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V. Institutionalizing Financial Ecosystem Stewardship:
From Framework to Enduring Capability

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Preface

Financial ecosystem stewardship does not fail because frameworks are incomplete. It fails because institutions forget.

The preceding volumes of the *Financial Ecosystem Series* established a coherent way of understanding and stewarding complex financial systems. Design clarified the architecture and trade-offs embedded in modern finance. Governance explained how stewardship is exercised when authority is fragmented and coordination is unavoidable. Diagnostics made systemic fragility legible to decision-makers. Stress testing explored how that fragility behaves under strain—without illusion, false precision, or claims of prediction.

Together, these volumes complete the analytical architecture of financial ecosystem stewardship. What they do not guarantee is endurance. Analytical insight does not persist automatically. Institutional attention shifts. Leadership changes. Crises fade into memory. Procedures harden while judgment thins. What was once a living mode of reasoning risks becoming a ritual—performed, referenced, and gradually detached from responsibility.

This volume begins from that vulnerability. It treats institutionalization not as implementation, reform, or formal adoption, but as the problem of continuity: how an ecosystemic way of reasoning survives across time, personnel, political cycles, and changing conditions. Its focus is not on creating new capacity, but on preserving and renewing the capacity that already exists.

Institutionalization, as understood here, does not promise control. It does not eliminate uncertainty, resolve trade-offs, or prevent crises. Financial ecosystems evolve, adapt, and surprise. Stewardship operates under irreducible uncertainty and contested authority.

The task of institutionalization is therefore more modest—and more demanding. It is to ensure that:

- ecosystem reasoning remains embedded in how institutions think, not only in what they produce;
- judgment is structured, disciplined, and preserved, rather than displaced by procedure;
- learning accumulates without hardening into false certainty;
- and responsibility persists even when outcomes cannot be assured.

This volume does not introduce new concepts, tools, or methods. It does not revisit the architecture already established. It operates entirely downstream of the framework, asking how that framework remains alive within institutions that are themselves adaptive, political, and fallible.

The risk addressed here is not ignorance. It is erosion.

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Executive Summary

The preceding volumes of the *Financial Ecosystem Series* established a coherent architecture for understanding and stewarding modern financial systems. They clarified how financial ecosystems are designed, how governance is exercised under fragmentation, how systemic fragility is made legible, and how that fragility behaves under strain. Together, they completed the analytical arc of ecosystemic financial stewardship.

What they do not ensure is persistence.

This final volume addresses the central vulnerability that remains once analysis is complete: **how ecosystemic stewardship endures over time inside real institutions**—across leadership changes, political cycles, crises, and institutional drift.

Why Institutionalization Is the Final Step

Financial history shows that frameworks, however rigorous, do not sustain themselves. Analytical insight decays when it is not embedded in institutional practice. Lessons from crises fade. Diagnostics become ritualized. Stress testing hardens into routine. Judgment is gradually displaced by procedure.

The dominant long-term risk to financial stability is therefore not analytical failure, but **institutional erosion**.

This volume argues that ecosystemic stewardship must be understood not as a framework to be adopted, but as a **durable institutional capability**—one that preserves the capacity to reason, decide, and learn under uncertainty over time.

What Institutionalization Means—and What It Does Not

Institutionalization, as used in this report, does not refer to implementation roadmaps, organizational redesign, or the formal adoption of new tools. It does not promise control, predictability, or immunity from crisis.

Instead, it refers to the conditions under which ecosystemic reasoning becomes embedded in:

- how institutions frame problems and priorities,
- how uncertainty is acknowledged and managed,
- how disagreement is interpreted rather than suppressed,
- how learning is retained without hardening into false certainty,
- and how responsibility is carried even when outcomes cannot be assured.

Institutionalization preserves **judgment**, not certainty.

Stewardship as an Enduring Institutional Function

This volume treats financial ecosystem stewardship as a continuous institutional function, distinct from supervision, regulation, or policy execution. Stewardship does not replace these functions; it orients them.

It operates across silos and mandates, without centralizing authority. It structures escalation without pre-committing action. It disciplines attention without dictating outcomes. Its success lies not in optimization, but in continuity.

Seen this way, institutionalization is not about doing more. It is about ensuring that what already exists—the design, governance, diagnostics, and stress-testing capacity developed in earlier volumes—**remains alive**.

Learning, Drift, and the Risk of Ritualization

Institutions are adaptive systems. They learn, but they also forget. Over time, repetition dulls attention. Processes replace thinking. Formalization crowds out discretion. What began as a living practice risks becoming a ritual performed without reflection.

This volume examines how stewardship degrades quietly, not through failure, but through normalization. It explains why learning is asymmetric—hard-won in crisis, easily lost in calm—and why continuity of judgment is the central institutional challenge.

Completing the Series

This volume does not extend the Financial Ecosystem Framework. It does not reinterpret design, governance, diagnostics, or stress testing. The framework is complete.

What remains irreducible is uncertainty.

The series therefore closes not by resolving tension, but by clarifying responsibility. Financial ecosystems will continue to evolve, adapt, and surprise. Models will remain incomplete. Trade-offs will persist.

In the end, it is institutions—not frameworks—that carry responsibility for stewardship over time.

This volume completes the *Financial Ecosystem Series* by making that responsibility explicit.

1. Why Frameworks Fail Without Institutionalization

The Financial Ecosystem Framework developed in this series is analytically complete. It specifies system design, clarifies governance under fragmentation, renders vulnerability legible, and explores fragility under strain. Yet none of these achievements guarantees durability.

Frameworks do not fail because they are wrong.

They fail because they are **not institutionally sustained**.

This section explains why the passage from insight to endurance is not automatic, and why institutionalization is the binding constraint on long-term financial ecosystem stewardship.

1.1 The Difference Between Insight and Capability

Analytical insight and institutional capability are not the same.

Insight refers to the capacity to *understand*: to see structure, interaction, and fragility within a complex financial ecosystem. Capability refers to the capacity to *act responsibly on that understanding over time*, across uncertainty, disagreement, and changing conditions.

Modern financial authorities are rich in insight. Decades of crisis experience, analytical advances, and international coordination have generated sophisticated frameworks for understanding systemic risk (Borio, 2011; Gorton and Metrick, 2012; BIS, 2014). Yet repeated crises reveal a persistent gap between what is known and what is sustained.

The reason is temporal.

Insight can be generated episodically—through reports, exercises, or leadership initiatives. Capability exists only when that insight becomes embedded in institutional routines, interpretive norms, and decision processes that persist beyond the moment of analysis.

Without institutionalization, insight remains fragile. It depends on individuals rather than structures, memory rather than practice, and attention rather than responsibility.

Box 1 explains why understanding systemic risk does not guarantee durable stewardship and illustrates the contrast between analytical insight and insitutional capability.

Box 1. Insight vs Capability

Financial stability institutions often possess deep analytical insight into the structure and vulnerabilities of the financial system. They can map interconnections, identify amplification mechanisms, and diagnose sources of fragility with considerable sophistication. Yet history

shows that such insight does not reliably translate into sustained action or continuity of judgment over time.

The distinction lies between **insight** and **capability**.

Insight is episodic. It is generated through reports, crisis post-mortems, stress-testing exercises, leadership initiatives, or external reviews. Insight improves understanding at a point in time, often under conditions of heightened attention and urgency.

Capability is durable. It exists when that understanding is embedded in institutional routines, shared interpretive norms, escalation practices, and decision processes that persist beyond the moment of analysis and beyond the individuals who produced it.

The table below illustrates this contrast.

Dimension	Analytical Insight	Institutional Capability
Time horizon	Episodic, event-driven	Continuous, cross-cycle
Source	Reports, exercises, expert analysis	Embedded practices and routines
Dependence	Individuals and leadership	Institutions and processes
Persistence	Decays as attention fades	Endures through turnover and change
Relation to uncertainty	Explains complexity	Sustains judgment under uncertainty
Failure mode	Forgotten or ignored	Erodes through drift or ritualization

Repeated crises demonstrate that the binding constraint is rarely the absence of insight. More often, institutions *knew* where fragility lay but lacked the durable capability to sustain attention, escalate concerns, and act coherently over time (Borio, 2011; Gorton and Metrick, 2012; BIS, 2014).

Institutionalization exists to close this gap. Its purpose is not to produce better insight, but to ensure that insight survives the passage of time.

Source: *Borio (2011); Gorton and Metrick (2012); BIS (2014).*

1.2 Why One-Off Frameworks Decay

Frameworks are born in moments of attention—often after crisis. They are refined, endorsed, and initially applied with seriousness. Over time, however, three dynamics set in.

First, **attention shifts**. New risks emerge, mandates evolve, and political priorities change. What once commanded system-level focus competes with other objectives.

