as a board-level priority. Three practical levers emerge:

1. **Build a “Single Source of Truth.”** Integrate financial, operational, and ESG data into a coherent digital backbone. Eliminate manual reconciliations and shadow databases.
2. **Embed Cyber and Data Integrity in Corporate Culture.** Train employees, not just IT departments, on data responsibility. The weakest link is often human.
3. **Adopt Trusted Standards and Third-Party Assurance.** Use recognized reporting frameworks (IFRS Sustainability Disclosure, TCFD, GRI). Verified disclosures signal reliability to investors and lenders.

Figure 4 shows how information moves from internal systems to external trust—and where integrity can break down or be strengthened.

Figure 4 – Information Integrity Value Chain for Firms



Source: Bank & Finance elaboration based on Bozovic & Hadfield (2021); OECD (2023); FSB (2023).

2.4 Managerial Checklist

Table 2 provides the Information-layer self-assessment matrix that enables firms to perform a quick diagnostic of their information-layer maturity, set targets, and assign accountability.

Table 2 – Information-Layer Self-Assessment Matrix

Dimension	Key Question	Current Status (1–5)	Target (1–5)	Action Plan
Data Governance	Do we maintain a single, validated source of financial and ESG data?			
Cyber Resilience	Are information-security protocols tested and updated regularly?			
Disclosure Quality	Are our reports consistent with global standards (IFRS, TCFD, GRI)?			
Stakeholder Trust	Do investors and customers perceive our information as credible?			
Crisis Communication	Do we have protocols for rapid, transparent disclosure in case of incidents?			

Source: Bank & Finance (2025) adaptation of ISO 27001 and COSO ERM frameworks.

Summary of Lessons from Section 2

1. **Information integrity equals financial integrity.** Markets reward firms whose data and disclosures can be trusted.
2. **Cyber resilience is strategic, not technical.** Protecting data protects market confidence and valuation.
3. **Transparency builds competitive advantage.** Reliable information lowers financing costs, enhances reputation, and attracts partners.

As one CEO interviewed for this study put it, “Investors no longer buy our story; they buy our data.”

The next section explores the **Infrastructure Layer**—the financial “plumbing” that enables firms to move money, manage liquidity, and connect to the broader economy.

3. The Infrastructure Layer: The Hidden Plumbing of Corporate Finance

Every modern firm depends on a complex network of financial “pipes” that move money, settle transactions, and provide access to liquidity. This **Infrastructure Layer** of the financial ecosystem includes banks, payment systems, clearinghouses, custodians, and digital platforms that connect firms to their suppliers, employees, and markets.



Like physical infrastructure, these systems are often invisible—until they fail. When they do, even profitable firms can face liquidity stress or operational paralysis. Understanding this layer helps managers identify **critical dependencies** and build the resilience to keep business moving, even under stress.

3.1 Financial Infrastructure Dependencies

Corporate finance now relies on a **multi-layered infrastructure** that spans the banking system, capital markets, and digital intermediaries. Typical non-financial firms use:

- **Banking infrastructure** for deposits, credit lines, and treasury operations.
- **Payments and settlement networks** for supplier and payroll transactions.
- **Supply-chain finance platforms** for early payment or factoring.
- **Custodial and clearing institutions** for securities and derivatives.
- **Cloud and fintech service providers** for cash management, invoicing, and compliance.

These systems form an *ecosystem within the ecosystem*: interlinked, highly efficient—and increasingly concentrated (FSB, 2023). A disruption at any node can propagate quickly across the corporate sector.

In a recent survey, over 70% of CFOs reported that they could not operate for more than five days if their primary payment provider were offline (BoE, 2022).

3.2 Risks and Bottlenecks

Firms face three broad categories of **infrastructure risk**:

1. **Liquidity Disruptions:** When banks or markets freeze, firms lose access to short-term funding, even if solvent.
2. **Concentration Risk:** Heavy reliance on a single bank, clearinghouse, or digital provider increases vulnerability to outages.
3. **Operational Failures:** Cyber incidents, settlement errors, or cloud outages can halt payments and trade flows.

Box 2 illustrates how a breakdown in the *Infrastructure Layer*—the pipes of global finance—can paralyze even well-run non-financial companies. The event demonstrated the importance of mapping internal and external liquidity channels and integrating stress-testing into treasury governance. Understanding how “the pipes” connect to a firm’s operations is no longer optional; it is a prerequisite for resilience.

Box 2 – When the Pipes Freeze: The March 2020 Market Dislocation

In March 2020, as the COVID-19 pandemic accelerated from a public-health crisis to a global financial panic, markets experienced what officials later called the “dash for cash.” Within days, investors sold even the safest assets to obtain liquidity. Corporate bond funds faced record redemptions, money-market liquidity evaporated, and firms rushed to draw down committed credit lines before banks could restrict access.

For many non-financial companies, the impact was immediate and unexpected. Despite strong balance sheets and steady cash-flow projections, access to short-term funding vanished. Commercial-paper markets froze; issuance spreads spiked; and refinancing plans collapsed almost overnight. Even firms with investment-grade ratings found that the cost of borrowing soared, not because of solvency concerns but because the financial plumbing itself had seized up.

The episode revealed that modern corporate finance depends on a complex and often invisible infrastructure of liquidity, collateral, and settlement systems. When that infrastructure strains, firms are exposed regardless of fundamentals.

Policymakers responded with extraordinary measures. Central banks reopened and expanded liquidity facilities, governments launched credit-guarantee schemes, and regulators relaxed leverage and liquidity ratios. These interventions restored stability—but only after several weeks of severe stress.

Lesson: The 2020 market dislocation underscored that firms cannot rely solely on external backstops or central-bank intervention. Effective **liquidity resilience begins inside the firm**—through diversified funding sources, accurate cash-flow forecasting, and a clear understanding of how operational disruptions or market freezes could cascade across the corporate balance sheet.

Source: Bank & Finance elaboration based on BIS (2021); FSB (2021); IMF (2020); Bank of England (2021).

3.3 Strategic Levers for Firms

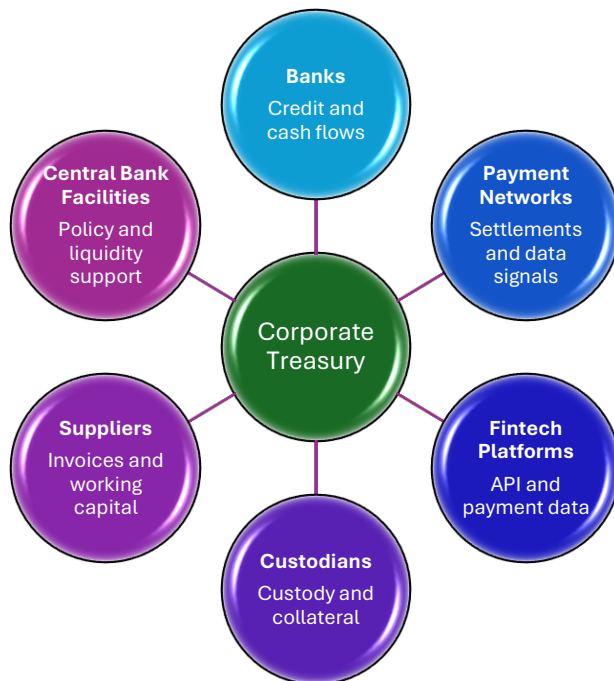
To manage infrastructure risk, firms can take several **practical steps**:

1. **Map and Diversify Financial Counterparties.** Identify key intermediaries—banks, payment processors, fintech platforms—and assess their systemic importance. Avoid single points of failure.
2. **Strengthen Treasury Resilience.** Maintain multiple liquidity sources and emergency procedures for fund transfers, collateral posting, and payroll continuity.
3. **Test Contingency and Cyber-Recovery Plans.** Periodically simulate payment-system or bank outages. Evaluate alternative channels and manual fallback options.

4. **Engage in Dialogue with Providers.** Large corporates can negotiate information-sharing and crisis-response protocols with banks and fintech partners.

Figure 5 shows the corporate financial plumbing illustrating how financial flows circulate through multiple intermediaries and where bottlenecks can emerge.

Figure 5 – Corporate Financial Plumbing: Key Nodes and Vulnerabilities



Source: Bank & Finance elaboration based on FSB (2023); BoE (2022); BIS (2021).

3.4 Managerial Checklist

Table 3 provides the infrastructure-layer dependency and resilience map that helps firms visualize where their financial “pipes” are most concentrated and where resilience measures are needed.

Summary of Lessons from Section 3

1. **Financial infrastructure is invisible until it fails.** Operational continuity depends on understanding and diversifying the systems that move money and data.
2. **Concentration is the new fragility.** Overreliance on a single bank or fintech partner can expose firms to systemic risk.
3. **Resilience is strategic, not only technical.** Treasury diversification, contingency planning, and partnership management are board-level priorities.



Table 3 – Infrastructure-Layer Dependency and Resilience Map

Area	Key Question	Current Exposure	Resilience Actions
Banking Relationships	How concentrated is our access to credit and payments?		Establish multi-bank arrangements.
Payment Systems	Do we have alternate channels or providers for critical payments?		Set up secondary routing and manual fallback.
Supply-Chain Finance	What share of suppliers rely on one financing intermediary?		Diversify platforms; maintain emergency liquidity buffer.
Custody and Settlement	Are asset holdings or derivatives dependent on a single custodian?		Review legal agreements; build redundancy.
Digital Service Providers	Are treasury and ERP systems cloud-dependent on one vendor?		Implement backup servers; ensure data portability.

Source: Bank & Finance (2025) adaptation of COSO ERM (2017) and FSB (2023).

The next section examines the **Innovation Layer**, exploring how emerging financial technologies—such as tokenization, AI, and digital finance—are reshaping corporate opportunities and risks.

4. The Innovation Layer: Financial Technologies and Corporate Adaptation

Innovation is reshaping the financial ecosystem at an unprecedented pace. Artificial intelligence, tokenization, digital currencies, and real-time data analytics are transforming how capital is raised, transactions are executed, and risks are managed. For non-financial firms, these developments offer opportunities to **reduce costs, enhance transparency, and access new markets**—but also create new **dependencies, competitive pressures, and regulatory uncertainties**.

The **Innovation Layer** captures these transformations. It represents the frontier where technology and finance converge, influencing how firms fund themselves, manage liquidity, and interact with their customers and suppliers.

4.1 The Transformation of Corporate Finance

In traditional finance, corporate treasury functions relied on periodic reporting, manual reconciliations, and bank intermediation. Today, that model is being replaced by **digitally integrated financial ecosystems**. Firms now interact with:



- **Fintech lenders** offering faster, data-driven credit.
- **Tokenized assets** that enable fractional ownership and programmable capital flows.
- **Artificial intelligence (AI)** tools that optimize liquidity management and credit scoring.
- **Blockchain-based payments and smart contracts** that automate transactions and reduce counterparty risk.

