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Reserve Currency Status and the Mispricing of Democratic Erosion: Evidence from US Treasury Markets

Governance Premia, Structural Yield Compression, and the Political Economy of Safe Assets

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ABSTRACT

We investigate why US Treasury yields fail to reflect democratic erosion signals that are increasingly visible in cross-national governance indices. Using a cross-sectional governance-yield model estimated on 91 sovereign issuers ($\beta = -0.35$ per Liberty point, $R^2 = 0.37$ in the bivariate specification; $R^2 = 0.79$ in the four-factor specification), the United States appears mispriced by approximately 650 basis points relative to its governance trajectory. We decompose this anomaly into four components and find that reserve currency status accounts for approximately 2,080 basis points of yield compression, more than sufficient to explain the entire US exception. Historical analysis of the sterling-to-dollar reserve currency transition (1914–1956) suggests that the reserve premium erodes gradually over 15–30 years rather than collapsing in a single discontinuous event, though the erosion accelerates sharply around catalytic geopolitical events. We estimate a probability-weighted yield adjustment path under three scenarios: maintained reserve status (equilibrium yield 4.5%), gradual erosion (6–8%), and rapid loss (11–16%). The 3–12 year lag between governance deterioration and credit market repricing, documented across 42 episodes in the post-war period, represents both a systemic risk and an opportunity for position-taking. Our findings challenge the efficient markets interpretation of US Treasury pricing and suggest that the reserve currency premium functions as a structural buffer that delays — but does not eliminate — the sovereign credit consequences of institutional decline.

Keywords: reserve currency, safe assets, democratic erosion, sovereign credit risk, governance premium, Treasury yields, exorbitant privilege, institutional quality

JEL Codes: E43, F31, G12, P16

1. Introduction

The United States presents a puzzle for sovereign credit analysis. Every major governance measurement framework — V-Dem, Freedom House, the Economist Intelligence Unit Democracy Index, the Transformation Index, and the Political Topology Index — documents a sustained decline in American institutional quality over the period 2016–2026. V-Dem reclassified the United States as an "electoral autocracy" in 2024. Freedom House has documented ten consecutive years of declining scores. The Political Topology Index estimates a decline from L=94 to L=48 over two decades, with an accelerating velocity of −9.2 points per year over the most recent five-year window (2020–2025). By any conventional measure, this constitutes the fastest institutional deterioration among consolidated democracies in the modern measurement period.

Yet US Treasury yields have remained largely disconnected from this governance trajectory. The 10-year Treasury yield stood at approximately 4.5% in early 2026, a level consistent with a AAA-equivalent sovereign operating within normal macroeconomic parameters. No governance risk premium is discernible in the term structure. Credit default swap spreads on US sovereign debt trade at approximately 60 basis points, implying a

cumulative five-year default probability of roughly 1% — a level indistinguishable from that of stable Northern European democracies whose governance scores have been flat or improving over the same period.

This paper investigates the sources of this disconnect. We argue that the anomaly is neither accidental nor irrational: it is the predictable consequence of the United States' unique position as the issuer of the world's primary reserve currency. Reserve currency status generates captive demand for US government debt that is largely insensitive to governance fundamentals, compressing yields far below the levels that a standard governance-adjusted credit model would predict. We quantify this compression at approximately 2,080 basis points and demonstrate that it is sufficient to explain the entire US exception to the governance-yield relationship.

Our contribution is fourfold. First, we construct a four-factor cross-sectional model of sovereign yields that incorporates institutional quality, fiscal position, reserve status, and governance velocity, achieving an R^2 of 0.79 across 91 sovereign issuers. Second, we decompose the US anomaly into its constituent parts, isolating the reserve currency premium from other structural factors. Third, we conduct a historical analysis of the sterling reserve currency transition (1914–1956), establishing the tempo and mechanism by which reserve premia erode during periods of institutional stress. Fourth, we estimate probability-weighted yield paths for US Treasuries under three scenarios of reserve currency durability, generating actionable projections for the medium-term trajectory of safe asset pricing.

The paper proceeds as follows. Section 2 reviews the literatures on reserve currencies, safe assets, and the political economy of sovereign credit risk. Section 3 presents the governance-yield model specification. Section 4 describes the data and estimation methods. Sections 5 through 9 present our results. Section 10 develops a US institutional resilience scorecard. Section 11 addresses counter-arguments and robustness concerns. Section 12 concludes.

2. Literature Review

2.1 The Exorbitant Privilege and Reserve Currency Economics

The foundational framework for understanding reserve currency dynamics is Eichengreen's (2011) comprehensive treatment of the "exorbitant privilege" — Valéry Giscard d'Estaing's famous characterization of the asymmetric advantages accruing to the issuer of the world's dominant reserve currency. Eichengreen documents that the United States has historically earned a seigniorage-like return on its reserve currency status, estimated at 2–3% of GDP annually, through the combination of lower borrowing costs, the ability to issue international liabilities in its own currency, and the terms-of-trade advantages of dollar-denominated commodity pricing. Crucially, Eichengreen (2011) argues that reserve currency status is not

permanent and identifies the conditions under which it can erode, including fiscal irresponsibility, institutional degradation, and the emergence of credible alternatives.

Gourinchas and Rey (2007) formalize the mechanism through which reserve currency status affects the external balance sheet. Their model demonstrates that the United States functions as a "world venture capitalist," earning a positive excess return on its external assets relative to its external liabilities. This excess return — estimated at approximately 2% per year over the 1952–2004 period — is a direct consequence of the dollar's reserve status, which allows the US to borrow cheaply (in the form of low-yielding Treasury securities held by foreign central banks) while investing abroad in higher-yielding assets. Their framework implies that any erosion in reserve status would compress this excess return, raising the effective cost of US external financing.

Maggiori (2017) develops a model of the international monetary system in which the safety premium on reserve currency assets is endogenous to the financial development and institutional quality of the issuing country. In his framework, the "safety trap" arises because global demand for safe assets exceeds the supply that can be credibly produced, creating a structural premium for the sovereign that sits at the apex of the safety hierarchy. The critical insight for our analysis is Maggiori's demonstration that the safety premium is self-reinforcing — a safe asset is safe partly because it is widely held — but that this equilibrium can become fragile when the underlying fundamentals of the issuing sovereign deteriorate sufficiently far from what the safety pricing implies.

Krishnamurthy and Vissing-Jorgensen (2012) provide the most precise decomposition of the Treasury convenience yield, estimating that US Treasury securities carry a safety premium of approximately 73 basis points relative to AAA-rated corporate bonds, and a broader convenience yield of approximately 46 basis points relative to other government-backed securities. Their time-series evidence shows that this convenience yield varies countercyclically, expanding during periods of financial stress when the demand for safe assets intensifies. For our purposes, their decomposition establishes a lower bound on the yield compression attributable to the Treasury's unique status: even without considering the broader reserve currency effects, the convenience yield alone depresses Treasury yields by more than one full percentage point below what credit fundamentals would suggest.

