



Reimagining Risk: Addressing Financialization Through Risk Accounting

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Executive Summary

Modern finance has become increasingly disconnected from its foundational purpose: to support the productive economy by allocating capital to its most valuable uses. Instead, it has become dominated by asset engineering, balance sheet optimization, and complex financial instruments that generate profits through volume and velocity rather than genuine value creation.

This phenomenon, known as financialization, has led to a system in which risk is often mispriced, misrepresented, or completely invisible — until it explodes.

The consequences are visible in repeated financial crises, unexplained losses, and a persistent erosion of trust in financial institutions.

A striking example is Deutsche Bank's abrupt shift from a €400 million profit in 2018 to a €5.3 billion loss in 2019¹, despite years of cost-cutting and restructuring. Traditional risk management approaches failed to anticipate or flag the mounting structural vulnerabilities that culminated in this reversal — not because risk wasn't present, but because it wasn't being measured at its origin.

This whitepaper proposes a transition to a more transparent, operationally grounded model of risk oversight: [Risk Accounting](#).

This method focuses on quantifying risk at the point of creation, rather than relying solely on backward-looking models and market assumptions. It enables the integration of standardized risk metrics into financial reporting, ensuring that decision-makers have a complete, forward-looking view of both profitability and the risks taken to achieve it.

Through a deep analysis of financialization, a real-world case study, and a critical examination of current frameworks, this paper advocates for a fundamental shift in how we see, measure, and manage risk in financial institutions.

¹ According to a Wall Street Journal Article, mentioned in this [article](#) by CNBC

Introduction

Over the past several decades, the financial industry has undergone a profound transformation. While finance was once a tool for channeling capital into productive economic activity, it has increasingly become a self-reinforcing system — one in which financial instruments, strategies, and profit-seeking mechanisms dominate the economic landscape.

This transformation, broadly described as financialization, has fueled the growth of assets often decoupled from real-world utility. In this environment, institutions optimize for metrics like short-term return on equity, capital efficiency, or shareholder value, frequently overlooking the actual risk being taken to achieve those results.

The consequences of this shift are increasingly visible: financial shocks that ripple through economies, the collapse of seemingly well-capitalized institutions, and the continued erosion of trust in regulatory and risk frameworks. One underlying reason is that risk — particularly non-financial and operational risk — is still largely treated as a byproduct of finance, rather than a core input.

Current risk frameworks rely heavily on historical data, probabilistic modeling, and scenario testing. But these tools often fall short when faced with systemic complexity, cultural failures, or risk accumulation at the transactional level. They fail not because risk is unknowable, but because it is being measured in the wrong place, at the wrong time, and with the wrong tools.

Regulators are not blind to these issues. Through increasingly complex regulatory frameworks — including recent consultations such as those led by the EBA on [Pillar 3 disclosures](#)² and [benchmarking of internal models](#) — there is a clear effort to bring greater transparency and comparability to risk data. However, these initiatives often reinforce the same reporting structures that have failed to detect or prevent risk accumulation in the past. They seek to refine a fragmented system, rather than rethinking it. This paper argues that more fundamental reform is possible — and necessary.

This whitepaper introduces an alternative vision: one where **risk becomes a measurable, traceable quantity**, integrated into financial reporting and decision-making from the point of origin., integrated into financial reporting and decision-making from the point of origin. This is the foundational premise of **Risk Accounting**, a methodology developed to align risk awareness with operational and financial realities — and to prevent the next crisis from appearing as a surprise (again).

The Phenomenon of Financialization

[Financialization](#) refers to the growing dominance of financial motives, financial markets, financial actors, and financial institutions in shaping the structure and behavior of the economy. This trend, accelerating since the 1970s, has led to a shift in economic activity away from producing goods and services and toward managing and extracting value from financial assets.

Originally a mechanism to support productive investment, finance has evolved into a self-referential ecosystem where the primary goal often becomes the maximization of shareholder value through trading, arbitrage, and speculative activities. Asset

² [All responses](#) to the Pillar 3 consultation and [RASB's response](#)

prices are driven not by utility or long-term fundamentals, but by liquidity, volatility, and the pursuit of short-term gains.

A key consequence of financialization is the inflation of asset values divorced from economic fundamentals. This process concentrates wealth, distorts resource allocation, and creates systemic risks that are not easily captured by traditional financial reporting or regulatory models.