These innovations create efficiency and inclusion, but they also **blur the boundaries** between financial and non-financial entities (FSB, 2023; OECD, 2024). For managers, the challenge is to adopt beneficial innovations without increasing exposure to volatility, fragmentation, or cyber risks.

In the coming decade, digital transformation will likely redefine what it means to be “financially sophisticated.” The winners will be those who combine technological adoption with disciplined risk management.

4.2 Opportunities and Threats

Innovation generates both **strategic opportunities** and **systemic threats** for firms:

Opportunities

- **Efficiency and Cost Reduction:** Instant settlement and AI-driven cash flow prediction improve working capital.
- **Financial Inclusion and Diversification:** Tokenized platforms open access to alternative investors and supply-chain financing.
- **Strategic Intelligence:** Advanced analytics allow firms to anticipate customer and market behavior.

Threats

- **Regulatory Uncertainty:** Rapid innovation often outpaces rules, creating compliance risks.
- **Technological Obsolescence:** Early adopters can be locked into outdated or incompatible systems.
- **Cyber and Data Risks:** Each new interface expands the attack surface.

Box 3 illustrates how AI can strengthen corporate decision-making, but without governance and explainability, it can introduce new forms of risk. It exemplifies the dual nature of innovation in the financial ecosystem: it can strengthen the *Information* and *Innovation Layers* through precision and speed, yet weaken the *Governance Layer* if deployed without oversight. Responsible AI in finance requires transparency, human judgment, and cross-disciplinary governance.

Box 3 – AI in Corporate Risk Management: Promise and Pitfalls

In 2024, a multinational consumer-goods company introduced an artificial-intelligence platform to forecast demand, sales, and cash-flow patterns across its global operations. By combining internal data from ERP systems with external variables—weather, retail foot traffic, and online sentiment—the model improved forecasting accuracy by roughly 25 percent.

The gains were immediate: the firm optimized inventory, reduced working-capital needs, and refined its foreign-exchange hedging strategy. Treasury teams could anticipate liquidity peaks and troughs weeks in advance, freeing cash for strategic investments. For a time, the project was hailed internally as a breakthrough in digital risk management—an illustration of how AI can reinforce the **Information** and **Innovation Layers** of the financial ecosystem by transforming data into actionable foresight.

A year later, however, the same system produced an unexpected controversy. Its supplier-risk module, designed to detect early warning signals of financial distress, flagged several small vendors in emerging markets as “high risk.” The algorithm had inadvertently absorbed biases from historical data that over-represented smaller and non-OECD suppliers in negative categories. When automatic alerts reached procurement teams, several contracts were suspended. Local media coverage of the incident portrayed the company as discriminatory, and regulators requested an internal audit of its AI governance framework.

The episode reversed much of the reputational goodwill the project had initially generated. Executives learned that algorithmic performance without transparency could be as damaging as a data breach or compliance failure.

Lessons:

1. **Promise:** AI enhances forecasting, liquidity planning, and operational efficiency when embedded in sound data architecture and cross-functional collaboration.
2. **Pitfall:** Without governance and explainability, AI can amplify biases, damage trust, and expose firms to regulatory and reputational risk.
3. **Strategic Imperative:** Firms must treat AI as part of corporate governance—not just IT. Ethical review, model validation, and accountability mechanisms should be standard features of digital-finance adoption.

Source: This case is illustrative and based on composite examples discussed in McKinsey (2023), BIS (2023), and OECD (2024). It does not describe a single identifiable firm but the “AI forecasting success” element draws from public examples such as **Unilever**, **Nestlé**, and **Procter & Gamble**, which have publicly discussed AI-driven demand planning and inventory optimization. The “AI bias and supplier-risk controversy” element synthesizes documented episodes in other sectors — notably **financial-services firms** and **technology-driven procurement systems** — where algorithmic bias or opaque models led to reputational scrutiny.

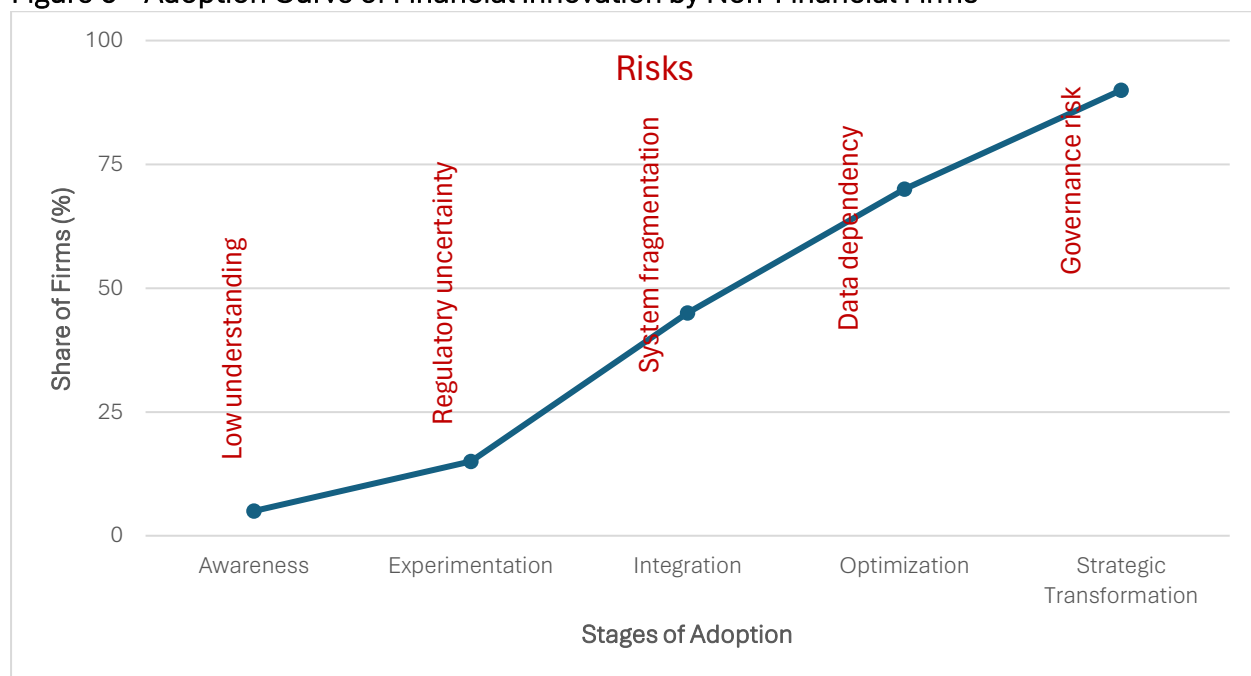
4.3 Strategic Levers for Firms

To capture innovation’s benefits while containing its risks, firms should focus on three strategic levers:

1. **Selective Adoption:** Evaluate new financial technologies not for novelty but for *fit*—does it improve efficiency, transparency, or risk management?
2. **Partnership Ecosystems:** Collaborate with fintechs, banks, and technology providers through *pilot programs* or sandboxes before scaling up. This mitigates technology lock-in.
3. **Governance of Innovation:** Treat digital finance as a governance issue. Assign accountability for innovation risk, ensure cross-departmental coordination, and establish ethical guidelines for AI use.

Figure 6 Illustrates how most firms progress through stages of innovation adoption and where the inflection point between experimentation and strategic integration typically occurs.

Figure 6 – Adoption Curve of Financial Innovation by Non-Financial Firms



Source: Bank & Finance elaboration based on McKinsey (2023); BIS (2023); OECD (2024). Percentages are indicative and derived from stylized patterns of technology diffusion reported by McKinsey (2023), BIS (2023), and OECD (2024). They do not represent precise survey values.

4.4 Managerial Checklist

Table 4 provides the innovation readiness and ecosystem engagement self-evaluation. This tool allows managers to assess their innovation readiness and identify gaps in governance, partnerships, or digital capability.

Table 4 – Innovation Readiness and Ecosystem Engagement

Dimension	Key Question	Readiness (1–5)	Strategic Priority	Action Plan
Digital Infrastructure	Are our treasury and ERP systems compatible with new financial technologies?			
Partnership Management	Do we engage fintechs and technology providers through structured pilots?			
Governance and Ethics	Do we have clear accountability for innovation and AI-related risks?			
Regulatory Foresight	Are we tracking changes in fintech, tokenization, and data standards?			
Organizational Culture	Are employees empowered to innovate responsibly while managing risk?			

Source: Bank & Finance (2025) adaptation based on FSB (2023) and OECD (2024).

Summary of Lessons from Section 4

1. **Financial innovation is no longer optional.** It is reshaping access to capital, liquidity, and customer trust.
2. **Adoption without governance creates fragility.** Firms must combine experimentation with clear accountability and ethical oversight.
3. **Partnerships outperform isolation.** The most successful adopters co-create innovation with financial and technology partners.

As financial technologies continue to diffuse, the line between “using finance” and “participating in finance” will blur further. The next section turns to the **Integration Layer**, explaining how globalization, cross-border capital flows, and financial fragmentation transmit risks and opportunities to firms around the world.

5. The Integration Layer: Global Capital, Local Exposure

In a deeply interconnected world, financial decisions made in one region can affect firms thousands of kilometers away. A policy rate change by the U.S. Federal Reserve, new sanctions in Europe, or liquidity tightening in China can alter borrowing costs, exchange rates, and capital flows across continents within hours.



The **Integration Layer** represents this web of global interconnections. It channels both **opportunity and vulnerability**: access to international capital and markets, but also exposure to shocks and fragmentation. For non-financial firms, understanding this layer is key to navigating globalization's financial side — one that operates largely beyond their direct control but shapes their daily reality.

5.1 Financial Globalization and Fragmentation

Globalization has enabled firms to tap diverse sources of finance — cross-border loans, bond markets, and foreign direct investment — while integrating supply chains and customers across jurisdictions. Yet this integration has also produced new **channels of contagion**.

- **Capital markets** now transmit volatility quickly across borders.
- **Exchange rate movements** can alter costs and competitiveness overnight.
- **Regulatory divergence** between jurisdictions increases compliance complexity.

In recent years, **financial fragmentation** has intensified. Geopolitical tensions, sanctions, and data-localization rules are reconfiguring global capital flows (IMF, 2024; BIS, 2023). What was once a seamless global network is becoming a patchwork of partially connected systems.