2.2 Governance, Institutions, and Sovereign Risk

The relationship between institutional quality and sovereign credit risk has been documented across multiple literatures. Bekaert, Harvey, and Lundblad (2005) demonstrate that political risk — measured by the International Country Risk Guide composite index — is a priced factor in emerging market sovereign spreads, with a one-standard-deviation improvement in political risk associated with a 40–60 basis point reduction in sovereign bond yields. Importantly, they find that the relationship is non-linear, with governance improvements

below a threshold level having a larger impact on spreads than improvements above the threshold.

Acemoglu, Johnson, and Robinson (2001, 2005) provide the deep institutional foundations for the governance-growth nexus that underlies sovereign creditworthiness. Their instrumental variable estimates suggest that the causal effect of institutions on long-run income is large — a one-standard-deviation improvement in institutional quality is associated with a factor-of-two increase in GDP per capita. While their analysis focuses on the growth channel rather than the credit channel directly, the implications for sovereign risk are straightforward: countries with stronger institutions generate higher income, broader tax bases, and more credible commitments to debt service.

Reinhart and Rogoff (2009, 2011) document the historical association between governance crises and sovereign defaults. Their database of 66 countries over eight centuries reveals that external sovereign default is concentrated among regimes with weak institutions, limited checks on executive power, and low transparency. More pertinent to our analysis, they show that market pricing of sovereign risk often lags institutional deterioration by several years, creating extended periods during which yields do not reflect underlying governance trajectories. This observation — the repricing lag — is a central feature of our model.

North, Wallis, and Weingast (2009) distinguish between "limited access orders" and "open access orders," arguing that the transition between these governance states is the fundamental determinant of long-run economic performance. Their framework implies that a country moving from an open access order (characterized by rule of law, competitive markets, and credible commitment to property rights) toward a limited access order faces not merely a marginal increase in sovereign risk but a qualitative shift in the relationship between governance and economic outcomes. The United States' position in this framework — an open access order experiencing potential erosion toward limited access characteristics — is, by their historical analysis, essentially unprecedented.

2.3 Safe Asset Demand and the Structural Foundations of Low Yields

Caballero, Farhi, and Gourinchas (2017) formalize the "safe asset shortage" hypothesis, arguing that the global supply of safe assets has not kept pace with the growth of global GDP and the demand for safe stores of value. In their framework, the secular decline in real interest rates since the 1990s is partly attributable to the scarcity of safe assets, and the US Treasury's position as the dominant safe asset supplier grants it a structural yield advantage that is largely independent of US fiscal fundamentals. This framework suggests that even significant governance deterioration might not affect Treasury yields so long as the structural shortage of safe assets persists and no credible alternative supplier emerges.

He, Krishnamurthy, and Milbradt (2019) analyze safe asset dynamics with a model in which government debt can lose its "safe" status through a self-fulfilling crisis mechanism. Their

model predicts that the transition from "safe" to "risky" status is discontinuous rather than gradual, occurring when the debt-to-GDP ratio or institutional quality crosses a threshold that triggers a shift in investor expectations. This threshold dynamic is highly relevant to our scenario analysis: it suggests that the reserve currency premium could appear stable for an extended period and then erode rapidly once a tipping point is reached.

Gorton (2017) extends the safe asset literature by documenting the "no-questions-asked" property of sovereign debt: safe assets are safe precisely because market participants do not need to perform costly due diligence on the underlying credit quality. When governance deterioration causes market participants to begin questioning the safety of a sovereign's debt, the loss of the "no-questions-asked" property can trigger a rapid repricing even if the underlying fundamentals have deteriorated only incrementally. The implication is that the informational structure of safe asset markets creates a non-linear relationship between governance quality and yields: within the safe zone, governance changes are irrelevant to pricing; outside the safe zone, they are priced rapidly and severely.

2.4 Historical Precedents: Reserve Currency Transitions

The historical literature on reserve currency transitions, while relatively thin, provides crucial evidence on the timing and mechanism of premium erosion. Eichengreen and Flandreau (2009) re-examine the sterling-dollar transition using newly available data from the League of Nations and the Bank for International Settlements. They find that the dollar surpassed sterling as the dominant reserve currency as early as the mid-1920s — substantially earlier than the traditional 1944 (Bretton Woods) dating — and that the transition involved an extended period of coexistence during which both currencies served reserve functions simultaneously. This finding suggests that reserve currency transitions are best understood as gradual processes with long overlapping periods, rather than as discrete switches.

Chinn and Frankel (2007, 2008) estimate a model of reserve currency determinants that includes the size of the issuing economy, the depth and breadth of its financial markets, confidence in the value of the currency (proxied by inflation differentials), and network externalities. Their projections suggest that the euro could surpass the dollar as the dominant reserve currency by the 2020s under pessimistic assumptions about US fiscal policy — a prediction that has not materialized, partly because of the euro area's own institutional fragilities. Nevertheless, their framework provides the analytical scaffolding for thinking about how governance deterioration might affect reserve currency status through the "confidence" channel.

Obstfeld and Taylor (2003) examine the historical evolution of international capital markets and identify a pattern in which reserve currency status is associated with a combination of financial openness, institutional credibility, and geopolitical power. Their long-run perspective suggests that reserve currency transitions historically occur in the aftermath

of major geopolitical realignments — World War I, Bretton Woods, the end of the gold standard — rather than as gradual responses to incremental changes in economic fundamentals. This observation has important implications for our scenario analysis: it suggests that a US governance crisis, if it were to interact with a broader geopolitical shock, could catalyze a much faster erosion of reserve status than a purely economic model would predict.

3. The Governance-Yield Model

3.1 Bivariate Specification

We begin with a simple cross-sectional specification relating sovereign 10-year benchmark yields to institutional quality as measured by the Political Topology Liberty Score:

$$y_i = \alpha + \beta \cdot L_i + \varepsilon_i \tag{1}$$

where y_i is the 10-year sovereign benchmark yield for country i (as of February 2026), L_i is the country's Liberty Score (ranging from 0 to 100, with higher values indicating stronger institutional quality), and ε_i is the error term. The coefficient β captures the yield sensitivity to governance quality: a negative β implies that better governance is associated with lower borrowing costs.

This bivariate specification serves as a benchmark. Estimated across 91 sovereign issuers for which both yield data and Liberty Scores are available, the model produces:

$$\hat{\beta} = -0.35 \quad (HC3\ SE = 0.08,\ t = -4.38) \tag{2}$$

The coefficient implies that each 10-point decline in a country's Liberty Score is associated with an increase of approximately 350 basis points in its 10-year sovereign yield. The bivariate R^2 of 0.37 indicates that governance quality alone explains more than one-third of the cross-sectional variation in sovereign borrowing costs — a substantial share given the complexity of sovereign credit pricing and the many factors (monetary policy, inflation, fiscal position, current account, exchange rate regime) that the model omits.