Leading economists such as [Hyman Minsky](#), [Michael Hudson](#), and [Joseph Stiglitz](#) have long warned about the dangers of this dynamic. Minsky's "financial instability hypothesis"³ predicted that as finance becomes more speculative, it naturally breeds fragility. Hudson has argued that financialization enables wealth extraction rather than wealth creation⁴. Stiglitz has highlighted how unregulated financial innovation often creates perverse incentives, eroding market discipline and transparency⁵.

In this environment, risk becomes increasingly abstract — embedded in complex instruments, hidden behind model assumptions, and unmoored from real economic utility. It is recognized too late and measured too narrowly. Financial statements remain silent on the true nature and origin of risk and oblivious to it until it generates losses, while regulators scramble to model system-wide exposures using stale or incomplete data.

As we will explore in the next section, these dynamics are vividly illustrated in the operational and financial challenges experienced by Deutsche Bank after the 2008 financial crisis.

Case Study – Deutsche Bank's 2019 Loss

[Deutsche Bank's €5.3 billion net loss in 2019](#) surprised markets, especially coming just a year after it [reported](#) a €400 million profit for 2018. Much of the loss was attributed to restructuring efforts, including significant transformation charges, write-downs, and severance-related costs. These were part of a broader strategic overhaul aimed at refocusing the bank's operations and addressing legacy issues.

However, beneath these headline figures lay a more revealing story. In 2007, Deutsche Bank invested approximately \$7.8 billion in a portfolio of U.S. municipal bonds, financing infrastructure and public services in states like California, New Jersey, and Puerto Rico. To hedge potential defaults, the bank purchased credit default swap protection in 2008 from Berkshire Hathaway, paying \$140 million upfront for insurance against bond failures.

Over time (and after the 2008 financial crisis), concerns mounted regarding the financial health of municipalities and the insurers backing their debt. Although the positions remained stable on paper, questions were raised by internal auditors and KPMG about whether Deutsche Bank had set aside sufficient reserves. The bank stood by its accounting.

By 2016, the bank restructured the position — effectively realizing the loss. The deal had initially enabled Deutsche Bank to recognize several hundred million dollars in profits upfront based on expected insured returns. But when the bonds

³ Available for download [here](#).

⁴ "[Killing the Host](#)" book by Michael Hudson

⁵ "[Freefall: America, Free Markets, and the Sinking of the World Economy](#)" book by Joseph Stiglitz

underperformed and costs mounted, the final result was a \$1.6 billion loss that was recognized in 2019.

This transaction conformed to accounting standards but failed to reflect the underlying economic exposure. The delayed recognition of risk reveals the core issue: risk was **economically present** but **accounting-invisible**. It exemplifies the problem of **misaligned profit recognition and deferred risk disclosure**.

From a risk accounting perspective, this case highlights the need for a methodology that **quantifies risk at inception** and tracks it through the product or transaction lifecycle. Had Risk Units (RUs) been in place — calculated through Exposure Uncertainty Factors (EUF), Value Band Weightings (VBW), and adjusted through a Risk Mitigation Index (RMI) — the buildup of unmitigated exposure could have been flagged and reported in real time.

This example is not isolated. It reflects a broader pattern in the industry where **financial engineering can obscure risk**, and regulatory or managerial oversight often lags behind economic reality. The reliance on backward-looking models and compliance-based reporting results in blind spots that only become visible when it is too late.

A forward-looking system — one grounded in operational realities and capable of producing standardized, audit-ready risk data — would not only improve institutional resilience but also strengthen trust across markets and stakeholders.

The Shortcomings of Current Risk Management Practices

The current landscape of risk management in financial institutions is largely built around regulatory compliance, statistical modeling, and historical loss data. While these tools are valuable, they are fundamentally reactive and limited in their predictive power, especially when confronting complex, fast-evolving risk environments.

One major limitation is the heavy reliance on Value-at-Risk (VaR) and stress testing models that often depend on assumptions of market behavior drawn from past events. These models can fail to capture tail risks, non-linear relationships, and real-time shifts in underlying exposures. Moreover, many of them require simplification and aggregation of risk factors, thereby diluting the visibility of granular, product-level, or process-level risk build-up.

