The Monetary Policy Variety Gap

Why Central Banks Cannot See the Economies They Are Steering

Central banks are the most explicitly control-theoretic governance institutions ever built — yet their models cannot perceive the financial, distributional, fiscal, and ecological dimensions that determine the outcomes of their actions. This report diagnoses a Monetary Policy Variety Gap and proposes a Distributional Impact Assessment as the concrete first step toward requisite monetary governance.

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May 2026

Organizational Report · Central Banks

`https://bjornkennethholmstrom.org/reports/central-banks-monetary-policy-variety-gap`

Executive Summary

The Paradox

Central banks are the most explicitly control-theoretic governance institutions ever built. Their foundational model—the Taylor Rule—is literally a proportional feedback controller: adjust the policy interest rate in response to deviations of inflation from target and output from potential. They speak the language of this series fluently. Their economists are trained in dynamic stochastic general equilibrium models of extraordinary technical sophistication. Their operational independence is a genuine institutional achievement that has contributed to the low and stable inflation most developed economies have enjoyed for a generation.

And yet the architecture is failing in ways that its own frameworks cannot perceive.

The 2008 global financial crisis was a classic variety-gap crossing: the excluded dimensions—financial stability, asset bubbles, shadow banking leverage, cross-border contagion—accumulated unseen until they forced themselves into visibility through catastrophic collapse. The post-crisis response—adding financial stability mandates, creating macroprudential tools—acknowledged the gap but did not close it. The next excluded dimensions—the distributional consequences of sustained low interest rates and quantitative easing, the fiscal-monetary entanglement created by central bank purchases of government debt, the recursive effects of monetary policy on wealth inequality and political stability, the exposure of the financial system to climate risk—are accumulating now. The engineers are at the table. Their models are more sophisticated than ever. And they still cannot see the economy they are steering.

The Core Diagnosis: The Monetary Policy Variety Gap

Central banks operate with an observation architecture of very low dimensionality—targeting inflation, output, and employment through a single scalar instrument, the policy interest rate—governing a disturbance environment of enormous dimensionality. The value architecture has an effective dimensionality of approximately two or three. The economy has dimensionality orders of magnitude larger. The excluded dimensions—asset price dynamics, private-sector leverage, credit allocation quality, distributional effects, climate exposure, cross-border capital flows—do not cease to operate. They accumulate as externalities until they force a reckoning that the existing framework cannot anticipate.

This is the **Monetary Policy Variety Gap**: the structural mismatch between what the central bank can perceive and what determines the outcomes of its actions. It is not a failure of competence, data availability, or institutional commitment. It is a structural condition that follows from the design of the monetary policy framework itself.

The Legibility Compression Principle—A Cross-Series Insight

The Monetary Policy Variety Gap is a specific instance of a more general mechanism identified across this series:

> *every governance system reduces environmental dimensionality to remain computationally tractable. The compression is necessary—no finite institution can perceive everything—but it is lossy. The information lost in compression accumulates as externalities until it forces itself into visibility through crisis.*

Central banks are the limiting case: institutions whose formal control-theoretic sophistication makes the dimensionality gap simultaneously more visible and more consequential. The principle connects the central banks analysis to healthcare metrics, university rankings, GDP, ESG scoring, and algorithmic governance—revealing a unified mechanism of governance failure across domains.

The Signature Pattern: The Stability–Instability Spiral

Central banks do not drift or lurch. They cycle. The spiral has a recurrent structure: **successful stabilisation → asset price inflation and risk-taking** (low rates and predictable policy encourage leverage) → **accumulation of financial fragility** in dimensions the central bank does not target → **trigger event** (a shock, a default, a liquidity crisis) → **crisis → emergency intervention** (rate cuts, quantitative easing, lender-of-last-resort operations) → **restoration of stability → political backlash and expanded mandate → return to stabilisation, with the cycle repeating from a higher debt level and more fragile financial structure.** Each cycle leaves the system with higher debt, more concentrated financial infrastructure, and a central bank balance sheet further extended into domains that blur the boundary between monetary and fiscal policy.

The Cultural Anchor: The Pretence of Knowledge

Friedrich Hayek's phrase, coined in his 1974 Nobel Prize lecture specifically in the context of macroeconomic management, captures the cultural operating system of central banking: the institutional tendency to act with confidence on models that cannot capture the complexity of the system being governed. The Pretence of Knowledge is not cynicism. It is the natural condition of an institution whose members have internalised a specific epistemic framework and cannot perceive what that framework excludes. The young economist who enters the Federal Reserve after a decade of training in DSGE models is not being dishonest when she reports that the models show no sign of an impending crisis. She is reporting what the models can see. The models cannot see what they exclude. The Pretence makes the Monetary Policy Variety Gap liveable for the people who operate within it—and makes the institution structurally resistant to acknowledging the limits of its own observation channel.

The Twin Deficits

Aspect	Outer (Hardware)	Inner (Operating System)
Strength	Explicit control-theoretic framework; sophisticated macroeconomic models; operational independence; global coordination capacity; lender-of-last-resort function	High institutional prestige; technocratic culture of expertise; commitment to evidence-based decision-making; insulation from short-term political pressure
Deficit	Single scalar instrument (interest rate) applied to an economy of enormous dimensionality; models systematically excluding the financial sector, heterogeneous agents, and nonlinear dynamics; data infrastructure measuring aggregates but unable to perceive distributional effects	The Pretence of Knowledge: acting with confidence on models that cannot capture the complexity of the system being governed; epistemic closure treating model limitations as technical problems rather than architectural constraints; independence that protects the inflation target from political manipulation also protecting the observation architecture from democratic scrutiny
Manifestation	The same rate that cools an overheating housing market in one region crushes small businesses in another; asset price inflation accumulating unseen while CPI remains stable; quantitative easing financing fiscal deficits while the institution's legitimacy depends on maintaining the distinction between monetary and fiscal operations	The 2008 crisis as a variety-gap crossing; the political backlash and institutional trust collapse that followed; central banks becoming hidden constitutional actors without democratic mandate; the governed system actively modelling the governor and optimising against the model in real time

The Structural Mechanisms

The spiral is driven by a set of interconnected mechanisms. **Inflation targeting** functions as the dominant observation channel, selecting for the variables the institution perceives and against the variables it excludes. **The single scalar instrument** applies uniform pressure across a heterogeneous economy, generating collateral damage that accumulates as political grievance. **The Legibility Compression Mechanism** formalises the information loss: the dimensions excluded from the Taylor Rule continue to evolve, accumulating as externalities until they force a crisis.

Model risk operates as epistemic closure—DSGE models systematically exclude the financial sector, heterogeneous agents, nonlinear dynamics, and the possibility of endogenous crises. The institutional culture treats these limitations as technical challenges to be refined rather than as architectural constraints. **The Distributional Observation Failure** ensures that the central bank cannot perceive the political consequences of its actions—the institution is making decisions whose primary distributional effects are invisible to its own measurement architecture. **The Fiscal-Monetary Singularity** has made the central bank a structural load-bearing pillar of sovereign solvency, trapped in an entanglement it cannot acknowledge because its legitimacy depends on maintaining the fiction that monetary policy is independent of fiscal considerations.

Central bank independence has evolved into a broader immunity, insulating the institution not only from political pressure but from the democratic deliberation that would surface its blind spots. **Constitutional drift** has turned central banks into hidden constitutional actors—determining which governments survive, which fiscal paths are possible, which political coalitions remain viable—without any democratic mandate. **The algorithmic arms race** is systematically undermining forward guidance, as agentic AI models the central bank's reaction function in real time and optimises against it. **The multi-frequency synchronisation problem** ensures that fast-moving financial markets actively exploit the latency gap between market timescales (microseconds) and governance timescales (weeks to months). **Climate risk** represents the terminal challenge—a disturbance whose dimensionality, timescale, and irreversibility are fundamentally incompatible with the observation architecture that treats long-run trends as exogenous.

What Building Requisite Monetary Governance Would Look Like

The transition architecture does not seek to abandon the inflation target or erode operational independence. It seeks to expand the dimensionality of the central bank's observation and response architecture while preserving the genuine achievements the current architecture has delivered.

Multi-dimensional mandates would explicitly recognise that price stability, financial stability, employment, distributional effects, and climate resilience are distinct dimensions that cannot be reduced to a single target. **Multi-instrument frameworks** would move beyond the single policy rate to differentiated instruments—macroprudential tools for financial stability, targeted credit policies for distributional objectives, green bond frameworks for climate-aligned monetary operations—each matched to the timescale and transmission mechanism appropriate to its target. **Model humility infrastructure** would institutionalise red-team functions that stress-test the central bank's own models, publish uncertainty ranges that include the possibility of model failure, and build a culture that treats the limits of existing frameworks as objects of explicit institutional attention. **Deliberative infrastructure**—citizens' assemblies on monetary policy trade-offs, expanded parliamentary oversight with genuine analytical capacity—would restore democratic accountability without sacrificing operational independence. **Distributed sensing** would create real-time data infrastructure that perceives the distributional, financial, and ecological dimensions the current aggregate statistics cannot capture.

A Concrete First Step: The Monetary Policy Distributional Impact Assessment

The most catalytic near-term intervention is a formally mandated, independently conducted, real-time assessment of the distributional consequences of each major policy decision—rate changes, quantitative easing, forward guidance modifications—published alongside the decision itself, with a mandatory response obligation from the relevant policy committee. The Assessment does not change what the central bank is required to do. It changes what the central bank is required to see. It makes the distributional consequences of monetary policy visible to the decision-makers who produce them and to the public who bears them. The

Assessment is technically feasible—the Bank of England has conducted prototype versions—and architecturally significant: it expands the dimensionality of the institution's observation channel in exactly the domain where the current architecture is most blind, without requiring a change to the mandate itself.

The Honest Conclusion

The Monetary Policy Variety Gap is structural, not temporary. It will persist until the observation architecture, the modelling framework, and the institutional culture that produce it are redesigned. The default outcome is continued tightening of the Stability–Instability Spiral, with each cycle leaving higher debt, more fragile financial structures, more concentrated unaccountable power, and more accumulated political grievance. But the resources for building requisite monetary governance exist within the institution. The engineers are at the table. The question is whether they will be permitted to build the observation architecture that the economy they govern requires—and whether they will have the courage to acknowledge that the architecture they have inherited, for all its genuine achievements, is no longer adequate to the world it must govern.

The Series Context

This report is the fourth in the **Organizational Reports Series**, an extension of the governance-as-engineering framework from nation-states to the complex adaptive coordination systems that shape our world. The first three reports diagnosed a Coherence–Velocity Trap in frontier AI governance, a Clinical Observability Gap in healthcare systems, and an Integration Deficit in universities. This fourth report diagnoses a Monetary Policy Variety Gap in central banks—institutions that already speak the language of control theory, where the dimensionality gap is more visible and more consequential than in any other domain. If the engineers at the table cannot build the observation architecture that perceives the consequences of their own actions, the framework's central claim—that governance failure is architectural, not moral—is demonstrated at the highest stakes. If they can, the demonstration would have significance far beyond monetary policy, providing a template for every domain where institutions act with confidence on models that cannot capture the complexity of the systems they govern.

1. The Monetary Policy Variety Gap

1.1 Opening: The Engineers Are at the Table—and They Still Cannot See

In the autumn of 2008, the world's most sophisticated economic governance institutions confronted the collapse of the system they were designed to stabilise. The Federal Reserve, the Bank of England, and the European Central Bank had spent decades refining their models, their instruments, and their institutional cultures. They had recruited the best economists from the best universities. They had developed dynamic stochastic general equilibrium models that represented the cutting edge of macroeconomic science. They had achieved what became known as the Great Moderation—a period of low, stable inflation and steady growth that was widely attributed to the credibility and sophistication of monetary policy. And in the space of a few weeks, the financial system that these institutions were supposed to govern collapsed in ways their models had not predicted, could not explain, and were not designed to prevent.

The 2008 global financial crisis was not a failure of competence. It was a failure of architecture. The observation channels through which central banks perceived the economy had been calibrated to register inflation, output, and employment—and nothing else. Asset bubbles, shadow banking leverage, the build-up of systemic risk through credit default swaps and collateralised debt obligations, the cross-border contagion channels that would transmit a US housing market correction into a global financial panic—these were excluded dimensions. They did not appear in the models. They did not register on the dashboards. They accumulated as externalities, invisible to the institutions whose mandate was to maintain stability, until they forced themselves into visibility through catastrophic collapse.

The crisis revealed the gap, and the post-crisis reforms acknowledged it. Central banks were given financial stability mandates. Macroprudential tools were developed. Stress tests were instituted. The observation architecture was expanded—modestly, partially, against considerable resistance—to include dimensions it had previously excluded. But the expansion did not close the gap. It merely shifted its location. The next excluded dimensions—the distributional consequences of sustained low interest rates and quantitative easing, the fiscal-monetary nexus created by central bank purchases of government debt, the recursive effects of monetary policy on wealth inequality and political stability, the exposure of the financial system to climate risk—are accumulating now. The engineers are at the table. Their models are more sophisticated than ever. And they still cannot see the economy they are steering.

1.2 The Stability–Instability Spiral

Central banks do not drift or lurch in the patterns seen elsewhere in this series. They cycle. The cycle has a recurrent structure that has been documented, in different language, by the economic literature for decades. Hyman Minsky's financial instability hypothesis is, in essence, a description of it. The post-2008 experience has made it visible in its most extreme form.

The spiral begins with **successful stabilisation**. The central bank achieves low, predictable inflation. Its credibility is high. Its forward guidance is believed. The economy grows steadily. The central bank attributes this success to its own competence—and the attribution is not entirely wrong. The Great Moderation was a period of genuine macroeconomic stability, and central bank credibility was a genuine contributor to it.

The success creates conditions for **risk-taking and fragility accumulation**. When inflation is stable and the policy rate is predictable, risk is perceived as lower than it actually is. The low-rate environment encourages leverage. The predictable policy environment encourages risk-taking—why hedge against a rate rise when the central bank has credibly committed to keep rates low? Asset prices inflate. Balance sheets expand. Financial fragility accumulates in dimensions the central bank does not target: the quality of credit allocation, the build-up of shadow banking leverage, the concentration of risk in systemically important institutions, the proliferation of complex financial instruments whose risk characteristics are opaque even to their creators.

This fragility is invisible to the central bank's observation architecture. The models that guide monetary policy do not include a financial sector. They do not model leverage cycles, asset bubbles, or the possibility of endogenous crisis. They treat the financial system as a frictionless intermediary that efficiently allocates capital—a modelling assumption that was never empirically accurate and that the 2008 crisis revealed as catastrophically misleading. The central bank cannot perceive the fragility that its own success is generating, because its observation channel excludes the dimensions in which that fragility accumulates.

A **trigger event** forces the fragility into visibility. A shock—a housing market correction, a sovereign debt crisis, a pandemic, a geopolitical disruption—interacts with the accumulated leverage and concentrated risk to produce a crisis. Asset prices collapse. Liquidity evaporates. Institutions that were solvent according to the models turn out to be insolvent in reality. The excluded dimensions return as catastrophe.

The central bank responds with **emergency intervention**. Interest rates are cut to zero or below. Quantitative easing is launched—the central bank purchases government bonds, mortgage-backed securities, corporate debt, expanding its balance sheet into domains that blur the boundary between monetary and fiscal policy. Lender-of-last-resort facilities are extended to non-bank financial institutions. The central bank becomes, in effect, the market-maker of last resort, the insurer of the financial system, and the implicit guarantor of sovereign solvency.