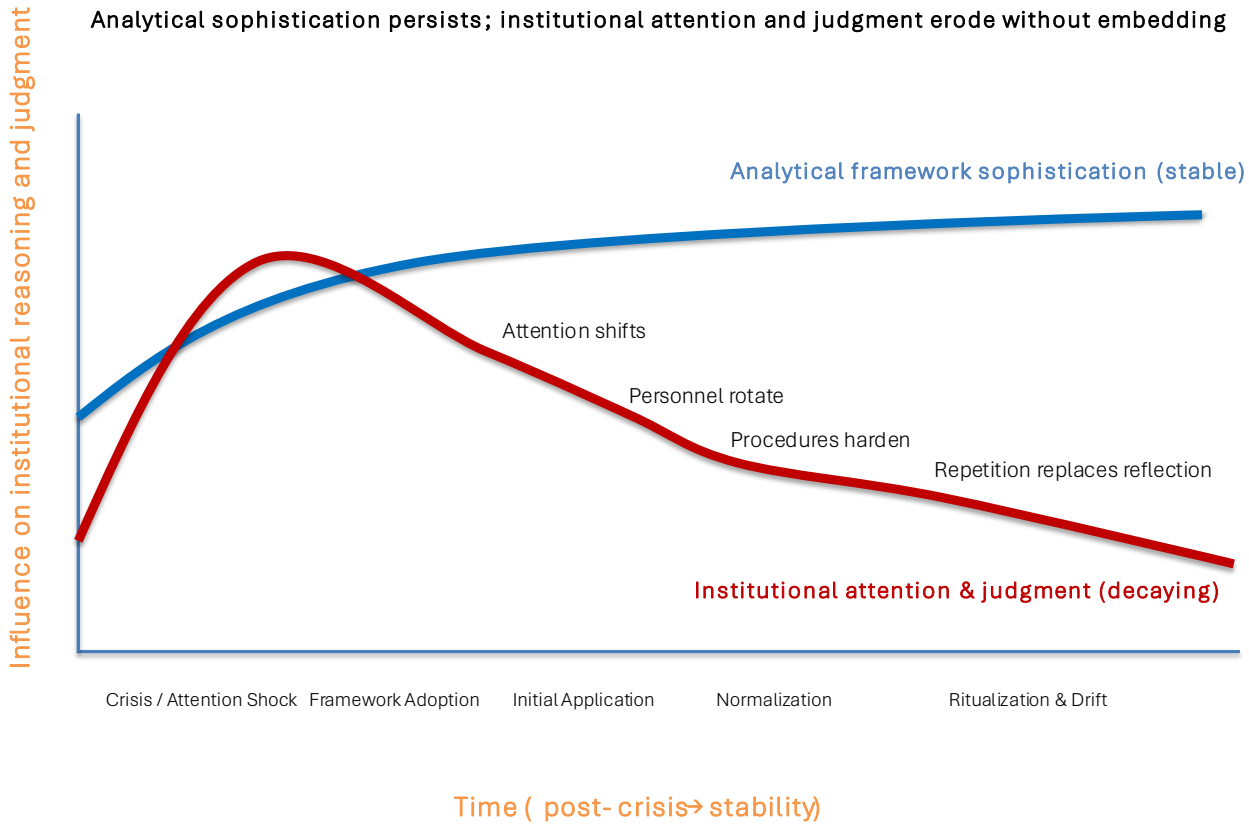
Second, **personnel rotate**. Institutional memory thins as those who developed or internalized the framework move on. What remains is documentation without lived understanding.

Third, **procedures harden**. Framework elements that were originally interpretive become routinized. Diagnostics are repeated. Stress tests are run. Outputs are produced. But reasoning weakens as repetition substitutes for reflection (Power, 2007; Strathern, 2000).

This is not a failure of competence. It is a structural feature of institutions operating under stability.

As a result, frameworks decay not through rejection, but through **normalization**. They become part of the background—invoked, but no longer contested or interrogated. **Figure 1** presents a depiction of how analytical frameworks lose influence over time without institutional embedding.

Figure 1. From Framework Adoption to Institutional Decay



Source: *Borio (2011); Minsky (1986); Power (2007); BIS (2023).*

1.3 Institutional Memory and Institutional Forgetting

Institutions do not remember the way individuals do.

They remember through practices, routines, narratives, and escalation paths. When these are not deliberately sustained, learning erodes—even when formal mandates remain unchanged.

Research on crisis memory consistently shows that lessons learned under stress are fragile and reversible. Periods of calm encourage reinterpretation of past crises as exceptional rather than instructive, leading to gradual relaxation of vigilance (Minsky, 1986; Kindleberger and Aliber, 2011; Gennaioli, Shleifer and Vishny, 2018).

This asymmetry is fundamental:

- **Learning is costly** — it requires crisis, attention, and disruption.
- **Forgetting is effortless** — it occurs naturally as conditions normalize.

Institutionalization exists to counter this asymmetry. Its purpose is not to preserve specific conclusions, but to preserve the **capacity to ask the right questions again** when conditions change.

Without institutional memory, diagnostics lose depth, stress testing becomes ritualized, and governance deliberation narrows to the visible and immediate.

Box 2 discusses why financial institutions repeatedly relearn similar lessons across cycles and illustrates the contrast between crisis learning and institutional forgetting.

Box 2. Crisis Learning and Reversible Memory

Financial crises generate intense learning. Assumptions are challenged, vulnerabilities are exposed, and institutional attention is sharply focused. In these moments, understanding deepens rapidly and consensus forms around the sources of fragility.

Yet this learning is rarely permanent.

Empirical and historical research shows that crisis-induced insight is **reversible**. As conditions stabilize, institutions reinterpret past failures as exceptional, context-specific, or unlikely to recur. Vigilance relaxes, constraints soften, and practices adapt to the new environment—often in ways that gradually recreate fragility (Minsky, 1986; Kindleberger and Aliber, 2011; Gennaioli et al., 2018).

This dynamic reflects a structural asymmetry:

- **Learning is costly**: it requires disruption, attention, and often political or economic pain.
- **Forgetting is effortless**: it occurs naturally as stress dissipates and normal conditions return.

Institutional memory, therefore, cannot rely on recollection alone. It must be sustained through practices that keep past questions alive even when their urgency fades.

The contrast below illustrates why learning erodes so predictably.

Dimension	Crisis Learning	Institutional Forgetting
Trigger	Systemic stress or failure	Periods of stability
Attention	Concentrated and urgent	Diffuse and shifting
Interpretation of risk	Structural and systemic	Exceptional and historical
Treatment of assumptions	Actively challenged	Gradually normalized
Effect on practice	Heightened vigilance	Procedural relaxation
Long-term outcome	Temporary insight	Re-emergence of fragility

Without mechanisms that deliberately preserve memory, institutions tend to remember *outcomes* but forget *processes*: they recall that a crisis occurred, but lose clarity about how vulnerabilities accumulated, how signals were discounted, and why escalation failed.

Institutionalization exists to counter this tendency. Its purpose is not to freeze past conclusions, but to sustain the **capacity to revisit foundational questions** as the system evolves.

When institutional memory erodes, diagnostics flatten, stress testing becomes repetitive, and governance deliberation narrows to the immediate. Stewardship then becomes reactive rather than anticipatory—not because institutions lack knowledge, but because they have lost continuity of learning.

***Source**: Minsky (1986); Kindleberger and Aliber (2011); Gennaioli, Shleifer and Vishny (2018).*

1.4 Why Institutional Failure Is the Dominant Long-Term Risk

From an ecosystem perspective, the most persistent source of fragility is not model error or data gaps. It is **institutional drift**.

Coordination failures, delayed escalation, and misaligned interpretations rarely result from ignorance. They arise because responsibility is diffused, judgment is proceduralized, and uncertainty is managed defensively rather than explicitly (Borio, 2020; BIS, 2023).

This explains a recurring pattern in financial crises:

- vulnerabilities were visible,
- signals were present,
- diagnostics existed,
- stress tests were performed,

yet action was delayed, fragmented, or misdirected.

The failure was institutional, not analytical.

Institutionalization, therefore, is not an enhancement to the framework developed in this series. It is the condition under which that framework remains operative as a living mode of stewardship rather than a historical artifact. **Table 1** provides a conceptual comparison of sources of breakdown in financial stability across time.

Table 1. Analytical Failure vs Institutional Failure

Dimension	Analytical Failure	Institutional Failure
Primary source of breakdown	Inadequate models, data gaps, or mis-specified assumptions	Drift, fragmentation, and erosion of judgment over time
Visibility of risk	Risks genuinely misunderstood or unseen	Risks often visible but not acted upon
Role of diagnostics	Absent, incomplete, or technically flawed	Present but underused, routinized, or ignored
Role of stress testing	Not performed or poorly designed	Performed but disconnected from judgment and escalation
Nature of the failure	Cognitive or technical	Organizational, procedural, and political
Timing of breakdown	Sudden discovery of unknown vulnerabilities	Gradual accumulation of known fragilities
Typical institutional response	Improve models and data	Add procedures without addressing judgment
Long-term consequence	Learning through analytical refinement	Recurrent crises despite analytical sophistication

Source: *Borio (2011); Borio (2020); BIS (2023); Gorton and Metrick (2012).*

Historical experience suggests that most major financial crises occur not because institutions lacked analytical tools, but because institutional processes failed to sustain attention, coordinate interpretation, or escalate concern in time. As analytical capacity improves, institutional failure becomes the dominant long-term risk.

Institutionalization addresses this risk by preserving the conditions under which analytical insight remains connected to responsibility, judgment, and coordinated action over time.

1.5 Section 1 Takeaway

Frameworks do not persist on their own. Analytical insight decays without institutional memory, ownership, and continuity. Over time, repetition replaces reflection, procedures crowd out judgment, and stewardship becomes ritualized.

The central challenge is not to design better frameworks, but to ensure that existing ones remain embedded in how institutions reason, deliberate, and escalate under uncertainty.

Institutionalization is therefore not an optional extension of the Financial Ecosystem Framework. It is the final and necessary step in preserving stewardship as a durable public capability.

2. Stewardship as an Enduring Institutional Function

The preceding section established why analytical frameworks decay without institutionalization. This section takes the next step: clarifying **what stewardship is**, institutionally, once design, governance, diagnostics, and stress testing already exist.

Stewardship is not supervision. It is not policy execution. It is not crisis management. It is a distinct and enduring **institutional function** that operates across all of them.

2.1 Stewardship Beyond Supervision, Regulation, and Policy

In conventional financial stability practice, responsibility is often decomposed into functions: supervision monitors institutions, regulation sets constraints, and policy intervenes when conditions warrant. Each function is necessary. None is sufficient for system-level coherence over time.

Stewardship operates at a different level.