Another critical flaw is the disconnection between risk data and business decision-making. In most institutions, risk metrics are produced by a separate function from those responsible for financial performance. This creates a cultural and informational silo where risk signals are delayed, filtered, or downplayed — especially when they conflict with profit expectations. Risk managers, often cast as the “bearers of bad news,” are sidelined from strategic discussions until it is too late.

This fragmentation is further exacerbated by regulatory mandates such as those derived from Basel frameworks (e.g., [BCBS239](#)), which emphasize aggregation and reporting but stop short of demanding operational integration. As a result, risk data is collected for compliance, not decision-making. It lacks contextual meaning, accountability linkage, and timeliness.

Additionally, conventional accounting systems are not designed to accommodate forward-looking or intrinsic risk. Financial statements disclose losses only once they are realized — not when risk begins to accumulate. This leads to a dangerous lag in

perception, where profit is recorded today while risk is silently carried forward, invisible and unaccounted for.

The Deutsche Bank case is emblematic of this flaw: the economic exposure underlying the 2007–2008 municipal bond transaction was present from the outset — but it remained obscured by accounting practices that allowed upfront profit recognition while deferring the recognition of risk. The models in place could not surface the buildup of vulnerability across years, nor could they account for the eventual cost of risk materializing long after the original transaction had been executed.

How are market or credit risk models — backward-looking, data-dependent, and valuation-bound — supposed to prevent such structural catastrophes? When the complexity of products, the opacity of assumptions, and the disconnect between front office actions and control functions go unmeasured, no statistical calibration can fill the gap.

What is needed is a system that places risk information at the core of financial oversight, rather than on its periphery. One that enables risk to be measured not merely through statistical abstraction, but through its operational roots and managerial context.

These shortcomings reveal a critical gap in current frameworks — one that cannot be filled by simply refining existing models. This realization is reflected in the ongoing efforts of regulators to rethink the core of risk measurement.

This is the challenge that Risk Accounting seeks to meet — as we will now explore.

Rethinking Model Regulation — A Glimpse into the Future

Insights from the EBA’s Consultation on Benchmarking Internal Models

Regulators are clearly aware of the limitations embedded in current model-based frameworks. The European Banking Authority’s (EBA) recent [consultation](#) on the benchmarking of internal models reflects a genuine attempt to refine how credit and market risks are modeled and reported. Yet, even in this detailed and technically rigorous process, the **focus remains largely qualitative, retrospective, and heavily siloed**.

The reliance on internal models, constrained templates, and narrowly scoped benchmarking exercises misses the broader transformation required. These approaches remain tied to valuation data that is identified in the market — which means that data must first exist, typically in the form of actual transactions. While this requirement may seem prudent, it opens the door to strategic behavior: institutions may be incentivized to create trades not for economic value but to generate model-eligible data, inflating a sense of robustness where there is little genuine depth or risk transfer.

In this light, the real challenge is not refining the models, but **changing the logic of how risk is recorded and surfaced**. Current model regulation assumes that risk will become visible through market evolution — but the Deutsche Bank case illustrates otherwise. The \$1.6 billion loss linked to municipal bonds insured by Berkshire Hathaway was not a failure of model calibration. Even the most refined model could not have predicted the financial crisis of 2008 just one year after the bond acquisition. The risk existed from the moment the transaction was structured — yet it remained invisible for nearly a decade.

This is the core flaw of existing regulation: it **chases the consequences of risk around the financial system**, tracking its transformations across asset classes and intermediaries, instead of recording it at its point of origin. We measure the risk of a product only once it becomes a problem — not when the risk is actually created.

What's missing is not just transparency, but **temporal alignment**. We need a way to record risk when it is accepted by the institution — not long after it has matured into loss.

Risk Accounting addresses precisely this gap. It does not rely on the existence of market transactions to estimate exposure. It begins with the structure, volume, and governance of activity itself — and builds a measurement system around that reality. That vision, and its implications, are the subject of the next section.

Advocating for Risk Accounting

If model regulation struggles to surface risk because it waits for signals in the market, then the solution must be one that **captures risk at its origin** — before it has a chance to migrate, compound, or conceal itself.

Risk Accounting proposes a simple but profound reorientation: rather than relying on external market behavior to infer internal exposure, it begins from within — from the very structure and volume of operational, product, and service activity. It seeks not to model away uncertainty, but to make it **measurable, visible, and auditable**.