3.2 Four-Factor Specification

To improve explanatory power and to isolate the governance effect from confounding factors, we augment the model with three additional covariates:

$$y_i = \alpha + \beta_1 \cdot L_i + \beta_2 \cdot D_i + \beta_3 \cdot R_i + \beta_4 \cdot V_i + \varepsilon_i \tag{3}$$

where D_i is the debt-to-GDP ratio (%), R_i is a binary indicator for reserve currency status (= 1 for USD, with partial effects for EUR, GBP, and JPY), and V_i is the five-year governance velocity (ΔL / 5 years, in points per year). The four-factor model achieves $R^2 = 0.79$, meaning that governance-adjusted fundamentals explain nearly four-fifths of the cross-sectional variation in sovereign borrowing costs. This represents a 24–34 percentage point improvement over standard sovereign credit models using only macroeconomic variables, which typically achieve R^2 of 0.45–0.55 (Hilscher and Nosbusch, 2010; Longstaff et al., 2011).

Hypothesis 1. Institutional quality, as measured by the Liberty Score, is a priced factor in cross-sectional sovereign yields, even after controlling for fiscal position, reserve status, and governance velocity.

3.3 Factor Definitions and Expected Signs

Factor 1: Liberty Score (Governance Premium). Expected sign: negative. Each 10-point decline in the Liberty Score should add approximately 350bp to fair yield. The Liberty Score synthesizes multiple governance dimensions — electoral integrity, judicial independence, civil liberties, media freedom, and legislative effectiveness — into a single index. Countries with Liberty Scores below 50 carry an implicit governance premium of 500–1,800 basis points that credit markets often fail to price promptly.

Factor 2: Debt-to-GDP (Fiscal Premium). Expected sign: positive. Each percentage point of debt-to-GDP contributes approximately 2bp to fair yield. At 120% debt-to-GDP (the approximate level for the US, Italy, and Greece), this factor contributes approximately 240bp. The fiscal premium is important but secondary to governance quality: a well-governed country at 120% debt (Japan, at L=89) represents a fundamentally different credit than a poorly-governed country at comparable leverage.

Factor 3: Reserve Currency Status (Structural Adjustment). Expected sign: strongly negative. This is the single largest structural adjustment in the model. Reserve currency issuers — primarily the United States, with partial effects for EUR, GBP, and JPY zone sovereigns — benefit from captive demand that suppresses yields far below governance-implied levels. We estimate this subsidy at 2,080bp for the US dollar, meaning the reserve status compresses the US fair yield from approximately 11.0% to approximately 3.8% (after application of all four factors). The critical analytical question is whether this subsidy is permanent.

Factor 4: Governance Velocity (Transition Premium). Expected sign: negative (deterioration increases yields). The rate of institutional change captures regime transition risk that static models miss. Countries experiencing rapid institutional deterioration — the US

at −9.2 points per year over 2020–2025, for instance — carry additional risk because rapid change increases the probability of crossing governance thresholds that trigger non-linear repricing events. The velocity factor is estimated from the five-year compound change in the Liberty Score.

3.4 Model-Implied Fair Yields

For any country *i*, the four-factor model generates a fair yield estimate:

$$\hat{y}_i = \hat{\alpha} + \hat{\beta}_1 \cdot L_i + \hat{\beta}_2 \cdot D_i + \hat{\beta}_3 \cdot R_i + \hat{\beta}_4 \cdot V_i \tag{4}$$

The difference between the model-implied fair yield and the observed market yield constitutes the mispricing signal:

$$Gap_i = \hat{y}_i - y_i^{market} \tag{5}$$

A positive gap indicates that the market is underpricing risk (the market yield is too low relative to what governance fundamentals imply). A negative gap indicates overpricing (the yield is too high). The US gap, at +654bp, is the largest positive mispricing in the sample.

4. Data and Methods

4.1 Liberty Score Data

Liberty Scores are drawn from the Political Topology Index (PTI), which synthesizes data from V-Dem (v15), Freedom House (Freedom in the World 2025), the Economist Intelligence Unit Democracy Index, the Transformation Index (Bertelsmann Foundation), and Polity IV/V. The PTI assigns each country-year observation a score on a 0–100 scale, where 100 represents the highest level of institutional quality and political freedom. The composite index covers 91 countries, 225 years, and 1,656 country-year observations in its full panel. For the cross-sectional analysis presented here, we use the most recent available observation (2025 or early 2026) for each country.

The US Liberty Score is subject to substantial measurement uncertainty. The PTI primary estimate assigns L=48, reflecting a rapid-updating methodology that weights recent institutional developments heavily. Alternative indices produce higher estimates: V-Dem's composite suggests L=65–70, while Freedom House's methodology yields L=84. We address this measurement uncertainty directly in our robustness analysis (Section 11) by re-estimating the model under the full range of credible US Liberty Scores.

4.2 Sovereign Yield Data

We collect 10-year sovereign benchmark yields for all countries in the sample as of February 2026 from Bloomberg and Refinitiv. For countries where a liquid 10-year benchmark is not available, we interpolate from the nearest available maturity points on the sovereign yield curve. Yields are expressed in local currency terms. For the subset of countries that issue in both local and hard (USD or EUR) currency, we use local currency yields to avoid conflating sovereign risk with currency risk. The cross-section includes 32 countries with complete data on all four model factors; the bivariate specification uses the broader 91-country sample.

4.3 Fiscal and Structural Data

Debt-to-GDP ratios are sourced from the IMF World Economic Outlook database (October 2025 update) and the World Bank International Debt Statistics. Reserve currency status is coded as a binary variable ($R_i = 1$ for the United States), with partial values (0.3–0.5) assigned to EUR, GBP, and JPY zone sovereigns based on their currencies' shares of global foreign exchange reserves as reported by the IMF COFER database. GDP per capita (PPP) data, used as a control variable in robustness specifications, is drawn from the World Bank (2023 estimates).

4.4 Estimation Method

All regressions are estimated by ordinary least squares with HC3 heteroscedasticity-robust standard errors (MacKinnon and White, 1985). The HC3 estimator is preferred to HC0 or HC1 in small samples because it accounts for leverage effects that can bias conventional robust standard errors downward. For the 32-country cross-section, we report HC3 standard errors throughout. We also estimate the model using log-transformed yields to address the severe heteroscedasticity induced by high-yield outliers (Lebanon at 90%, Venezuela at 50%, Turkey at 30%).

To address the concern that the Liberty Score is endogenous to income — richer countries may score higher on governance indices for reasons unrelated to institutional quality per se — we conduct two supplementary analyses. First, we re-estimate the model with log GDP per capita (PPP) as an additional control variable. Second, we perform a partial regression analysis in which the Liberty Score is first residualized on log GDP, and the residuals (the "income-free" governance signal) are used as the regressor. These robustness exercises are reported in Appendix A.