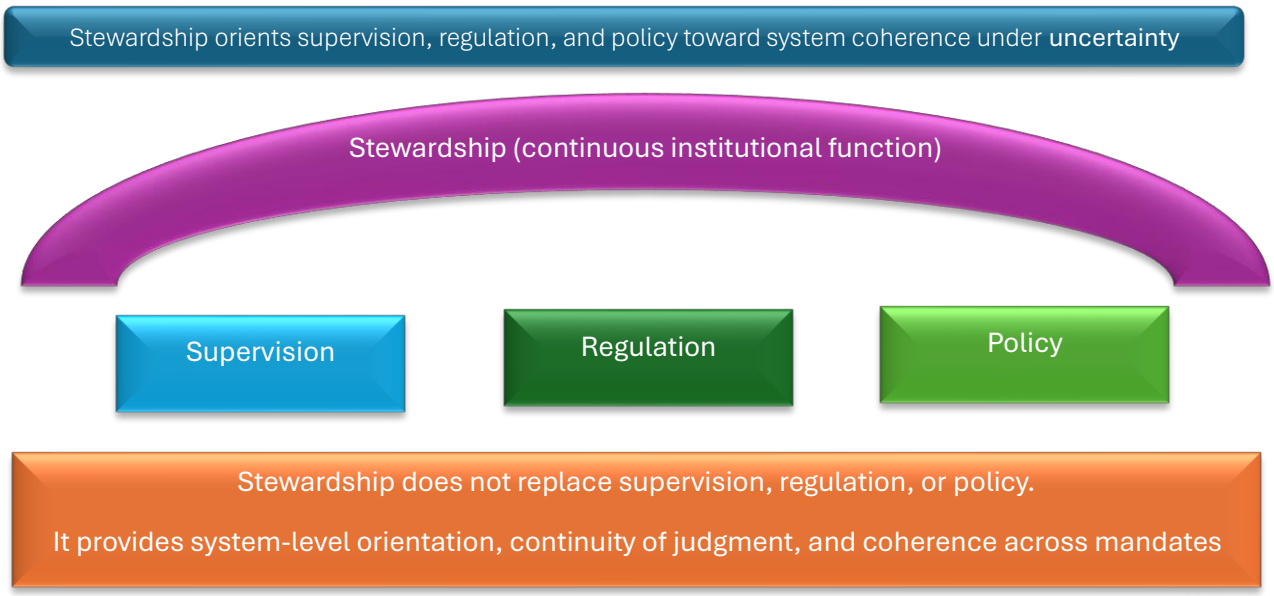
It is concerned not with compliance or control, but with **system integrity under uncertainty**. It asks how the financial ecosystem evolves, where fragility accumulates, and how authority is exercised when objectives conflict and outcomes are uncertain.

This distinction has been increasingly recognized—implicitly—in post-crisis reflections. BIS and IMF analyses repeatedly emphasize that financial stability cannot be reduced to rule enforcement or instrument calibration, but requires continuous judgment about system-wide interactions and trade-offs (Borio, 2014; IMF, 2022; BIS, 2023).

Stewardship, in this sense, is not an additional task layered onto existing mandates. It is the function that **orients** those mandates toward system coherence. **Figure 2** illustrates that

stewardship is a continuous function operating across supervision, regulation, and policy, without replacing them.

Figure 2. Stewardship as an Overarching Institutional Function



Source: *Borio (2014); BIS (2015); FSB (2011); Kay and King (2020).*

2.2 Stewardship as Ownership Without Centralization

A persistent institutional temptation is to locate stewardship in a single unit, committee, or authority. Experience suggests this approach is ineffective.

Financial ecosystems are inherently fragmented. Authority is distributed across institutions, jurisdictions, and time horizons. No single actor has full visibility or control. Attempts to centralize stewardship risk either overreach or irrelevance.

Effective stewardship therefore depends on **ownership without centralization**.

Ownership means that responsibility for system-level coherence is explicit, acknowledged, and exercised. It does not require monopoly over decision-making. Instead, it requires that ecosystem-level concerns can be articulated, escalated, and contested across institutional boundaries.

This perspective aligns with post-crisis thinking on macroprudential policy and financial stability governance, which increasingly emphasizes coordination, shared interpretation, and collective judgment rather than hierarchical control (FSB, 2011; BIS, 2015; ECB, 2024).

Stewardship endures when institutions recognize system responsibility as part of their role—even when it exceeds their formal mandate.

Box 3 explains how system stewardship can be exercised across fragmented authority and provides an illustrative contrast between centralized stewardship and distributed ownership.

Box 3. Ownership Without Centralization

A recurring institutional instinct is to resolve coordination challenges by centralizing responsibility: creating a lead authority, a dominant committee, or a single "system owner." In financial ecosystems, this instinct is understandable—and usually misplaced.

Modern financial systems are inherently fragmented. Authority is distributed across central banks, supervisors, treasuries, market regulators, infrastructures, and, often, across jurisdictions. No single institution possesses full visibility, control, or legitimacy over the entire ecosystem. Attempts to centralize stewardship in one locus therefore tend to fail in one of two ways: they overreach, or they become symbolic.

Ownership without centralization offers a different logic.

Ownership refers to the explicit recognition and exercise of responsibility for system-level coherence. It does not imply monopoly over decisions, instruments, or mandates. Instead, it requires that institutions acknowledge a shared obligation to consider ecosystem-wide effects—even when these lie beyond their formal remit.

Dimension	Centralized Stewardship	Ownership Without Centralization
Location of responsibility	Single authority or body	Distributed across institutions
Visibility of the system	Assumed to be comprehensive	Recognized as partial and complementary
Treatment of mandates	Overridden or stretched	Respected but interpreted systemically
Coordination mechanism	Hierarchical direction	Shared interpretation and escalation
Risk	Overreach or irrelevance	Ambiguity managed through dialogue
Effect on legitimacy	Contested authority	Collective responsibility

Under ownership without centralization, stewardship operates through **interfaces rather than command**. Institutions retain their mandates, but accept that system-level concerns may require articulation, escalation, and contestation across boundaries. Responsibility is exercised through framing, coordination, and shared judgment—not through unilateral control.

This model aligns with post-crisis experience in macroprudential policy and financial stability governance, where effective action has depended less on formal hierarchy than on sustained

coordination, common language, and mutual recognition of interdependence (FSB, 2011; BIS, 2015; ECB, 2024).

Stewardship endures not because authority is concentrated, but because **responsibility is shared and exercised repeatedly**. Ownership without centralization preserves coherence without pretending that complex financial ecosystems can be governed from a single center.

Source: *FSB (2011); BIS (2015); ECB (2024).*

2.3 Authority Without Overreach

Stewardship requires authority—but not in the conventional sense of command or enforcement.

Its authority lies in **orientation and escalation**, not instruction. Stewardship does not decide outcomes. It shapes how decisions are framed, which uncertainties are acknowledged, and when coordination is required.

This distinction is critical for legitimacy.

When stewardship is mistaken for control, institutions face pressure to justify actions through spurious precision or technical certainty. This dynamic contributes to technocratic overreach and, ultimately, loss of trust when outcomes diverge from expectations (Power, 2007; Aikman et al., 2018).

By contrast, stewardship authority is exercised through:

- framing system-wide risks credibly,
- disciplining attention across silos,
- escalating concern without pre-committing action,
- and preserving space for judgment under uncertainty.

Such authority is subtle, but durable. It supports governance without substituting for it.

2.4 Continuity as the Core Institutional Challenge

The defining challenge of stewardship is **continuity**.

Financial ecosystems evolve continuously. Institutions, by contrast, operate through discontinuous processes: electoral cycles, leadership transitions, reorganizations, and shifting priorities. The resulting mismatch creates a structural risk: system evolution outpaces institutional memory.

Continuity does not mean rigidity. Stewardship must adapt as the ecosystem changes. But adaptation without continuity leads to drift—where each cycle begins anew, disconnected from prior understanding.

This is why stewardship must be treated as a **function**, not an initiative. Functions persist even as strategies change. They anchor responsibility over time.

Without such continuity, diagnostics lose context, stress testing loses relevance, and governance deliberation becomes reactive.

Table 2 explains why stewardship must persist across cycles rather than be re-launched episodically.

Table 2. Stewardship as a Function vs Stewardship as an Initiative

Dimension	Stewardship as an Initiative	Stewardship as a Function
Temporal orientation	Time-bound, episodic	Continuous, cross-cycle
Trigger	Crisis, reform moment, or leadership change	Standing responsibility
Institutional anchoring	Projects, task forces, special exercises	Embedded roles and routines
Dependence on individuals	High (champions, sponsors)	Lower (institutional memory)
Treatment of prior learning	Frequently reset or reinterpreted	Accumulated and revisitable
Relationship to uncertainty	Addressed when salient	Managed continuously
Effect on diagnostics	Context-dependent, episodic	Context-preserving over time
Effect on stress testing	Event-driven and repetitive	Iterative and cumulative
Long-term risk	Drift between cycles	Rigidity avoided through continuity
Contribution to stewardship	Temporary coherence	Enduring institutional capacity

Source: *Borio (2014); BIS (2015); BIS (2023); Kay and King (2020).*

Initiatives can generate insight and momentum, particularly in moments of crisis. But without being embedded as a function, their effects dissipate as attention shifts and personnel rotate. Treating stewardship as a function anchors responsibility over time, allowing institutions to adapt without losing continuity of judgment.

2.5 Stewardship and the Preservation of Judgment

At its core, stewardship exists to preserve **judgment**.

The prior volumes in this series repeatedly emphasized the limits of foresight. Diagnostics are incomplete. Stress testing is exploratory. Governance involves trade-offs that cannot be resolved analytically. In such conditions, judgment is irreducible.

The institutional risk is not that judgment disappears, but that it becomes:

- personalized rather than institutional,
- implicit rather than articulated,
- or displaced by procedure and formalism.

Institutional stewardship exists to counter this risk by embedding judgment in collective processes, shared language, and repeatable—but not rigid—deliberation.

This emphasis echoes a growing strand of institutional reflection that warns against substituting formalization for responsibility in environments of deep uncertainty (Kay and King, 2020; BIS, 2023).

Stewardship does not eliminate discretion. It **disciplines and preserves it**.

2.6 Section 2 Takeaway

Stewardship is a distinct and enduring institutional function. It does not replace supervision, regulation, or policy, but orients them toward system-level coherence over time.

It requires ownership without centralization, authority without overreach, and continuity without rigidity. Above all, it exists to preserve institutional judgment under uncertainty—across cycles, leadership changes, and evolving conditions.

Treating stewardship as a function rather than an initiative is the necessary foundation for embedding the Financial Ecosystem Framework as a living institutional capability rather than a static analytical achievement.

3. Embedding Design, Governance, and Diagnostics

Institutionalization does not mean freezing the Financial Ecosystem Framework into structure. Nor does it mean translating prior volumes into procedures or mandates. It means determining **what must endure**—and **what must remain open to revision**—if stewardship is to remain credible over time.

This section clarifies that distinction.

3.1 What Must Be Embedded

Some elements of ecosystemic stewardship lose their meaning if they are not structurally embedded within institutions.

First, **the system boundary** must endure. Design established that financial stability cannot be reduced to a narrow perimeter of regulated entities. Stewardship requires a persistent system-wide lens that includes institutions, markets, infrastructures, information flows, and governance arrangements (Borio, 2011; BIS, 2015). When this boundary narrows over time, fragility re-emerges outside the field of attention.

Second, **the logic of interaction** must remain central. Diagnostics demonstrated that systemic risk arises from coupling, feedback, and amplification—not from isolated weaknesses. Institutionalization requires that decision processes consistently foreground interaction effects, even when pressures favor institution-by-institution assessment (Gorton and Metrick, 2012; BIS, 2023).