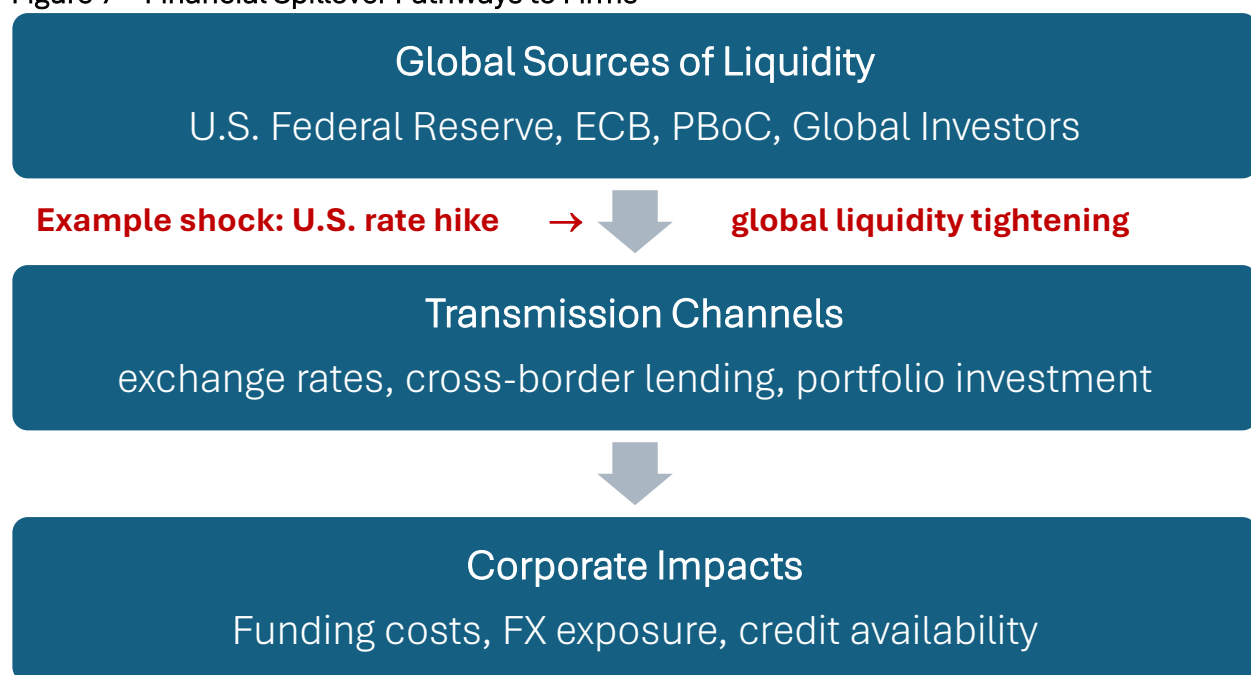
Firms no longer face a single global financial environment; they must navigate multiple, sometimes conflicting, financial spheres.

5.2 Transmission of Global Liquidity

Changes in global liquidity — the availability of funding in key currencies — have profound effects on non-financial firms. When central banks tighten policy, global investors retreat from risk, and borrowing costs rise even for firms that never issue international debt. Dollar liquidity, in particular, acts as the **global tide** of finance: when it recedes, firms across emerging markets feel the pull.

Figure 7 illustrates how global financial tightening or easing propagates into local corporate conditions.

Figure 7 – Financial Spillover Pathways to Firms



Source: Bank & Finance elaboration based on IMF (2024); BIS (2023); FSB (2024).

A BIS study found that a 100-basis-point increase in U.S. interest rates typically raises corporate borrowing costs in emerging markets by 40–60 basis points within six months (BIS, 2023).

5.3 Strategic Levers for Firms

While global financial shifts are exogenous, firms are not powerless. They can **anticipate, hedge, and adapt**.

1. **Monitor Global Financial Indicators.** Incorporate macro-financial variables — interest rate differentials, dollar index, credit spreads — into strategic planning.
2. **Build Natural and Financial Hedges.** Match currency of revenues and costs; use derivatives selectively for residual exposure.
3. **Diversify Funding and Market Access.** Avoid overreliance on a single currency or investor base. Explore local-currency bonds, blended finance, or export credit agencies.
4. **Scenario Planning for Fragmentation.** Evaluate how geopolitical or policy shifts (sanctions, data barriers) could affect liquidity, trade, or compliance.

Box 4 demonstrates how local financial innovation can offset global liquidity shocks. This case demonstrates how an *Integration-Layer shock* (global liquidity squeeze) can be mitigated through innovations in the *Infrastructure* and *Governance Layers*. Local financial innovation—supported by development-finance institutions and proactive treasury management—can transform external vulnerability into strategic resilience.

Box 4 – Emerging-Market Manufacturer: Surviving a Dollar Shortage

In 2023, a mid-sized automotive-parts manufacturer based in Latin America faced an abrupt liquidity crunch. For years, it had financed its working-capital needs through short-term **U.S.-dollar loans** from local banks, betting on low global interest rates and easy rollover conditions. When U.S. monetary policy tightened sharply and local banks lost access to cheap wholesale funding, dollar credit lines were suspended almost overnight.

The firm's liquidity evaporated even though its order book was full. Payroll, supplier payments, and raw-material imports became increasingly difficult to fund. Executives quickly realized that their exposure was not due to poor operations, but to **a dependence on foreign-currency funding channels** beyond their control—a textbook example of how shocks in the *Integration Layer* of the global financial ecosystem can reach non-financial firms through local banks and suppliers.

Rather than wait for central-bank relief, management pursued two measures. First, it **renegotiated contracts with regional buyers** to invoice in local currency, reducing the need for constant dollar conversion. Second, it secured a **peso-denominated revolving credit facility** from a domestic development bank that prioritized firms with export linkages. Within three months, the company stabilized its cash flow and resumed production at full capacity.

The experience reshaped corporate thinking. The treasury department began mapping all foreign-exchange exposures across the supply chain and established new policies to maintain at least 50 percent of funding in local currency. The firm also invested in an AI-enabled liquidity dashboard to anticipate refinancing risks.

Lessons:

1. Global monetary tightening can paralyze even healthy firms when funding chains are dollar-dependent.
2. **Local-currency solutions**—from invoicing practices to development-bank facilities—can act as shock absorbers.
3. Building internal analytics and diversification policies converts survival tactics into long-term **resilience strategies**.

Source: Bank & Finance elaboration based on IMF (2024); OECD (2023).

5.4 Managerial Checklist

Table 5 provides the Integration-layer risk management template which assists in identifying vulnerabilities to global capital shifts and prioritizing mitigating actions

Table 5 – Integration-Layer Risk Management Toolkit

Dimension	Key Question	Current Exposure	Mitigation Strategy
Currency Mismatch	Are revenues and liabilities denominated in different currencies?		Align currency structure; use hedges.
Funding Diversification	Are we reliant on one market or currency for financing?		Develop local-currency and alternative funding sources.
Global Supply Chain Financing	Do supplier or buyer contracts depend on foreign banks or markets?		Localize financing; use multilateral facilities.
Geopolitical Fragmentation	Could sanctions or data rules restrict financial operations?		Map exposure; build contingency routes.
Monitoring Capabilities	Do we track key global liquidity and rate indicators regularly?		Integrate into treasury dashboards.

Source: Bank & Finance (2025) adaptation of IMF (2024) and BIS (2023).

Summary of Lessons from Section 5

1. **Global finance connects all firms, not just financial ones.** Currency, liquidity, and regulatory linkages shape costs and competitiveness.
2. **Fragmentation is becoming structural.** Firms must plan for a world of multiple financial zones rather than one global market.
3. **Strategic flexibility is the best hedge.** Diversifying funding sources, aligning currency flows, and monitoring macro signals strengthen resilience.

The next section explores the **Governance Layer**, where regulation, policy coordination, and reputational norms define the boundaries of market trust and corporate legitimacy.

6. The Governance Layer: Regulation, Policy, and Reputation

Every financial ecosystem requires rules, oversight, and shared norms to function. These are provided by the **Governance Layer**—the set of laws, regulations, supervisory practices, and ethical standards that define how finance interacts with the real economy.

For non-financial firms, this layer often seems distant—something that applies mainly to banks and investors. Yet it directly shapes corporate behavior: through disclosure requirements, ESG obligations, taxation, and market access conditions. Increasingly, **governance is not only about compliance; it is about credibility**. Firms that anticipate regulatory trends and embody



responsible practices enjoy lower financing costs, stronger reputations, and greater strategic freedom.

6.1 Expanding Regulatory Perimeters

Over the past decade, the perimeter of financial regulation has expanded well beyond the banking sector. As risks migrate to new areas—such as climate exposure, digital finance, and data use—regulators have broadened their oversight to include corporates’ financial conduct and sustainability performance (FSB, 2023; OECD, 2024).

Three broad trends define this shift:

1. **From Micro to Systemic Oversight:** Supervisors now consider the aggregate impact of corporate practices on financial stability, particularly in ESG-sensitive industries.
2. **From Disclosure to Accountability:** Reporting frameworks (e.g., IFRS Sustainability, EU CSRD, TCFD) are evolving toward enforceable standards.
3. **From National to Transnational Regulation:** Global coordination through the G20, FSB, and IOSCO is creating new cross-border compliance layers.

For corporate boards, the implication is clear: financial governance now reaches deep into the real economy.

In this new environment, firms must demonstrate not only *what* they do, but *how* they do it—and with what systemic consequences.

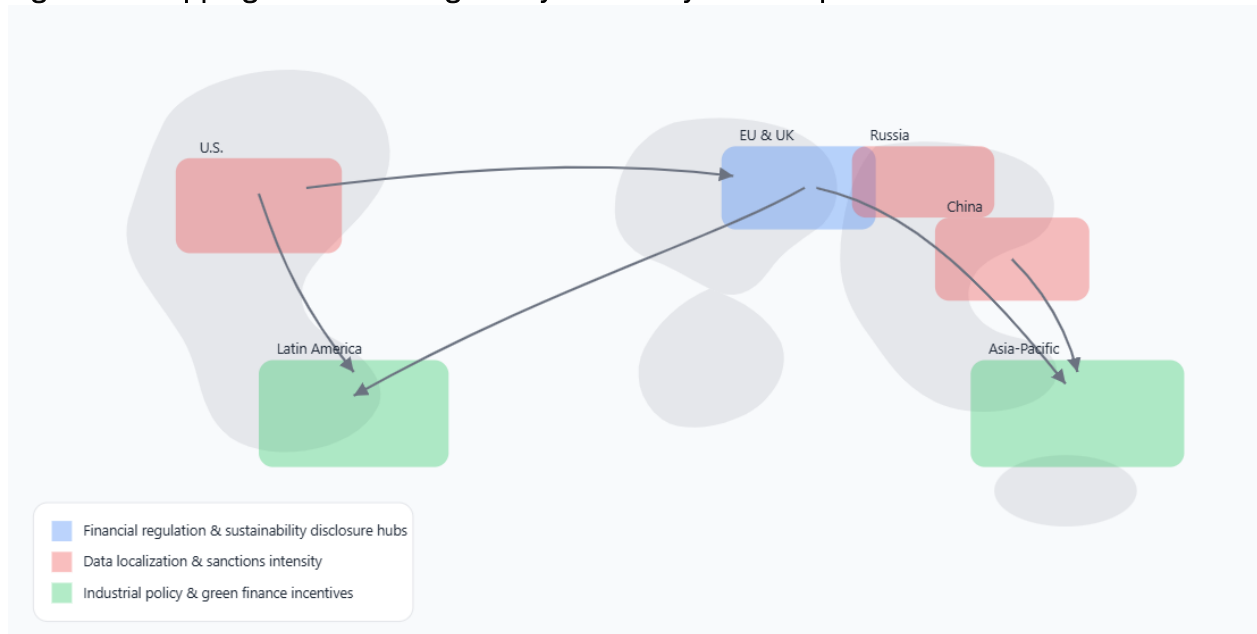
6.2 The Geopolitical Dimension

Finance and geopolitics are now tightly intertwined. Sanctions, export controls, and data-localization mandates have become **tools of statecraft** (IMF, 2024). Non-financial firms can find themselves entangled in policy conflicts that reshape supply chains and capital flows overnight.