At the core of Risk Accounting is the **Risk Unit (RU)** — a standardized and additive measure that quantifies both **Inherent Risk (IR)** and **Residual Risk (RR)**. This unit is not theoretical. It is computed using data that most institutions already collect — only differently interpreted:

- The **Exposure Uncertainty Factor (EUF)** expresses the degree of uncertainty inherent to a specific product or service offering — representing its inherent potential to generate non-financial risk.
- The **Value Band Weighting (VBW)** scales the exposure by taking into account the transaction volume or throughput associated with the product or service.
- The **Risk Mitigation Index (RMI)** reflects the effectiveness of the operational environment in which the product or service is delivered, factoring in the quality of internal controls, governance practices, and risk culture.

By combining these dimensions, each product or service, in combination with its associated transaction volume, can be assigned a clear, comparable RU value — enabling institutions to measure risk **where it originates**, not just where it eventually manifests.

Risk Accounting introduces a fundamental shift: from **backward-facing validation to forward-facing accountability**. This makes it possible to embed risk transparency into management reporting, strategic decision-making, and even financial disclosures.

Empirical studies have reinforced this model's predictive power. In a 2021 [paper](#) by Hughes and Marzouk, the authors demonstrated that rising RU levels within large U.S. banks correlated with losses and capital injections during the financial crisis. Their research suggests that RUs may function as an **early warning indicator** — something traditional risk systems consistently fail to deliver.

Independent [validation](#) by Professor Tom Butler in 2023 further supports this conclusion. He characterized Risk Accounting as a **paradigm shift** — not only for how we measure risk, but for how we build a more risk-aware culture inside financial institutions.

Crucially, Risk Accounting is not an abstraction. It is a tested, scalable method with the potential to **restore alignment between financial value and risk discipline**. It invites institutions to account for risk with the same rigor they apply to financial performance.

In doing so, it addresses the shortcomings of current regulation not with more complexity, but with better timing, structure, and visibility — offering regulators and institutions alike a path toward genuine risk governance.

Implementing Risk Accounting in Practice

Turning the vision of Risk Accounting into an operational reality requires both cultural commitment and technical coordination. Fortunately, the building blocks already exist in most institutions: transactional systems, process maps, product catalogs, and governance frameworks. The challenge is not data availability — it is data reinterpretation.

The implementation of Risk Accounting unfolds in several foundational steps:

1. **Product and Service Inventorying**

Institutions begin by mapping all products and services that generate exposure to non-financial risk. Each is assessed for its inherent characteristics, external dependencies, and complexity.

2. **Assignment of Exposure Uncertainty Factors (EUFs)**

Each product or service is assigned an EUF based on its structural propensity to generate non-financial risk — reflecting how inherently “risky” it is, independent of transaction size.

3. **Application of Value Band Weighting (VBW)**

Transactional data is used to scale the exposure, applying VBW according to throughput — such as number of transactions, volume processed, or financial value — to reflect accumulated exposure.

4. **Assessment of Risk Mitigation Index (RMI)**

Institutions evaluate the operational environment in which products and services are delivered. The RMI accounts for effectiveness of controls, assurance mechanisms, governance quality, and cultural maturity.

5. **Calculation of Inherent and Residual Risk (IR and RR)**

RUs are derived by combining EUF and VBW to measure Inherent Risk. Residual Risk is then computed by adjusting IR downward through the RMI.

6. **Integration into Management and Financial Reporting**

The RU dataset is used to populate dashboards, board reporting packs, risk-adjusted performance metrics, and even regulatory disclosures — enabling real-time visibility into risk buildup, efficiency of mitigation, and areas requiring attention.

7. Ongoing Review, Calibration, and Assurance

Risk Accounting is not static. EUFs, VBWs, and RMIs are subject to periodic validation using loss data, incident reporting, assurance findings, and organizational learning.

Crucially, Risk Accounting provides **actionable information**. If risk accumulation exceeds acceptable thresholds, institutions can determine whether to reduce transaction volumes, improve operational effectiveness, or both. This provides direct control levers — a feedback loop between measurement and management — turning risk insight into strategic response.

Common Implementation Challenges and Enablers:

- **Data Silos and Fragmentation:** Addressed through shared taxonomies, metadata standards, and cross-functional alignment.
- **Cultural Resistance:** Overcome by leadership sponsorship, alignment of incentives, and framing risk measurement as a value-enabler, not a compliance burden.
- **Initial Complexity:** Managed by phased implementation, starting with pilot areas and leveraging automation to scale.