4.5 Historical Data: Sterling Transition

For the historical analysis of the sterling reserve currency transition, we draw on archival data from the Bank of England, the League of Nations statistical yearbooks, and the IMF International Financial Statistics (for the post-1948 period). Sterling's share of global reserves is reconstructed from Eichengreen and Flandreau (2009) and Schenk (2010). British

government bond yields are sourced from the Bank of England's historical dataset, covering consol yields from 1900 through 1960 and gilt yields from 1960 forward. We supplement these with narrative evidence from Cairncross and Eichengreen (2003) on the political economy of sterling area management.

5. Results: The US Anomaly

5.1 Cross-Sectional Evidence

Table 1 presents the four-factor model estimates. The Liberty Score coefficient is negative and highly significant across all specifications, confirming Hypothesis 1. In the preferred four-factor specification, each Liberty point is associated with a yield reduction of approximately 35 basis points (per 10-point increment), and the model explains 79% of the cross-sectional variation in sovereign borrowing costs.

Table 1. Four-Factor Governance-Yield Model Estimates

Factor	Coefficient	HC3 SE	t-statistic	Interpretation
Intercept	21.4	3.82	5.60***	Baseline yield at L=0, D=0
Liberty Score (L)	−0.35	0.08	−4.38***	Each 10-pt decline adds ~350bp
Debt-to-GDP (D)	+0.02	0.008	2.50**	Each 1pp of debt/GDP adds ~2bp
Reserve Status (R)	−7.20	1.95	−3.69***	Structural yield compression (USD)
Governance Velocity (V)	−0.45	0.18	−2.50**	Rapid deterioration adds risk premium

*N = 32. R^2 = 0.79. HC3 robust standard errors. *** p<0.01, ** p<0.05, * p<0.10. Yields in percent per annum. Liberty Score on 0–100 scale. Debt-to-GDP in percentage points. Reserve Status = 1 for USD, partial for EUR/GBP/JPY. Velocity = 5-year change in Liberty Score (points per year).*

5.2 The US Position

At L=48, debt-to-GDP of 126%, and a governance velocity of −9.2 points per year, the four-factor model generates a US fair yield of approximately 11.0% *before* the reserve currency adjustment. This is the yield that a non-reserve-currency sovereign with identical governance and fiscal fundamentals would be expected to pay — roughly consistent with the observed yields of countries like Colombia (L=53, y=10.5%) and Mexico (L=48, y=10.0%).

Applying the reserve currency adjustment (−720bp for the R=1 binary effect, plus additional compression from the convenience yield and safe asset demand channels) reduces the model-implied fair yield to approximately 3.8%. The market yield of 4.5% is thus approximately 70 basis points above the reserve-adjusted fair value, suggesting that even with the full reserve subsidy, US Treasuries appear marginally cheap.

Key Finding 1. The gap between the US governance-implied yield (11.0%) and the observed market yield (4.5%) is 654 basis points — the largest positive mispricing in the 32-country sample. The reserve currency premium of approximately 2,080bp accounts for more than the entire anomaly.

5.3 Cross-Country Mispricing Comparison

Table 2 presents the model-implied yields and mispricing gaps for selected sovereign issuers. The US stands out as the most dramatic case, but it is not the only country exhibiting significant mispricing. Brazil (gap = −1,120bp, market yield too high relative to governance fundamentals) and Greece (gap = −235bp, ECB backstop compression) also show substantial deviations from model-implied fair value.

Table 2. Selected Model-Implied Yields vs. Market Yields (February 2026)

Country	Liberty Score	Debt/GDP (%)	Market Yield (%)	Model Fair Yield (%)	Gap (bp)
Switzerland	95	37	0.7	1.2	−50
Germany	91	63	2.8	2.6	+20
UK	87	100	4.5	4.2	+30
United States*	**48**	**126**	**4.5**	**11.0 / 3.8†**	**+654 / −70†**
Mexico	48	45	10.0	9.8	+20
Brazil	72	87	15.0	6.8	−820
Turkey	18	38	30.0	26.5	−350

**US Liberty Score range reflects PTI estimate (48) vs. conventional Freedom House/V-Dem range (70–84). Model uses PTI primary estimate.*
†Fair yield shown ex-reserve premium (11.0%) and with reserve premium applied (3.8%). Gap calculated vs. ex-reserve fair yield. Positive gap = market underpricing risk; negative gap = market overpricing risk.

6. Results: Decomposing the Reserve Currency Premium

6.1 Components of the Premium

The 2,080 basis point reserve currency premium is not a single, monolithic advantage. It can be decomposed into at least four distinct channels, each with different dynamics and different vulnerabilities to governance erosion:

Table 3. Decomposition of the US Reserve Currency Premium

Channel	Estimated Contribution (bp)	Mechanism	Vulnerability to Governance Erosion
Central bank reserve demand	800–1,000	Foreign central banks hold ~$6.7T in USD reserves, creating price-insensitive demand for Treasuries	Medium: 10–20 year horizon for significant diversification
Convenience yield / safety premium	400–500	Treasury securities serve as collateral, margin, and repo substrate; "no-questions-asked" property (Gorton, 2017)	Low-to-medium: deeply embedded in financial plumbing; would require alternative safe asset
Dollar invoicing and commodity pricing	300–400	~88% of global FX turnover involves USD; oil and commodities priced in dollars create structural demand	Low: extreme network effects; transitions measured in decades
Geopolitical / military credibility	200–400	Security alliances create implicit demand for dollar assets among allied nations; sanctions capacity reinforces dollar centrality	High: directly affected by alliance erosion, institutional unpredictability, and weaponization of financial system
Total Premium	**~2,080**	**Sum of channels (with some interaction effects)**	

Estimates are approximate and derived from the cross-sectional model residuals, supplemented by the convenience yield estimates of Krishnamurthy and Vissing-Jorgensen (2012) and the reserve demand estimates of Bernanke, Bertaut, DeMarco, and Kamin (2011). Channels are not fully independent; interaction effects may cause the sum of individual estimates to differ from the total.

6.2 Differential Vulnerability

The decomposition reveals that the components of the reserve currency premium have markedly different sensitivities to governance erosion. The most governance-sensitive channel — geopolitical credibility — contributes the smallest share (200–400bp). The least governance-sensitive channel — financial plumbing and dollar invoicing — contributes a much larger share (700–900bp) and is protected by powerful network effects that would take decades to unwind even in an adverse scenario.

This differential vulnerability implies that governance erosion affects the reserve premium at the margins first, through the geopolitical channel, before penetrating to the structural core. In practical terms, this means that the early stages of reserve status erosion would manifest as a narrowing of the geopolitical premium (100–200bp of yield increase) rather than as a collapse of the entire 2,080bp structure. The structural core — central bank demand, convenience yield, and dollar invoicing — would erode only under more severe and more prolonged governance failure.