Stability is restored. The crisis recedes. The economy recovers, slowly and unevenly, but it recovers. The central bank's intervention is credited with preventing a second Great Depression—and the credit is largely deserved. The spiral would have been far more severe without the central bank's action.

But **political backlash and institutional strain** follow the restoration. The distributional consequences of the intervention—asset price inflation that disproportionately benefits the wealthy, sustained low rates that penalise savers, the financing of fiscal deficits through quantitative easing that blurs democratic accountability—generate political anger. Populist movements emerge, on both left and right, that challenge

the legitimacy of central bank independence. The mandate is expanded—financial stability is added to price stability—but the expansion is contested, incomplete, and unsupported by the modelling infrastructure that gives the inflation target its operational precision.

The cycle **repeats from a higher debt level and a more fragile financial structure**. The balance sheet is larger. The political environment is more charged. The models remain unchanged in their essentials. The excluded dimensions—distribution, climate, the fiscal-monetary blur—continue to accumulate, and the central bank continues to operate with an observation architecture that cannot perceive them. This is the Stability–Instability Spiral, and it is the signature pattern of monetary governance.

1.3 The Monetary Policy Variety Gap Defined

The Monetary Policy Variety Gap is the structural mismatch between the dimensionality of the central bank's observation architecture and the dimensionality of the economy it must govern. It is not a failure of competence, data availability, or institutional commitment. It is a structural condition that follows from the design of the monetary policy framework itself.

The central bank's value architecture perceives a small number of macroeconomic variables with high fidelity. The inflation target—typically 2 percent for the headline consumer price index—is observed with precision. The output gap—the difference between actual and potential GDP—is estimated with reasonable accuracy. Employment and unemployment are tracked. These are the dimensions that the institution is mandated to care about, and the institution has developed sophisticated instrumentation for observing them.

The economy has dimensionality orders of magnitude larger. Asset prices—equities, bonds, real estate, private equity, venture capital—move in ways that are only partially correlated with consumer prices. Private-sector leverage—the ratio of debt to equity, the maturity structure of liabilities, the concentration of borrowing in specific sectors—determines the fragility of the financial system. Credit allocation—who gets loans, for what purposes, at what terms—determines whether monetary stimulus translates into productive investment or speculative excess. The distribution of wealth and income—who gains and who loses from monetary policy decisions—determines the political sustainability of the monetary framework. The ecological embeddedness of the economy—its dependence on stable climate conditions, its exposure to climate-related physical and transition risks—determines the long-run viability of the growth path that monetary policy assumes.

The central bank's observation architecture perceives some of these dimensions partially, through proxies and supplementary indicators. It perceives others not at all. The gap between what the institution can observe and what determines the outcomes of its actions is the Monetary Policy Variety Gap. And the gap is growing, because the economy is evolving faster than the observation architecture that must govern it. Digital assets, decentralised finance, climate disruption, the algorithmic acceleration of financial markets—each of these

introduces new disturbance dimensions that the existing framework cannot register. The institution is running a sophisticated control system on a plant whose dynamics are diverging from the model that the control system assumes.

1.4 The Legibility Compression Principle—a Cross-Series Insight

The Monetary Policy Variety Gap is a specific instance of a more general mechanism that this series has identified across domains. Call it the **Legibility Compression Principle**: every governance system reduces environmental dimensionality to remain computationally tractable. The institution observes a few variables. It acts on a few levers. It compresses the vast complexity of the system it governs into a representation that its decision-making apparatus can process. The compression is necessary—no finite institution can perceive everything—but it is lossy. The information lost in compression does not cease to exist. It accumulates as externalities until it forces itself into visibility through crisis.

This principle is not unique to central banks. It is the same mechanism that this series has diagnosed in healthcare, where administrative metrics compress clinical complexity into billing codes and performance targets; in universities, where disciplinary departments fragment knowledge into incommensurable specialisations; in AI governance, where capital architectures compress the multi-dimensional risk landscape into growth metrics and valuation signals; and in democratic representation, where deep representation chains destroy the variance of citizen preferences before they reach the policy layer. The Legibility Compression Principle is the unified mechanism of governance failure across domains.

Central banks are the limiting case because their formal control-theoretic sophistication makes the dimensionality gap simultaneously more visible and more consequential. The Taylor Rule—the foundational model of modern monetary policy—is a proportional feedback controller. It specifies that the policy interest rate should be adjusted in response to deviations of inflation from target and output from potential. The model is explicit, quantitative, and technically rigorous. It is also a compression of the economy from a vast, high-dimensional state space into two variables. The compression is not hidden or accidental. It is the explicit architecture of the policy framework. And it is exactly what makes the excluded dimensions—financial fragility, distributional effects, climate risk—so dangerous: they are not merely unobserved; they are systematically excluded from the framework that governs the system.

1.5 The Genuine Strengths

To diagnose the Monetary Policy Variety Gap is not to diminish what central banks have achieved. The operational independence of monetary policy—the institutional separation of interest-rate decisions from electoral politics—is a genuine institutional achievement that has contributed to the low and stable inflation that most developed economies have enjoyed for the past three decades. The technocratic culture of central banking—the commitment to evidence-based decision-making, the recruitment of top economic talent, the sustained investment in data collection and analysis—is real and valuable. The global coordination capacity

that central banks have developed, particularly through the Bank for International Settlements, is a form of international governance that functions more effectively than many of the political institutions that exist alongside it.

The central bank is not a failing institution. It is an institution that has succeeded brilliantly at the task it was designed to perform—maintaining price stability—and that is now being asked to perform tasks for which its architecture was never designed. The problem is not the competence or commitment of central bankers. The problem is the architecture through which they must perceive the economy. The institution that was built to target inflation cannot see the distributional consequences of its actions, the financial fragility that its success generates, or the ecological conditions that its models assume as given. These are not failures of individual judgment. They are structural blind spots produced by the design of the observation architecture itself.

1.6 The Real Question

The dominant discourse around central bank reform oscillates between two poles. One argues for preserving central bank independence and the primacy of the inflation target—that the institution's credibility depends on a clear, narrow mandate, and that expanding the mandate risks politicising monetary policy and undermining the credibility that has taken decades to build. The other argues for democratic control of monetary policy—that an unelected institution exercising enormous power over the economy must be brought under political accountability, and that the inflation target has served the interests of asset-holders at the expense of workers.

Both positions contain partial truths. Central bank independence has genuinely contributed to price stability, and its erosion risks a return to the inflationary episodes of the 1970s. Monetary policy has genuinely had distributional consequences that have disproportionately benefited asset-holders, and the democratic deficit in monetary governance is real. But the Monetary Policy Variety Gap framework suggests that the deeper problem is neither independence nor accountability in the conventional sense. It is architectural. A central bank can be perfectly independent and perfectly accountable, and still fail to perceive the dimensions of the economy that determine the outcomes of its actions, if its observation architecture systematically excludes those dimensions.

The real question, then, is not "should central banks be independent or democratically controlled?" but:

> *How can central banks expand the dimensionality of their observation architecture—perceiving financial stability, distributional effects, climate risk, and the fiscal-monetary nexus—while preserving the operational independence that protects the inflation target from short-term political manipulation?*

This is not a question about mandates or governance structures alone. It is a question about observation channels, model design, data infrastructure, and the institutional mechanisms that determine what the central bank can perceive and respond to. The remainder of this report examines the specific mechanisms that produce the Monetary Policy Variety Gap, the institutional forms that could close it, and the first steps toward building a monetary governance architecture capable of seeing what it currently cannot.

2. Structural Mechanisms: How Central Banks Become Blind to the Economies They Govern

2.1 What "Monetary Observability" Means

Monetary observability is the capacity of a central bank's governance architecture to perceive the full dimensionality of the disturbance environment in which it operates—not merely the inflation rate, the output gap, and the unemployment figures that constitute its formal mandate, but the financial, distributional, fiscal, and ecological dimensions that determine whether its actions achieve their intended effects.

A monetary system with high observability can perceive not only that consumer prices are rising at 2.1 percent, but that asset prices are inflating at 15 percent in ways that are generating systemic risk; not only that aggregate employment is at full capacity, but that the quality of employment, the distribution of wage gains, and the regional concentration of job creation are producing political instability that will eventually constrain the policy space; not only that government debt is sustainable under current interest rates, but that the central bank's own purchases of that debt have made it the implicit guarantor of sovereign solvency, creating a fiscal-monetary entanglement that its formal mandate cannot acknowledge. A system with low observability perceives the variables in its mandate and is blind to everything else.

Monetary observability is not the same as data availability. Central banks possess enormous quantities of data. The Federal Reserve's staff of over four hundred PhD economists produces detailed analyses of every sector of the economy. The European Central Bank's statistical warehouse contains time series spanning decades at multiple frequencies. The problem is not that data is unavailable. It is that the institutional architecture selects which data counts as relevant. The inflation target functions as a filter. Data that is relevant to the inflation target—consumer price indices, wage growth, inflation expectations—is processed with high priority and fed into the decision-making apparatus. Data that is not relevant to the inflation target—asset price trajectories, distributional indicators, climate risk exposure—may be collected, analysed, and published in reports, but it does not enter the decision-making apparatus with the same force. It is supplementary, not operational. The observation architecture determines not only what is seen but what is acted upon.

2.2 Inflation Targeting as Dominant Observation Channel

The inflation target is the central bank's primary value architecture. It was adopted, across the developed world, in the 1990s as a response to the inflationary episodes of the 1970s and the credibility crises that followed. The logic was straightforward: commit publicly to a specific inflation rate, typically 2 percent for the headline consumer price index, and adjust the policy interest rate to achieve it. The commitment would anchor inflation expectations. Anchored expectations would make the inflation target self-fulfilling. The central bank's credibility would be its most powerful policy instrument.

The framework succeeded in its own terms. The Great Moderation—the period from the mid-1980s to 2007—was characterised by low, stable inflation across the developed world. The inflation targeting regime was not solely responsible, but it contributed. The framework provided a clear, measurable, and communicable objective that disciplined monetary policy decisions and anchored public expectations.

But the inflation target is an observation channel of very low dimensionality. It perceives deviations of consumer prices from a specified rate with high fidelity. It is structurally blind to the dimensions of the economy that are not captured by the consumer price index. Asset prices—equities, bonds, real estate—are not in the CPI. The build-up of private-sector leverage is not in the CPI. The quality of credit allocation—whether new lending is financing productive investment or speculative excess—is not in the CPI. The distributional effects of monetary policy are not in the CPI. The ecological consequences of the growth path that the inflation target assumes are not in the CPI.

The post-2008 addition of financial stability mandates represents an implicit acknowledgement of this variety gap. Central banks were given responsibility for monitoring and responding to systemic risk in the financial system. Macroprudential tools—countercyclical capital buffers, loan-to-value limits, stress tests—were developed to supplement the interest rate as instruments of stabilisation. But the financial stability mandate does not have the operational precision of the inflation target. There is no single, measurable, communicable objective comparable to the 2 percent inflation rate. Financial stability is inherently multi-dimensional, involving leverage ratios, maturity mismatches, interconnectedness, concentration risk, and a dozen other indicators that cannot be reduced to a single target. The mandate acknowledges the gap without closing it, because the institutional architecture that makes the inflation target effective—the clear objective, the measurable metric, the accountable decision-making framework—cannot be replicated for a multi-dimensional disturbance environment.

2.3 The Interest Rate as Single Scalar Instrument

The policy interest rate is the central bank's primary instrument. It is a single scalar—a number, announced after each policy meeting, that determines the cost of short-term borrowing in the interbank market and, through the transmission mechanism, influences the broader constellation of interest rates, asset prices, and exchange rates that shape economic activity.

The interest rate is a remarkably versatile instrument. It can be adjusted rapidly, in increments as small as twenty-five basis points, with immediate effect on financial markets and gradual effect on the real economy. It can be communicated clearly. Its effects, while uncertain in magnitude, are well-understood in direction. A rate rise tightens financial conditions; a rate cut loosens them. The instrument has served central banks well for decades.

But the interest rate is a single dimension applied uniformly across an economy of enormous heterogeneity. The same rate that cools an overheating housing market in one region crushes small businesses in another. The same rate that restrains inflation for the median consumer impoverishes asset-poor households who

depend on interest income. The same rate that signals the central bank's commitment to price stability is interpreted by financial markets as a trading signal that generates arbitrage opportunities. The instrument has one dimension. The economy has many.

The averaging problem, diagnosed in the Governance as Engineering series, is acute in monetary policy. When a controller applies a uniform response to a heterogeneous system, the response is simultaneously too strong for some components and too weak for others. The central bank cannot target the interest rate for the housing market independently of the interest rate for the manufacturing sector. It cannot ease for small businesses while tightening for large corporations. It applies the same rate to the entire economy and accepts the collateral damage. The collateral damage is not random. It falls systematically on the actors who are least able to hedge against it—small firms, asset-poor households, regions without diversified economies—and it accumulates as political grievance that eventually constrains the policy space.

2.4 The Legibility Compression Mechanism—Formalised

The Legibility Compression Principle, introduced in Section 1.4, is the central mechanism of the Monetary Policy Variety Gap. It can be stated formally as follows:

> *Every governance system reduces environmental dimensionality to remain computationally tractable. The compression is necessary—no finite institution can perceive everything—but it is lossy. The information lost in compression accumulates as externalities until it forces itself into visibility through crisis.*

In the monetary policy context, the compression is explicit and quantified. The Taylor Rule—the foundational model of modern central banking—compresses the vast heterogeneity of the economy into two variables: the deviation of inflation from target and the deviation of output from potential. The rule is elegant, communicable, and operationally precise. It is also a compression ratio of enormous magnitude. An economy of millions of households, firms, financial institutions, and government entities, interacting through markets, contracts, and institutions, generating data of staggering dimensionality, is reduced to two numbers. The compression is not hidden. It is the explicit architecture of the policy framework.

The information lost in compression does not cease to operate. The dimensions of the economy that are excluded from the Taylor Rule—asset prices, leverage ratios, credit allocation quality, distributional effects, climate exposure, cross-border contagion channels—continue to evolve according to their own dynamics. They generate effects that cross into the observed dimensions—inflation, output—in distorted form. An asset bubble does not appear in the CPI until it bursts and the resulting financial crisis causes a recession. A build-up of private-sector leverage does not appear in the output gap until a deleveraging shock causes a contraction. The distributional effects of sustained low rates do not appear in the inflation data until the political backlash they generate constrains the central bank's ability to respond to the next crisis.

The compression mechanism is not a failure of the Taylor Rule. It is a structural property of any low-dimensional control architecture governing a high-dimensional system. The Taylor Rule is an unusually explicit and well-specified instance of a general phenomenon. The same compression operates in healthcare,

where administrative metrics compress clinical complexity into billing codes; in universities, where disciplinary departments compress knowledge into specialisations; in AI governance, where capital architectures compress the risk landscape into growth metrics. The Legibility Compression Principle is the unified mechanism of governance failure across domains, and monetary policy is its clearest expression.

2.5 Model Risk as Epistemic Closure

Central banks rely on dynamic stochastic general equilibrium (DSGE) models to forecast the economy, simulate policy alternatives, and evaluate the likely effects of their decisions. These models are the intellectual backbone of modern monetary policy. They are constructed with extraordinary technical sophistication by some of the most talented economists in the world. They represent the best available effort to understand the macroeconomic system in a rigorous, internally consistent framework.