Third, **the primacy of judgment** must be embedded. Governance and stress testing both underscored that analytical outputs do not decide. Institutions do. Stewardship therefore requires that deliberative space for judgment—interpretation, disagreement, and escalation—remains protected from procedural compression (Kay and King, 2020).

These elements are not tools. They are **orientation points**. Without embedding them, ecosystemic reasoning becomes optional rather than constitutive. **Box 4** discusses which are non-negotiable orientation points for enduring ecosystem stewardship.

Box 4. What Must Be Embedded

Not all elements of ecosystemic reasoning can remain implicit or discretionary. Some must be **structurally embedded** within institutions if stewardship is to endure beyond individual leadership, episodic analysis, or moments of stress.

These elements are not tools, metrics, or procedures. They are **orientation points** that shape how institutions interpret information and exercise judgment over time.

Embedded Element	What It Anchors	What Is Lost If It Erodes
System boundary	A persistent system-wide lens that extends beyond regulated entities to include markets, infrastructures,	Fragility migrates outside the field of attention; risk appears to “emerge” from nowhere

	information flows, and governance arrangements	
Logic of interaction	Recognition that systemic risk arises from feedback, coupling, and amplification rather than isolated weaknesses	Analysis collapses into siloed assessments; propagation is discovered only after it materializes
Primacy of judgment	Protection of deliberation, disagreement, and escalation as central to decision-making	Outputs substitute for choice; procedures displace responsibility

These elements must endure even as diagnostics evolve, stress-testing assumptions change, and governance arrangements adapt. When they are not embedded, ecosystem reasoning becomes optional—invoked when convenient, sidelined when uncomfortable.

Embedding them does not reduce uncertainty or resolve trade-offs. It ensures that institutions continue to **see the system as a system**, reason about interaction rather than components, and recognize that judgment—under uncertainty—remains unavoidable.

Institutionalization begins by making these orientation points constitutive of how institutions think, not merely of what they produce.

***Source**: Borio (2011); BIS (2015); Gorton and Metrick (2012); BIS (2023); Kay and King (2020).*

3.2 What Must Remain Adaptive

Other elements must *not* be embedded rigidly.

Diagnostics, by construction, are provisional. Vulnerabilities evolve as markets innovate, institutions adapt, and regulation reshapes incentives. Institutionalization therefore does not preserve specific vulnerability maps or indicators. It preserves the **capacity to re-diagnose** (Minsky, 1986; Gennaioli et al., 2018).

Similarly, stress testing cannot be stabilized into a fixed repertoire. Stress dimensions, propagation channels, and amplification mechanisms change as the ecosystem evolves. Embedding stress testing as a routine without revisiting assumptions invites ritualization—the very failure the prior volume warned against (BIS, 2023).

Institutionalization thus requires selective discipline: embedding the *function* of diagnostics and stress testing, while keeping their *content* open to revision.

This distinction is often missed. Institutions frequently lock in what should remain fluid, while leaving what should endure exposed to drift. **Table 3** presents a conceptual distinction between what must persist structurally and what must evolve continuously.

Table 3. Embedded vs Adaptive Elements of Ecosystem Stewardship

Dimension	Elements That Must Be Embedded	Elements That Must Remain Adaptive
Core purpose	Preserve orientation and continuity of reasoning	Preserve relevance under changing conditions
Nature	Structural and constitutive	Provisional and revisable
Examples	System boundary; logic of interaction; primacy of judgment	Vulnerability maps; stress dimensions; propagation narratives
Relation to time	Designed to endure across cycles	Expected to change as the ecosystem evolves
Treatment of assumptions	Stable reference points	Explicitly contestable and replaceable
Risk if mishandled	Drift and loss of ecosystem perspective	Ritualization and false confidence
Typical institutional error	Allowing embedded elements to erode quietly	Freezing adaptive elements into routine
Role in stewardship	Anchors how institutions think	Updates what institutions focus on

Source: *Borio (2011); Minsky (1986); Gennaioli, Shleifer and Vishny (2018); BIS (2023).*

Institutionalization requires discrimination. When institutions embed what should remain fluid, learning hardens into habit. When they fail to embed what should endure, stewardship becomes optional and episodic. Enduring capability depends on embedding orientation while preserving adaptability of content.

3.3 Avoiding Rigidity and Lock-In

The risk of embedding is rigidity.

When ecosystem reasoning is translated too directly into formal rules, templates, or fixed processes, it loses its capacity to adapt. Over time, the institution becomes proficient at repeating past analysis rather than interrogating present conditions.

This dynamic has been observed repeatedly in financial regulation and risk management. Practices introduced to address one crisis can become sources of fragility in the next if they are treated as permanent solutions rather than contingent responses (Goodhart, 2008; Power, 2007).

From an ecosystem perspective, rigidity is not merely inefficiency—it is a source of systemic risk. Lock-in narrows interpretation, discourages dissent, and delays recognition of novel vulnerabilities.

Institutionalization must therefore preserve **interpretive flexibility** even as it embeds responsibility.

3.4 Embedding Without Reinterpretation

A critical discipline of this volume is not to reinterpret prior work.

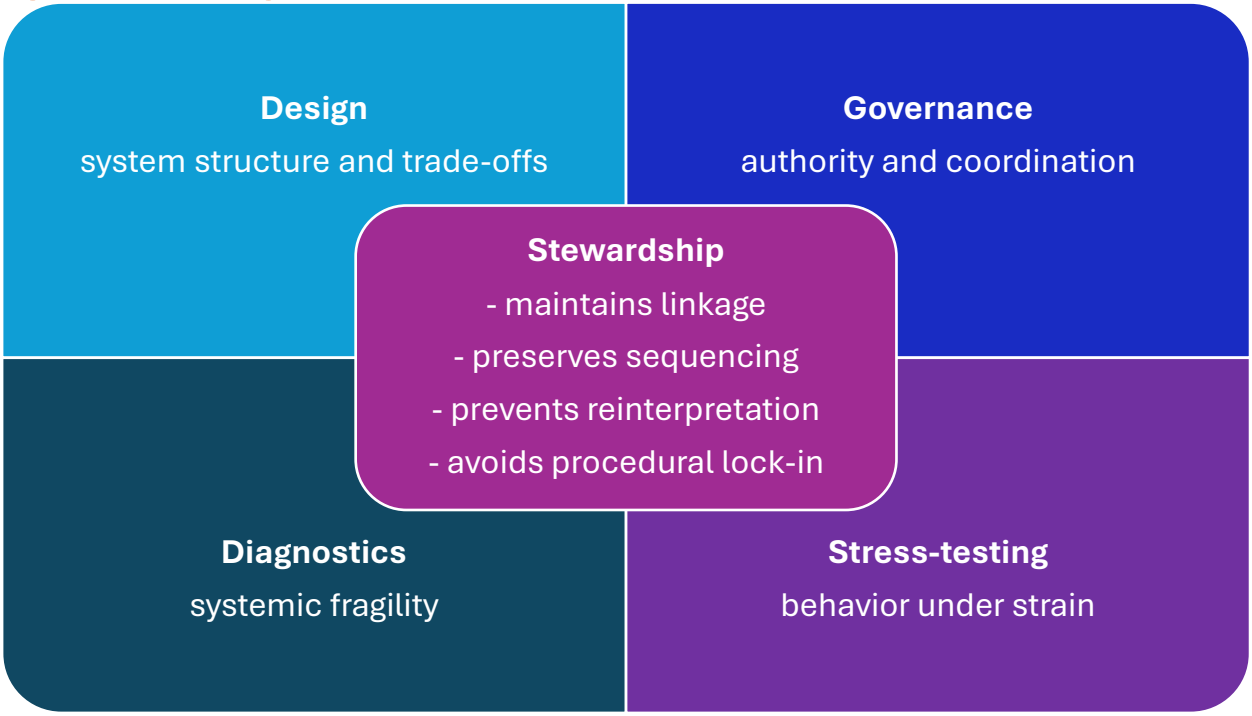
Institutionalization does not refine design, adjust governance, or reinterpret diagnostics. Those analytical tasks are complete. Reopening them at the institutionalization stage would undermine continuity rather than strengthen it.

Instead, embedding operates through **consistency of use**:

- Design continues to define what the system is and what trade-offs it embodies.
- Governance continues to define how authority is exercised and contested.
- Diagnostics continue to define how fragility is rendered legible.
- Stress testing continues to define how that fragility is explored under strain.

Institutionalization ensures that these functions remain linked, sequenced, and mutually reinforcing over time. **Figure 3** illustrates how design, governance, diagnostics, and stress testing remain connected through stewardship without being frozen into procedure.

Figure 3. Embedding Without Lock-In



Source: *Borio (2011); Goodhart (2008); BIS (2023); Kay and King (2020).*

3.5 Embedding as Orientation, Not Instruction

Perhaps the most important clarification is this: embedding does not mean instruction.

Institutional stewardship operates by shaping **how institutions think**, not by dictating **what they must do**. It influences framing, attention, escalation, and deliberation—leaving decisions to accountable authorities.

This distinction is essential for legitimacy. When institutions claim to follow frameworks mechanically, they obscure responsibility. When they acknowledge judgment explicitly, they preserve it (Borio, 2020).

Embedding ecosystemic reasoning therefore strengthens accountability rather than diluting it. It makes clear that decisions are taken under uncertainty, informed—but not determined—by analysis.

3.6 Section 3 Takeaway

Institutionalization requires discrimination.

Some elements of ecosystemic stewardship must be embedded structurally: the system boundary, the logic of interaction, and the primacy of judgment. Other elements must remain adaptive: diagnostic content, stress-testing assumptions, and representations of vulnerability.

Failure to distinguish between the two leads either to drift or to rigidity. Enduring stewardship depends on embedding orientation without freezing interpretation—preserving continuity without lock-in.

This balance is the core institutional challenge of sustaining the Financial Ecosystem Framework as a living capability rather than a static architecture.

4. Institutional Learning Under Uncertainty

The preceding sections established that stewardship must endure as an institutional function, and that embedding requires discrimination between what must persist and what must remain adaptive. This section turns to the most fragile dimension of institutionalization: **learning**.

Financial ecosystem stewardship depends not on static knowledge, but on the capacity of institutions to learn under uncertainty—without mistaking repetition for understanding or novelty for insight.