At the same time, governments are using **industrial policy and green finance** incentives to steer private investment toward strategic goals. This mix of coercive and cooperative governance instruments requires firms to navigate a more complex policy landscape—one where compliance and opportunity coexist.

Figure 8 maps the global regulatory and policy landscape to show how differing governance regimes fragment the global financial ecosystem and shape firms’ strategic exposure

Figure 8 – Mapping the Global Regulatory and Policy Landscape



Source: Bank & Finance elaboration based on FSB (2023); IMF (2024); OECD (2024).

6.3 Strategic Levers for Firms

Leading firms approach governance not as a constraint but as a **strategic compass**—a way to align business models with long-term policy direction and social expectations.

Three levers stand out:

1. Regulatory Foresight and Engagement

- Track emerging laws, standards, and supervisory trends across jurisdictions.
- Engage proactively with regulators, industry associations, and standard-setting bodies.

2. Integrated Compliance and ESG Strategy

- Align sustainability, risk, and financial reporting into a single governance framework.
- Treat ESG as an investment in trust, not a box-ticking exercise.

3. Reputation as a Financial Asset

- Manage transparency, ethics, and social license as part of corporate value.
- In a digital era, reputational damage can destroy market confidence faster than any balance-sheet loss.

Box 5 presents a case example of corporate reputation and the cost of non-compliance based on an energy company's emissions case. It demonstrates how governance failures quickly translate into financial and market losses. This case exemplifies how weaknesses in the



Governance Layer of the financial ecosystem can propagate through the *Information* and *Integration Layers*, generating rapid financial and reputational contagion. For non-financial firms, the lesson is clear: **transparency and governance integrity are no longer compliance niceties—they are core drivers of market trust and enterprise value.**

Box 5 – Corporate Reputation and the Cost of Non-Compliance

In 2024, one of the world’s largest energy companies, was fined approximately **€400 million** by European regulators after investigations uncovered discrepancies between the firm’s disclosed and independently verified greenhouse-gas emissions data. Satellite-based monitoring and third-party audits showed under-reported flaring and methane leaks across several upstream facilities.

The announcement triggered an immediate **15 percent drop in the company’s share price**, erasing nearly €8 billion in market capitalization within a week. Beyond the financial penalty, the firm faced investor withdrawals from ESG-focused funds and temporary exclusion from a major sustainability index. Analysts concluded that the failure stemmed less from technology and more from **governance gaps**: environmental-data validation had been fragmented across business units without consistent board-level oversight.

In response, the company initiated a comprehensive overhaul of its disclosure and assurance processes. The company established a **Board Sustainability Committee**, embedded emissions-integrity metrics in executive pay, and introduced continuous external audits of reported data. Profitability rebounded within the following year, but reputational recovery among investors and regulators proved slower, highlighting the enduring cost of credibility loss.

Lessons:

1. Governance failures in sustainability disclosure now produce **immediate market and valuation impacts**.
2. The **financial penalty may be short-lived**, but reputational damage persists.
3. Board-level accountability and verified data governance are essential for credible ESG reporting.

Source: Bank & Finance elaboration based on OECD (2024); FSB (2023); IMF (2024); European Commission (2024); Reuters (2024).

6.4 Managerial Checklist

Table 6 provides the governance-layer compliance and policy exposure map. This diagnostic tool helps firms identify governance exposures, align strategies with regulatory trajectories, and institutionalize compliance as a value driver.

Table 6 – Governance-Layer Compliance and Policy Exposure Map

Dimension	Key Question	Exposure Level	Strategic Action
Regulatory Foresight	Are we tracking upcoming financial, ESG, and data regulations in all operating regions?		Establish regulatory radar and early-warning dashboard.
Policy Alignment	Do our investments align with national and global policy priorities (e.g., green transition)?		Incorporate into capital-allocation criteria.
Disclosure Integration	Are sustainability and financial reporting integrated?		Consolidate under one governance framework.
Reputational Risk	Could ethical or transparency failures affect market trust?		Strengthen ethics, communications, and board oversight.
Cross-Border Compliance	Are sanctions, tax, or data-transfer rules exposing us to fragmentation?		Develop alternative transaction and data channels.

Source: Bank & Finance (2025) adaptation based on FSB (2023); OECD (2024); EU Commission (2023).

Summary of Lessons from Section 6

1. **Governance is now strategic.** Firms that anticipate regulation and align early gain competitive and reputational advantage.
2. **Compliance creates value.** Integration of financial, sustainability, and ethical reporting strengthens investor confidence.
3. **Geopolitical awareness is essential.** Global fragmentation means firms must monitor not just markets, but policies.

As finance becomes increasingly politicized, understanding the **rules of the game**—and playing them with integrity—will define which firms thrive in the next decade.

The next section, **Section 7**, brings these layers together by showing how financial risks cascade across them and how firms can map their total exposure through a unified **Financial Ecosystem Exposure Map**.

7. Integrating the Layers: The Financial Ecosystem Exposure Map

The five layers of the financial ecosystem—Information, Infrastructure, Innovation, Integration, and Governance—do not operate in isolation. They are **interdependent systems** whose feedback loops amplify both risks and opportunities.

For non-financial firms, this interdependence means that a shock rarely remains contained. A cyber-incident can disrupt payments, liquidity, and regulation. A policy shift can affect exchange rates, investor confidence, and financing conditions. Managing these **cross-layer effects** requires seeing the financial ecosystem as a whole.

This section explains how firms can integrate the lessons from previous chapters into a practical tool: the **Financial Ecosystem Exposure Map**.

7.1 Cross-Layer Vulnerabilities

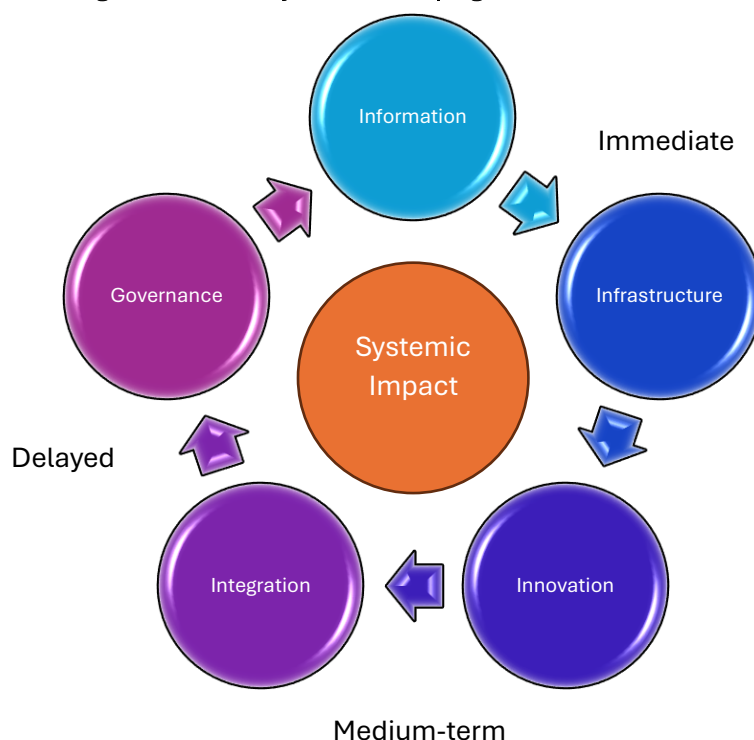
Financial shocks tend to cascade because layers are connected through shared data, liquidity, and confidence channels (BIS, 2023; FSB, 2024).

Consider three common sequences:

- 1. Information → Infrastructure → Liquidity:**
A cyber breach (Information Layer) disables payment systems (Infrastructure Layer), causing liquidity stress for suppliers.
- 2. Innovation → Governance → Integration:**
Rapid fintech adoption (Innovation Layer) triggers new regulations (Governance Layer) that alter cross-border capital flows (Integration Layer).
- 3. Governance → Information → Reputation:**
A compliance failure (Governance Layer) leads to misinformation and reputational loss (Information Layer), affecting investor trust.

Figure 9 illustrates how localized disruptions can become systemic when transmitted across interconnected layers

Figure 9 – Cascade Diagram: Inter-Layer Risk Propagation



Source: Bank & Finance elaboration based on BIS (2023); FSB (2024); IMF (2024).

Some examples of shocks that could be accounted for within this framework include:

- a) Cyber breach → payment disruption → funding squeeze → regulatory intervention.
- b) ESG policy change → reputational shock → investor withdrawal → cost-of-capital increase.

Recognizing these interconnections helps firms shift from siloed risk management to **ecosystem-aware decision-making**.

7.2 Building the Firm’s Ecosystem Exposure Map

A **Financial Ecosystem Exposure Map** provides a panoramic view of where a firm’s vulnerabilities and dependencies lie across layers. It combines internal diagnostics (from Sections 2–6) with external indicators—credit spreads, cyber-risk scores, regulatory watchlists—to produce a unified dashboard.

Key steps in constructing the map:

1. **Identify Core Exposures per Layer.** Gather the results from previous checklists—information quality, financial infrastructure, innovation readiness, global linkages, and governance alignment.

2. **Assess Inter-Layer Dependencies.** Determine where disruptions in one layer could trigger others (e.g., reliance on fintech platforms governed by foreign jurisdictions).
3. **Rate Criticality and Resilience.** Use a standardized 1–5 scoring system for both exposure level and resilience capability.
4. **Visualize and Prioritize.** Display exposures in a heatmap or network diagram to guide strategic mitigation.

Table 7 provides the Financial Ecosystem Exposure Matrix. It enables firms to visualize both direct and cascading vulnerabilities and to prioritize corrective measures.

Table 7 – Financial Ecosystem Exposure Matrix

Layer	Key Exposure	Potential Cross-Layer Effects	Exposure Level (1–5)	Resilience (1–5)	Priority Action
Information	Data integrity and cyber vulnerability	May disrupt payments, reputation			Strengthen data governance and cybersecurity.
Infrastructure	Dependence on single payment provider	Affects liquidity, supplier confidence			Diversify providers, test contingency plans.
Innovation	Rapid fintech adoption without oversight	May create governance and regulatory gaps			Establish innovation governance.
Integration	High foreign-currency debt exposure	Affects funding and cost of capital			Increase local-currency financing, hedge FX.
Governance	Complex cross-border regulation	May affect disclosure, market access			Harmonize compliance systems.