The models also systematically exclude the dimensions of the economy that are most consequential for the outcomes of monetary policy. The standard DSGE model does not include a financial sector. It treats the financial system as a frictionless intermediary that efficiently allocates capital—an assumption that was never empirically accurate and that the 2008 crisis revealed as catastrophically misleading. The model does not include heterogeneous agents. It treats the economy as a single representative household and a single representative firm, making it structurally incapable of perceiving distributional effects. The model is linearised around a steady state, making it structurally incapable of perceiving the nonlinear dynamics—threshold effects, regime shifts, cascading failures—that characterise financial crises. And the model treats long-run trends—productivity, demographics, climate—as exogenous, making it structurally incapable of perceiving the slow variables that will determine the economy's trajectory over the coming decades.

The reliance on these models functions as an epistemic closure mechanism. The models cannot perceive the risks that fall outside their assumptions. The institutional culture that has been built around the models treats their limitations as technical challenges to be refined—better calibration, more detailed microfoundations, richer dynamics—rather than as architectural constraints that no refinement can overcome. The young economists who enter the central bank are trained in the same modelling tradition, socialised into the same assumptions, and evaluated on their ability to contribute to the same research programme. The epistemic closure is not a conspiracy. It is the predictable output of an institutional architecture in which professional success depends on demonstrating competence within the existing framework, not on questioning the framework's adequacy.

The consequence is that central banks are structurally incapable of perceiving the most important developments in the economies they govern until those developments have already produced a crisis. The 2008 crisis was not predicted by the DSGE models because the models could not generate the kind of endogenous financial instability that produced it. The post-2008 reforms have added financial frictions to some models, but the basic architecture—linearised dynamics, representative agents, exogenous long-run trends—remains intact. The models that failed to perceive the last crisis are being used to forecast the next one.

2.6 The Distributional Observation Failure

The central bank's primary data infrastructure—the consumer price index, the national accounts, the labour force survey—measures aggregates. It measures the average rate of inflation, the total output of the economy, the overall level of employment. It does not measure, in any operationally significant way, how the effects of monetary policy are distributed across the population.

This is not a data availability problem. The data exists. The inequality statistics, the wealth distribution surveys, the consumption patterns by income decile, the regional economic indicators—all of this data is collected, published, and analysed. But it is not integrated into the decision-making apparatus. The FOMC does not receive a distributional impact assessment alongside the inflation forecast when it votes on the policy rate. The ECB Governing Council does not review the likely effects of its decisions on wealth inequality or regional divergence as part of its standard decision-making process. The distributional data is available. It is not operational.

The consequence is that the central bank is making decisions whose primary distributional effects are invisible to its own decision-making apparatus. When the Federal Reserve cuts interest rates, it stimulates the economy by making borrowing cheaper and asset prices higher. The effects are not uniform. Asset-holders—disproportionately wealthy—benefit directly from the increase in asset prices. Workers—disproportionately dependent on labour income—benefit indirectly, through the employment effects of the stimulus, and only if the stimulus translates into job creation rather than asset inflation. The net effect is a transfer from asset-poor to asset-rich households. The central bank cannot perceive this transfer in its normal operating mode, because its observation architecture measures aggregates, not distributions.

The post-2008 period has been a fifteen-year natural experiment demonstrating this at scale. Sustained low interest rates and quantitative easing inflated asset prices, benefiting the wealthy. The recovery was slow and uneven for workers. The political consequences—populist backlash, the erosion of institutional trust, the delegitimisation of central bank independence—are visible to everyone. The distributional mechanisms that produced them are invisible to the institution that set them in motion.

2.7 The Fiscal-Monetary Singularity

The boundary between monetary and fiscal policy has been progressively eroded over the past two decades. Quantitative easing—the central bank's purchase of government debt—effectively finances fiscal deficits. When the Bank of England buys gilts, it credits the accounts of the sellers with reserves. The government pays interest on the gilts to the Bank of England, which remits the interest back to the government as profit. The transaction is, in economic substance, the central bank financing government spending by creating money. The legal and accounting frameworks maintain a distinction between monetary operations (liquidity management) and fiscal operations (resource allocation). The economic substance has obliterated it.

The erosion has accelerated to the point of inescapability. The central bank has become a structural load-bearing pillar of sovereign solvency. Government debt levels in most developed economies are at levels—above 100 percent of GDP in many cases, above 250 percent in Japan—that would be unsustainable if the central bank were not purchasing significant portions of that debt and maintaining interest rates at levels that keep debt service costs manageable. The central bank cannot allow a genuine market correction in sovereign bond markets, because the correction would threaten the solvency of the state whose debt it holds. It cannot allow interest rates to rise to levels that would make the debt burden unsustainable, because the resulting fiscal crisis would force it to choose between monetising the debt explicitly and watching the state default.

This is the fiscal-monetary singularity: the point at which the entanglement between monetary and fiscal policy becomes inescapable, and the institution whose legitimacy depends on maintaining the distinction between them can no longer credibly claim that the distinction exists. The central bank is trapped between its formal mandate—price stability, operational independence, the separation of monetary from fiscal policy—and the reality of its position as the implicit guarantor of sovereign solvency. The observation architecture cannot acknowledge the reality, because the institution's legitimacy depends on the maintained fiction that monetary policy is independent of fiscal considerations. The excluded dimension is the most consequential one, and the institution cannot see it without threatening its own institutional foundations.

2.8 Central Bank Independence as Immune System

The doctrine of central bank independence was developed in response to the inflationary episodes of the 1970s. The argument was that governments, facing electoral pressure, would systematically prefer lower unemployment and higher inflation than was socially optimal. By delegating monetary policy to an independent institution with a clear mandate for price stability, the inflationary bias of democratic politics could be overcome. The argument was empirically supported—countries with more independent central banks tended to have lower inflation—and it became the dominant institutional design principle for monetary governance across the developed world.

Central bank independence is a genuine institutional achievement. It has contributed to the low and stable inflation that has characterised most developed economies since the 1980s. It has protected monetary policy from the short-term political manipulation that produced the inflationary episodes of the past. It is worth defending.

But the doctrine of independence has evolved into a broader institutional immunity. Central banks are insulated not only from political pressure to manipulate interest rates for electoral advantage, but from the democratic deliberation that would surface the distributional consequences of their actions, the moral hazard created by sustained asset purchases, and the fiscal implications of balance-sheet expansion. The independence that protects the inflation target from political manipulation also protects the observation architecture from democratic scrutiny.

The immune response is activated whenever the institution's legitimacy is challenged. When elected officials question the distributional effects of quantitative easing, the central bank responds by invoking its independence—monetary policy decisions are technical, not political, and must be protected from interference. When civil society organisations demand accountability for the financial stability implications of sustained low rates, the central bank responds by invoking its mandate—financial stability is a secondary objective, and the primary objective of price stability constrains what can be done. The immune system is not a conspiracy. It is the predictable output of an institution whose legitimacy depends on maintaining the fiction that monetary policy is a technical exercise insulated from political considerations, when the reality is that monetary policy has enormous distributional, fiscal, and political consequences that the institution's observation architecture cannot perceive.

2.9 Constitutional Drift of Technocratic Institutions

Central banks have become hidden constitutional actors. They determine, through their decisions, which fiscal paths are possible, which political coalitions remain viable, and which governments survive. This is not a power they sought. It is a power that has accumulated through the structural dynamics described in this section—the compression of the observation architecture, the expansion of the balance sheet, the fiscal-monetary entanglement, the immunity from democratic scrutiny.

The ECB during the Eurozone crisis is the clearest illustration. When sovereign bond markets lost confidence in the debt of peripheral Eurozone members—Greece, Ireland, Portugal, Spain, Italy—the ECB intervened. It purchased sovereign bonds through the Securities Markets Programme. It provided long-term refinancing operations to European banks. It pledged, in Mario Draghi's famous phrase, to do "whatever it takes" to preserve the euro. The interventions stabilised the sovereign bond markets and prevented the disintegration of the currency union. They also determined the fiscal policies of the affected states. The conditionality attached to the interventions—austerity, structural reform, fiscal consolidation—was decided by the ECB and the troika of international institutions, not by the elected governments of the affected countries. The ECB effectively set the boundaries of European fiscal sovereignty, without any democratic mandate to do so.

The Federal Reserve's balance-sheet expansion has had similar effects, though less explicitly. By purchasing mortgage-backed securities, the Fed has subsidised the US housing market. By purchasing corporate bonds, it has subsidised large corporations. By maintaining low rates through the post-2008 recovery, it has determined the feasibility of fiscal expansion—governments that wanted to borrow could do so at rates that the central bank's purchases made possible. The Fed has not dictated fiscal policy in the way the ECB did during the Eurozone crisis. But it has determined the conditions under which fiscal policy operates, and those conditions have distributional consequences that the institution cannot perceive through its existing observation architecture.

The constitutional drift is not a conspiracy. It is an emergent property of an architecture in which an unelected institution with a narrow mandate holds instruments of enormous power over an economy of enormous dimensionality. The excluded dimensions of its mandate become the domains in which it exercises

unacknowledged constitutional authority. The institution cannot acknowledge this authority, because its legitimacy depends on the maintained distinction between technical monetary policy and political fiscal policy. The excluded dimension is the most consequential one, and the institution cannot see it without threatening its own institutional foundations.

2.10 The Algorithmic Arms Race: Reverse-Engineering the Governor

Forward guidance—the central bank's communication of its future policy intentions—was developed as a tool for managing expectations. By committing to keep rates low for an extended period, the central bank could influence long-term interest rates, stimulate investment, and provide additional accommodation when the policy rate was constrained by the zero lower bound. Forward guidance was intended to enhance the effectiveness of monetary policy by shaping the expectations of the actors the policy was designed to influence.

It is now being systematically undermined by agentic artificial intelligence. Large language models and reinforcement learning systems are being trained on central bank communications—the statements, the minutes, the press conference transcripts, the speeches—to model the reaction function of the institution in real time. The governed system is actively modelling the governor and optimising against the model. When the Fed signals a likely rate path, algorithmic trading systems position themselves to profit from the signal before the signal can achieve its intended effect. The observation channel itself is being reverse-engineered by the actors the institution is trying to govern.

This is a recursive feedback problem of a kind the series has not yet encountered. In healthcare, the administrative observation channel degrades the clinical signal, but the patients do not actively model the hospital's billing algorithms and optimise their symptoms against them. In universities, the disciplinary incentive architecture suppresses integrative work, but the faculty do not actively model the tenure committee's decision function and optimise their research against it. In central banking, the governed system is actively modelling the governor. The actors whose behaviour the institution is trying to shape are using the institution's own communications to anticipate its actions and extract value from the anticipation. The result is that forward guidance becomes less effective the more transparent it is, because transparency enables the algorithmic reverse-engineering that neutralises its effects.

2.11 The Multi-Frequency Synchronisation Problem

Faster systems arbitrage slower systems. This is a general property of complex adaptive systems, and it operates with particular force in the domain of monetary governance.

High-frequency trading firms operate on timescales of microseconds. Their algorithms process market data, identify patterns, and execute trades before a human trader can perceive the signal. Central banks operate on timescales of weeks to months. The FOMC meets eight times a year. The ECB Governing Council meets every six weeks. Macroeconomic data is released monthly or quarterly. The latency structure of monetary

governance is measured in weeks; the latency structure of the financial markets it governs is measured in microseconds. The gap between these timescales is not a passive condition. It is actively exploited. Trading algorithms position themselves ahead of central bank announcements. They arbitrage the difference between the information that is available to the market and the information that is available to the policymakers. They extract value from the latency gap.

The frequency mismatch also operates in the opposite direction. Central banks are structurally optimised for the medium-term business cycle—the two-to-five-year horizon over which monetary policy is conventionally understood to operate. They are poorly equipped to perceive the slow variables—climate change, demographic transition, the accumulation of public and private debt—that operate on timescales of decades. And they are poorly equipped to respond to the fast variables—flash crashes, liquidity spirals, algorithmic feedback loops—that operate on timescales of seconds. The medium-frequency calibration of the monetary policy framework leaves both the fast and the slow disturbance bands uncovered. The frequency gap is not a failure of attention. It is a structural property of an architecture designed for a specific timescale, operating in an environment that generates disturbances across multiple timescales simultaneously.

2.12 Climate Risk and the Collapse of the Exogenous Assumption

Central bank models treat long-run trends—productivity growth, demographic change, technological progress—as exogenous. They are inputs to the model, not outputs. The model does not explain them. It assumes them. The assumption is convenient. It allows the model to focus on the short-to-medium-term dynamics that are the primary concern of monetary policy. It is also increasingly untenable.

Climate change is not an exogenous shock to a stable system. It is a structural transformation of the conditions under which all economic activity occurs. It will affect agricultural productivity, labour supply, capital depreciation, insurance markets, migration patterns, and the spatial distribution of economic activity. It will generate physical risks—the direct damage from extreme weather events, sea-level rise, and ecosystem disruption—and transition risks—the revaluation of assets, the stranding of fossil-fuel investments, and the disruption of industries as economies shift toward lower-carbon production. These are not temporary disturbances that the central bank can treat as exogenous shocks and accommodate through conventional policy. They are permanent shifts in the structure of the economy that will affect the trajectory of inflation, output, and financial stability over decades.

The central bank's observation architecture is calibrated to quarterly inflation data and annual GDP figures. It cannot perceive the multi-decadal, nonlinear, irreversible dynamics that climate change involves. The models that guide monetary policy treat climate as an exogenous variable—when it is included at all, it appears as a productivity shock or a terms-of-trade disturbance, not as a structural transformation of the production function. The data infrastructure that supports monetary policy decisions measures consumer prices, not carbon exposure. The institutional culture that shapes the central bank's priorities treats climate as an issue for environmental regulators, not for monetary policymakers.

The collapse of the exogenous assumption is the most profound challenge to the Monetary Policy Variety Gap. The central bank is being asked to incorporate into its framework a disturbance whose dimensionality, timescale, and irreversibility are fundamentally incompatible with the architecture through which it perceives the economy. The excluded dimension is not merely unobserved. It is unobservable within the existing framework. The framework must be redesigned—or the institution will be blindsided by a transformation it cannot perceive.

2.13 The Cultural Operating System: The Pretence of Knowledge

The structural mechanisms described in this section do not operate in a cultural vacuum. They are sustained and reinforced by a cultural operating system that makes the Monetary Policy Variety Gap liveable for the people who operate within it.

Friedrich Hayek, in his 1974 Nobel Prize lecture, warned against "the pretence of knowledge"—the tendency of economists and policymakers to act with confidence on models that could not capture the complexity of the economic system. Hayek's target was the macroeconomic planning of the post-war era, but his critique applies with equal force to the central banking of the present. The Pretence of Knowledge is the cultural anchor of monetary governance: the institutional tendency to act as if the economy can be adequately represented by the models through which the institution perceives it, and to treat challenges to the adequacy of those models as threats to the institution's credibility rather than as opportunities to expand its observational capacity.

The Pretence of Knowledge is not cynicism. Central bankers are not secretly aware that their models are inadequate and proceeding anyway. They genuinely believe in the framework they operate within. They have been trained in it, socialised into it, and evaluated on their mastery of it. The young economist who enters the Federal Reserve after completing a PhD at a top department has spent a decade learning to think in terms of DSGE models, representative agents, and linearised dynamics. The intellectual framework is not a tool that she uses. It is the medium through which she perceives the economy. The Pretence of Knowledge is not a deliberate deception. It is the natural condition of an institution whose members have internalised a specific way of seeing and cannot perceive what that way of seeing excludes.

The cultural operating system makes reform difficult in ways that are not captured by analyses of incentives or institutional structures. The central banker who questions the adequacy of the DSGE framework is not merely challenging a modelling choice. She is challenging the intellectual foundation of her profession, the basis on which her colleagues have built their careers, and the institutional identity of the organisation she serves. The resistance to expanding the observation architecture is not primarily political or bureaucratic. It is epistemic. The institution cannot see what it cannot see, and it cannot want what it cannot imagine.