4.1 Learning as a Continuous, Not Episodic, Function

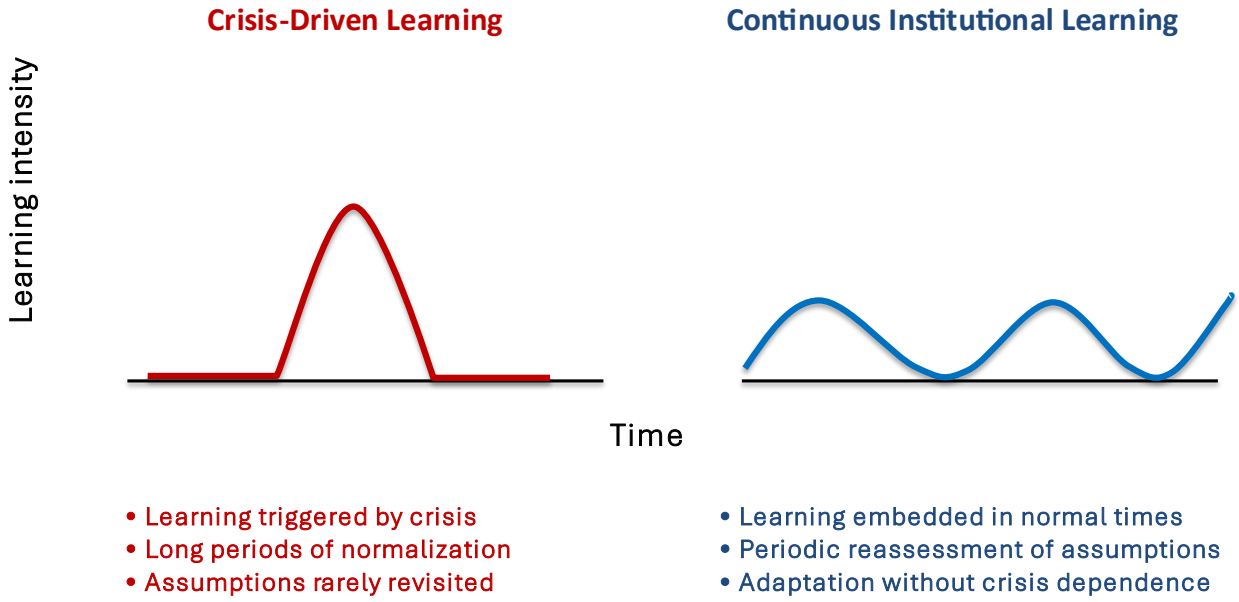
In financial stability practice, learning is often treated as episodic. Crises trigger reviews, reforms, and reflection. Calm periods, by contrast, encourage normalization and forgetting. From an ecosystem perspective, this asymmetry is dangerous.

Financial systems evolve continuously. Incentives shift, technologies change, interconnections deepen, and new forms of leverage emerge. If institutional learning is activated only after visible failure, stewardship lags system evolution by design (Minsky, 1986; Gennaioli et al., 2018).

Institutionalization therefore requires learning to be treated as a **continuous function**, embedded in normal-time practice rather than reserved for post-crisis moments. This does not imply constant change. It implies sustained attentiveness to how assumptions age as conditions evolve.

Learning, in this sense, is not accumulation of information. It is **periodic reassessment of what is taken for granted**. **Figure 4** provides a comparison of episodic, crisis-triggered learning and continuous institutional learning under uncertainty.

Figure 4. Continuous Learning Versus Crisis-Driven Learning



Source: *Minsky (1986); Gennaioli, Shleifer and Vishny (2018); BIS (2023).*

4.2 Learning Loops Across Diagnostics and Stress Testing

Diagnostics and stress testing are the primary learning interfaces within the Financial Ecosystem Framework.

Diagnostics identify where fragility resides under current conditions. Stress testing explores how that fragility behaves under strain. Learning occurs when insights from each inform revision of the other over time.

Institutionalization requires that these loops remain active.

Without learning loops, diagnostics become static inventories and stress testing becomes repetition. Vulnerabilities identified years earlier are re-examined without questioning whether they remain binding. Stress dimensions are reused without asking whether they still probe the system where it is most fragile (BIS, 2023; ECB, 2024).

Effective stewardship treats diagnostics and stress testing not as outputs, but as **inputs into institutional learning**—to be revised, challenged, and occasionally abandoned. **Box 5** shows how diagnostics and stress testing interact to sustain learning rather than repetition and provides an illustrative contrast between active learning loop versus ritualized application.

Box 5. Learning Loops in Ecosystem Stewardship

Within the Financial Ecosystem Framework, diagnostics and stress testing are not parallel exercises. They form a **learning loop** through which institutional understanding is continuously revised.

Diagnostics identify where fragility resides under prevailing conditions. Stress testing explores how that fragility behaves when conditions change. Learning occurs only when the insights generated by each are allowed to **modify the assumptions, focus, and interpretation of the other over time**.

When this loop weakens, both functions degrade.

Dimension	Active Learning Loop	Ritualized Application
Role of diagnostics	Provisional mapping of current fragility	Static inventory of known vulnerabilities
Role of stress testing	Exploratory challenge to assumptions	Repetition of familiar scenarios
Treatment of outputs	Inputs for reinterpretation and revision	Endpoints for reporting and compliance
Assumptions	Explicit and contestable	Implicit and carried forward
Institutional effect	Accumulating judgment	Accumulating routine

Without active learning loops, vulnerabilities identified in earlier periods are revisited without questioning their continued relevance. Stress dimensions are reused because they are familiar, not because they remain probing. Over time, repetition substitutes for inquiry.

Institutionalization does not require more frequent diagnostics or more complex stress tests. It requires preserving the **capacity to let each unsettle the other**—to revise focus, abandon outdated assumptions, and redirect attention as the ecosystem evolves.

In this sense, learning loops are not technical mechanisms. They are institutional disciplines that prevent understanding from hardening into habit.

Source: *BIS (2023); ECB (2024).*

4.3 Updating Assumptions Without Chasing Noise

Learning under uncertainty requires restraint.

A persistent institutional risk is overreaction to recent events. New shocks, innovations, or market episodes can trigger rapid reinterpretation of risk, leading institutions to chase noise rather than interrogate structure.

This tendency is well documented. Behavioral and institutional research shows that salience and recency bias often distort risk perception, particularly in complex systems where causal attribution is difficult (Shiller, 2017; Gennaioli et al., 2018).

Institutional stewardship must therefore distinguish between:

- **signals** that indicate structural change, and
- **noise** that reflects transient conditions.

This distinction cannot be automated. It relies on judgment informed by diagnostic continuity and stress-testing discipline. Learning that updates assumptions too quickly undermines coherence; learning that updates them too slowly invites irrelevance.

Institutionalization exists to hold this tension, not to resolve it mechanically.

4.4 Learning from Near-Misses and False Alarms

Crises are not the only source of learning.

Near-misses—episodes where stress was absorbed without visible failure—and false alarms—situations where anticipated fragility did not materialize—contain critical information. Yet institutions often discard these experiences because they lack the clarity of crisis outcomes.

From an ecosystem perspective, this is a missed opportunity.

Near-misses reveal absorptive mechanisms that functioned under strain. False alarms expose assumptions that were overly pessimistic or propagation channels that failed to activate. Both are essential for calibrating judgment over time (Borio, 2014; BIS, 2023).

Institutional learning must therefore extend beyond failure analysis. It must include systematic reflection on **why stress did not become systemic**, and under what conditions similar resilience can—or cannot—be expected in the future. **Table 4** provides a conceptual comparison across relevant dimensions of learning from crises, near-misses, and false alarms.

Table 4. Sources of Institutional Learning Under Uncertainty

Dimension	Crises	Near-Misses	False Alarms
Visibility of stress	High and undeniable	High but contained	Anticipated but unrealized
Institutional attention	Intense and concentrated	Moderate and short-lived	Often minimal or dismissive
Clarity of outcome	Clear failure	Ambiguous success	Ambiguous non-event
Typical institutional focus	Causes of breakdown	Often neglected	Often disregarded
Learning potential	Structural weaknesses exposed	Absorptive capacity revealed	Assumptions and narratives tested
Risk of misinterpretation	Overgeneralization	Complacency	Overcorrection or dismissal
Contribution to judgment	Identifies failure modes	Identifies resilience mechanisms	Calibrates expectations and uncertainty
Role in stewardship	Essential but insufficient	Underutilized	Critical but overlooked

Source: *Borio (2014); BIS (2023); Minsky (1986); Kindleberger and Aliber (2011).*

Institutions tend to privilege crisis learning because outcomes are unambiguous. Yet exclusive focus on failure distorts judgment. Near-misses and false alarms provide essential information about absorption, adaptation, and the limits of propagation. Institutionalization sustains stewardship by ensuring that learning extends across all three sources—without mistaking non-failure for safety.

4.5 Learning Without Illusion

The greatest danger in institutional learning is the illusion of mastery.

As experience accumulates, institutions may mistake familiarity for understanding. Models improve, processes mature, and narratives stabilize. Over time, uncertainty is reinterpreted as risk that has been "managed."

This illusion undermines stewardship.

The prior volume on stress testing emphasized that uncertainty remains irreducible, even as understanding improves. Institutional learning must therefore deepen humility rather than erode it (Kay and King, 2020; BIS, 2023).

Learning, properly institutionalized, does not narrow the perceived space of uncertainty. It clarifies where uncertainty remains and why judgment will continue to be required.

4.6 Section 4 Takeaway

Institutional learning under uncertainty is not episodic, reactive, or automatic. It must be sustained deliberately through continuous engagement with diagnostics and stress testing, disciplined updating of assumptions, and reflection on both failures and non-failures.

Learning that hardens into routine undermines stewardship as surely as ignorance. Enduring capability depends on preserving the capacity to reassess assumptions without chasing noise or succumbing to false confidence.

Institutionalization, in this sense, is not the accumulation of knowledge, but the preservation of the conditions under which responsible learning remains possible over time.

5. Coordination, Escalation, and Continuity

Stewardship fails most visibly not in analysis, but in coordination and escalation. When fragility accumulates across institutions and markets, responsibility is dispersed, information is partial, and authority is fragmented. In such conditions, the capacity to coordinate and to escalate concerns credibly becomes decisive.