Risk Accounting enables institutions to manage risk **proactively**, audit it **consistently**, and govern it **holistically**. It closes the temporal and structural gaps left by traditional models, allowing decision-makers to act on **risk information as real and current as the financials they are used to seeing**.

The Strategic Benefits and Future Potential of Risk Accounting

Risk Accounting offers more than a corrective to regulatory gaps — it represents a long-term strategic advantage for institutions and the financial system as a whole.

For Institutions:

- It enables a **360-degree view** of performance by aligning financial outcomes with real-time risk exposure.
- It supports **risk-adjusted decision-making**, where business lines can be assessed not only by profitability but by the quality of risk-taking.
- It creates an **audit-ready trail** of exposure, control effectiveness, and accountability — facilitating assurance, internal oversight, and supervisory review.
- It reinforces **cultural alignment**, embedding risk visibility at all levels of the organization.

For Systemic Health:

- It reduces reliance on backward-looking models, replacing them with **forward-facing, standardized measures** that transcend regulatory jurisdictions.
- It provides a **common unit of account** — the Risk Unit (RU) — enabling comparability across institutions, markets, and time.

For the Future of Reporting:

- Risk Accounting paves the way for the **integration of financial and risk reporting**, breaking down the long-standing separation between profitability tracking and risk oversight.
- This convergence means that boards, regulators, and investors can finally see not just "how much was earned," but "at what cost of risk" — enhancing transparency, discipline, and long-term trust.
- Over time, this creates conditions for tokenized, traceable, and even tradable risk exposures — where well-managed institutions may benefit from risk transparency premiums, while poor governance is priced in.

The promise of Risk Accounting is not just to measure risk better — but to reshape the incentives, behaviors, and signals that drive the entire financial system.

Transforming Risk in a New, Tradeable Asset Class through Tokenization

The next frontier in the evolution of Risk Accounting is the tokenization and potential trading of Risk Units (RUs) — transforming risk from an internal control variable into a transparent, market-visible asset class.

This concept, first introduced in the RASB whitepaper [The Means and Benefits of Tokenizing and Digitally Trading Risk Units](#), envisions a system where Residual Risk — once quantified and validated — can be expressed in **Tokenized Risk Units (TRUs)**. These tokens would represent verifiable, standardized exposures, traceable across institutional boundaries.

The benefits of this shift are both institutional and systemic:

- **Market signaling:** Institutions with high-quality risk governance would be able to demonstrate lower TRU volumes per unit of revenue or capital — functioning like a "risk credit rating" for transparency.
- **Incentive realignment:** By making risk exposures observable and potentially priced by the market, reflecting the issuer's effectiveness in managing risk, institutions are encouraged to actively manage down their TRU footprint.
- **Liquidity and accountability:** As TRUs become accepted representations of residual risk, they can facilitate bilateral exchanges, insurance, or hedging strategies based not on abstract ratings, but on **real, measured exposure**.

Risk, once hidden in footnotes or obscured by model assumptions, could become as visible and tradable as financial returns themselves.

Tokenized Risk Units could become the **missing link** between internal governance and external market discipline — offering a form of informational currency that rewards transparency, consistency, and foresight.

This vision is bold — but no longer speculative. The RASB whitepaper also outlines an innovative market architecture for TRU exchanges: one designed to **discourage speculative trading while preserving sufficient margin to make TRUs attractive for legitimate risk-transfer transactions**. This calibrated market design ensures that incentives remain aligned with the core purpose — to surface, price, and improve risk governance — rather than to exploit volatility or manipulate exposure indicators.

This vision aligns with the rise of distributed ledgers and decentralized risk-sharing platforms — technologies that promise to make risk data both **immutable and**

universally accessible. Integrating these capabilities with Risk Accounting could transform not just governance within institutions, but the very markets where risk is transferred and priced.

The data, standards, and governance mechanisms are within reach. All that remains is the collective will to recognize that **risk deserves a market of its own.**

Conclusion

The journey through financialization has brought us to a crossroads. As institutions, regulators, and society at large grapple with the growing complexity, opacity, and fragility of the financial system, it has become clear that traditional tools — no matter how refined — cannot restore the trust or insight required for a resilient future.