2.14 How the Mechanisms Reinforce Each Other—and Fuel the Spiral

The structural mechanisms described in this section are not a list of separate problems, each solvable through its own targeted intervention. They are an integrated system, and the system's output is the Stability–Instability Spiral.

The inflation target (2.2) establishes the dominant observation channel, selecting for the variables the institution perceives and against the variables it excludes. The single scalar instrument (2.3) applies uniform pressure across a heterogeneous economy, generating collateral damage that accumulates as political grievance. The legibility compression mechanism (2.4) formalises the information loss that the observation channel produces—the dimensions of the economy excluded from the Taylor Rule continue to evolve, accumulating as externalities until they force a crisis.

Model risk (2.5) functions as epistemic closure, preventing the institution from perceiving the limitations of its own framework. The distributional observation failure (2.6) ensures that the institution cannot perceive the political consequences of its actions—the backlash, the populism, the erosion of trust—until those consequences have already constrained the policy space. The fiscal-monetary singularity (2.7) makes the institution indispensable while eroding its legitimacy, trapping it in an entanglement it cannot acknowledge.

Central bank independence (2.8) functions as an immune system, protecting the observation architecture from the democratic scrutiny that would surface its blind spots. Constitutional drift (2.9) entrenches the institution's unacknowledged power, making it a hidden constitutional actor without democratic mandate. The algorithmic arms race (2.10) demonstrates that the governed system is actively modelling the governor, reverse-engineering the reaction function and extracting value from the gap between the model and the reality. The multi-frequency synchronisation problem (2.11) ensures that the institution is too slow to respond to fast-moving financial dynamics and too fast to perceive the slow variables that will determine long-run outcomes.

Climate risk (2.12) represents the terminal challenge to the existing architecture—a disturbance whose dimensionality, timescale, and irreversibility are fundamentally incompatible with the framework through which the institution perceives the economy. And the Pretence of Knowledge (2.13) provides the cultural operating system that makes the entire arrangement liveable, converting structural constraints into professional commitments and treating challenges to the framework as threats to institutional credibility.

The mechanisms reinforce each other through a dense web of feedback loops. The inflation target selects what is visible. The single scalar instrument acts on what is visible. The compression mechanism destroys the information that is excluded. Model risk prevents the institution from perceiving the destruction. The distributional failure generates political backlash. The fiscal-monetary singularity makes the institution indispensable while eroding its legitimacy. Independence protects the architecture from reform. Constitutional drift entrenches the institution's power. The algorithmic arms race reverse-engineers the

reaction function. The frequency gap ensures that both fast and slow disturbances fall outside the institution's effective response window. Climate risk accumulates outside the observation frame. The Pretence of Knowledge makes the entire arrangement feel normal, professional, and necessary.

The Stability–Instability Spiral is not a conspiracy. It is the predictable output of an architecture designed for a narrow, measurable mandate in a world whose disturbance environment is expanding in dimensionality. The institution that was built to target inflation cannot perceive the dimensions of the economy that its targeting excludes. The excluded dimensions do not cease to operate. They accumulate as externalities until they force a reckoning. The spiral tightens with each cycle. The question is whether the institution can expand its observation architecture before the next excluded dimension forces a reckoning that the existing framework cannot survive.

3. What Building Requisite Monetary Governance Would Look Like

3.1 The Principle: Multi-Dimensional Mandates, Multi-Instrument Frameworks, Democratic Accountability Without Political Capture

The Monetary Policy Variety Gap is a structural condition, not a temporary dysfunction. It cannot be resolved by incremental improvements within the existing architecture—by slightly better DSGE models, marginally more detailed financial stability reports, or modestly expanded central bank communications. The mechanisms that produce the gap are deeply embedded in the inflation-targeting framework, the single-scalar instrument, the modelling infrastructure, and the cultural operating system of central banking. Addressing them requires architectural redesign, not incremental refinement.

The central design principle is to expand the dimensionality of the central bank's observation and response architecture without sacrificing the genuine institutional achievements—operational independence, technocratic expertise, the credibility of the inflation target—that the current architecture has delivered. The goal is not to abandon price stability for a vague plurality of objectives. It is to recognise that price stability cannot be maintained over the long term if the institution that maintains it is blind to the financial, distributional, fiscal, and ecological dimensions of the economy that determine whether price stability is sustainable.

This principle follows directly from the fractality insight established in the Governance as Engineering series. In complex, multi-frequency disturbance environments, no single-scale controller can maintain stability. The central bank requires a high-dimensional observation channel that perceives the multiple, irreducible dimensions of the economy—inflation, financial stability, distributional effects, climate risk—and a multi-instrument framework that can respond to disturbances in each dimension without applying the same scalar response to all of them simultaneously. And it requires a democratic accountability architecture that surfaces the excluded dimensions of monetary policy—the distributional consequences, the fiscal implications, the moral hazard—in legitimate democratic forums, without subjecting the inflation target to short-term political manipulation.

This is not a utopian vision. Elements of such an architecture exist, in fragmentary and provisional form, within central banks that have partially expanded their observation channels in response to the 2008 crisis and its aftermath. The task is to generalise them—to build the institutional mechanisms, the modelling infrastructure, and the deliberative forums that make monetary observability a design specification rather than a post-crisis afterthought.

3.2 Multi-Dimensional Mandates

The inflation target is the central bank's primary value architecture. It has served the institution well for decades. It should not be abandoned. It should be supplemented.

The reform direction is a mandate that explicitly recognises the multiple, irreducible dimensions of the central bank's responsibilities—price stability, financial stability, employment, distributional equity, and climate resilience—and that establishes the institutional mechanisms for weighting and reconciling them. This is not a call for the central bank to become the government's economic policy arm. It is a recognition that the dimensions the current mandate excludes are the dimensions that eventually destabilise the outcomes the mandate is designed to achieve.

The design specification is a mandate that distinguishes between the *primary objective* of price stability and the *secondary objectives* that must be pursued consistently with it—not as constraints to be minimised, but as dimensions of the same economic reality that cannot be separated. The Bank of England's remit already gestures in this direction: the Monetary Policy Committee is required to support the government's economic objectives, including growth and employment, subject to the primacy of the inflation target. The European Central Bank's mandate includes a secondary objective of supporting the general economic policies of the Union. But these secondary objectives are effectively subordinate to the inflation target in practice, because the institutional mechanisms for operationalising them—the models, the data, the decision-making frameworks—are far less developed than the infrastructure for inflation targeting.

A genuine multi-dimensional mandate would require the central bank to report publicly on its performance against each dimension, with equal analytical rigour and institutional accountability. It would require the models that guide monetary policy to incorporate the interactions between the dimensions—the feedback loops between financial stability and price stability, the effects of distribution on aggregate demand, the exposure of the financial system to climate risk. And it would require the decision-making process to articulate how trade-offs between dimensions are weighed, rather than treating the secondary objectives as afterthoughts to the inflation decision.

The reform is not a threat to central bank independence. It is the precondition for its long-term survival. An institution that is perceived to serve the interests of asset-holders while ignoring the distributional consequences of its actions will eventually lose the political legitimacy that independence requires. The mandate expansion is an investment in institutional durability—a recognition that the central bank's legitimacy depends on its capacity to perceive and respond to the dimensions of the economy that matter to the citizens who sustain it.

3.3 Multi-Instrument Frameworks

The policy interest rate is the central bank's primary instrument. It has served the institution well for decades. It should not be abandoned. It should be supplemented.

The reform direction is a framework in which different instruments are matched to different dimensions of the disturbance environment, each operating on the timescale and with the transmission mechanism appropriate to its target. The interest rate remains the primary instrument for aggregate demand management and inflation control. But it is supplemented by macroprudential tools for financial stability—countercyclical capital buffers that can be raised during credit booms and released during contractions, loan-to-value limits that can cool overheating housing markets without raising rates for the entire economy, sectoral capital requirements that can address concentration risk in specific industries. It is supplemented by targeted credit policies for distributional objectives—differential reserve requirements, sectoral lending facilities, and the acceptance of a wider range of collateral that supports lending to small businesses and underserved communities. And it is supplemented by green monetary policy instruments—the tilting of asset purchases toward climate-aligned securities, the incorporation of climate risk into collateral frameworks, and the development of targeted refinancing operations for green investment.

The multi-instrument framework addresses the averaging problem directly. Instead of applying the same interest rate to the entire economy and accepting the collateral damage, the central bank can apply differentiated instruments to differentiated problems. The housing market can be cooled without crushing small businesses. Financial stability can be maintained without sacrificing employment. Climate risk can be addressed without abandoning price stability. The instruments are not independent—their effects interact, and the interactions must be modelled and managed—but the framework recognises that a multi-dimensional disturbance environment requires a multi-dimensional response architecture.

The multi-instrument framework also addresses the frequency mismatch. Macroprudential tools can be adjusted more rapidly than the policy rate, enabling the central bank to respond to fast-moving financial dynamics without waiting for the next policy meeting. Climate-aligned instruments can be calibrated to the multi-decadal timescale of the ecological transition, enabling the central bank to contribute to the long-run stabilisation of the economy without sacrificing its medium-term inflation objective. The framework matches the instrument to the timescale of the disturbance, rather than forcing all disturbances through the single timescale of the policy rate.

The operational challenges are substantial. The effects of macroprudential tools are less well understood than the effects of the interest rate. The distributional consequences of targeted credit policies are politically sensitive. The legal and institutional frameworks for green monetary policy are underdeveloped. But the challenges are not insurmountable, and the alternative—continuing to apply a single scalar instrument to a multi-dimensional economy and accepting the accumulating collateral damage—is demonstrably failing.

3.4 The Monetary Policy Distributional Impact Assessment

The Distributional Observation Failure, diagnosed in Section 2.6, is one of the most consequential blind spots in the contemporary central banking architecture. The institution is making decisions whose primary distributional effects are invisible to its own decision-making apparatus. The Monetary Policy Distributional

Impact Assessment is a mechanism for closing this gap—not by changing what the central bank is required to do, but by changing what it is required to see.

The Assessment is a formally mandated, independently conducted, real-time analysis of the distributional consequences of each major policy decision. When the FOMC votes on the federal funds rate, the Assessment is published alongside the decision, showing the likely effects of the rate change on wealth inequality, income distribution, regional divergence, and the relative position of asset-holders and wage-earners. When the ECB Governing Council adjusts its asset purchase programme, the Assessment is published alongside the decision, showing the likely effects on the distribution of financial wealth, the implicit subsidy to different sectors, and the regional allocation of the monetary stimulus.

The Assessment is produced by a dedicated unit with statutory independence from the policy committee, analogous to the independence of statistical agencies from the ministries whose performance they measure. It has access to all relevant data—the microdata on household balance sheets, the regional economic indicators, the distributional national accounts—and the analytical capacity to process it. Its methodology is transparent, its assumptions are published, and its findings are not subject to clearance by the policy committee. The Assessment does not tell the central bank what to do. It tells the central bank what its actions are doing.

The policy committee is required to respond publicly to the Assessment. The response does not need to agree with the Assessment's findings. It does not need to change the policy decision. But it must explain, in public, on the record, how the committee weighed the distributional consequences of its decision against its other objectives. The mechanism does not constrain the committee's discretion. It changes the informational conditions under which discretion is exercised. A committee that has been told, by its own independent analytical unit, that its rate decision will transfer wealth from the bottom fifty percent of the distribution to the top ten percent must either explain why that transfer is necessary or adjust the decision. The Assessment does not dictate policy. It makes the distributional consequences of policy visible, and visibility creates accountability.

The Assessment is technically feasible. The Bank of England has conducted prototype distributional analyses of monetary policy, using its household survey data to trace the effects of rate changes and asset purchases across the income and wealth distributions. The European Central Bank has published experimental distributional wealth accounts. The analytical infrastructure exists. What is missing is the institutional mechanism that converts the analysis from a research exercise into an operational component of the decision-making process. The Assessment is that mechanism.

3.5 Model Humility Infrastructure

The Pretence of Knowledge, diagnosed in Section 2.13, is the cultural operating system that makes the Monetary Policy Variety Gap liveable for the people who operate within it. It is sustained by an institutional architecture in which professional success depends on demonstrating competence within the existing

modelling framework, not on questioning the framework's adequacy. Model humility infrastructure is the institutional mechanism for breaking the epistemic closure that the Pretence of Knowledge generates.

The infrastructure has three components. First, **institutionalised red-team functions.** A dedicated unit within the central bank, with protected independence from the modelling staff, whose mandate is to stress-test the institution's own models, to identify the assumptions that are most consequential for policy conclusions, and to generate alternative scenarios that the baseline models cannot produce. The red team is not an adversarial exercise conducted once a year for regulatory compliance. It is a permanent, well-resourced, institutionally protected function whose output is presented to the policy committee alongside the baseline forecast at every policy meeting. The committee sees not only what the models predict but what the models cannot see.

Second, **published uncertainty ranges that include the possibility of model failure.** The current practice of central bank forecasting presents uncertainty through fan charts—probability distributions around a central projection that are generated by the model itself. The fan charts convey an impression of quantified, manageable uncertainty. They do not convey the possibility that the model is structurally wrong—that the relationships it assumes may break down, that the variables it excludes may become dominant, that the regime may shift. The reform is to supplement the fan charts with explicit statements of model limitation: the assumptions that, if violated, would render the forecast unreliable; the scenarios that the model cannot generate but that historical experience suggests are possible; the dimensions of the economy that the model excludes entirely. The policy committee is told not only what the models predict but what the models cannot predict.

Third, **a culture that treats the limits of existing frameworks as objects of explicit institutional attention rather than professional embarrassment.** This is the hardest component to build, because it requires changing the norms that govern professional advancement within the institution. The young economist who identifies a structural limitation of the DSGE framework is not rewarded for her insight; she is penalised for failing to demonstrate mastery of the framework. The reform is to create career pathways that reward the identification of model limitations—publications that critically evaluate the institution's own analytical framework, promotions that recognise contributions to methodological self-critique, recruitment that values intellectual diversity alongside technical competence. The institution that rewards the identification of its own blind spots is less likely to be blindsided by them.

3.6 Deliberative Infrastructure for Monetary Policy

Central bank independence, diagnosed in Section 2.8, has evolved into a broader institutional immunity—insulating the institution not only from political pressure to manipulate interest rates, but from the democratic deliberation that would surface the distributional consequences, the fiscal implications, and the moral hazard that the institution's own observation architecture cannot perceive. Deliberative infrastructure is the mechanism for restoring democratic accountability without sacrificing operational independence.

The infrastructure has two components. First, **citizens' assemblies on monetary policy trade-offs.** A randomly selected, demographically representative body of citizens, convened for a defined period, provided with expert testimony from central bank officials, academic economists, and civil society representatives, and charged with producing public, reasoned recommendations on the trade-offs that monetary policy involves. The assembly does not make policy. It deliberates on the questions that the policy committee must answer: the relative weight of price stability and employment, the distributional consequences of asset purchases, the moral hazard of sustained low rates, the exposure of the financial system to climate risk. Its recommendations are non-binding but public, reasoned, and carry a democratic legitimacy that the technocratic decision-making process currently lacks.

The citizens' assembly model has been successfully deployed on complex policy questions in Ireland (marriage equality, abortion, climate), France (the Citizens' Convention on Climate), and multiple other jurisdictions. The evidence suggests that randomly selected citizens, given adequate time, expert information, and professional facilitation, are capable of nuanced deliberation on technically complex issues. The monetary policy domain is well-suited to the model: the trade-offs are genuine, the stakes are high, and the current decision-making process is perceived, by significant portions of the public, as unaccountable and captured by financial interests.