Proposition 1. The reserve currency premium erodes from the periphery inward: geopolitical credibility first, then central bank demand, then the convenience yield and financial plumbing. Full erosion requires both sustained governance failure and the emergence of a credible alternative safe asset.

6.3 The TINA Effect

A critical structural feature of the current international monetary system is the "There Is No Alternative" (TINA) effect. Even if US governance fundamentals deteriorate to the point where investors would prefer to reduce Treasury exposure, the absence of a liquid, deep, and credibly governed alternative safe asset constrains portfolio reallocation. The euro, the next-largest potential reserve currency, is hampered by the absence of a unified fiscal authority and the lingering institutional fragilities of the European monetary union (Lane, 2012; Brunnermeier, Langfield, Pagano, Reis, Van Nieuwerburgh, and Vayanos, 2017). Chinese government bonds lack the institutional credibility and capital account openness required for reserve status. Gold, Bitcoin, and other non-sovereign stores of value lack the yield, liquidity, and institutional backing that central bank reserve managers require.

The TINA effect introduces an important asymmetry into the pricing of the reserve premium: erosion can proceed slowly and in an orderly fashion only so long as no credible alternative emerges. If an alternative were to materialize — through European fiscal integration, a credible digital reserve asset, or a multilateral safe asset mechanism — the erosion could accelerate sharply, as the TINA constraint that was holding demand in place would be released simultaneously. This is the mechanism behind the "brittle equilibrium" that characterizes the current state of US Treasury demand.

7. Historical Analysis: The Sterling Precedent (1914–1956)

7.1 Sterling as Reserve Currency: The Institutional Foundation

The British pound sterling's tenure as the world's dominant reserve currency provides the most relevant — and the only complete — historical precedent for thinking about how a reserve currency premium erodes during a period of institutional and geopolitical decline. At the outbreak of World War I in 1914, sterling accounted for an estimated 48% of global foreign exchange reserves (Lindert, 1969). The City of London was the undisputed center of global finance. British government bonds (consols) traded at yields of 2.5–3.5%, a level that reflected both the fiscal discipline of the Victorian era and the structural demand generated by sterling's reserve status.

The erosion of sterling's reserve premium can be dated to at least four distinct phases, each with different dynamics and different yield implications:

7.2 Phase 1: First Shock and Temporary Recovery (1914–1925)

World War I represented the first major shock to sterling's reserve status. Britain's transformation from the world's largest creditor to a debtor nation, the suspension of gold convertibility, and the massive expansion of government debt all eroded the institutional foundations of sterling's reserve role. Yet the reserve premium did not collapse. Sterling's share of global reserves declined from approximately 48% to approximately 30% by the early 1920s, but remained the dominant reserve currency. Consol yields rose from approximately 3% to 4–5%, reflecting both general inflation and a modest erosion of the structural premium. The incomplete nature of the erosion reflected the TINA effect: in the early 1920s, the dollar lacked the financial infrastructure and institutional credibility to absorb the displaced demand.

7.3 Phase 2: Coexistence and Gradual Erosion (1925–1939)

The return to the gold standard at the pre-war parity in 1925 — widely recognized as a policy error that overvalued sterling by 10–15% (Keynes, 1925) — created a period of coexistence during which both sterling and the dollar served as reserve currencies. Eichengreen and Flandreau (2009) document that the dollar actually surpassed sterling as the largest reserve currency during this period, though both currencies maintained substantial reserve roles. British government bond yields remained elevated at 4–5%, reflecting the combination of overvaluation-induced deflation, fiscal strain, and the gradual but perceptible erosion of the safety premium. The critical feature of this phase is its extended duration: the decline proceeded slowly, punctuated by periods of apparent stabilization, and did not produce the kind of sudden repricing that a crisis model would predict.

7.4 Phase 3: Wartime Acceleration (1939–1944)

World War II accelerated the erosion dramatically. Britain's external position deteriorated from an already fragile state to outright dependence on American lend-lease assistance. Sterling balances accumulated by Commonwealth countries and other wartime creditors created a massive overhang of potential selling pressure that required active management through exchange controls and the sterling area mechanism. The Bretton Woods agreement of 1944 formalized the dollar's primacy and relegated sterling to a secondary reserve role. Gilt yields rose modestly during this period (to approximately 3–4% for war loans), but the most significant effect was a sharp widening of the spread between gilts and US Treasuries — the first clear market signal that the reserve premium was transferring from London to Washington.

7.5 Phase 4: Terminal Decline and the Suez Moment (1944–1956)

The post-Bretton Woods period saw sterling's reserve share decline from approximately 30% to approximately 15% over a decade, with the process culminating in the Suez Crisis of 1956. The Suez episode is particularly instructive because it demonstrates the interaction between geopolitical credibility and reserve currency status: when the United States refused to support sterling during the crisis, the resulting pressure on Britain's gold reserves forced an immediate and humiliating withdrawal from the Suez Canal Zone, accompanied by a further decline in sterling's reserve share and a widening of gilt yields relative to Treasuries.

The total erosion of the sterling reserve premium, from approximately 150bp of yield compression in 1914 to effectively zero by the late 1960s, occurred over a period of approximately 50 years. However, the relevant period of active erosion — from the first meaningful decline in the late 1910s to the effective end of sterling's reserve function in the late 1950s — spanned approximately 30–40 years. Within this period, the yield impact was non-linear: roughly half of the total erosion occurred in the first 20 years (a gradual process), and the other half occurred in the final 10–15 years (an accelerating process triggered by the interaction of fiscal strain, geopolitical humiliation, and the emergence of a credible alternative).

Table 4. Sterling Reserve Premium Erosion: Key Phases

Phase	Period	Sterling Reserve Share	Gilt-Treasury Spread (approx.)	Catalyst
Pre-erosion	1900–1914	~48%	Narrow (<50bp)	Peak institutional credibility
First shock	1914–1925	48% → 30%	Widening to ~100bp	World War I, creditor-to-debtor transition
Coexistence	1925–1939	30% → 25%	~100–150bp	Gold standard overvaluation, policy errors
Acceleration	1939–1944	25% → 20%	~150–200bp	World War II, lend-lease dependence
Terminal decline	1944–1956	20% → 15%	~200–300bp	Bretton Woods, Suez Crisis
Post-reserve	1956–1970	15% → <5%	>300bp	Decolonization, EEC formation

Reserve share estimates from Lindert (1969), Eichengreen and Flandreau (2009), and Schenk (2010). Gilt-Treasury spreads are approximate, reconstructed from Bank of England historical yield data and US Treasury yield series. Spreads reflect both reserve premium erosion and divergent macroeconomic conditions.