This section examines how institutionalization sustains coordination and escalation over time—across silos, jurisdictions, and leadership cycles—without centralizing control or hard-coding responses.

5.1 Coordination as an Endogenous Feature of the Ecosystem

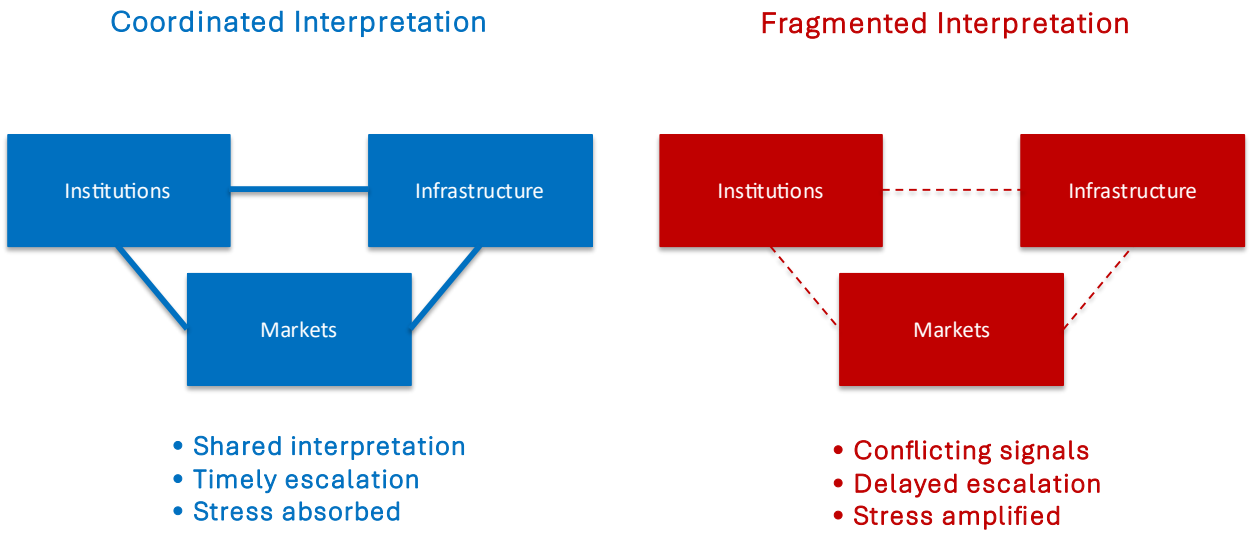
Coordination is not an external overlay on the financial system. It is an endogenous feature of the ecosystem itself.

Governance arrangements—mandates, information-sharing practices, decision forums, and informal norms—shape how stress propagates and how it is interpreted. Under strain, coordination can absorb stress through timely alignment, or amplify it through delay, inconsistency, or conflict (Borio, 2020; BIS, 2023).

The prior volume on stress testing demonstrated that governance capacity is often the binding constraint on systemic resilience. Institutionalization therefore treats coordination not as a contingency plan, but as a **standing condition** of stewardship.

This implies sustained attention to how institutions interact in normal times, not only to how they are expected to respond in crisis. **Figure 5** provides a Stylized depiction of how coordination structures interact with financial propagation under stress.

Figure 5. Coordination as an Endogenous Component of System Behavior



Source: Borio (2020); BIS (2023); FSB (2011); ECB (2024).

5.2 Escalation Under Uncertainty

Escalation is the mechanism through which concerns move from observation to decision.

In practice, escalation is difficult precisely when uncertainty is greatest. Signals are ambiguous, interpretations diverge, and action carries political and reputational risk. Institutions may hesitate to escalate because thresholds are unclear or because escalation itself is seen as an implicit call to act.

This hesitation is structural, not accidental.

Research on crisis dynamics shows that delayed escalation often reflects uncertainty about interpretation rather than lack of information (Gorton, 1988; BIS, 2023). When escalation is treated as synonymous with intervention, institutions rationally delay.

Institutional stewardship must therefore decouple **escalation from pre-commitment**. Escalation should be understood as a request for collective interpretation, not as a trigger for predetermined action.

This distinction preserves credibility. It allows concerns to surface early without forcing premature decisions. Box 6 discusses why effective stewardship separates raising concern from committing to action and illustrates the contrast between escalation with and without pre-commitment.

Box 6. Escalation Without Pre-Commitment

In financial ecosystem stewardship, escalation is often misunderstood. It is frequently treated as a precursor to intervention, rather than as an intermediate step in collective interpretation. This misunderstanding creates a structural disincentive to escalate precisely when uncertainty is highest.

When escalation is implicitly equated with action, institutions face a dilemma: raise concern and risk being forced into premature intervention, or delay escalation in the hope that uncertainty resolves itself. Under such conditions, hesitation is rational.

Research on crisis dynamics shows that delayed escalation rarely reflects ignorance. More often, it reflects uncertainty about how signals should be interpreted and fear of the consequences of acting too early (Gorton, 1988; BIS, 2023).

Effective stewardship breaks this linkage.

Dimension	Escalation With Pre-Commitment	Escalation Without Pre-Commitment
Meaning of escalation	Implicit call to intervene	Request for collective interpretation
Institutional incentive	Delay until certainty increases	Surface concern early
Treatment of uncertainty	Suppressed or deferred	Explicitly acknowledged
Decision space	Narrowed prematurely	Preserved for judgment
Effect on credibility	Vulnerable to overreaction	Strengthens disciplined deliberation

By decoupling escalation from intervention, institutions create space for disagreement, interpretation, and refinement of understanding. Concerns can be raised without forcing immediate decisions, allowing collective judgment to develop under uncertainty.

This separation does not weaken accountability. It strengthens it. It ensures that when action is eventually taken—or consciously deferred—it is grounded in shared understanding rather than forced timing.

Institutionalization preserves this distinction by embedding escalation as a **deliberative mechanism**, not a mechanical trigger. In doing so, it enables stewardship to be anticipatory without becoming precipitate.

Source: *Gorton (1988); BIS (2023).*

5.3 Coordination Across Silos and Jurisdictions

Financial ecosystems cut across institutional and jurisdictional boundaries. Banks, non-banks, markets, infrastructures, and authorities interact continuously, often with misaligned incentives and time horizons.

Institutionalization does not eliminate these silos. It recognizes them.

Effective stewardship depends on maintaining **interfaces** across silos—shared language, interpretive forums, and informal channels—through which system-level concerns can travel even when mandates diverge (FSB, 2011; BIS, 2015).

This interface logic is particularly important in cross-border contexts, where legal authority is limited and coordination relies on trust, reciprocity, and shared understanding rather than command (IMF, 2022).

Continuity of coordination depends less on formal agreements than on sustained interaction over time. When these interactions atrophy in normal times, coordination under stress becomes fragile.

5.4 Continuity Across Leadership and Political Cycles

One of the most severe tests of institutionalization is leadership change.

Governors, ministers, and senior officials rotate. Political priorities shift. New leadership brings new emphases and interpretations. In the absence of institutional continuity, ecosystem stewardship is repeatedly reset.

This reset is costly.

Continuity does not require policy invariance. It requires preservation of **institutional reasoning**: shared understanding of system structure, known fault lines, and unresolved uncertainties.

Institutions that rely on individual memory or informal leadership risk sharp discontinuities when personnel change. Institutionalization exists to ensure that stewardship survives these transitions—not by constraining new leadership, but by anchoring decision-making in accumulated understanding.

Table 5 presents a conceptual overview of how leadership and political cycles affect stewardship capacity.

Table 5. Continuity Risks Across Institutional Transitions

Dimension	Weak Institutional Continuity	Strong Institutional Continuity
Source of stewardship	Individual leaders or informal authority	Embedded institutional function
Effect of leadership change	Reset of priorities and interpretations	Reorientation within a shared frame
Treatment of prior learning	Selectively retained or discarded	Preserved and revisitable
Handling of unresolved risks	Deferred or reinterpreted	Explicitly carried forward
Diagnostic continuity	Fragmented across tenures	Cumulative across cycles
Stress-testing relevance	Repeated without context	Interpreted in light of history
Governance deliberation	Reactive and episodic	Anchored in accumulated reasoning
Risk during transitions	Loss of coherence and delayed response	Temporary adjustment without erosion
Long-term effect on stewardship	Drift and repeated relearning	Enduring capacity under change

Source: *Borio (2020); BIS (2023); Kay and King (2020).*

Leadership change is unavoidable and often desirable. The institutional risk lies not in renewal, but in discontinuity of reasoning. When stewardship depends on individuals, transitions reset understanding. When stewardship is institutionalized, transitions reframe priorities while preserving accumulated insight.

5.5 Coordination as a Condition for Legitimate Action

Finally, coordination and escalation are not only functional necessities. They are conditions for legitimacy.

Actions taken under systemic stress—whether interventions, forbearance, or restraint—are scrutinized intensely. When coordination appears fragmented or opaque, trust erodes even if outcomes stabilize temporarily.

Conversely, when institutions demonstrate coherent interpretation, transparent escalation, and collective responsibility, legitimacy is reinforced—even when uncertainty remains (Borio, 2014; Kay and King, 2020).

Institutionalization therefore treats coordination not as an operational convenience, but as a **public function** essential to credible stewardship.

5.6 Section 5 Takeaway

Coordination and escalation are the connective tissue of financial ecosystem stewardship. They determine whether insight travels, whether concerns surface in time, and whether responsibility is exercised collectively rather than defensively.

Institutionalization sustains these functions by embedding coordination as an endogenous feature of governance, decoupling escalation from pre-commitment, preserving interfaces across silos and jurisdictions, and maintaining continuity across leadership cycles.

Without such embedding, even the most sophisticated diagnostics and stress testing lose force. Stewardship becomes episodic, reactive, and vulnerable to drift. With it, institutions retain the capacity to reason and act coherently under uncertainty—over time.

6. Preventing Ritualization and False Confidence

Institutionalization strengthens stewardship only if it preserves thinking. When it does not, the same processes designed to sustain capability can quietly undermine it.

This section examines two closely related failure modes of institutionalization: **ritualization** and **false confidence**. Both emerge not from neglect, but from apparent success.

6.1 When Processes Replace Thinking

Ritualization occurs when practices that were once interpretive become routine.