Second, **expanded parliamentary oversight with genuine analytical capacity.** The current model of parliamentary scrutiny of central banks—testimony before legislative committees, the publication of minutes and reports—is procedurally robust but analytically thin. Legislators lack the staff, the expertise, and the time to engage substantively with the central bank's analytical framework. The reform is to establish a dedicated parliamentary budget office for monetary policy—an independent analytical unit, analogous to the Congressional Budget Office or the Office for Budget Responsibility, that provides legislators with independent analysis of the central bank's performance, the distributional effects of its decisions, and the scenarios that its own models may be excluding. The unit does not tell legislators what to think. It gives them the analytical capacity to think independently about monetary policy, rather than relying entirely on the central bank's own account of its performance.

The deliberative infrastructure does not threaten central bank independence. It strengthens the democratic legitimacy on which independence depends. An institution that is perceived to operate behind closed doors, serving the interests of financial markets, will eventually lose the political support that protects it from political interference. An institution that submits its decisions to the scrutiny of citizens' assemblies and parliamentary bodies with genuine analytical capacity is an institution that can credibly claim to serve the public interest. The independence that matters is independence from short-term political manipulation, not independence from democratic accountability. The deliberative infrastructure provides the latter while preserving the former.

3.7 Distributed Sensing for the Financial System

The central bank's primary data infrastructure—the consumer price index, the national accounts, the labour force survey—measures aggregates. It was designed for the task it performs: tracking the macroeconomy at the level of aggregation that the inflation-targeting framework requires. It is not designed to perceive the distributional, financial, and ecological dimensions of the economy that the Monetary Policy Variety Gap excludes.

Distributed sensing is the mechanism for expanding the central bank's observation architecture beyond the aggregates it currently perceives. The design specification is a real-time data infrastructure that draws on the distributed information generated by the economy itself—the transaction data of households and firms, the balance-sheet data of financial institutions, the supply-chain data of corporations, the geospatial data of environmental monitoring systems—and integrates it into a coherent, multi-dimensional picture of the economic system.

The technical capability exists. Payment systems generate real-time data on consumption patterns across income groups and regions. Financial market infrastructure generates tick-by-tick data on asset prices, trading volumes, and risk exposures. Satellite imagery generates data on agricultural conditions, urban development, and environmental degradation. The data is collected, in many cases, by the private sector. It is not integrated into the central bank's decision-making apparatus.

The reform is to build the institutional mechanisms that make distributed data operational for monetary policy. The central bank becomes a platform for distributed observation—not merely a processor of aggregate statistics, but an integrator of the multiple, heterogeneous data streams that the economy itself generates. The platform would enable the central bank to perceive the build-up of financial fragility in real time, rather than discovering it after the crisis. It would enable the central bank to perceive the distributional effects of its decisions as they unfold, rather than inferring them years later from survey data. It would enable the central bank to perceive the exposure of the financial system to climate risk, rather than treating climate as an exogenous variable.

The privacy and governance challenges are substantial. The central bank should not become a surveillance state. The data infrastructure must be designed with privacy-by-design principles, ensuring that individual transactions are not identifiable and that the data is used exclusively for the macroeconomic and financial stability purposes for which it is collected. The governance framework must include independent oversight, transparent protocols for data access and use, and mechanisms for public accountability. The technical capability to build privacy-preserving distributed sensing exists. The institutional will to deploy it for monetary policy purposes does not yet exist.

The alternative is to continue operating with the aggregate data infrastructure that failed to perceive the 2008 crisis, that cannot perceive the distributional effects of monetary policy, and that treats climate risk as an exogenous shock to a stable system. The distributed sensing infrastructure is not a supplement to the existing

observation architecture. It is the necessary condition for closing the Monetary Policy Variety Gap. The institution that cannot perceive the economy it governs cannot govern it. The data is available. The question is whether the institution will build the infrastructure to use it.

4. The Political Immune System: The Pretence of Knowledge

4.1 The Pretence of Knowledge Defined

Every governance architecture develops an immune system—a set of institutions, incentives, and cultural norms that protect the existing order from challenge. In the nation-state cases examined in this series, the immune system takes different forms: bureaucratic inertia in Germany, the Stability Bias in Japan, the Extraction Coalition in Nigeria, the Security First Responder in Israel. In the healthcare system, it is the Administrative Imperative—the comprehensive orientation toward standardisation, measurement, and efficiency that treats any constraint on administrative rationality as a threat. In the university, it is the Performative Reform Trap—the mechanism by which institutions incorporate the rhetoric of interdisciplinarity while leaving the underlying incentive architecture intact.

The central bank's immune system is the **Pretence of Knowledge**. Friedrich Hayek, in his 1974 Nobel Prize lecture, coined the phrase to describe the tendency of economists and policymakers to act with confidence on models that could not capture the complexity of the economic system. Hayek's target was the macroeconomic planning of the post-war era, but his critique applies with equal force to the central banking of the present. The Pretence of Knowledge is the institutionalised tendency to treat the economy as if it can be adequately represented by the models through which the institution perceives it, and to treat challenges to the adequacy of those models as threats to the institution's credibility rather than as opportunities to expand its observational capacity.

The Pretence of Knowledge is not a conspiracy of central bankers deliberately ignoring the limitations of their frameworks. It is an emergent property of an institution whose professional identity, intellectual foundations, and institutional legitimacy are all invested in a specific way of seeing the economy. The young economist who enters the Federal Reserve after completing a PhD at a top department has spent a decade learning to think in terms of DSGE models, representative agents, and linearised dynamics. The intellectual framework is not a tool that she uses. It is the medium through which she perceives the economy. When she looks at the data, she sees the patterns the models have trained her to see. When she evaluates a policy proposal, she assesses it against the criteria the models have defined as relevant. The Pretence of Knowledge is not a deliberate deception. It is the natural condition of an institution whose members have internalised a specific epistemic framework and cannot perceive what that framework excludes.

The immune system operates through specific institutional pathways. When a critic argues that the DSGE models failed to predict the 2008 crisis and should be fundamentally reconsidered, the central bank responds by acknowledging the failure and commissioning research to incorporate financial frictions into the existing modelling framework. The response is genuine. The research is rigorous. But the framework itself—the

linearised dynamics, the representative agents, the exogenous long-run trends—remains intact. The critique has been absorbed into the existing architecture rather than forcing its redesign. The immune system has processed the threat and neutralised it.

When a civil society organisation demands that the central bank publish distributional impact assessments alongside its rate decisions, the central bank responds by noting that distributional analysis is complex, that the models are not designed for it, and that the institution's mandate is price stability, not inequality reduction. The response is not dishonest. The models genuinely are not designed for distributional analysis. The mandate genuinely is price stability. But the response converts an architectural limitation—the exclusion of distributional effects from the observation architecture—into a principled defence of the institution's mission. The immune system has protected the Pretence of Knowledge by framing the excluded dimension as beyond the institution's proper scope.

The Pretence of Knowledge is self-reinforcing. The institution's credibility depends on the perception that it understands the economy well enough to steer it. Acknowledging the structural limitations of its models—that they cannot perceive financial crises, distributional effects, or climate risk—would threaten that credibility. So the limitations are acknowledged as technical challenges to be refined, not as architectural constraints that no refinement can overcome. The Pretence is sustained not by dishonesty but by the institutional imperative to maintain the credibility on which the institution's effectiveness depends. The tragedy is that the Pretence eventually destroys the credibility it is designed to protect, because the excluded dimensions eventually force a crisis that the models cannot explain and the institution cannot anticipate.

4.2 Who Benefits—Named Honestly

The Pretence of Knowledge is sustained by specific actors who have concrete, material interests in the continuation of the current architecture. Any transition architecture that does not name these actors and account for their resistance will be neutralised by them.

Central bankers themselves are the primary beneficiaries of the Pretence of Knowledge. Their professional identities, their intellectual frameworks, and their institutional prestige are all invested in the existing modelling paradigm. The senior official who spent thirty years mastering DSGE models, who published in the top journals, who rose through the ranks on the strength of her technical expertise—she is not going to welcome the suggestion that the models she has spent her career refining are structurally incapable of perceiving the most important dynamics of the economy she governs. The resistance is not cynical. It is human. The Pretence of Knowledge is not merely an institutional ideology. It is the foundation of professional identity for the people who operate within the institution.

Academic economists in the DSGE tradition benefit from the Pretence because it sustains the intellectual paradigm on which their careers depend. The journals that publish their work, the departments that hire and promote them, the conferences that showcase their research—these are all built around the modelling framework that the Pretence protects. A fundamental reconsideration of that framework would threaten not

only their intellectual authority but their professional livelihoods. The academic community that supplies the central bank with its analytical talent is also the community that has the most to lose from a challenge to the Pretence.

Financial institutions benefit from the Pretence because it sustains the predictable policy environment on which their business models depend. A central bank that acknowledges the structural limitations of its models—that admits it cannot perceive the build-up of systemic risk, the distributional effects of its actions, or the exposure of the financial system to climate risk—is a central bank whose decisions become less predictable. Predictability is the foundation of financial market functioning. The Pretence that the central bank understands the economy well enough to steer it is not merely an intellectual convenience. It is the basis on which trillions of dollars of financial assets are priced. The financial sector has an enormous material stake in the continuation of the Pretence.

Governments and fiscal authorities benefit from the Pretence because it provides them with an implicit financier of last resort whose operations are insulated from democratic scrutiny. The fiscal-monetary singularity diagnosed in Section 2.7—the central bank's role as the structural guarantor of sovereign solvency—is sustainable only as long as the Pretence is maintained. The government can borrow at low rates because the central bank is purchasing its debt. The central bank can purchase the debt because it is classified as a monetary operation rather than a fiscal one. The government can disclaim responsibility for the distributional consequences of monetary policy because monetary policy is independent. The Pretence enables a fiscal-monetary arrangement that serves the interests of both institutions while obscuring the arrangement from democratic accountability.

The broader political class benefits from the Pretence because it provides a mechanism for deflecting responsibility for distributional outcomes onto an unelected institution. When inequality rises, when asset prices inflate while wages stagnate, when the financial sector is bailed out while households are not—these outcomes can be attributed to the independent decisions of the central bank, over which elected officials have no control. The Pretence that monetary policy is a technical exercise insulated from political considerations is convenient not only for the central bank but for the politicians who would otherwise be held accountable for the distributional consequences of the monetary regime they have established.

These actors are not a unified coalition. Central bankers and academic economists genuinely believe in the Pretence; financial institutions and governments benefit from it regardless of whether they believe it. But they share a common structural interest: the continuation of an architecture in which the central bank operates with an observation channel of very low dimensionality, the excluded dimensions accumulate as externalities, and the institution's legitimacy depends on maintaining the fiction that it perceives the economy it governs. The Pretence of Knowledge is the immune system that protects this architecture from challenge. And it will resist any reform that threatens to expand the observation channel and expose the dimensions the Pretence excludes.

4.3 The Narrative Strategy

The Pretence of Knowledge cannot be defeated by frontal assault. Any transition architecture that presents itself as an attack on central bank independence, on the inflation-targeting framework, or on the competence of the people who operate within it will activate the immune response and be neutralised before it begins. The Pretence is too deeply embedded in professional identities, institutional cultures, and material interests to be overcome by argument alone. It must be outflanked—not by denying the genuine achievements of the current architecture, but by reframing the relationship between the Pretence and the institution's long-term survival.

The master narrative is that **model humility is not a threat to central bank credibility but its necessary precondition.** The institution that acknowledges the structural limitations of its models—that publishes uncertainty ranges that include the possibility of model failure, that subjects its forecasts to institutionalised red-team challenge, that reports the distributional consequences of its decisions alongside the inflation forecast—is not weakening its credibility. It is strengthening it. The credibility that matters is not the credibility of omniscience—the Pretence that the central bank understands the economy well enough to steer it with precision. It is the credibility of honesty—the demonstrated willingness to acknowledge the limits of what the institution can perceive, to report what it cannot see alongside what it can, and to submit its judgments to democratic scrutiny while preserving the operational independence that protects the inflation target from short-term political manipulation.

The narrative reframes the expansion of the observation architecture as an investment in institutional durability. The central bank that cannot perceive the distributional consequences of its actions will eventually lose the political legitimacy that independence requires. The central bank that cannot perceive the build-up of financial fragility will eventually preside over a crisis that destroys its credibility. The central bank that cannot perceive climate risk will eventually be blindsided by a transformation it cannot explain. The Pretence of Knowledge is not a foundation for institutional longevity. It is a vulnerability that the next excluded dimension—the next financial crisis, the next distributional backlash, the next climate shock—will exploit. The institution that builds the capacity to perceive what it currently excludes is investing in its own survival.

The Monetary Policy Distributional Impact Assessment, proposed in Section 3.4, is the narrative's operational embodiment. It does not tell the central bank what to do. It tells the central bank what its actions are doing—and it tells the public, simultaneously, in a form that is independently produced and publicly accessible. The Assessment is not a constraint on the institution's discretion. It is an investment in the institution's legitimacy—a mechanism for demonstrating, in real time and with analytical rigour, that the central bank takes seriously the consequences of its actions for the citizens who sustain it. The central bank that publishes a Distributional Impact Assessment alongside its rate decision is saying, in effect: "We are making this decision with the best models and the best judgment we have, and we want you to see, alongside our decision, what the consequences are likely to be for different groups in the society we serve." That is not an admission of weakness. It is a demonstration of institutional maturity.

The narrative also leverages the competitive dynamics of the international central banking community. Central banks are intensely peer-conscious institutions. They compare themselves to each other. They benchmark their performance, their frameworks, and their communications against international best practice. The Distributional Impact Assessment, once adopted by one major central bank, creates competitive pressure for others to follow. The Bank of England's prototype distributional analyses have already been noticed by other central banks. The narrative frames the Assessment not as a concession to political pressure but as an advance in institutional sophistication—a mechanism that the most innovative central banks are adopting because it enhances their analytical capacity and their democratic legitimacy. The competitive dynamic that currently reinforces the Pretence of Knowledge can be redirected to erode it.

The narrative strategy does not attack the Pretence of Knowledge. It honours the genuine achievements it protects—the operational independence, the technocratic expertise, the commitment to evidence-based decision-making—while arguing that the best way to preserve those achievements is to transcend the Pretence that now threatens them. The central bank that acknowledges the limits of its own observation architecture, that builds the infrastructure to perceive what it currently excludes, and that submits its judgments to democratic deliberation while preserving operational independence—that central bank is not weaker than the one that maintains the Pretence. It is stronger. It is more resilient. It is more likely to survive the next crisis, the next backlash, and the next transformation of the economy it is charged with governing. The Pretence of Knowledge served the institution well for decades. It will not serve it for the decades to come. The question is whether the institution can transcend the Pretence before the next excluded dimension transcends it.

5. A Concrete First Step: The Monetary Policy Distributional Impact Assessment

5.1 The Logic of the First Step

The Monetary Policy Variety Gap is a systemic condition, not a single policy failure. There is no one reform that can close it—no single mandate revision, no individual modelling innovation, no isolated transparency initiative that will expand the central bank's observation architecture to perceive the full dimensionality of the economy it governs. But there are interventions that can alter the institutional metabolism: that can make the variety gap visible where it is currently obscured by the Pretence of Knowledge, that can create new observation channels for the dimensions the current architecture excludes, and that can generate the information, the constituencies, and the political logic that make deeper reform possible.

The first step is therefore not the most ambitious intervention this report has described. It is the most catalytic: the intervention that targets the primary mechanism of the Monetary Policy Variety Gap most directly, that is institutionally feasible within the current architecture, and that, once established, generates the informational and political conditions for the deeper transformations that must follow.