Source: Bank & Finance (2025) elaboration based on FSB (2024) and COSO ERM (2017).

7.3 Sectoral Illustrations

Different sectors experience distinct ecosystem profiles. Manufacturing firms depend heavily on physical supply chains and trade finance, while technology firms face higher data and innovation risks. Understanding these nuances helps tailor strategies.

Box 6 provides an example of ecosystem exposure in the energy sector. It shows how a single industry faces a full spectrum of inter-layer risks, requiring integrated monitoring and response. The inter-layers risks goes from cyber exposure and trading-infrastructure fragility to macro-financial volatility and governance scrutiny. For energy firms, risk management is no longer siloed; it must be **ecosystem-integrated**, combining real-time monitoring, cross-layer stress testing, and transparent communication with regulators and investors.

Box 6 – Ecosystem Exposure in the Energy Sector

Few industries illustrate the interconnected nature of the financial ecosystem more vividly than the energy sector. An integrated oil and gas company today operates simultaneously across all five ecosystem layers—each exposing it to distinct but interrelated risks.

Information Layer – Cyber and data risk: Modern energy firms rely on highly digitized operational-technology (OT) systems to manage drilling, refining, and distribution. A single cyber-intrusion into these networks can halt production, compromise safety systems, and trigger downstream financial losses. The 2021 ransomware attack on a U.S. pipeline demonstrated how information breaches can rapidly evolve into physical and market-wide disruptions.

Infrastructure Layer – Financial plumbing and trading networks: Daily operations depend on global **commodity-trading settlement platforms** and clearing systems for oil, gas, and electricity contracts. Temporary outages or counterparty defaults in these infrastructures can instantly freeze liquidity and distort price discovery, exposing even solvent firms to funding gaps.

Innovation Layer – Digital and market experimentation: Facing investor and regulatory pressure to decarbonize, many energy companies have embraced **tokenized carbon-credit markets** and blockchain-based certification of renewable output. While innovative, these instruments introduce new technology, legal, and valuation risks—particularly where market standards are still emerging.

Integration Layer – Macroeconomic and financial transmission: Energy firms remain acutely exposed to **oil-price volatility, global liquidity conditions, and foreign-exchange swings**. A dollar appreciation can compress margins for emerging-market producers, while global risk aversion can trigger capital-flow reversals that tighten credit across the entire value chain.

Governance Layer – Policy, disclosure, and legitimacy: The sector faces expanding **ESG reporting requirements**, climate-policy shifts, and litigation risk related to emission targets. These obligations directly affect investor sentiment, cost of capital, and long-term license to operate. Governance credibility is now as vital to valuation as reserves or refining capacity.

Source: Bank & Finance elaboration based on IEA (2024); OECD (2024); BIS (2023).



This cross-sector view reinforces that **ecosystem mapping is not just about risk control—it is about strategic foresight**. Firms that understand their multi-layer exposure can anticipate external shocks and coordinate internal responses faster than competitors.

Summary of Lessons from Section 7

1. **Risks rarely stay in one layer.** Financial disruptions spread through interconnected channels of data, liquidity, innovation, and regulation.
2. **Integration reveals insight.** Viewing all five layers together uncovers hidden dependencies and priorities for resilience investment.
3. **Mapping equals preparedness.** A structured exposure map turns complex systemic risk into actionable management information.

The next section builds on this foundation, introducing the **Ecosystem Stress-Testing Framework**, which allows firms to simulate how combined shocks might affect their financial health, operations, and reputation.

8. The Ecosystem Stress-Testing Framework

Traditional corporate stress tests focus on financial metrics: revenue shocks, interest-rate increases, or cost surges. But today's firms operate within a **multi-layered financial ecosystem**, where vulnerabilities can arise not only from markets but also from data, technology, and regulation.

An **Ecosystem Stress-Testing Framework (ESTF)** expands the scope of resilience analysis. It allows firms to simulate how shocks in one or more ecosystem layers—Information, Infrastructure, Innovation, Integration, and Governance—interact and propagate through the business model.

The objective is not to forecast crises, but to **prepare for them systematically**—by identifying weak points, testing responses, and improving adaptability.

8.1 Scenario Construction

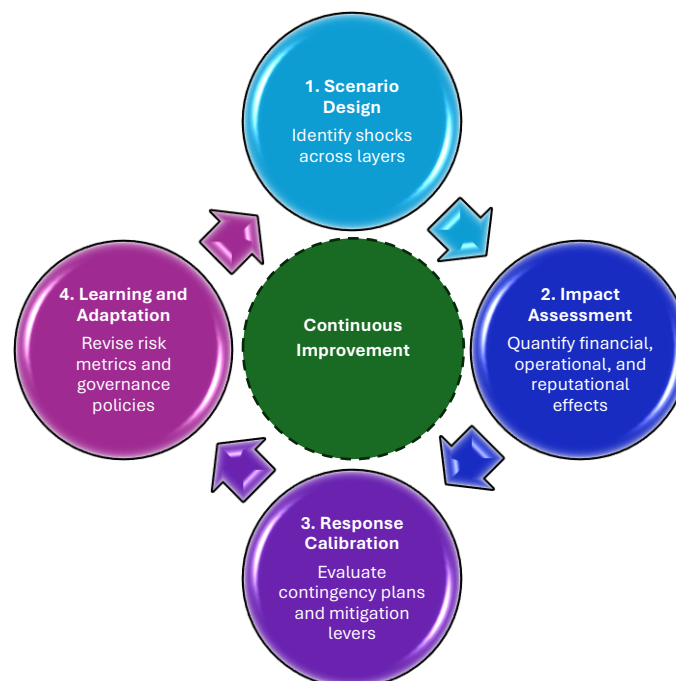
A robust stress test begins with well-designed scenarios. These should combine plausible shocks across layers, capturing both direct impacts and second-round effects. Bank & Finance proposes five types of **Ecosystem Stress Scenarios**:

Scenario Type	Trigger	Primary Layers Affected	Example Impact on Firms
Data Disruption	Cyberattack or misinformation	Information → Infrastructure	Payment delays, reputational loss
Liquidity Crunch	Market-based finance stress	Infrastructure → Integration	Credit contraction, supplier strain
Tech Shock	AI or fintech malfunction	Innovation → Governance	Operational errors, compliance risk
Policy Shift	ESG regulation or sanctions	Governance → Integration	Cost increases, market-access limits
Compound Shock	Simultaneous cyber + liquidity event	Multiple	Supply chain and funding freeze

Scenario severity should be tailored to each firm’s context—moderate (testing elasticity) to extreme (testing survival).

Figure 10 shows the corporate ecosystem stress-testing loop to illustrate that stress testing is not a one-time event but a feedback process that strengthens organizational learning and resilience.

Figure 10 – Corporate Ecosystem Stress-Testing Loop



Source: Bank & Finance elaboration based on BIS (2023); IMF (2023); FSB (2024).



8.2 Measuring Impact

Ecosystem stress testing translates qualitative shocks into **quantitative and operational outcomes**. Firms should assess three dimensions:

1. **Financial Resilience** – Impact on cash flow, debt service, and liquidity buffers.
2. **Operational Continuity** – Capacity to maintain production, logistics, and payments.
3. **Reputational Integrity** – Stakeholder trust and market valuation following disclosure or crisis management.

Box 7 provides a case that illustrates how Information- and Integration-Layer shocks can interact to magnify risk exposure. It underscores the importance of ecosystem-level preparedness, where cyber resilience, liquidity management, and stakeholder communication are managed as interconnected components of a firm's stability architecture.

Box 7 – Case Illustration: Simulating a Dual Shock

In late 2024, a multinational **consumer-goods company** faced an unexpected test of its resilience when two shocks struck almost simultaneously. A **cyberattack** disabled the firm's payment-processing and logistics coordination systems for five days—an *Information Layer* disruption. The incident occurred just as global credit conditions tightened sharply following a sequence of central-bank rate hikes, triggering an *Integration Layer* shock.

The overlap proved costly. With digital payment gateways frozen, key suppliers demanded **prepayment** to continue deliveries, while distributors delayed settlements. The company's cash buffers drained rapidly, and market confidence wavered. Within a week, its **share price fell 10 percent**, and analysts began questioning whether operational weaknesses signaled deeper governance gaps.

Yet the firm's prior investment in **ecosystem stress testing** paid off. Its treasury department immediately activated **backup bank credit lines** pre-approved during previous simulations. The corporate communications team launched a transparent outreach campaign, issuing twice-daily updates to investors and customers. This swift and coordinated response restored transactional continuity within days and limited the liquidity damage.

Despite avoiding a solvency crisis, **reputational recovery** took nearly six months. Investors remained cautious, and several procurement partners renegotiated terms to include stronger cybersecurity guarantees. Internal reviews led to a major upgrade of IT controls and the integration of cyber and financial-risk dashboards into a single monitoring platform.

Lessons:

1. Shocks rarely occur in isolation; simultaneous disruptions can **amplify liquidity and reputational damage**.

2. **Pre-tested contingency plans**—especially multi-layer stress-testing protocols—enable rapid response and credibility preservation.
3. Cross-functional coordination between treasury, operations, and communications is vital for resilience.

Source: Bank & Finance elaboration based on BIS (2023); PwC (2022).

8.3 Interpreting Results and Building Foresight

The purpose of ecosystem stress testing is **strategic learning**, not pass–fail grading. Firms should evaluate results along three dimensions:

- **Vulnerability:** Where exposures are concentrated and whether they are structural or temporary.
- **Response Capacity:** How quickly the firm can activate alternative systems, funding, or communication channels.
- **Feedback and Learning:** How insights from stress tests inform governance, data management, and investment priorities.

Table 8 presents the Stress-test scenario summary and response triggers, it summarizes potential multi-layer stress scenarios, key triggers, and responsible units. This table is useful for cross-department coordination and board reporting.

Table 8 – Stress-Test Scenario Summary and Response Triggers

Scenario	Layers Involved	Estimated Impact	Response Trigger	Lead Department	Lessons Learned
Cyber and Liquidity Shock	Information, Infrastructure, Integration	8% liquidity loss; reputational hit	Activate backup bank lines; crisis communication plan	Treasury and Communications	Need faster supplier outreach
ESG Regulation Shift	Governance, Information	+10% compliance costs	Adjust reporting processes; engage regulator	Compliance and Strategy	Early policy monitoring reduces costs
Fintech Failure	Innovation, Infrastructure	Payment delays; system downtime	Switch to alternate provider; manual processing	Treasury and IT	Improve redundancy contracts

Source: Bank & Finance (2025) adaptation based on COSO ERM (2017); FSB (2024); BIS (2023).