Risk must no longer be treated as an afterthought, or merely as a compliance burden. It must be recognized as a first-order variable — generated through decisions, embodied in products and services, and either governed or allowed to accumulate. We cannot govern what we cannot see. And what we see depends on how — and where — we choose to measure.

Risk Accounting offers a new lens: one that places risk at the center of enterprise performance, one that is measurable at inception, traceable across activity, and aligned with financial outcomes. It closes the gap between profit and exposure, between operations and oversight, between today's decisions and tomorrow's consequences.

It is not merely a method. It is a philosophy of accountability.

As we look ahead, the integration of Risk Units into tokenized, market-compatible instruments offers a transformative vision — one where risk becomes visible, priceable, and governable by design. A future where transparency is rewarded, and opacity discounted. Where incentives no longer favor risk concealment, but risk clarity.

This whitepaper is both a call and a blueprint: to regulators, to institutions, and to the architects of tomorrow's financial infrastructure. The tools exist. The rationale is strong. The urgency is growing.

This is not a call to banks alone. Regulators, technology providers, and asset managers also play vital roles in building this ecosystem of accountability. Each stakeholder can help shift risk from the shadows of hindsight to the clarity of foresight.

It's time to reimagine risk — and with it, rebuild the system around the values we can finally measure.

Glossary of Key Terms:

- **Risk Unit (RU):** The standardized, additive unit of measure used to quantify all forms of non-financial risk — both Inherent and Residual — across an enterprise.
- **Inherent Risk (IR):** The raw, unmitigated level of risk associated with a product, service, process, or activity, calculated based on volume and exposure uncertainty.
- **Residual Risk (RR):** The remaining level of risk after the application of mitigation controls, governance, and cultural factors. $RR = IR \times \text{Risk Mitigation Index (RMI)}$.
- **Exposure Uncertainty Factor (EUF):** A qualitative multiplier that reflects the riskiness of a product or process based on its complexity, externality, and potential for disruption or failure.
- **Value Band Weighting (VBW):** A quantitative multiplier based on the size or volume of activity, such as number of transactions or monetary exposure.
- **Risk Mitigation Index (RMI):** A scoring index ($0 < RMI \leq 1$) that adjusts the IR downward based on the quality of controls, assurance, culture, and governance.
- **Tokenized Risk Unit (TRU):** A digitized and tradable form of the Risk Unit, designed to create transparent, incentive-aligned markets for managing and pricing non-financial risk.
- **Financialization:** The shift in the economy's focus from productive investment to the growth of financial assets, often decoupled from real utility or economic fundamentals.
- **BCBS239:** A regulatory framework from the Basel Committee focused on principles for effective risk data aggregation and risk reporting.

Summary Roadmap for Stakeholders:

To support a transition toward measurable, accountable risk governance, we propose the following actions by key stakeholder groups:

For Financial Institutions:

- Begin mapping operational processes and identifying key risk generation points.
- Establish internal working groups to assess feasibility of implementing RU methodology.
- Pilot the integration of risk data (IR, RR) into financial and management reporting.
- Educate senior leadership on the benefits of tokenizing risk and aligning culture around measurable exposures.

For Regulators and Standard-Setters:

- Encourage voluntary disclosures based on standardized non-financial risk units.

- Develop guidance to harmonize TRU-based metrics with existing frameworks (e.g. Pillar 3, ESG disclosures).
- Support pilot programs for tokenized risk ecosystems with select institutions.
- Promote academic research into RU predictiveness and its applications in macroprudential oversight.

For Technology Providers and Platforms:

- Build secure, auditable infrastructure for recording, aggregating, and exchanging TRU data.
- Develop plug-ins and APIs to integrate Risk Accounting outputs into core banking, ERP, and ESG platforms.
- Explore smart contract logic for dynamic pricing of TRUs based on residual risk metrics.

For Academia and Think Tanks:

- Expand research on behavioral, predictive, and macro-financial applications of RU-based models.
- Foster interdisciplinary studies across accounting, economics, finance, and computer science.

For Investors and ESG Rating Agencies:

- Incorporate TRU-based transparency scores in assessing long-term resilience and governance quality.
- Engage with institutions demonstrating integrated risk-financial reporting.

This roadmap is not prescriptive — but it is actionable. Each actor can take the next step toward a system where risk is not hidden, modeled, or deferred — but made visible, priced, and governed.