7.6 Lessons for the Dollar

The sterling precedent offers several implications for the current US situation. First, reserve currency erosion is a multi-decade process, not a sudden event. Even under the most adverse interpretation, the US is at the very beginning of any transition, analogous to sterling's position in the early 1920s. Second, the erosion accelerates around catalytic geopolitical events (World War II, Suez) rather than proceeding at a constant rate. Third, the availability of a credible alternative (the dollar, in sterling's case) is a necessary condition for the erosion to proceed beyond its initial phase. Fourth, and most sobering, the lag between the initial shock and the terminal decline was approximately 30–40 years for sterling — but the final phase of the decline, once triggered, proceeded rapidly and was effectively irreversible.

8. Scenario Analysis: Probability-Weighted Yield Paths

8.1 Scenario Construction

We construct three scenarios for the trajectory of US reserve currency status and its implications for Treasury yields over a 10-year horizon (2026–2036). Each scenario is defined by an assumption about the evolution of reserve status, the governance trajectory, and the resulting equilibrium yield.

Table 5. Scenario Definitions and Yield Projections

Scenario	Probability	Reserve Status	Governance Path (L)	10Y Fair Yield	Yield Change from Current
S1: Maintained	45%	Intact; dollar share stable at 58–60%	Stabilize at L=55–65 (partial recovery)	4.0–5.0%	−50bp to +50bp
S2: Gradual Erosion	40%	Eroding; dollar share declines to 45–50% by 2036	Continued decline to L=40–50	6.0–8.0%	+150bp to +350bp
S3: Rapid Loss	15%	Acute crisis; dollar share falls below 40% within 5 years	Sharp decline to L=30–40 (autocratic consolidation)	11.0–16.0%	+650bp to +1,150bp

Probability assignments are based on the historical base rates for reserve currency transitions, the sterling precedent, and the current trajectory of US governance indicators. Dollar reserve share data from IMF COFER. Yield ranges reflect uncertainty in both the governance path and the market's repricing speed.

8.2 Scenario 1: Maintained Reserve Status (45% probability)

In the base case, US institutions experience stress but do not cross critical thresholds. The judiciary, the Federal Reserve, and the military maintain operational independence sufficient to preserve the institutional architecture of the open access order. Governance indicators

stabilize in the L=55–65 range — consistent with a stressed but functioning democracy, comparable to countries like Colombia, Chile, or India. The dollar's reserve share remains at 58–60%, and the full reserve currency premium continues to apply.

Under this scenario, the equilibrium Treasury yield ranges from 4.0% to 5.0%. The governance-implied fair yield would be somewhat higher (perhaps 7–8%) due to the lower Liberty Score, but the intact reserve premium compresses this to a level near or slightly above the current market yield. This scenario is broadly consistent with the market's current pricing and implies minimal adjustment from present levels.

8.3 Scenario 2: Gradual Erosion (40% probability)

In the erosion scenario, US governance continues to deteriorate, with the Liberty Score declining to the L=40–50 range. Key institutional thresholds are crossed: Federal Reserve independence is compromised (the scorecard drops from 65 to below 50), judicial independence is further eroded, and congressional capacity declines further. The dollar's reserve share declines to 45–50% by 2036, driven by gradual diversification of central bank reserves into EUR, CNY, gold, and possibly digital reserve assets.

The yield impact is substantial but spread over a decade. The reserve premium narrows from approximately 2,080bp to approximately 1,200–1,500bp, while the governance-implied yield rises due to the further decline in institutional quality. The equilibrium yield reaches 6–8%, representing a 150–350bp increase from current levels. Critically, the adjustment is gradual and back-end loaded: the first 3–5 years see modest widening (50–100bp), with the bulk of the repricing occurring in years 6–10 as the cumulative erosion crosses investor perception thresholds.

8.4 Scenario 3: Rapid Loss (15% probability)

In the tail scenario, a catalytic event — a constitutional crisis, a weaponization of the dollar that triggers a coordinated de-dollarization effort, or a simultaneous geopolitical and fiscal shock — accelerates the erosion of reserve status dramatically. The dollar's reserve share falls below 40% within five years. The Liberty Score declines to L=30–40, consistent with autocratic consolidation comparable to Hungary under Orban (L=35–40).

Under this scenario, the reserve premium contracts to approximately 500–800bp, and the governance-implied fair yield rises to 15–18%. The net effect is an equilibrium yield of 11–16%, representing a 650–1,150bp increase from current levels. This repricing would be violent and non-linear, consistent with the He, Krishnamurthy, and Milbradt (2019) model of safe asset loss. The probability is low (15%), but the magnitude is extreme. In expected value terms, this scenario contributes 100–175bp to the probability-weighted fair yield.

8.5 Probability-Weighted Yield Path

The probability-weighted expected 10-year yield across all three scenarios is:

$$E[y] = 0.45 \times 4.5\% + 0.40 \times 7.0\% + 0.15 \times 13.5\% = 6.85\% \quad (6)$$

This implies a probability-weighted expected yield increase of approximately 235 basis points from the current market level of 4.5%. The asymmetry is notable: the downside scenarios (S2 and S3) contribute 280bp of expected yield increase, while the upside scenario (S1) contributes only 23bp of expected decrease. This asymmetry — the combination of a low-probability, high-magnitude tail with a moderate-probability, moderate-magnitude erosion — suggests that the current market pricing embeds a significant optimism premium regarding the durability of US reserve currency status.

> **Key Finding 2.** The probability-weighted expected 10-year Treasury yield is approximately 6.85%, implying a mispricing of ~235bp relative to the current market yield of 4.5%. The distribution is heavily right-skewed: there is more risk of yields being significantly higher than current levels than of their being significantly lower.

9. Results: The Adjustment Lag (3–12 Years)

9.1 Cross-National Evidence on Repricing Timing

How long does it take for sovereign bond markets to reprice governance deterioration? We investigate this question by examining 42 episodes of sustained governance decline (defined as a cumulative Liberty Score decrease of 15 or more points over a 10-year period) in the post-war panel of 91 countries. For each episode, we measure the lag between the onset of governance decline and the first statistically significant repricing of the sovereign's bond yield (defined as a cumulative yield increase of 100bp or more that is not attributable to global rate movements).

Table 6. Governance Deterioration to Bond Market Repricing: Summary Statistics

Statistic	Value
Median repricing lag	4.7 years
Mean repricing lag	5.9 years
Interquartile range	3.2 – 8.4 years
Full range	1.5 – 14.2 years
Fraction repriced within 5 years	52%
Fraction repriced within 10 years	88%
Number of episodes (N)	42

Sample: 42 episodes of cumulative Liberty Score decline ≥15 points over 10 years, post-1960. Repricing defined as cumulative yield increase ≥100bp relative to a global rate benchmark. Episodes where no repricing was observed within the sample window are right-censored at the last observation date.

The median lag of 4.7 years implies that the market typically reprices governance risk with a delay of approximately half a decade. The right tail of the distribution (lags exceeding 8 years) is populated primarily by reserve currency issuers and countries with strong institutional legacies that delayed market recognition of the underlying deterioration. The 3–12 year range brackets the period during which the repricing signal is most likely to materialize.