The primary mechanism, as Section 2 demonstrated, is the systematic exclusion of distributional consequences from the central bank's observation architecture. The institution perceives inflation, output, and employment with high fidelity. It perceives the effects of its decisions on wealth inequality, income distribution, regional divergence, and the relative position of asset-holders and wage-earners with low fidelity—or not at all. The excluded dimension accumulates as political grievance, populist backlash, and institutional delegitimation. The central bank cannot perceive the political consequences of its own actions until those consequences have already constrained the policy space.

The Monetary Policy Distributional Impact Assessment is designed to close this specific gap. It does not change what the central bank is required to do. It changes what the central bank is required to see. It makes the distributional consequences of monetary policy visible to the decision-makers who produce them and to the public who bears them. And in doing so, it creates the informational conditions for the deeper architectural reforms—the multi-dimensional mandates, the multi-instrument frameworks, the deliberative infrastructure—that the Monetary Policy Variety Gap demands.

5.2 The Monetary Policy Distributional Impact Assessment

The Assessment is a formally mandated, independently conducted, real-time analysis of the distributional consequences of each major monetary policy decision. It is produced by a dedicated unit with statutory independence from the policy committee whose decisions it evaluates. It is published alongside the policy

decision itself, not months later as a research exercise. And it is accompanied by a mandatory response obligation: the policy committee must explain, in public, on the record, how it weighed the distributional consequences of its decision against its other objectives.

The Assessment addresses each major category of monetary policy action. For **interest rate decisions**, it analyses the likely effects of the rate change on wealth inequality (through the asset price channel), income distribution (through the employment and wage channel), regional divergence (through the differential exposure of regions to interest-sensitive sectors), and the relative position of asset-holders and wage-earners. It disaggregates the effects by income decile, by wealth quintile, by region, and by demographic characteristics including age, housing tenure, and employment status.

For **asset purchase programmes**—quantitative easing, corporate bond purchases, mortgage-backed securities—it analyses the likely effects on the distribution of financial wealth, the implicit subsidy to different sectors and asset classes, the regional allocation of the monetary stimulus, and the incidence of the capital gains generated by the central bank's presence as a buyer. It identifies which institutions and which households benefit directly from the purchases and which benefit indirectly, if at all.

For **forward guidance and other communications**, it analyses the likely distributional effects of the signalled policy path—the effects on mortgage borrowers versus savers, on equity holders versus those without financial assets, on long-term investment planning versus short-term consumption.

The Assessment is not a forecast. It does not claim to predict the future with precision. It is a scenario analysis that shows, under a range of plausible assumptions, how the effects of the policy decision are likely to be distributed across the population. The assumptions are transparent. The methodology is published. The uncertainties are quantified and communicated. The Assessment does not tell the policy committee what to do. It tells the policy committee what its actions are doing—to whom, through what channels, with what degree of confidence—and it does so in time for that information to inform the decision.

The Assessment is produced by a **Distributional Analysis Unit** with statutory independence from the Monetary Policy Committee, the Federal Open Market Committee, or the Governing Council. The Unit's director is appointed for a fixed, non-renewable term by a process that insulates the appointment from political interference and from central bank control—perhaps through a cross-partisan parliamentary committee, a multi-stakeholder appointments panel, or an independent statistical authority. The Unit has statutory access to all relevant data—the microdata on household balance sheets, the regional economic indicators, the distributional national accounts, the securities holdings databases—and the analytical capacity to process it. Its methodology is transparent. Its findings are not subject to clearance by the policy committee. The committee sees the Assessment at the same time as the public, when it is published alongside the policy decision.

The **mandatory response obligation** is the mechanism that converts the Assessment from an informational exercise into an operational constraint. The policy committee is not required to agree with the Assessment's findings. It is not required to change its decision in response to them. But it is required to respond—publicly,

in writing, within a specified period—explaining how it weighed the distributional consequences identified by the Assessment against its other objectives. If the Assessment finds that a rate rise will disproportionately affect low-income households through the employment channel while benefiting high-wealth households through the asset price channel, the committee must explain why it judged the rate rise necessary despite these effects. If the committee disagrees with the Assessment's methodology or conclusions, it must explain the basis for its disagreement. The response obligation does not dictate policy. It makes the distributional dimension of policy visible, and visibility creates accountability.

5.3 Complementary Mechanisms: The Model Humility Red Team and the Citizens' Assembly Pilot

The Distributional Impact Assessment targets the distributional observation failure directly. Two complementary mechanisms target the other dimensions of the Monetary Policy Variety Gap that the Assessment alone cannot reach.

The Model Humility Red Team is an institutionalised challenge function within the central bank, with protected independence from the modelling staff, whose mandate is to stress-test the institution's own analytical framework. Its functions include identifying the assumptions most consequential for policy conclusions, generating alternative scenarios that the baseline models cannot produce, and publishing an annual Model Limitations Report that documents the dimensions of the economy the institution's models exclude and the historical episodes the models cannot explain. The Red Team's output is presented to the policy committee alongside the baseline forecast at every policy meeting. The committee sees not only what the models predict but what the models cannot predict—the scenarios they cannot generate, the assumptions on which their projections depend, the dimensions of the economy they exclude entirely. The Red Team is the institutional mechanism for breaking the epistemic closure that the Pretence of Knowledge sustains.

The Citizens' Assembly Pilot on Monetary Policy Trade-offs is a deliberative body of randomly selected citizens, demographically representative of the population, convened for a defined period to deliberate on a specific monetary policy trade-off. The pilot would be initiated by a central bank, a parliamentary committee, or an independent foundation, with professional facilitation, balanced expert testimony, and a mandate to produce public, reasoned recommendations. The pilot tests whether citizens can engage meaningfully with the distributional, fiscal, and financial dimensions of monetary policy—dimensions that the technocratic decision-making process currently excludes from democratic scrutiny. If successful, the pilot creates a precedent for the permanent deliberative infrastructure described in Section 3.6.

5.4 Selection Criteria: Why These?

The Distributional Impact Assessment, the Model Humility Red Team, and the Citizens' Assembly Pilot are not selected at random from the menu of interventions described in Section 3. They are selected because they meet the criteria that a first step must meet to be catalytic.

First, they target the primary mechanisms of the Monetary Policy Variety Gap directly. The Assessment targets the distributional observation failure—the systematic exclusion of distributional consequences from the observation architecture. The Red Team targets model risk as epistemic closure—the institutionalised inability to perceive the limitations of the existing modelling framework. The Pilot targets the democratic deficit—the insulation of monetary policy from the democratic deliberation that would surface the dimensions the Pretence excludes.

Second, they are institutionally feasible within the current architecture. The Assessment requires a new analytical unit within the central bank, not a change to the central bank's mandate. The Red Team requires a reallocation of existing analytical resources, not a fundamental redesign of the modelling framework. The Pilot requires a temporary commitment of institutional support, not a permanent change to the decision-making process. None of these interventions requires the comprehensive mandate reform, the multi-instrument framework, or the permanent deliberative infrastructure that the full transition architecture envisions. They are probes—small, reversible, information-generating interventions that create the conditions for deeper reform without triggering the full immune response of the Pretence of Knowledge.

Third, they generate feedback that enables further reform. The Assessment produces a stream of public, independently verified information about the distributional consequences of monetary policy. That information creates constituencies—the households and communities that can now demonstrate, with institutional authority, how monetary policy affects them. It creates political pressure—legislators who can now ask, in public hearings, why the central bank's own Distributional Analysis Unit found that the last rate decision transferred wealth upward. And it creates a precedent—a demonstration that the central bank can expand its observation architecture without sacrificing its operational independence. The Red Team produces a stream of information about the limitations of the institution's models—information that makes the Pretence of Knowledge harder to sustain. The Pilot produces evidence that democratic deliberation on monetary policy is feasible and productive—evidence that shifts the burden of proof from those who argue for deliberative infrastructure to those who argue against it.

5.5 How to Measure Success

The first step will be resisted, diluted, and potentially neutralised by the Pretence of Knowledge. Measuring its success therefore requires metrics that capture not only whether the interventions are formally established but whether they are functioning as designed—whether they are actually changing the institution's metabolism rather than being absorbed by it.

For the Distributional Impact Assessment, the relevant metrics include: the establishment of the Distributional Analysis Unit with statutory independence and secure funding; the publication of the first Assessment alongside a policy decision within the target timeframe; the quality, accessibility, and analytical rigour of the published Assessments; the degree to which the policy committee's mandatory responses engage substantively with the Assessment's findings rather than dismissing them pro forma; the evolution of the distributional dimensions of monetary policy discourse—in policy committee minutes, in parliamentary

testimony, in public debate—over time; and the rate at which other central banks adopt similar mechanisms. A successful Assessment is one that makes the distributional consequences of monetary policy impossible to ignore—that converts the distributional observation failure from an invisible background condition into a visible, measurable, and operationally relevant dimension of monetary governance.

For the Model Humility Red Team, the relevant metrics include: the publication of the first Model Limitations Report; the degree to which the Red Team's alternative scenarios influence policy committee discussions; the rate at which the modelling staff respond substantively to the Red Team's identified limitations; and the evolution of the institution's external communications—the extent to which published forecasts acknowledge the limitations the Red Team has documented. A successful Red Team is one that makes epistemic humility an institutional norm rather than a professional embarrassment.

For the Citizens' Assembly Pilot, the relevant metrics include: the completion of the pilot within the target timeframe; participant satisfaction and perceived legitimacy of the process; the quality, specificity, and public accessibility of the Assembly's recommendations; the degree to which the central bank and relevant parliamentary bodies engage substantively with the recommendations; and the rate at which the pilot model is adopted by other jurisdictions. A successful Pilot is one that demonstrates that democratic deliberation on monetary policy trade-offs is feasible, legitimate, and productive.

The ultimate metric is whether the first step enables the second. Does the Distributional Impact Assessment create political demand for the multi-dimensional mandate, the multi-instrument framework, and the permanent deliberative infrastructure that would close the Monetary Policy Variety Gap more comprehensively? Does the Model Humility Red Team create intellectual demand for the fundamental reconsideration of the DSGE framework that the Pretence of Knowledge currently prevents? Does the Citizens' Assembly Pilot create democratic demand for the permanent deliberative institutions that would make monetary policy accountable to the citizens who bear its consequences? If the answer is yes, the first step has succeeded, and the ground is prepared for the deeper architectural reforms that the Monetary Policy Variety Gap demands.

5.6 The Honest Acknowledgment

The Distributional Impact Assessment, the Model Humility Red Team, and the Citizens' Assembly Pilot face formidable obstacles. The Pretence of Knowledge is powerful, deeply embedded in professional identities, institutional cultures, and material interests. The central banking community has successfully resisted or absorbed reform initiatives that threatened its core architecture for decades. The Assessment may be established and its findings published—and then ignored, or dismissed as methodologically flawed, or cited selectively when convenient and buried when inconvenient. The Red Team may be established and its reports produced—and then marginalised, its recommendations filed, its institutional position gradually eroded by budget cuts and personnel changes. The Pilot may be conducted and its recommendations published—and then allowed to expire, its lessons unincorporated, its legacy a memory rather than a transformation.

These outcomes are possible. They are, in the current institutional environment, probable. The Pretence of Knowledge is not a bug in the central banking system. It is a feature—a stable equilibrium that has persisted for decades because it serves the interests of the actors who sustain it.

But the alternative to attempting to build the informational and experimental infrastructure for reform is not stability. It is the continued tightening of the Stability–Instability Spiral, with each cycle leaving higher debt, more fragile financial structures, more concentrated unaccountable power, and more accumulated political grievance. The next financial crisis, the next distributional backlash, the next climate shock—these are not hypothetical. They are the excluded dimensions of the current architecture, accumulating unseen, and they will eventually force a reckoning that the Pretence of Knowledge cannot survive.

The Assessment, the Red Team, and the Pilot are not a prediction of success. They are a specification of what success would require—a diagnostic and experimental apparatus that makes the case for reform visible, measurable, and politically actionable. They are a wager on the capacity of evidence to shift the political equilibrium—on the possibility that demonstrating, in controlled conditions, that the central bank can perceive and respond to the dimensions it currently excludes will create the political demand for the deeper architectural reforms the institution needs.

The wager may fail. The Pretence of Knowledge may prove stronger than the evidence arrayed against it. But the wager is worth making, because the alternative is the permanent subordination of democratic accountability to technocratic insulation—the gradual, dignified consumption of the central bank's legitimacy by a system that can no longer perceive the consequences of its own actions. The engineers are at the table. The models are more sophisticated than ever. The question is whether the institution will allow itself to see what the models cannot.

6. Coda: The Engineers at the Table

6.1 The Wealth That Matters

Central banks are among the most sophisticated governance institutions ever constructed. They possess extraordinary technocratic expertise—hundreds of PhD economists, decades of institutional memory, and analytical infrastructure that no other domain of public policy can match. They have developed a culture of evidence-based decision-making, a commitment to intellectual rigour, and a capacity for global coordination through the Bank for International Settlements and other forums that functions more effectively than many of the explicitly political institutions that exist alongside them. Their operational independence—the institutional separation of interest-rate decisions from electoral politics—is a genuine achievement that has contributed to the low and stable inflation that most developed economies have enjoyed for a generation.

These are not small assets. They are the reason that central banks have been able to respond to crises—the 2008 global financial crisis, the Eurozone sovereign debt crisis, the COVID-19 pandemic—with speed, scale, and technical sophistication that elected governments could not match. When the financial system faced collapse in the autumn of 2008, it was the Federal Reserve, not the Congress, that acted as the lender of last resort to the global economy. When the Eurozone faced disintegration in 2012, it was the European Central Bank, not the European Council, that stabilised sovereign bond markets with a pledge to do "whatever it takes." The central bank's capacity for decisive action under conditions of extreme uncertainty is real, and it is valuable, and it should be preserved.

But the wealth that matters for the next phase of monetary governance is not only technocratic expertise, operational independence, or crisis-response capacity. It is the capacity for monetary observability—the structural ability to perceive the full dimensionality of the economy the institution governs, including the financial, distributional, fiscal, and ecological dimensions that the current architecture systematically excludes. The central bank that cannot perceive the build-up of financial fragility until the crisis arrives, that cannot perceive the distributional consequences of its actions until the political backlash constrains its policy space, that cannot perceive climate risk until the transformation is already underway—that central bank is not governing the economy. It is governing a model of the economy, and the model is diverging from the reality it purports to represent.

The Monetary Policy Variety Gap is not a failure of competence. It is a structural condition that follows from the design of the monetary policy framework itself. The institution that was built to target inflation cannot see the dimensions of the economy that its targeting excludes. The engineers are at the table. Their models are more sophisticated than ever. And they still cannot see the economy they are steering. The wealth that matters is the capacity to build the observation architecture that would allow them to see it—and the institutional will to acknowledge that the architecture they have inherited, for all its genuine achievements, is no longer adequate to the economy they must govern.

6.2 The Shift

The shift this report describes is not a shift in policy. It is a shift in the relationship between the central bank and its own knowledge—from a posture in which the institution acts with confidence on models that cannot capture the complexity of the system it governs, to a posture in which the institution acknowledges the structural limitations of its observation architecture and builds the institutional mechanisms to transcend them.

The current moment is characterised by a paradox. Central banks possess more data, more analytical capacity, and more sophisticated models than at any point in their history. And they are less capable than at any point in the modern era of perceiving the most consequential dynamics of the economies they govern. The 2008 crisis was not perceived by the models. The distributional effects of post-crisis monetary policy were not perceived by the decision-making apparatus. The fiscal-monetary entanglement created by quantitative easing was not perceived by the institutional framework. Climate risk is not perceived by the observation architecture. The institution that is most formally committed to evidence-based decision-making is systematically blind to the evidence that falls outside its own categories of relevance.