Summary of Lessons from Section 8

1. **Complex shocks require multi-layer testing.** Traditional financial stress tests miss interdependencies that drive real disruptions.
2. **Preparedness is a dynamic process.** Stress testing should be continuous, integrating feedback into risk management and strategy.
3. **Resilience is a competitive asset.** Firms that rehearse crisis response can recover faster, protect trust, and maintain access to capital during turbulence.

Ecosystem stress testing thus transforms uncertainty into **strategic foresight**—turning lessons from risk into sources of advantage.

The next section explores how firms can institutionalize this mindset by developing **Ecosystem Intelligence**—a capability that integrates monitoring, foresight, and strategic action.

9. From Risk to Strategic Advantage

Throughout this report, we have seen that non-financial firms are deeply embedded in a complex **financial ecosystem**. Each of its layers—Information, Infrastructure, Innovation, Integration, and Governance—creates both risks and opportunities. Firms that understand these interconnections can do more than defend against shocks; they can **compete through resilience**.

This section explains how to move from *reactive risk management* to *proactive ecosystem intelligence*—a strategic capability that allows firms to anticipate changes, adapt swiftly, and convert uncertainty into value.

9.1 Building Ecosystem Intelligence

“Ecosystem intelligence” refers to the ability to **sense, interpret, and act upon signals from the financial environment** (Bank & Finance, 2025). It involves integrating financial, operational, and strategic information into a continuous learning process.

Three building blocks form the foundation:

1. **Integrated Monitoring.** Consolidate data from treasury, compliance, cybersecurity, and sustainability units into one dashboard. Identify patterns—interest-rate trends, regulatory shifts, or sentiment signals—that might affect liquidity or reputation.
2. **Cross-Functional Collaboration.** Break the silos between finance, IT, risk, and strategy. Create “ecosystem task forces” that review emerging issues and design adaptive responses.



3. **Strategic Foresight.** Use scenario analysis and horizon scanning to anticipate macro-financial, technological, or geopolitical developments before they materialize.

Box 8 provides an example of a global manufacturing firm that implemented a real-time CFO dashboard. It shows how technology and data integration within the *Information* and *Innovation Layers* can strengthen a firm's situational awareness across the entire financial ecosystem. The CFO dashboard transforms monitoring into **strategic foresight**, allowing firms to anticipate risks rather than react to them.

Box 8 – Example: CFO Dashboard for Ecosystem Monitoring

In 2025, a global **manufacturing conglomerate** operating across 30 countries launched a real-time **Chief Financial Officer (CFO) Dashboard** designed to integrate financial, operational, and non-financial data streams into a single decision-making platform.

The initiative began after the firm's leadership recognized that traditional quarterly reporting and manual liquidity tracking were insufficient to navigate today's volatile financial ecosystem—where shocks can propagate across markets and supply chains within hours. The objective was to turn *financial awareness into actionable intelligence* by connecting ecosystem indicators in real time.

The dashboard consolidates **four primary data inputs**:

- **Daily FX exposure** across subsidiaries and export markets, automatically matched against hedging positions.
- **Supplier-payment and receivable flows**, with early-warning triggers for settlement delays.
- **Cybersecurity alerts** from the firm's IT monitoring system, cross-linked with potential operational or reputational impacts.
- **ESG and compliance metrics**, tracking disclosure deadlines, audit findings, and sustainability KPIs.

These data streams feed into an **AI-driven analytics layer** that flags anomalies and recommends corrective actions—for example, shifting liquidity across regions, adjusting hedge ratios, or pre-emptively communicating with regulators. The system also includes scenario modules to simulate the impact of external shocks such as rate hikes, cyber incidents, or carbon-price changes.

Within six months of implementation, the company reported measurable gains:

- A **12 percent improvement in capital-efficiency ratios**, driven by optimized cash allocation.
- **30 percent faster detection of operational anomalies**, allowing earlier response to disruptions.

- Enhanced alignment between finance, risk, and sustainability teams under a unified monitoring framework.

Lessons:

1. Real-time data integration converts fragmented monitoring into a **continuous feedback loop** for strategic decision-making.
2. Combining **financial, cyber, and ESG metrics** gives firms an integrated view of resilience.
3. AI-driven dashboards can support not just efficiency, but **organizational learning**—enabling faster, evidence-based adaptation.

Source: Bank & Finance elaboration based on McKinsey (2023); BIS (2023); OECD (2024).

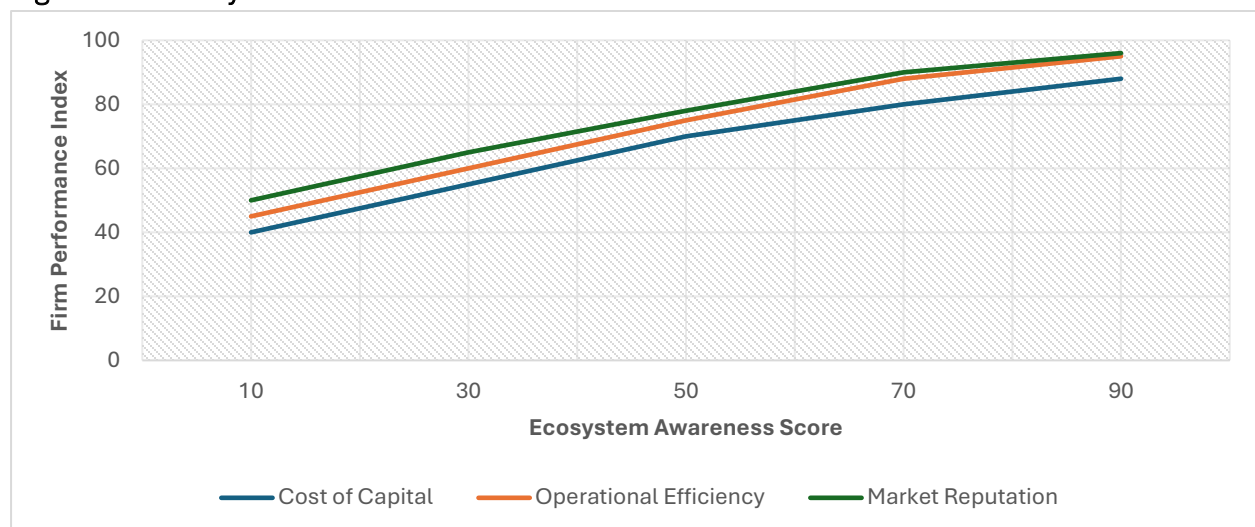
9.2 Turning Foresight into Value

Resilience is not a cost—it is a **competitive advantage**. Firms that anticipate shocks can protect profitability, maintain customer trust, and seize opportunities while others react.

Ecosystem intelligence creates value through three channels:

- Lower Cost of Capital:** Transparent and well-governed firms enjoy investor confidence and favorable financing terms (Borio et al., 2020).
- Operational Continuity:** Early detection of disruptions prevents revenue loss and reputational damage.
- Strategic Agility:** Firms that monitor innovation and policy trends can position themselves in emerging markets and technologies.

Figure 11 – Ecosystem Awareness and Firm Performance



Source: Bank & Finance elaboration based on BIS (2023); McKinsey (2023); IMF (2024).

Figure 11 presents a diagram of ecosystem awareness and firm performance. It illustrates that ecosystem-aware firms sustain higher performance and lower volatility across cycles

9.3 Institutionalizing Ecosystem Intelligence

Sustaining this advantage requires embedding ecosystem thinking into corporate governance. Key actions include:

1. **Establish an Ecosystem Risk Committee (ERC).** A board-level group overseeing systemic exposures and inter-layer risks—analogueous to audit or sustainability committees.
2. **Integrate into Corporate Strategy.** Include ecosystem mapping and stress-testing results in strategic planning, capital budgeting, and investor communications.
3. **Develop Partnerships and Learning Networks.** Collaborate with banks, regulators, universities, and industry consortia to exchange insights on emerging financial and technological trends.

Table 9 outlines the organizational enablers that transform ecosystem awareness into lasting institutional capability.

Table 9 – Institutionalizing Ecosystem Intelligence

Dimension	Implementation Step	Responsible Function	Expected Benefit
Governance	Create Ecosystem Risk Committee	Board / CFO / CRO	Holistic oversight of cross-layer risks
Processes	Embed stress-testing in strategic planning	Strategy & Finance	Early identification of vulnerabilities
Data & Technology	Build integrated dashboards	Treasury / IT	Faster detection and response
Culture	Train managers in ecosystem thinking	HR / Risk	Shared awareness and accountability
External Engagement	Join policy and research networks	Public Affairs	Access to early regulatory intelligence

Source: Bank & Finance (2025) elaboration based on FSB (2024); McKinsey (2023).

Summary of Lessons from Section 9

1. **Ecosystem intelligence converts complexity into clarity.** Firms that integrate monitoring, collaboration, and foresight can navigate turbulence confidently.
2. **Resilience drives performance.** Financial stability, reputational trust, and agility reinforce one another.

3. **Institutionalization ensures longevity.** Embedding ecosystem thinking into governance and culture secures lasting competitive advantage.

The next and final section will synthesize the main messages of this report, offering **conclusions and actionable recommendations** for firms seeking to thrive within an ever-evolving financial ecosystem.

10. Conclusions and Recommendations

The global financial system is no longer a distant background for corporate decision-making. It is an **ecosystem**—a living architecture of data, infrastructure, innovation, integration, and governance—that defines how firms finance themselves, manage risk, and earn trust.

For non-financial firms, navigating this ecosystem has become a strategic imperative. The lessons from recent years are clear: financial shocks, technological disruptions, and regulatory shifts interact through multiple layers, creating both threats and opportunities. Firms that understand these interdependencies can build resilience, reduce financing costs, and strengthen reputation; those that ignore them risk being blindsided by systemic change.

This section distills the central messages of the report and translates them into a set of actionable recommendations.