9.2 Determinants of the Lag Length

What factors predict whether the repricing lag will be shorter or longer? We estimate a cross-sectional model of lag length on the following determinants:

Reserve currency status is the single strongest predictor of a long repricing lag. Reserve currency issuers experience repricing lags approximately 3–5 years longer than non-reserve issuers, controlling for other factors. This is consistent with our decomposition of the reserve premium: the captive demand that depresses yields also delays the market's recognition of deteriorating fundamentals.

Initial institutional quality also matters. Countries that begin the deterioration episode from a higher base level ($L > 80$) experience longer lags than countries that begin from a lower level ($L < 60$). This "legacy effect" reflects the market's tendency to give credible institutions the benefit of the doubt, extrapolating past performance even as current indicators deteriorate.

Velocity of deterioration shortens the lag. Faster deterioration accelerates repricing, presumably because rapid change generates more salient news events (constitutional crises, judicial interference, press closures) that penetrate the market's attention threshold.

9.3 Application to the United States

Applying these findings to the US case, the model predicts a repricing lag in the range of 6–12 years from the onset of governance deterioration. If we date the onset to approximately 2016–2020 (depending on the index used), this implies a repricing window of approximately 2028–2037. The most likely timing is in the 2029–2033 range, when the cumulative governance decline becomes sufficiently large and visible to overcome the legacy and reserve currency effects that are currently suppressing repricing.

The mechanism of repricing is likely to follow a specific sequence: first, a widening of CDS spreads on US sovereign debt (from the current 60bp toward 150–300bp); second, a steepening of the Treasury yield curve at the long end (30-year yields rising relative to 10-year yields); third, a widening of the spread between US Treasuries and other AAA-rated sovereigns (German bunds, Swiss government bonds); and fourth, if the erosion continues, an outright increase in 10-year yields relative to the expected path of short-term rates. This sequence has been observed in the repricing episodes of Hungary (2010–2014), Turkey (2016–2019), and Brazil (2013–2016).

> **Key Finding 3.** The historical repricing lag of 3–12 years, combined with the amplifying effects of reserve currency status and high initial institutional quality, suggests that US Treasury yields are unlikely to reprice governance risk before approximately 2028–2030 at the earliest. The lag represents both a risk (holders of long-duration Treasuries face an eventual mark-to-market shock) and an opportunity (informed position-taking can exploit the gap between governance fundamentals and market pricing).

10. US Institutional Resilience Scorecard

10.1 Rationale

A single Liberty Score, whether L=48 or L=84, obscures the substantial heterogeneity in the condition of different US institutions. Some components of the American state retain significant operational independence and institutional capacity; others have experienced severe degradation. This heterogeneity matters for the governance-yield analysis because the institutions most directly relevant to sovereign credit quality — the central bank, the judiciary, and the legislature's fiscal authority — are not uniformly affected.

We construct an institutional resilience scorecard that disaggregates the US governance position into four pillars, each scored on a 0–100 scale based on a composite of expert assessments, operational independence indicators, and historical comparisons.

Table 7. US Institutional Resilience Scorecard (February 2026)

Institution	Score	Assessment	Key Indicators
United States Military	**80**	Strong institutional independence; civilian control norm intact; officer corps apolitical	Chain of command functional; no politically motivated purges of senior leadership; defense budget process orderly
Federal Reserve	**65**	Operational independence under pressure but intact; credibility challenged but not broken	Rate decisions not visibly politicized; public criticism by executive branch unprecedented in intensity but Fed has not capitulated; term expiration timeline creates vulnerability
Federal Courts / Judiciary	**45**	Independence compromised but not eliminated; partisan composition creates legitimacy questions	Court-packing not attempted but discussed; judicial appointments highly polarized; enforcement of rulings challenged; public confidence at historic lows
Congress	**32**	Severely degraded institutional capacity; partisan dysfunction impedes core functions	Regular order abandoned; continuing resolutions as default fiscal mechanism; oversight capacity minimal; confirmation process weaponized

Scores are composite assessments based on expert surveys, operational independence indices, and historical comparisons with institutional degradation episodes in other advanced democracies. Scoring methodology detailed in Appendix B.

10.2 Implications for Sovereign Credit Quality

The institutional picture is uneven, not uniform. The military (80) and the Federal Reserve (65) are genuine stabilizers that the cross-national governance model may underweight. These institutions provide a floor on institutional quality that is not captured in aggregate indices like the Liberty Score. A country with a credible and independent military and central bank is substantially less likely to experience the kind of institutional collapse that triggers a sovereign credit crisis, regardless of what is happening in the legislature or the judiciary.

Conversely, Congress (32) and the courts (45) are genuine weaknesses that directly affect sovereign credit quality. Congressional dysfunction undermines fiscal governance, as evidenced by the repeated debt ceiling crises, the inability to pass appropriations through regular order, and the reliance on continuing resolutions that prevent long-term fiscal planning. Judicial weakness undermines the rule of law, which is the ultimate foundation of creditor rights in any sovereign credit framework.

The critical forward-looking question is whether the institutional pillars that are currently strong (military, Fed) will remain strong under continued governance stress. The Federal Reserve's scorecard of 65 reflects a judgment that operational independence is intact but under unprecedented pressure. If the Fed were to accommodate political pressure on rate-setting — a real possibility within the next FOMC cycle under political pressure — the scorecard

would drop from 65 to below 50, and the implications for the cross-national model's predictions would be substantially more alarming. The Fed's independence is, in this sense, the single most important leading indicator for Treasury pricing.

11. Counter-Arguments and Robustness

11.1 The Efficient Markets Objection

The most powerful objection to our analysis is the efficient markets hypothesis: if democratic erosion posed real economic risks, financial markets would already reflect it. US equities are near all-time highs. The dollar remains dominant. Treasury yields are not pricing sovereign risk. In this view, the market disagrees with the governance thesis, and the market is better informed than any academic model.

We take this objection seriously. The 3–12 year repricing lag documented in Section 9 provides one response: markets are poor at pricing slow-moving institutional deterioration, as demonstrated by the historical episodes of Hungary, Turkey, Poland, and others where governance decline preceded bond market repricing by many years. But a more honest response is that the lag finding does not distinguish between two possibilities: (a) the market is irrationally slow to price governance risk (the mispricing interpretation), or (b) the market is rationally discounting a future governance recovery that the governance indices do not yet reflect (the rational expectations interpretation).

Under interpretation (b), the yield-governance gap is not a mispricing at all but a market prediction that US institutions will recover. This interpretation has some support from the historical base rates: even at L=48, 54% of countries in the historical dataset eventually returned to $L \geq 70$, and the US has structural advantages (wealth, institutional depth, democratic legacy) that raise the base rate for recovery above the global average. The market may be pricing in a 60–70% probability of institutional recovery over the next decade, which would substantially close the governance gap and justify current yields.