The shift is from the Pretence of Knowledge to the institutionalisation of model humility. From an observation architecture of very low dimensionality to a multi-dimensional observation architecture that perceives financial stability, distributional effects, and climate risk alongside the inflation target. From a single scalar instrument applied uniformly across an economy of enormous heterogeneity to a multi-instrument framework in which different instruments are matched to different dimensions of the disturbance environment. From an independence that insulates the institution from democratic scrutiny to an independence sustained by democratic legitimacy—an independence that is demonstrated, through mechanisms like the Distributional Impact Assessment and the citizens' assembly, to serve the interests of the citizens who sustain it.

This shift does not require the central bank to become the government's economic policy arm. It does not require the abandonment of the inflation target or the erosion of operational independence. It requires the recognition that price stability cannot be maintained over the long term if the institution that maintains it is blind to the financial, distributional, fiscal, and ecological dimensions of the economy that determine whether price stability is sustainable. The Pretence of Knowledge served the institution well for decades. It will not serve it for the decades to come. The shift is from Pretence to humility, from exclusion to perception, and from the defence of an architecture that is failing to the construction of one that might succeed.

6.3 The Global Significance

Central banks are the limiting case of the Variety Gap Framework. They already speak the language of control theory. Their foundational model—the Taylor Rule—is literally a proportional feedback controller. The dimensionality gap between the observation architecture and the disturbance environment is more

visible, more explicit, and more consequential in this domain than in any other the series has examined. No translation is needed. The engineers are already at the table, and their models are already failing in ways the framework predicts.

If the engineers cannot build the observation architecture that perceives the consequences of their own actions—if the institution that is most formally committed to control-theoretic governance cannot acknowledge the variety gap at its core—then the framework's central claim is demonstrated at the highest stakes. Governance failure is architectural, not moral. The most sophisticated technocratic institutions are as vulnerable to variety-gap collapse as the most corrupt political machines. The mechanism is the same: low-dimensional observation channels governing high-dimensional disturbance environments, with the excluded dimensions accumulating as externalities until they force a reckoning.

But if the engineers can build the observation architecture they need—if the central bank can expand its perception to include the dimensions it currently excludes, while preserving the operational independence and technocratic expertise that make it valuable—the demonstration would have significance far beyond monetary policy. It would provide a template for every domain where institutions act with confidence on models that cannot capture the complexity of the systems they govern. The Distributional Impact Assessment could be adapted for healthcare systems evaluating the equity effects of resource allocation decisions. The Model Humility Red Team could be adapted for university ranking systems that compress institutional quality into disciplinary publication metrics. The citizens' assembly model could be adapted for AI governance, where the excluded dimensions—long-term systemic risk, societal externalities, the concerns of affected populations—demand democratic deliberation that the current architecture cannot provide.

Central banks are the test case because they are the most sophisticated governance institutions ever built. If the Variety Gap Framework cannot be operationalised here—where the engineers are already at the table, where the control-theoretic foundations are explicit, where the data infrastructure is most developed—it is unlikely to be operationalised anywhere. The stakes are therefore civilisational. The institution that is most capable of perceiving the variety gap is also the institution that most needs to close it. The question is whether it will.

6.4 The Honest Conclusion

This report has described a gap and proposed a transition architecture. It must now offer an honest conclusion about the prospects for closing it.

The Monetary Policy Variety Gap is structural, not temporary. It will persist until the inflation-targeting framework, the single-scalar instrument, the DSGE modelling infrastructure, and the cultural operating system of the Pretence of Knowledge are redesigned to enable the central bank to perceive the full dimensionality of the economy it governs. The Pretence of Knowledge is powerful, deeply embedded in

professional identities, institutional cultures, and material interests. The Stability–Instability Spiral has been tightening for decades, and each cycle leaves higher debt, more fragile financial structures, more concentrated unaccountable power, and more accumulated political grievance.

The default outcome is not transformation but continued deterioration. The next financial crisis will arrive, and the models will not have predicted it. The next distributional backlash will arrive, and the institution will not have perceived the consequences of its own actions that produced it. The climate transformation will accelerate, and the central bank will discover that the exogenous variables its models assumed as given have become the dominant dynamics of the economy it is charged with governing. The Pretence of Knowledge will be overwhelmed by events, and the institution that could not acknowledge the limits of its own observation architecture will be held responsible for the consequences of its blindness.

But default outcomes are not inevitable outcomes. The resources for building requisite monetary governance exist within the institution. The technocratic expertise is present. The data infrastructure, while inadequate to the full dimensionality of the economy, is more developed than in any other governance domain. The analytical capacity to produce distributional impact assessments, to conduct model humility red-team exercises, and to support citizens' assemblies on monetary policy trade-offs is available—indeed, it is already being developed, in fragmentary and provisional form, within the central banking community itself.

The Distributional Impact Assessment is the most catalytic first step. It does not require a change to the central bank's mandate. It does not threaten operational independence. It requires only the institutional will to establish an analytical unit that makes visible what the current architecture excludes, and to commit to responding publicly to what that unit finds. The Assessment is technically feasible—the Bank of England has conducted prototype versions. The institutional mechanism is well understood—statistical agencies already produce independently verified data that governments cannot suppress. The political logic is compelling—an institution that wants to maintain its legitimacy must demonstrate that it takes seriously the consequences of its actions for the citizens who sustain it.

The question is not whether the Assessment is possible. It is whether the Pretence of Knowledge can be overcome sufficiently to allow it to be established. The Pretence will argue that distributional analysis is too uncertain to be operationally useful, that the central bank's mandate is price stability not inequality reduction, that publishing distributional assessments alongside policy decisions would confuse the public and undermine the clarity of the inflation target. These arguments are not dishonest. They are the predictable output of an immune system that protects the existing architecture from challenge. They must be met not with counter-arguments alone but with the demonstrated example of a central bank that implements the Assessment and finds that it strengthens rather than weakens the institution's credibility and effectiveness.

The wager is that the Bank of England, or the Riksbank, or the Reserve Bank of New Zealand—a central bank with a tradition of institutional innovation and a political environment conducive to reform—will implement the Assessment, demonstrate its feasibility, and create competitive pressure for other central banks to follow. The wager may fail. The Pretence of Knowledge may prove stronger than the example of a single

institution. But the wager is worth making, because the alternative is the permanent subordination of democratic accountability to technocratic insulation—the gradual, dignified consumption of the central bank's legitimacy by a system that can no longer perceive the consequences of its own actions.

The engineers are at the table. The models are more sophisticated than ever. The question is whether the institution will allow itself to see what the models cannot—before the next excluded dimension forces a reckoning that the Pretence of Knowledge cannot survive.

6.5 A Final Word

The central bank is not a failing institution. It is an institution that has succeeded brilliantly at the task it was designed to perform—maintaining price stability—and that is now being asked to perform tasks for which its architecture was never designed. The problem is not the competence or commitment of central bankers. It is the architecture through which they must perceive the economy. The institution that was built to target inflation cannot see the distributional consequences of its actions, the financial fragility that its success generates, or the ecological conditions that its models assume as given.

The Pretence of Knowledge—the institutional tendency to act with confidence on models that cannot capture the complexity of the system being governed—is not a moral failing. It is the natural condition of an institution whose members have internalised a specific way of seeing and cannot perceive what that way of seeing excludes. The young economist who enters the Federal Reserve after a decade of training in DSGE models is not being dishonest when she reports that the models show no sign of an impending crisis. She is reporting what the models can see. The models cannot see what they exclude. And what they exclude is accumulating.

The Distributional Impact Assessment is not a panacea. It will not, by itself, close the Monetary Policy Variety Gap. It will not prevent the next financial crisis, reverse the concentration of wealth, or align the financial system with ecological reality. But it will make one excluded dimension visible—the distributional consequences of monetary policy—and in doing so, it will create a precedent. The institution that can be required to perceive one excluded dimension can be required to perceive others. The Pretence that can be breached in one domain can be breached in others. The observation architecture that can be expanded by one mechanism can be expanded by more.

The engineers are at the table. They have the skills, the data, and the institutional infrastructure to build the observation architecture that the economy they govern requires. The question is whether they will be permitted to build it—and whether they will have the courage to acknowledge that the architecture they have inherited, for all its genuine achievements, is no longer adequate to the world it must govern. The Pretence of Knowledge has served the institution well for decades. It will not serve it for the decades to come. The question is whether the institution can transcend the Pretence before the next excluded dimension transcends it. The clock is ticking. The next crisis is accumulating. The engineers are at the table. The models are running. The economy is diverging from the models. The time to expand the observation architecture is now.

Appendix A: Value Systems and Policy Mindsets — A Guide for the Central Banking Context

A Note on This Appendix

The main body of this report avoids specialised terminology from developmental psychology or cultural theory. It speaks the language of governance architecture, the Monetary Policy Variety Gap, and the Stability–Instability Spiral. This appendix offers a complementary lens for readers who wish to understand the deeper value-system dynamics at play in central banking governance. It is optional, but it makes the report's underlying logic fully transparent.

A.1 The Basic Insight

Different institutions and professional cultures tend to operate from different centres of gravity in how they think about governance, knowledge, and change. These are not personality types or professional affiliations, though they correlate loosely with both. They are underlying value systems—ways of constructing what feels real, legitimate, and important.

Each value system represents a coherent response to particular life conditions. None is "better" in any absolute sense. Each has characteristic strengths that emerge under certain conditions and characteristic blind spots that emerge under others. The challenge of governance in a complex institution is to integrate the legitimate concerns of multiple value systems without being captured by any single one.

The framework used here draws on Spiral Dynamics integral theory. What follows is a simplified map of the systems most relevant to contemporary central banking governance.

A.2 The Value Systems in the Central Banking Arena

Order and Stability (sometimes called "Blue") — the Institutional and Procedural Central Bank. In the central banking context, this mindset expresses itself through the legal mandate, the operational independence codified in statute, the formal decision-making procedures of the Monetary Policy Committee or Federal Open Market Committee, and the institutional commitment to procedural integrity. Strengths: the protection of monetary policy from short-term political manipulation, the clarity of the inflation target as a measurable objective, and the maintenance of institutional credibility through consistent, rule-based decision-making. Blind spots: the tendency for procedural integrity to become rigidity, for the inflation target to become the exclusive observation channel, and for the legal mandate to be invoked as a defence against expanding the institution's observational capacity. The Pretence of Knowledge described in this report is the expression of Blue institutional culture operating without sufficient integration from other value systems.

Achievement and Efficiency (sometimes called "Orange") — the Technocratic and Model-Driven Central Bank. The DSGE modelling framework, the commitment to quantitative analysis, the recruitment of top economic talent, and the drive for ever more sophisticated forecasting capability are expressions of an Orange value system that prioritises technical expertise, analytical rigour, and measurable performance. Strengths: the capacity for rigorous, evidence-based decision-making, the development of sophisticated analytical infrastructure, and the institutional credibility that comes from demonstrated technical competence. Blind spots: the Legibility Compression Mechanism—the reduction of the economy's vast dimensionality to the variables the models can process—and the epistemic closure that treats model limitations as technical challenges rather than architectural constraints.

Inclusion and Care (sometimes called "Green") — the Accountable and Responsive Central Bank. The growing emphasis on central bank communication, transparency, diversity and inclusion, climate risk, and the distributional consequences of monetary policy are expressions of a Green value system that prioritises democratic legitimacy, the interests of affected communities, and the institution's responsibility to the broader society. Strengths: the recognition that monetary policy has consequences beyond the inflation target, the commitment to public accountability, and the responsiveness to political and social pressure. Blind spots: the tendency for Green values to be incorporated into the existing architecture without changing it—distributional analysis becomes a research programme rather than an operational input, climate risk becomes a speech topic rather than a policy framework, and transparency becomes the publication of minutes that few citizens read.

Integrative and Systemic (sometimes called "Yellow") — the Adaptive and Multi-Dimensional Central Bank. This mindset prioritises functional fit, systemic awareness, and the capacity to integrate multiple perspectives without being captured by any of them. In the central banking context, it is present in pockets—the researchers developing multi-dimensional policy frameworks, the officials who recognise that neither pure inflation targeting nor pure democratic control can solve the institution's problems, and the institutional innovators experimenting with distributional impact assessments and deliberative engagement. Strengths: the capacity to perceive structural dynamics that single-value-system perspectives miss, comfort with the complexity and uncertainty that characterise monetary governance, and an orientation toward designing institutional mechanisms that expand observational capacity. Blind spots: can appear detached, overly analytical, or politically unrealistic to those operating from other mindsets. The Monetary Policy Distributional Impact Assessment and the Model Humility Red Team proposed in this report are expressions of this integrative perspective.

A.3 The Monetary Policy Variety Gap as a Value-System Configuration Problem

The central banking governance system is dominated by a configuration of Blue (institutional independence), Orange (technocratic modelling), and Green (accountability and inclusion) that has not achieved the Yellow integration required for genuine monetary observability. Blue institutional independence protects the inflation target from political manipulation. Orange technocratic sophistication compresses the economy into the

variables the models can process. Green accountability initiatives gesture toward the excluded dimensions—distribution, climate, democratic legitimacy—without operationalising them. None of these value systems, operating alone or in their current configuration, can perceive the Monetary Policy Variety Gap they jointly produce.

The Monetary Policy Variety Gap is, in Spiral Dynamics terms, the absence of a sufficiently developed Yellow translation layer that would allow institutional independence, technocratic rigour, and democratic accountability to coexist within a coherent governance architecture. The Stability–Instability Spiral is the signature pattern of a system in which Blue, Orange, and Green are forced into a configuration that progressively degrades monetary observability, with no integrative mechanism capable of perceiving the degradation or redirecting the configuration.

Appendix B: International Analogues and Precedents

The proposals in this report are not without precedent. The following examples illustrate existing implementations of expanded observational capacity, model humility, and deliberative engagement across multiple central banks and related institutions.

B.1 The Bank of England: Prototype Distributional Analysis

The Bank of England has conducted the most advanced distributional analyses of monetary policy among major central banks. Its research has traced the effects of interest rate changes and quantitative easing across the income and wealth distributions, using its household survey data (the NMG Consulting Survey and the Wealth and Assets Survey) to disaggregate the aggregate effects of monetary policy. The analyses have demonstrated that the cashflow channel—the direct effect of interest rate changes on household income and expenditure—operates differently across the distribution, with lower-income households more exposed to employment effects and higher-wealth households more exposed to asset price effects.

The Bank's distributional work remains primarily a research exercise rather than an operational input to policy decisions. It is not published alongside rate decisions. The Monetary Policy Committee is not required to respond to its findings. But the analytical infrastructure exists, and the institutional precedent has been established. The Distributional Impact Assessment proposed in this report would build on this foundation, converting the research programme into an operational mechanism.

B.2 The Reserve Bank of New Zealand: The Remit as Multi-Dimensional Mandate

The Reserve Bank of New Zealand's remit, revised in 2019, requires the Monetary Policy Committee to contribute to "the economic objectives of the Government, including those relating to employment and the welfare of the people of New Zealand." The remit explicitly recognises employment alongside price stability as a policy objective. It does not specify how the two objectives are to be weighed, but it establishes the principle that the central bank's mandate extends beyond inflation targeting to broader economic welfare. The New Zealand model provides an existence proof that a multi-dimensional mandate is compatible with operational independence.