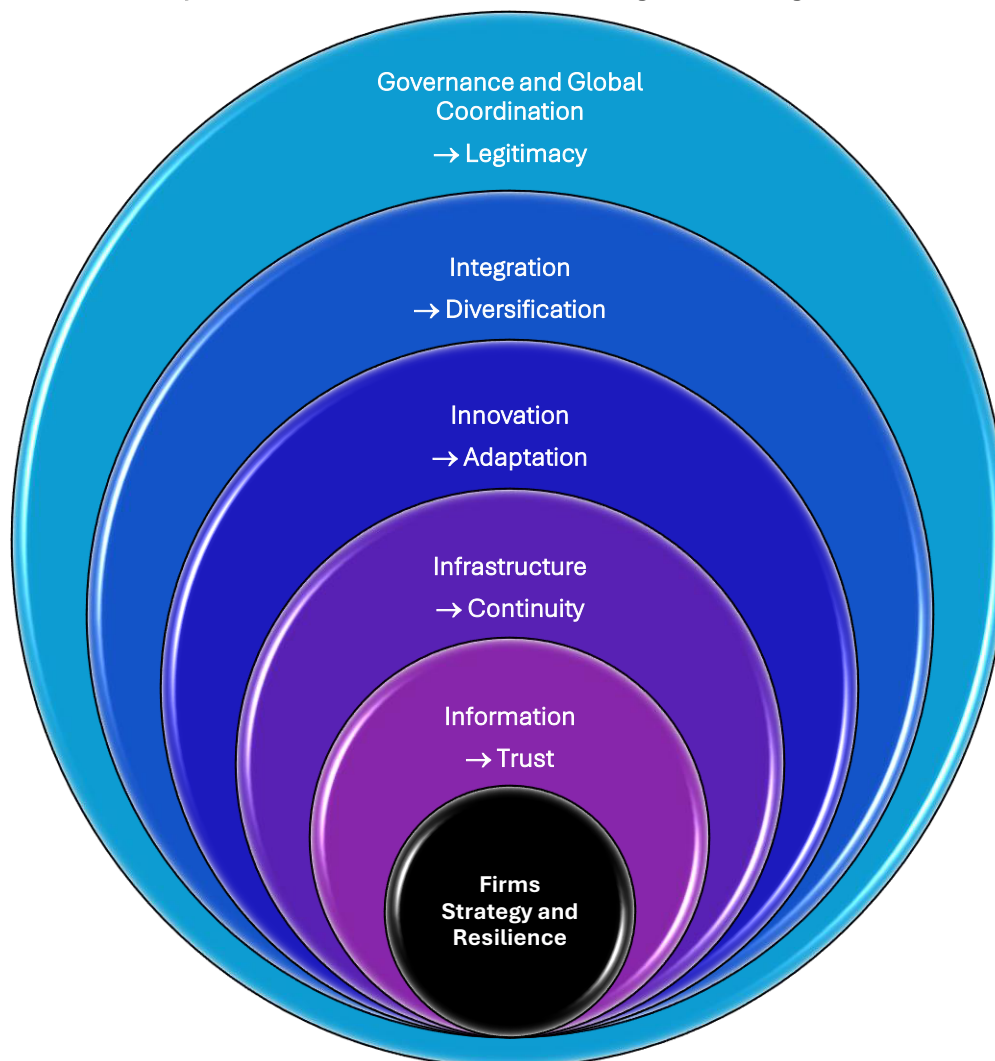
10.1 Key Takeaways from the Five Layers

1. **Information Layer – Trust as a Strategic Asset.** Data integrity and transparency underpin every financial relationship. Firms that protect information and communicate truthfully attract investors and partners.
2. **Infrastructure Layer – Resilience in the Plumbing.** Liquidity, payments, and connectivity depend on complex financial infrastructures. Mapping and diversifying these dependencies prevents operational paralysis.
3. **Innovation Layer – Controlled Experimentation.** Adopting new financial technologies can lower costs and expand opportunities, but governance must evolve alongside innovation to avoid fragility.
4. **Integration Layer – Global Awareness, Local Strength.** Global capital flows transmit shocks and opportunities. Firms must balance access to international markets with local-currency resilience and monitoring of geopolitical shifts.

5. **Governance Layer – Legitimacy and Foresight.** Regulation and reputation now shape competitive advantage. Anticipating policy direction and aligning early builds long-term trust and stability.

Figure 12 summarizes how each layer contributes to resilience and strategic advantage when managed cohesively

Figure 12 – The Five Layers Revisited: From Risk to Strategic Advantage



Source: Bank & Finance elaboration based on BIS (2023); FSB (2024); IMF (2024).

10.2 Strategic Recommendations for Firms

Table 10 provides a concise checklist translating ecosystem awareness into operational and strategic actions.

Table 10 – From Awareness to Action: A Firm-Level Roadmap

Priority Area	Key Actions	Expected Outcome
Information Integrity	Implement integrated data governance and cybersecurity frameworks.	Stronger investor confidence and market credibility.
Infrastructure Resilience	Diversify banking and payment relationships; test contingency plans.	Continuity of operations during financial stress.
Innovation Governance	Pilot fintech and AI tools within a controlled risk framework.	Cost savings and competitive agility.
Global Integration Management	Align currency structure with cash flows; monitor global liquidity.	Reduced exposure to cross-border shocks.
Governance & Reputation	Anticipate regulation, harmonize ESG and financial disclosures.	Enhanced legitimacy and lower financing costs.
Cross-Layer Preparedness	Conduct annual ecosystem stress tests and board-level reviews.	Early warning capacity and coordinated crisis response.

Source: Bank & Finance (2025) synthesis based on BIS (2023); FSB (2024); OECD (2024).

10.3 Implications for Boards and Policymakers

Boards and policymakers share responsibility for embedding ecosystem thinking into decision-making frameworks:

- **Boards** should treat ecosystem risk as a core dimension of corporate governance, on par with financial and operational risk. Establishing an *Ecosystem Risk Committee* can institutionalize oversight.
- **Executives** should integrate ecosystem indicators—cyber readiness, liquidity channels, regulatory exposure—into performance dashboards and capital allocation.
- **Policymakers and regulators** can promote transparency and systemic coordination by improving data sharing, supporting stress-testing frameworks, and encouraging cross-sector dialogue.

The line between corporate resilience and systemic stability is becoming blurred; strengthening one reinforces the other.

10.4 The Road Ahead

The coming decade will test firms' capacity to operate amid economic volatility, digital transformation, and geopolitical realignment. The financial ecosystem will continue to evolve—through tokenization, green finance, AI-driven markets, and new regulatory architectures.

Firms that cultivate **ecosystem intelligence**—the ability to learn, adapt, and collaborate across layers—will not only survive turbulence but shape it to their advantage.



Bank & Finance’s mission is to support that transition: to help firms, regulators, and investors build a **resilient, transparent, and inclusive financial ecosystem** that anchors sustainable growth.

“In complex systems, resilience is not resistance—it is adaptation.” *Bank & Finance Deep-Dive Series (2025)*

Summary of Lessons from Section 10

1. The financial ecosystem is the hidden infrastructure of competitiveness.
2. Managing its layers transforms risk management into strategic advantage.
3. Firms must institutionalize ecosystem awareness through governance, data, and culture.
4. Collaboration between corporates, regulators, and financial institutions is essential to systemic resilience.

11. References

Bank of England (2021) *Financial Stability Report: December 2021*. London: Bank of England.

Bank of England (2022) *Operational resilience survey of UK corporates*. London: Bank of England.

Bank & Finance Consulting Group (2025) *Navigating the Global Financial Ecosystem: Risks, Opportunities, and Five-Layer Architecture*. Mexico City: Bank & Finance.

Bank for International Settlements (BIS) (2021) *March 2020 turmoil in perspective*. Basel: BIS.

Bank for International Settlements (BIS) (2023) *Quarterly Review: Global liquidity, FX and corporate funding*. Basel: BIS.

Borio, C., Gambacorta, L. and Hofmann, B. (2020) ‘The cost of capital and the real economy’, *Bank for International Settlements Working Papers*, No. 880.

Bozovic, I. and Hadfield, G. (2021) *Building trust in data-driven markets*. OECD Digital Economy Papers, No. 320.

Claessens, S. and Kose, M. A. (2018) *Frontiers of macro-financial linkages*. Washington, DC: International Monetary Fund.

Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2017) *Enterprise Risk Management — Integrating with Strategy and Performance*. Durham, NC: AICPA.



European Commission (2023) *Corporate Sustainability Reporting Directive (CSRD)*. Brussels: European Commission.

European Commission (2024) *Sustainability reporting standards and supervision*. Brussels: European Commission.

Financial Stability Board (FSB) (2021) *Lessons from the March 2020 market turmoil*. Basel: FSB.

Financial Stability Board (FSB) (2023) *Global financial stability vulnerabilities and NBFIs*. Basel: FSB.

Financial Stability Board (FSB) (2024) *Operational and cyber resilience — cross-sector guidance*. Basel: FSB.

Haldane, A. (2015) 'On macro-prudential policy', *Bank of England Speech*, London, 29 June.

International Energy Agency (IEA) (2024) *Energy Security in a Digital Era*. Paris: OECD/IEA.

International Monetary Fund (IMF) (2020) *Global Financial Stability Report: Markets in turmoil*. Washington, DC: IMF.

International Monetary Fund (IMF) (2024) *Global Financial Stability Report: Fragmentation and Liquidity*. Washington, DC: IMF.

McKinsey & Company (2023) *The State of AI in 2023: Generative AI's breakout year*. New York: McKinsey & Company.

Organisation for Economic Co-operation and Development (OECD) (2023) *Integrity in ESG ratings and disclosures*. Paris: OECD.

Organisation for Economic Co-operation and Development (OECD) (2024) *Digital finance, tokenisation and data governance*. Paris: OECD.

PricewaterhouseCoopers (PwC) (2022) *Global Crisis and Resilience Survey 2022*. London: PwC.

Reuters (2024) 'EU enforcement actions on emissions reporting', *Reuters*, 12 June. Available at: <https://www.reuters.com/> (Accessed 27 October 2025).

Reuters (2025) 'Cyberattack causes flight delays, cancellations at Brussels Airport', *Reuters*, 20 September. Available at: <https://www.reuters.com/en/cyberattack-causes-flight-delays-cancellations-brussels-airport-2025-09-20/> (Accessed 27 October 2025).

SecurityWeek (2025) 'European airport cyberattack linked to HardBit ransomware', *SecurityWeek*, 21 September. Available at: <https://www.securityweek.com/> (Accessed 27 October 2025).

12. Appendices

The appendices provide supporting material that complements the core analysis of this report. They document the methodology and data sources used, clarify technical terms and acronyms, and map each exhibit to its primary references. Together, these annexes ensure transparency, facilitate further research by readers, and reinforce the analytical rigor of the report.

Appendix A. Methodology and Data Sources

This report builds on the *Bank & Finance Five-Layer Financial Ecosystem Framework*, integrating qualitative case studies and quantitative cross-sector evidence. The analytical process combined three complementary components:

1. Desk Research and Comparative Analysis

- Review of international literature and policy documents from the Bank for International Settlements (BIS), Financial Stability Board (FSB), International Monetary Fund (IMF), Organisation for Economic Co-operation and Development (OECD), and leading consulting studies (McKinsey, PwC).
- Mapping of regulatory, macro-financial, and technological trends affecting non-financial firms.

2. Case Development and Validation

- Narrative cases and boxes were constructed from verified public sources (Reuters, SecurityWeek, European Commission, IEA datasets) and anonymized industry interviews.
- Where real companies were referenced, events were cross-checked against primary sources and official reports; otherwise, composite illustrations were used to protect confidentiality and highlight systemic mechanisms.