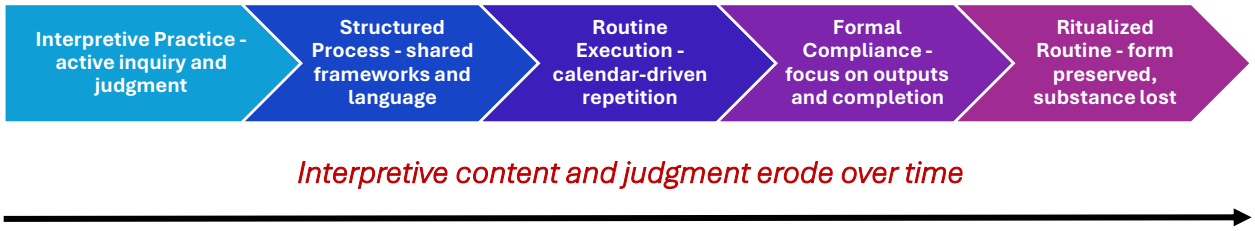
Diagnostics are updated because the calendar requires it. Stress tests are run because the cycle demands it. Governance meetings proceed because they are scheduled. Outputs are produced, reviewed, and archived. Over time, the act of completion substitutes for inquiry.

This is a familiar dynamic in complex organizations. Studies of risk management and regulation show that once procedures stabilize, they tend to crowd out reflection, particularly under conditions of uncertainty where outcomes cannot be easily validated (Power, 2007; Strathern, 2000).

From an ecosystem perspective, ritualization is dangerous because it preserves **form without substance**. The language of stewardship remains, but its capacity to challenge assumptions weakens.

Institutionalization must therefore be designed not only to sustain processes, but to **protect spaces for interpretation and dissent**. **Figure 6** shows how analytical practices can lose interptetive content over time.

Figure 6. From Interpretive Practice to Ritualized Routine



Source: *Power (2007); Strathern (2000); BIS (2023).*

6.2 Repetition, Familiarity, and Attentional Decay

Repetition dulls attention.

As diagnostics and stress-testing exercises recur without visible crisis, their results become familiar. Familiarity breeds reassurance. Over time, what was once treated as provisional insight is reinterpreted as stable knowledge.

This dynamic is reinforced by cognitive and institutional biases. Familiar patterns are easier to process, less likely to be challenged, and more readily accepted within organizations (Kahneman, 2011; Gennaioli et al., 2018).

The result is **attentional decay**: institutions continue to look, but they see less.

Institutional stewardship must explicitly counter this tendency by treating repetition as a prompt for renewed questioning rather than confirmation. Without this discipline, learning plateaus and fragility accumulates unnoticed.

6.3 Formalization and the Loss of Judgment

Formalization is a double-edged instrument.

Rules, templates, and standardized processes enable coordination, comparability, and continuity. But under deep uncertainty, excessive formalization can displace judgment rather than support it.

This risk is particularly acute in financial stability practice, where formal outputs—scores, classifications, scenarios—can create an illusion of completeness. Once encoded, these

representations acquire authority independent of their assumptions (Goodhart, 2008; Borio, 2020).

The prior volume on stress testing emphasized that numerical or procedural precision does not resolve uncertainty. When formalization is mistaken for understanding, institutions become vulnerable to false confidence.

Institutionalization must therefore treat formalization as **supporting judgment**, not replacing it. Box 7 discusses how formal processes can both sustain and erode institutional judgment and present an illustrative contrast between formalization that supports or displaces judgment.

Box 7. Formalization as Enabler and Threat

Formalization is indispensable to modern financial governance. Rules, templates, classifications, and standardized procedures enable coordination across institutions, comparability over time, and continuity across personnel changes. Without formalization, stewardship would depend excessively on individual memory and informal authority.

Yet under conditions of deep uncertainty, formalization carries a structural risk.

When analytical representations—scores, risk categories, scenarios, or classifications—are formalized, they acquire authority independent of the assumptions, judgments, and uncertainties that produced them. Over time, the representation begins to stand in for understanding rather than support it (Goodhart, 2008; Borio, 2020).

This dynamic is particularly acute in financial stability practice, where uncertainty is irreducible and outcomes cannot be validated ex ante.

Dimension	Formalization as Enabler	Formalization as Threat
Role of formal outputs	Inputs into deliberation	Substitutes for deliberation
Treatment of assumptions	Explicit and revisitable	Implicit and forgotten
Relationship to uncertainty	Acknowledged and preserved	Suppressed or obscured
Authority of representations	Conditional and contextual	Treated as definitive
Effect on judgment	Disciplines and supports	Narrows and displaces

When formalization supports judgment, it structures attention, facilitates coordination, and preserves institutional memory. When it displaces judgment, it creates an illusion of completeness that discourages challenge and reinterpretation.

The risk is not formalization itself, but **formalization without interpretive discipline**.

The prior volume on stress testing emphasized that procedural or numerical precision cannot resolve uncertainty. When institutions mistake encoded outputs for understanding, they

become vulnerable to false confidence—believing they have mastered risks that remain fundamentally contingent.

Institutionalization therefore requires that formal processes remain clearly subordinate to judgment. Their authority must derive from how they are used, contested, and revised—not from their existence alone.

***Source**: Goodhart (2008); Borio (2020).*

6.4 The Dynamics of False Confidence

False confidence does not arise from arrogance. It arises from order.

As institutions mature, processes stabilize, and outputs accumulate, uncertainty is gradually reframed as managed risk. The language of exploration gives way to the language of assurance. Over time, the boundary between what is understood and what is assumed becomes blurred.

This dynamic has been documented repeatedly in the lead-up to financial crises. Periods of apparent stability encourage extrapolation, normalization of fragility, and suppression of doubt (Minsky, 1986; Kindleberger and Aliber, 2011).

False confidence is therefore not an aberration. It is an endogenous risk of institutional success. Institutionalization that does not explicitly guard against this dynamic risks converting stewardship into a source of complacency.

6.5 Institutionalizing Humility

If ritualization and false confidence are the risks, **humility** is the counterweight.

But humility cannot be left to individual disposition. It must be institutional.

Institutional humility takes the form of:

- explicit acknowledgment of uncertainty,
- refusal to over-interpret outputs,
- protection of dissenting views,
- and disciplined separation between analysis and decision.

This perspective aligns with recent reflections in central banking and financial governance that emphasize the limits of models, forecasts, and formal frameworks under conditions of complexity and change (Kay and King, 2020; BIS, 2023).

Humility, in this sense, does not weaken authority. It preserves credibility. Table 6 presents a conceptual contrast between ritualized practice and humility-preserving stewardship.

Table 6: Ritualization vs Institutional Humility

Dimension	Ritualized Practice	Institutional Humility
Treatment of uncertainty	Minimized or obscured	Explicitly acknowledged
Role of analytical outputs	Interpreted as conclusions	Treated as provisional inputs
Relationship to models and frameworks	Granted implicit authority	Recognized as contingent and incomplete
Space for dissent	Narrowed by procedure	Protected and legitimized
Interpretation of repetition	Confirmation of understanding	Prompt for renewed questioning
Separation of analysis and decision	Blurred; outputs imply action	Disciplined; judgment remains explicit
Institutional posture	Reassuring and self-confirming	Reflective and self-critical
Effect on credibility over time	Vulnerable to sudden erosion	Preserved through consistency
Long-term risk	False confidence and complacency	Sustained judgment under uncertainty

Source: *Power (2007); Kay and King (2020); BIS (2023).*

Ritualization and humility represent opposing institutional trajectories. When processes replace thinking, institutions project confidence they cannot sustain. When humility is institutionalized, authority is preserved not through claims of mastery, but through disciplined acknowledgment of limits. This posture does not weaken stewardship—it is the condition for its durability.

6.6 Section 6 Takeaway

Ritualization and false confidence are not failures of intention. They are structural risks that emerge when institutionalization succeeds superficially but fails substantively.

Processes that replace thinking, repetition that dulls attention, and formalization that displaces judgment all undermine stewardship from within. Over time, they convert ecosystemic reasoning into routine and exploration into reassurance.

Preventing these failure modes requires institutional humility: explicit acknowledgment of limits, protection of interpretive space, and continuous discipline in separating analysis from certainty.

Without this, institutionalization risks becoming the final illusion. With it, stewardship remains a living capability rather than a ceremonial one.

7. Accountability, Legitimacy, and Trust

Institutionalization ultimately succeeds or fails on legitimacy.

Financial ecosystem stewardship operates under uncertainty, incomplete control, and contested authority. Decisions are consequential, often distributional, and sometimes controversial. In this context, accountability and trust are not ancillary concerns. They are constitutive conditions of durable stewardship.

This section clarifies how accountability and legitimacy can be sustained **without false precision**, and why trust depends less on certainty than on integrity of process.

7.1 Accountability Without False Precision

Traditional notions of accountability rely on clear objectives, measurable outcomes, and traceable causality. Financial ecosystem stewardship rarely enjoys these conditions.

Outcomes depend on complex interaction, delayed effects, and counterfactual paths that cannot be observed. Success is often defined by what did *not* happen, while failure may emerge long after decisions were taken.

In such environments, there is a strong temptation to manufacture precision—to rely on indicators, thresholds, or ex post rationalizations that create an appearance of control. This temptation is corrosive.

Accountability that rests on spurious precision undermines credibility when reality diverges from expectation. It encourages defensive behavior, risk aversion, and retrospective justification rather than responsible judgment (Power, 2007; Borio, 2020).

Institutional stewardship therefore requires a different conception of accountability: one grounded in **process integrity**, transparency of reasoning, and clarity about limits—not in the illusion of determinism. **Box 8** discusses why conventional performance metrics fail to capture responsibility in ecosystem stewardship and provides a comparison of metric-based versus process-based accountability.

Box 8. Accountability Under Deep Uncertainty

In many areas of public policy, accountability is anchored in measurable objectives, observable outcomes, and traceable causality. Financial ecosystem stewardship rarely operates under these conditions.

Systemic outcomes emerge from complex interaction, delayed feedback, and counterfactual paths that cannot be observed. Success is often defined by the absence of crisis, while failure may surface years after decisions were taken—and under conditions very different from those in which they were made.

This creates a structural tension.

When accountability is demanded in environments where causality is opaque, institutions face strong incentives to **manufacture precision**: to rely on indicators, thresholds, or ex post narratives that create an appearance of control and attribution. Over time, these representations substitute for judgment rather than support it (Power, 2007; Borio, 2020).