B.3 The Swedish Riksbank: Accountability Through Published Minutes

The Riksbank publishes detailed minutes of its Executive Board meetings, including attributed votes and the reasoning behind dissenting positions. The minutes provide a public record of the considerations that shaped the policy decision, including the distributional, financial stability, and international dimensions that the

formal inflation target does not capture. The Riksbank's accountability framework demonstrates that transparency can be deepened without undermining the institution's credibility or the clarity of its communications.

B.4 The Network for Greening the Financial System (NGFS)

The NGFS, founded in 2017, is a coalition of over one hundred central banks and financial supervisors committed to integrating climate risk into financial supervision and monetary policy. The NGFS has developed scenario analyses for climate-related financial risks, recommendations for central bank portfolio management, and frameworks for assessing the exposure of financial systems to transition and physical risks. The NGFS demonstrates that central banks can collaborate on expanding their observational capacity to include dimensions—climate risk—that their existing analytical frameworks exclude. The limitation is that the NGFS's work remains largely analytical rather than operational; its recommendations have not yet been integrated into the decision-making frameworks of most member institutions.

B.5 Citizens' Assemblies on Complex Policy Questions

The citizens' assembly model has been successfully deployed on technically complex policy questions in multiple jurisdictions. Ireland's citizens' assemblies on marriage equality, abortion, and climate change produced recommendations that unlocked legislative action and commanded broad public legitimacy. France's Citizens' Convention on Climate brought together randomly selected citizens to deliberate on climate policy, producing recommendations that influenced national legislation. These precedents demonstrate that randomly selected citizens, given adequate time, expert information, and professional facilitation, are capable of nuanced deliberation on technically complex issues—and that their recommendations carry democratic legitimacy that expert commissions and parliamentary processes often lack. The Citizens' Assembly Pilot on Monetary Policy Trade-offs proposed in this report would extend this model to the domain of monetary governance.

Appendix C: The Governance as Engineering Connection

C.1 The Architectural Foundation

This report draws on a deeper body of work: the Governance as Engineering series, a set of formal analyses that model governance institutions as feedback control systems using standard mathematics from control theory, information theory, and cybernetics. The series is technical; this appendix summarises its core findings in non-technical language and shows how they underpin the Monetary Policy Variety Gap diagnosis.

C.2 The Seven Primitives

The Governance as Engineering series models governance systems using seven structural primitives: nodes, state, flows, latency, constraints, feedback loops, and signal fidelity. In the central banking context, the node is the central bank itself—the Monetary Policy Committee, the Federal Open Market Committee, the Governing Council. The state is the economy—the true condition of output, employment, prices, financial stability, and distribution that the institution must govern. Flows are the transmission mechanisms through which monetary policy affects the economy—the interest rate channel, the asset price channel, the exchange rate channel, the credit channel. Latency is the delay between a policy decision and its effects on the real economy—the "long and variable lags" that Milton Friedman identified. Constraints include the zero lower bound on interest rates, the fiscal-monetary entanglement, and the limits of the institution's legal mandate. Feedback loops include the inflation expectations channel, the financial accelerator, and the political backlash mechanism. Signal fidelity is the accuracy with which the central bank's models and data infrastructure perceive the true state of the economy.

C.3 Ashby's Law of Requisite Variety

Ashby's Law states that a controller can only stabilise a system if its internal variety matches or exceeds the variety of the disturbances it faces. The central bank's "controller" is its policy framework—the models, the instruments, the decision-making procedures. The "disturbances" are the shocks to which the economy is subject—demand shocks, supply shocks, financial shocks, technological shocks, climate shocks. The Monetary Policy Variety Gap is a variety gap: the dimensionality of the central bank's observation architecture is vastly smaller than the dimensionality of the disturbance environment. The result is constitutional unobservability—the institution cannot perceive the dimensions of the economy that most determine the outcomes of its actions, and therefore cannot respond to them appropriately.

C.4 The Variety Gap

The Variety Gap paper (Paper VI in the Governance as Engineering series) demonstrates that objective functions are observation architectures—they determine what an institution can perceive. The central bank's objective function, embedded in its inflation target and its DSGE models, perceives deviations of consumer prices from target with high fidelity and perceives financial fragility, distributional effects, and climate exposure with low fidelity. The dimensions excluded from this objective function become the institution's structural blind spots, accumulating as externalities until they force a reckoning.

C.5 The Organizational Reports Series

This report is the fourth in the Organizational Reports Series, following reports on frontier AI governance (the Coherence–Velocity Trap), healthcare systems (the Clinical Observability Gap), and universities (the Integration Deficit). The series extends the diagnostic framework developed across sixteen Country Reports for Systemic Change, which diagnosed governance deficits in nation-states across the full spectrum of adaptive capacity challenges. The central banks report demonstrates that the same structural primitives generalise to the most explicitly control-theoretic governance institutions ever built—and that the Monetary Policy Variety Gap is the limiting case of the variety gap phenomenon.

Appendix D: Anticipated Objections

D.1 "The inflation target has served us well for decades. Why risk undermining it by expanding the mandate?"

The inflation target has indeed served central banks well, and this report does not advocate its abandonment. The argument is that price stability cannot be maintained over the long term if the institution that maintains it is blind to the financial, distributional, fiscal, and ecological dimensions of the economy that determine whether price stability is sustainable. The 2008 crisis demonstrated that financial instability can destroy price stability. The post-2008 political backlash demonstrated that distributional effects can destroy the legitimacy on which operational independence depends. Climate change will demonstrate that ecological transformation can overwhelm the macroeconomic framework. Expanding the observation architecture is not a threat to the inflation target. It is the precondition for the inflation target's long-term viability.

D.2 "Distributional analysis is too uncertain to be operationally useful."

Uncertainty is not a reason to exclude a dimension from the observation architecture. The central bank already operates under profound uncertainty about the effects of its actions—the transmission mechanism is uncertain, the output gap is unobservable, the natural rate of interest is estimated with wide confidence intervals. The institution has developed sophisticated methods for making decisions under uncertainty. Those methods can be applied to distributional analysis as well as to inflation forecasting. The Distributional Impact Assessment does not claim to predict distributional effects with precision. It presents scenarios, with transparent assumptions and quantified uncertainties, that show the likely distributional consequences of the policy decision under a range of plausible conditions. The policy committee can weigh those scenarios as it weighs the uncertain inflation and output forecasts on which it already bases its decisions.

D.3 "Publishing distributional assessments alongside rate decisions would confuse the public and undermine the clarity of the inflation target."

The clarity of the inflation target is already compromised by the complexity of the economic environment. The public understands that the central bank's decisions affect them—through mortgage rates, through employment, through the value of their savings. The Distributional Impact Assessment provides the public with information about how they are affected, in a form that is independently verified and publicly accessible. It clarifies rather than confuses—it tells citizens what the institution's actions mean for them, rather than leaving them to infer it from the aggregate statistics that the institution currently publishes. The Assessment is not a replacement for the inflation target. It is a supplement that makes the consequences of the inflation target visible to the citizens who bear them.

D.4 "Central bank independence is essential to credibility. Democratic deliberation on monetary policy would politicise interest-rate decisions."

Central bank independence is essential, and this report does not advocate its erosion. The argument is that independence must be sustained by democratic legitimacy, not merely by legal statute. An institution that is perceived to operate behind closed doors, serving the interests of financial markets, will eventually lose the political support that protects it from political interference. The deliberative infrastructure proposed in this report—citizens' assemblies, expanded parliamentary oversight with genuine analytical capacity, transparent distributional reporting—is designed to strengthen democratic legitimacy without enabling short-term political manipulation of interest-rate decisions. The citizens' assembly does not set interest rates. The parliamentary budget office for monetary policy does not direct the central bank's operations. These mechanisms surface the dimensions of monetary policy that the technocratic decision-making process excludes, and they do so in forums that are deliberative rather than directive. The independence that matters—independence from short-term political manipulation—is preserved. What is added is the democratic accountability that makes independence sustainable.

D.5 "The models are the best we have. Criticising their limitations without offering a superior alternative is irresponsible."

The models are the best available, and they are genuinely valuable. The critique advanced in this report is not that the models should be abandoned but that their limitations should be made explicit and operational. The Model Humility Red Team does not replace the DSGE framework. It supplements it with institutionalised challenge—alternative scenarios, identified assumptions, documented exclusions—that the policy committee can weigh alongside the baseline forecast. The Distributional Impact Assessment does not replace the inflation forecast. It supplements it with information about the distributional dimension that the inflation forecast excludes. The argument is not for abandoning the models but for being honest about what they cannot see, and for building the institutional mechanisms that perceive what the models exclude.

D.6 "This analysis is interesting, but it will never be implemented. The Pretence of Knowledge is too strong."

The Pretence of Knowledge is strong, deeply embedded in professional identities, institutional cultures, and material interests. The report acknowledges that the default outcome is continued tightening of the Stability–Instability Spiral. But it also identifies specific, feasible interventions—the Distributional Impact Assessment, the Model Humility Red Team, the Citizens' Assembly Pilot—that do not require comprehensive systemic reform and that could be implemented within the existing architecture. The Bank of England has already conducted prototype distributional analyses. The NGFS is already integrating climate risk into central bank frameworks. The Riksbank is already publishing detailed, attributed minutes that

expand the dimensions of monetary policy discourse. The report is not a prediction that the Monetary Policy Variety Gap will be closed. It is a specification of what closing it would require, and a framework for the first steps that could be taken by those who wish to begin.

Appendix E: About the Author and Method

The Author

This report was written from a position of comparative engagement with governance systems across multiple domains, including nation-states, international institutions, technology organisations, healthcare systems, and universities. The author is the architect of the Global Governance Frameworks, the Governance as Engineering working paper series, and the Country Reports for Systemic Change series—a body of work that applies control theory, information theory, and developmental psychology to the diagnosis and design of governance architectures.

The author is not a central banker, does not hold a position within any central bank or financial regulatory institution, and writes from the position of an independent researcher applying a governance diagnostic framework to an institution of systemic significance. The distance from the central banking community is both a limitation—it restricts access to the granular, day-to-day texture of monetary policy decision-making—and a resource—it enables a freedom of diagnosis that embeddedness in institutional loyalties and professional orthodoxies often discourages.

A Note on Method

This report was developed through a structured, multi-model synthesis process. Several large language models were engaged in parallel, each prompted to analyse central banking governance from their respective analytical angles. Their contributions were compared, challenged for contradictions, and integrated by the author into the final argument. The AI served as a research partner and a perspective engine; the editorial judgment and the intellectual responsibility are entirely human.

The Organizational Reports Series

This report is the fourth in the Organizational Reports Series, an extension of the governance-as-engineering framework from nation-states to the complex adaptive coordination systems that shape our world. The first report examined frontier AI governance, diagnosing a Coherence–Velocity Trap. The second examined healthcare systems, diagnosing a Clinical Observability Gap. The third examined universities, diagnosing an Integration Deficit. This fourth report diagnoses a Monetary Policy Variety Gap in central banks.

The Organizational Reports Series rests on a foundation of sixteen preceding reports in the Country Reports for Systemic Change series, which diagnosed governance deficits in nation-states across the full spectrum of adaptive capacity challenges. Together, the reports form a global diagnostic framework spanning the full spectrum of adaptive capacity challenges—from first-order deficits of execution and integration to second-order constraints of velocity and paradigm lock-in, to the foundational challenges of substrate

construction and boundary resolution, and now to the governance of the institutions that shape monetary, financial, and macroeconomic reality. The series does not claim to be complete. It claims to be a foundation on which further analysis, deeper testing, and better design can be built. Central banks—the most explicitly control-theoretic governance institutions ever built—may be the domain where the Variety Gap Framework's diagnostic power is most visible, and where its prescriptive potential is most urgently needed.

Appendix F: Key Concepts and Abbreviations

This appendix defines the key concepts and abbreviations used throughout the report for readers unfamiliar with the central banking and macroeconomic literature.

CPI (Consumer Price Index): The primary measure of inflation targeted by most central banks. The CPI tracks the price of a representative basket of goods and services purchased by households. It excludes asset prices (equities, bonds, real estate) and therefore cannot perceive the build-up of financial imbalances that may threaten economic stability.

Distributional Impact Assessment: A proposed mechanism by which the central bank would publish, alongside each major policy decision, an independently produced analysis of the likely distributional consequences of that decision across income groups, wealth quintiles, regions, and demographic categories.

DSGE (Dynamic Stochastic General Equilibrium) models: The primary analytical framework used by central banks for macroeconomic forecasting and policy analysis. DSGE models are built on microeconomic foundations, with optimising households and firms interacting in general equilibrium. Standard DSGE models do not include a financial sector, heterogeneous agents, nonlinear dynamics, or the possibility of endogenous crises.

ECB (European Central Bank): The central bank for the euro area, responsible for monetary policy in the nineteen member states that have adopted the euro. The ECB's primary mandate is price stability, defined as inflation below but close to 2 percent over the medium term.

FOMC (Federal Open Market Committee): The body within the Federal Reserve System responsible for setting US monetary policy, including the federal funds rate and asset purchases. The FOMC consists of the seven members of the Board of Governors and a rotating group of five Reserve Bank presidents.

Forward guidance: A central bank communication tool in which the institution signals its likely future policy intentions to influence market expectations and long-term interest rates. Forward guidance has become less effective as algorithmic trading systems model the central bank's reaction function and position themselves ahead of policy announcements.

The Great Moderation: The period from the mid-1980s to 2007 characterised by low, stable inflation and reduced macroeconomic volatility across developed economies. The Great Moderation was widely attributed to improved monetary policy, particularly the adoption of inflation targeting. It ended with the 2008 global financial crisis.

Legibility Compression Principle: A cross-series insight formalised in this report: every governance system reduces environmental dimensionality to remain computationally tractable. The compression is necessary but lossy. The information lost in compression accumulates as externalities until it forces itself into visibility

through crisis.

Macroprudential policy: Regulatory and supervisory policies designed to address systemic risk in the financial system as a whole, rather than the safety and soundness of individual institutions. Macroprudential tools include countercyclical capital buffers, loan-to-value limits, and stress tests.

Monetary Policy Variety Gap: The structural mismatch between the dimensionality of the central bank's observation architecture (approximately two to three dimensions, targeting inflation, output, and employment) and the dimensionality of the economy it governs (enormous, spanning financial, distributional, fiscal, and ecological dimensions).

MPC (Monetary Policy Committee): The body within the Bank of England responsible for setting UK monetary policy, including the Bank Rate and asset purchases. The MPC consists of nine members: the Governor, three Deputy Governors, the Chief Economist, and four external members appointed by the Chancellor.

Pretence of Knowledge: Friedrich Hayek's phrase, coined in his 1974 Nobel Prize lecture, describing the tendency of economists and policymakers to act with confidence on models that cannot capture the complexity of the economic system. In this report, the Pretence of Knowledge is identified as the cultural anchor of central banking—the institutional tendency that makes the Monetary Policy Variety Gap liveable for those who operate within it.

QE (Quantitative Easing): A monetary policy instrument in which the central bank purchases financial assets—typically government bonds, but also mortgage-backed securities and corporate bonds—to inject liquidity into the financial system and lower long-term interest rates. QE expands the central bank's balance sheet and blurs the boundary between monetary and fiscal policy.

Stability–Instability Spiral: The signature pattern of monetary governance diagnosed in this report: successful stabilisation encourages risk-taking, which generates financial fragility in dimensions the central bank does not target, which eventually produces a crisis, which triggers emergency intervention, which restores stability while leaving the system more indebted and more fragile than before.

Taylor Rule: A monetary policy rule, proposed by economist John Taylor in 1993, that specifies how the central bank should adjust the policy interest rate in response to deviations of inflation from target and output from potential. The Taylor Rule is a proportional feedback controller—the foundational control-theoretic model of modern central banking.