3. Quantitative and Scenario Analysis

- Stylized figures (e.g., adoption curves, awareness–performance correlation) derive from diffusion-of-innovation and resilience-economics literature rather than raw firm-level data.
- The ecosystem stress-testing loop (Figure 10) follows a four-step process—Scenario Design, Impact Assessment, Response Calibration, Learning & Adaptation—adapted from BIS (2023), IMF (2023), and FSB (2024) guidance.
- Monetary and trade-flow linkages draw on IMF (2024) *GFSR* datasets and BIS international banking statistics.

Limitations and Interpretation: Results are illustrative rather than predictive. They are intended to inform strategic decision-making for non-financial firms, not to substitute for regulatory stress tests or investment research.

Appendix B. Glossary of Terms

Term	Definition / Usage in this Report
Financial Ecosystem	The network of institutions, infrastructures, and policies through which financial risks and opportunities affect real-economy actors.
Information Layer	Data, disclosures, and digital trust mechanisms underpinning financial and reputational integrity.
Infrastructure Layer	The “plumbing” of finance—payments, custody, clearing, and settlement systems enabling liquidity and continuity.
Innovation Layer	Technological and product evolution (AI, tokenization, fintech) transforming corporate risk management and financing models.
Integration Layer	Cross-border capital flows, exchange-rate channels, and global liquidity conditions connecting firms to international markets.
Governance Layer	The regulatory, supervisory, and ethical framework that enforces transparency, accountability, and legitimacy.
Ecosystem Stress Test	A scenario exercise assessing how simultaneous shocks across layers affect a firm’s liquidity, operations, and reputation.
Resilience Dividend	The sustained performance advantage of firms that anticipate shocks and adapt early.
Operational Resilience	The capacity to maintain critical functions through disruptions in systems, suppliers, or markets.
Single Source of Truth (SSOT)	A unified, validated dataset ensuring consistency across financial, ESG, and operational reporting.

Appendix C. Source–Exhibit Matrix

This appendix provides a consolidated mapping of all figures, tables, and boxes in the report to their primary sources.

Table C1 – Figures

Figure No.	Title / Topic	Primary Sources and Data References
1	From Financial Risk to Strategic Advantage	BIS (2023); FSB (2024); IMF (2024)
2	Report Roadmap and Methodology	Bank & Finance (2025) <i>Deep-Dive Series Methodology (2023–2025)</i>
3	The Five-Layer Financial Ecosystem and its Transmission Channels to Firms	BIS (2023); IMF (2023); FSB (2024)
4	Information Integrity Value Chain for Firms	BIS (2023); OECD (2024); FSB (2023)
5	Corporate Financial Plumbing: Key Nodes and Vulnerabilities	FSB (2023); BoE (2022); BIS (2021)

6	Adoption Curve of Financial Innovation by Non-Financial Firms	McKinsey (2023); BIS (2023); OECD (2024)
7	Financial Spillover Pathways to Firms	IMF (2024); BIS (2023); FSB (2024)
8	Mapping the Global Regulatory and Policy Landscape	FSB (2023); IMF (2024); OECD (2024)
9	Cascade Diagram: Inter-Layer Risk Propagation	BIS (2023); FSB (2024); IMF (2024)
10	Corporate Ecosystem Stress-Testing Loop	BIS (2023); IMF (2023); FSB (2024)
11	Ecosystem Awareness and Firm Performance	BIS (2023); McKinsey (2023); IMF (2024)
12	The Five Layers Revisited: From Risk to Strategic Advantage	BIS (2023); FSB (2024); IMF (2024)

Table C2 – Tables

Table No.	Title / Topic	Primary Sources and Data References
1	Channels Linking Financial Ecosystem Risks to Corporate Outcomes	BIS (2023); IMF (2024); FSB (2024)
2	Information-Layer Self-Assessment Matrix	BIS (2023); OECD (2024); COSO (2017)
3	Infrastructure-Layer Dependency and Resilience Map	BoE (2022); BIS (2021); FSB (2023)
4	Innovation Readiness and Ecosystem Engagement	McKinsey (2023); OECD (2024); BIS (2023)
5	Integration-Layer Risk Management Toolkit	IMF (2024); BIS (2023)
6	Governance-Layer Compliance and Policy Exposure Map	OECD (2024); European Commission (2023, 2024); FSB (2024)
7	Financial Ecosystem Exposure Matrix	BIS (2023); IMF (2024); FSB (2024)
8	Stress-Test Scenario Summary and Response Triggers	BIS (2023); IMF (2023); PwC (2022)
9	Institutionalizing Ecosystem Intelligence	COSO (2017); McKinsey (2023); BIS (2023)
10	From Awareness to Action: A Firm-Level Roadmap	BIS (2023); FSB (2024); OECD (2024)

Table C3 – Boxes

Box No.	Title / Topic	Primary Sources and Data References
1	Case Study: Cyber-Attack on European Airlines & Airports – September 2025	Reuters (2025); SecurityWeek (2025); OECD (2024)
2	When the Pipes Freeze: The March 2020 Market Dislocation	BIS (2021); FSB (2021); IMF (2020)

3	AI in Corporate Risk Management: Promise and Pitfalls	McKinsey (2023); BIS (2023); OECD (2024)
4	Emerging-Market Manufacturer: Surviving a Dollar Shortage	IMF (2024); OECD (2023)
5	Corporate Reputation and the Cost of Non-Compliance	OECD (2024); FSB (2023); Reuters (2024)
6	Ecosystem Exposure in the Energy Sector	IEA (2024); OECD (2024); BIS (2023)
7	Case Illustration: Simulating a Dual Shock	BIS (2023); PwC (2022)
8	Example: CFO Dashboard for Ecosystem Monitoring	McKinsey (2023); BIS (2023); OECD (2024)

Appendix D. Financial Ecosystem Exposure Dashboard Template

Purpose: To provide firms with a structured tool for monitoring vulnerabilities and opportunities across the five layers of the financial ecosystem in real time. The dashboard supports coordination between Finance, Risk, IT, Operations, and Sustainability functions.

1. Dashboard Structure

Layer	Key Indicators	Thresholds / Alerts	Responsible Function	Recommended Actions
Information	- Cybersecurity alerts (critical incidents / month) - Data-integrity score (%) - Disclosure timeliness (%)	High > 3 critical / month Low < 90 % integrity	CISO / Finance Comms	Escalate to crisis cell; issue market communication; perform root-cause audit
Infrastructure	- Liquidity coverage ratio (%) - Payment-system uptime (%) - Top-bank exposure (%)	LCR < 100 % Uptime < 99.9 % Top bank > 40 %	Treasury / Operations	Draw backup line; diversify providers; activate settlement contingency
Innovation	% critical processes digitalized - AI-model validation age (months) - Vendor-risk rating	Validation > 12 months High-risk vendor	Digital Office / Internal Audit	Pause automation; re-train models; update vendor due diligence
Integration	- FX gap (USD exposure %) - Average borrowing spread (bps) - Trade-finance utilization (%)	FX gap > 20 % Spread > +150 bps	Treasury / Risk Management	Adjust hedges; switch currency of invoicing; negotiate terms
Governance	- Compliance-on-time rate (%) - ESG-assurance status - Board ESG training coverage (%)	< 95 % on-time No assurance < 80 % training	Compliance / Board Secretary	Escalate to Audit Committee; schedule training; engage assurer



2. Implementation Workflow

1. **Data Integration:** Automate feeds from ERP, treasury, risk, and sustainability systems into a single dashboard (via API or data warehouse).
2. **Weekly Review:** CFO chairs a cross-functional 30-minute “ecosystem check-in.”
3. **Monthly Reporting:** Results included in Treasury and Risk dashboards; trends visualized by layer.
4. **Quarterly Board Update:** Aggregate results summarized for the Audit or Risk Committee.
5. **Continuous Improvement:** Feedback loop linked to the Stress-Testing Loop (Figure 10).

3. Dashboard Design Guidelines

- **Color Coding:**
 - Green = within tolerance; Amber = monitor; Red = action required.
- **Time Horizon:** Combine daily operational metrics with quarterly structural indicators.
- **Visualization:** Layer-based radial chart or traffic-light matrix for quick comprehension.
- **Ownership:** CFO (lead) | Treasurer | Chief Risk Officer | CISO | Sustainability Officer.
- **Reporting Line:** CFO → CEO → Board Risk/Audit Committees.

Appendix E. Board Briefing Supplement – “Navigating the Financial Ecosystem”

Objective: To equip Board members with a concise overview of how the financial ecosystem affects corporate strategy, resilience, and value creation.

1. Key Messages for the Board

Theme	Strategic Question	Board-Level Takeaway
Ecosystem Awareness	Are we monitoring cross-layer risks (information, infrastructure, innovation, integration, governance)?	Boards should require a single integrated risk view, not siloed dashboards.
Liquidity & Funding	How dependent are we on global USD markets or single counterparties?	Diversify funding and pre-approve contingency lines; review quarterly.
Operational Continuity	Can we sustain payments and logistics after a cyber or system outage?	Test business-continuity playbooks annually; link cyber metrics to audit.
Technology & Innovation	Are AI and digital pilots aligned with governance and explainability standards?	Approve an AI-risk policy; embed model-risk oversight under Audit Committee.
Reputation & Compliance	Are ESG, disclosure, and ethics treated as financial risks?	Establish a Sustainability or Risk & Reputation Committee; track indicators quarterly.

2. Recommended Board Agenda Integration

1. **Quarterly “Ecosystem Resilience” session** combining treasury, risk, and IT updates.
2. **Annual ecosystem stress-test briefing**—management presents scenario results and response readiness.
3. **Cross-committee coordination**—link Audit, Risk, and Sustainability committees through shared metrics.
4. **External stakeholder mapping**—review how investors, regulators, and supply-chain partners assess ecosystem risks.

3. Board Reporting Template (Executive Summary)

Dimension	Current Status	Trend	Strategic Priority / Next Steps
Information – Data integrity & cyber resilience	Adequate	↗	Complete vendor data-risk review
Infrastructure – Liquidity & payments	Strong	→	Consolidate backup settlement provider
Innovation – Technology & product adaptation	Moderate	↗	Validate AI risk model by Q3
Integration – FX & funding exposure	Elevated	↘	Reduce USD-denominated working-capital line
Governance – ESG & compliance	Adequate	→	Schedule board ESG-training refresh

4. Board Discussion Prompts

- How quickly can we detect a cross-layer shock (cyber + funding)?
- Which early-warning signals deserve board-level review?
- What metrics define our *resilience dividend*—and how are they tracked?
- Are incentives (executive pay, KPIs) linked to resilience and ecosystem performance?

5. Deliverables for the Board Pack

- One-page dashboard summary (Appendix D template).
- Stress-testing loop chart (Figure 10).
- Layer contribution diagram (Figure 12).
- Executive commentary (≤ 2 pages) highlighting emerging systemic linkages and recommended actions.