Dimension	Metric-Based Accountability	Process-Based Accountability
Basis of assessment	Measurable outcomes and targets	Integrity of reasoning and decision process
Treatment of causality	Assumed or simplified	Explicitly uncertain and contested
Relation to uncertainty	Suppressed or disguised	Acknowledged and documented
Institutional behavior	Defensive, justificatory	Deliberative, responsibility-oriented
Long-term effect	Erosion of credibility	Preservation of legitimacy

In ecosystem stewardship, accountability cannot rest on proving that decisions were "correct" in outcome terms. It rests on demonstrating that decisions were taken **responsibly**: with transparent reasoning, explicit acknowledgment of uncertainty, and coherence with institutional mandates and prior understanding.

This conception of accountability does not weaken discipline. It strengthens it by aligning responsibility with what institutions can legitimately know and control.

Institutionalization supports this alignment by embedding norms of process integrity—clarity about assumptions, openness to challenge, and willingness to revisit judgment over time—rather than reliance on false precision.

***Source**: Power (2007); Borio (2020).*

7.2 Legitimacy in the Presence of Uncertainty

Legitimacy does not require certainty. It requires coherence, honesty, and consistency.

Historical experience shows that public trust erodes most sharply not when institutions admit uncertainty, but when they claim confidence they cannot sustain. Overstatement of foresight,

control, or resilience creates expectations that reality will eventually disappoint (Minsky, 1986; Kindleberger and Aliber, 2011).

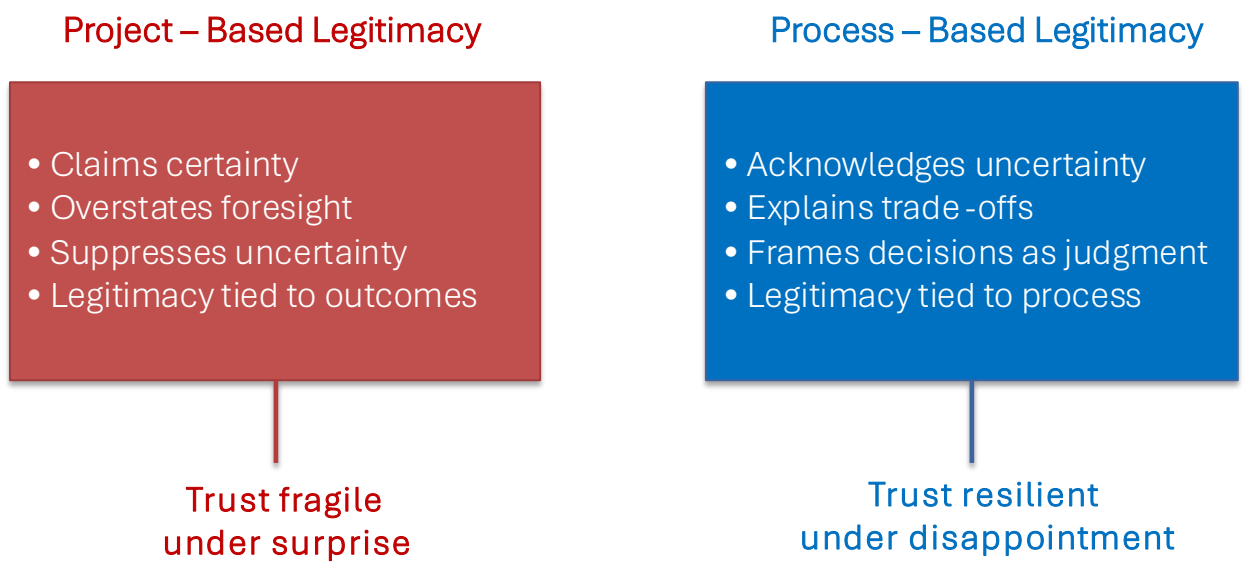
By contrast, institutions that articulate uncertainty clearly—while demonstrating disciplined reasoning and collective responsibility—tend to preserve legitimacy even under adverse outcomes (Kay and King, 2020).

From an ecosystem perspective, legitimacy arises when:

- uncertainty is acknowledged explicitly,
- trade-offs are recognized rather than obscured,
- and decisions are framed as judgments taken under responsibility, not as mechanical consequences of models.

Institutionalization supports legitimacy by embedding these norms into how stewardship is practiced and communicated. **Figure 7** shows that legitimacy is grounded in transparent reasoning rather than outcome certainty.

Figure 7. Legitimacy Through Process, Not Prediction



Source: *Kay and King (2020); Shiller (2017); BIS (2023).*

7.3 Trust as an Emergent Property of Stewardship

Trust cannot be engineered directly. It emerges from repeated interaction between institutions and the public over time.

In financial ecosystem stewardship, trust depends on whether institutions are perceived as:

- competent but not overconfident,
- authoritative but not opaque,
- adaptive but not arbitrary.

These attributes are reinforced when stewardship is visibly continuous rather than episodic, and when institutions demonstrate learning without disavowing past judgments at every turn (Gennaioli et al., 2018).

Institutionalization contributes to trust by ensuring that ecosystem reasoning is not reinvented with each crisis or leadership change, but carried forward as a shared institutional practice.

7.4 Communicating Limits Credibly

Communication is a central component of legitimacy, but also a source of risk.

In moments of stress, pressure mounts to reassure. Yet reassurance that exceeds institutional knowledge undermines credibility when events unfold differently than expected.

Recent reflections in central banking and financial governance increasingly emphasize the importance of **narrative discipline**—communicating what is known, what is uncertain, and what remains contested without collapsing into alarmism or false confidence (Shiller, 2017; BIS, 2023).

Institutional stewardship treats communication not as messaging, but as an extension of judgment. It aligns external narratives with internal uncertainty, preserving consistency between what institutions say and how they reason. **Table 7** provides a comparison of communication approaches under uncertainty.

Table 7. Communication Strategies and Their Implications for Trust

Dimension	Overconfident Communication	Opaque Communication	Disciplined Communication
Treatment of uncertainty	Minimized or denied	Avoided or concealed	Explicitly acknowledged
Alignment with internal reasoning	Weak; external narrative diverges from internal doubt	Unclear; reasoning remains inaccessible	Strong; narratives reflect internal judgment
Use of reassurance	Excessive and unconditional	Minimal or absent	Calibrated and conditional
Handling of contested views	Suppressed to project unity	Hidden from public view	Acknowledged without dramatization
Short-term public reaction	Temporary reassurance	Confusion or suspicion	Qualified confidence

Response to adverse outcomes	Sharp loss of credibility	Erosion of trust through opacity	Credibility preserved despite disappointment
Institutional posture	Claims control and foresight	Withdraws from explanation	Accepts responsibility without false certainty
Long-term implication for trust	Fragile and volatile	Gradually eroding	Cumulative and resilient

Source: *Shiller (2017); BIS (2023); Kay and King (2020).*

Trust is not sustained by certainty, but by consistency. Overconfident communication undermines credibility when uncertainty inevitably materializes. Opaque communication creates distance and suspicion. Disciplined communication—grounded in transparency about limits and coherence with internal reasoning—preserves legitimacy even when outcomes diverge from expectations.

Institutional stewardship depends on this discipline. Communication that mirrors judgment reinforces trust by demonstrating that institutions neither exaggerate their control nor retreat from responsibility.

7.5 Accountability as Responsibility Over Time

Finally, accountability in ecosystem stewardship is temporal.

Decisions made today shape conditions years later. Responsibility cannot be discharged at the moment of action alone. It extends across time, requiring institutions to revisit assumptions, reassess outcomes, and acknowledge when understanding has changed.

This temporal dimension distinguishes stewardship accountability from rule-based compliance. It is less about proving correctness ex post, and more about demonstrating **continuity of responsibility**.

Institutionalization exists to make this continuity possible—by preserving memory, sustaining learning, and maintaining legitimacy even as conditions evolve.

7.6 Section 7 Takeaway

Accountability, legitimacy, and trust are not secured through precision, prediction, or performance metrics. They are sustained through integrity of process, transparency of reasoning, and disciplined acknowledgment of uncertainty.

Institutionalization enables stewardship to remain credible by aligning authority with humility, judgment with responsibility, and communication with limits. In doing so, it preserves trust not by promising control, but by demonstrating coherence over time.

8. Conclusion — Stewardship as a Living Capability

This volume set out to answer a single question: how financial ecosystem stewardship persists over time once analysis is complete.

The answer is neither technical nor procedural. It is institutional.

The *Financial Ecosystem Series* has established a coherent architecture for understanding and stewarding complex financial systems. Design clarified structure and trade-offs. Governance explained how authority operates under fragmentation. Diagnostics rendered systemic fragility legible. Stress testing explored how that fragility behaves under strain—without illusion.

What this final volume has shown is that none of these achievements endure automatically.

From Framework to Capability

Frameworks do not persist. Institutions do.

Analytical insight, however rigorous, decays when it is not embedded in institutional memory, routines of interpretation, and continuity of judgment. Over time, repetition replaces reflection, procedures crowd out discretion, and stewardship risks becoming ritual rather than responsibility.

Institutionalization is therefore not an extension of the framework. It is the condition under which the framework remains alive.

Stewardship becomes a capability when institutions retain the capacity to reason coherently under uncertainty—repeatedly, credibly, and without overreach.

Continuity Without Closure

This series does not promise control over financial ecosystems. Such control is neither possible nor desirable.

Financial systems evolve, adapt, and surprise. Vulnerabilities migrate. New forms of interconnection emerge. Uncertainty remains irreducible.

Institutionalization does not resolve these conditions. It preserves the capacity to confront them honestly.

The task of stewardship is not to eliminate fragility, but to recognize it, interpret it, and respond with judgment exercised under responsibility. This requires continuity—across leadership changes, political cycles, and periods of apparent calm.

Continuity, in this sense, is not rigidity. It is disciplined openness to revision grounded in accumulated understanding.

Institutions Carry Responsibility

Models do not bear responsibility.

Frameworks do not exercise judgment.

Institutions do.

The future will not test the conceptual architecture developed in this series. It will test whether institutions can sustain the habits of reasoning, coordination, and humility that stewardship demands.

This volume closes the *Financial Ecosystem Series* by clarifying that responsibility. It does not resolve uncertainty. It does not claim foresight. It does not offer assurance.

It affirms that stewardship is a living institutional capability—one that must be preserved, renewed, and exercised over time.

That task has no endpoint.

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