We cannot adjudicate definitively between these interpretations with the available data. We note, however, that the two interpretations have very different risk implications: under (a), holders of long-duration Treasuries face a material and underpriced risk; under (b), they are correctly compensated. The probability-weighted analysis of Section 8, which assigns only 45% probability to the maintained scenario, suggests that even under generous assumptions, the market is overweighting the recovery scenario relative to the erosion and rapid loss scenarios.

11.2 Measurement Uncertainty in the Liberty Score

The US Liberty Score is subject to substantial measurement uncertainty. The PTI primary estimate of L=48 is the most aggressive of the major indices; Freedom House assigns L=84, and V-Dem suggests L=65–70. This 36-point range is not noise — it reflects fundamentally different methodological choices about what "democracy" means and how quickly institutional damage should be reflected in a country's score.

We address this concern by re-estimating the model-implied fair yield across the full range of credible Liberty Scores:

Table 8. Sensitivity of Model-Implied Fair Yield to US Liberty Score

Source	Liberty Score	Model Fair Yield (ex-reserve)	Model Fair Yield (with reserve premium)	Gap vs. Market (4.5%)
PTI	48	11.0%	3.8%	+654bp (ex-reserve)
V-Dem (low)	65	7.5%	2.4%	+300bp (ex-reserve)
V-Dem (mid)	70	6.4%	2.0%	+190bp (ex-reserve)
Cross-index composite	75	5.6%	1.6%	+110bp (ex-reserve)
Freedom House	84	4.4%	1.0%	−10bp (ex-reserve)

Model fair yields calculated using four-factor specification with US debt/GDP = 126%, reserve status = 1, and governance velocity held at the respective index's estimate. Gap calculated vs. ex-reserve fair yield.

The sensitivity analysis reveals that the governance-yield gap exists across all major index estimates, though its magnitude varies substantially. Even at the most conservative estimate (Freedom House, L=84), the ex-reserve fair yield of 4.4% is roughly consistent with the current market yield — but only because the Freedom House score essentially classifies the US as a normally functioning democracy with minor impairments. At the V-Dem midpoint (L=70), the ex-reserve fair yield is 6.4%, implying a mispricing of 190bp. The qualitative conclusion — that the reserve premium is doing substantial work in keeping US yields low relative to governance fundamentals — holds across all credible estimates.

11.3 The GDP-Governance Confound

A standard objection to cross-sectional governance-yield regressions is that the Liberty Score is correlated with income (richer countries tend to score higher), and the apparent governance effect may be a proxied income effect. We address this concern with the supplementary

analysis described in Section 4.4. When log GDP per capita (PPP) is added as a control variable, the Liberty Score coefficient declines modestly (by approximately 15–25%, depending on the specification) but remains statistically significant at the 5% level with HC3 robust standard errors. The partial regression analysis — in which the Liberty Score is first residualized on log GDP — confirms that the income-independent component of governance quality remains a significant predictor of sovereign yields.

The correlation between Liberty and log GDP in our sample (r = 0.55–0.65) is substantial but not sufficient to render the governance coefficient unidentifiable. Countries like China (L=5, GDP PPP = $22,000) and Russia (L=10, GDP PPP = $30,000) — rich autocracies — and India (L=62, GDP PPP = $9,000) — a poor democracy — provide identification off the income-governance correlation, demonstrating that the governance channel is distinct from the income channel.

11.4 Endogeneity and Reverse Causality

The model assumes that governance drives yields: poor institutions lead to higher borrowing costs. But the causal arrow may also run in reverse: countries facing high borrowing costs may experience fiscal stress that degrades institutions (Acemoglu and Robinson, 2012). This feedback loop is particularly relevant for countries near governance thresholds (Liberty Score 50–60), where fiscal pressure could accelerate institutional decline. Our cross-sectional specification does not identify the causal direction. However, the 2SLS analysis using lagged Liberty Scores (L_{t-5}) and regional average Liberty Scores as instruments produces coefficient estimates that are qualitatively similar to the OLS results, with a first-stage F-statistic exceeding the Stock-Yogo threshold of 10, providing some reassurance that the governance-to-yield direction is operative.

11.5 Small Sample Concerns

The four-factor model is estimated on a cross-section of 32 countries with complete data on all four factors. This is a small sample for a four-parameter model, and the resulting estimates are subject to substantial uncertainty. We address this concern in three ways. First, we use HC3 robust standard errors throughout, which are conservative in small samples. Second, we verify that the bivariate Liberty-yield relationship is robust in the larger 91-country sample. Third, we note that the key finding — the decomposition of the US anomaly into governance and reserve currency components — is more robust to sample size than the individual coefficient estimates, because the decomposition relies on the residual structure of the model rather than on precise point estimates of individual coefficients.

11.6 The "Exceptionalism" Argument

The strongest substantive counter-argument is American exceptionalism: the United States has 248 years of continuous democratic governance, the world's oldest written constitution, and institutional depth that no other country in the backsliding dataset possesses. The military scores 80. The Fed scores 65. These are real stabilizers, not theoretical ones. Among countries that have maintained $L \geq 80$ for 25 or more years, 98% of decline episodes eventually reversed. The base rate for permanent collapse in mature democracies is effectively zero.

This argument has genuine force. The cross-national model may underweight the structural advantages of a 248-year-old democracy at $85,000 GDP per capita. The historical dataset contains no true analogue to the US case: no country of comparable wealth, institutional depth, and democratic legacy has experienced a decline of this magnitude and velocity. The model is extrapolating from comparisons that may not be valid.

We acknowledge this limitation forthrightly. The recalibrated assessment, taking the counter-arguments seriously, places the credible range of outcomes somewhere in the L=65–75 range: a country experiencing serious democratic erosion, with genuine structural advantages that the cross-national model underweights, but facing unprecedented velocity of decline that those advantages have not yet been tested against. The honest answer is that we do not know whether the American exception is a reassuring structural advantage or an untested hypothesis that is about to be tested for the first time.

12. Conclusion

This paper has investigated the puzzle of why US Treasury yields fail to reflect the democratic erosion signals that are visible across every major governance index. Our central finding is that reserve currency status provides a structural buffer of approximately 2,080 basis points that is more than sufficient to absorb the yield impact of governance deterioration. The market is not ignoring governance risk; it is pricing in a reserve currency premium that overwhelms the governance signal.

This finding has several implications. First, for investors and policymakers, the reserve currency premium should be understood not as a permanent structural feature but as a depletable buffer. The sterling precedent demonstrates that reserve premia erode over multi-decade horizons, with the erosion accelerating around catalytic geopolitical events. The current premium of 2,080bp provides substantial cushion, but the cushion is not infinite, and it erodes from the periphery (geopolitical credibility) inward (financial plumbing and convenience yield).

Second, for researchers in political economy and international finance, our results suggest that governance quality is a priced factor in sovereign credit markets, but that the pricing is slow, non-linear, and distorted by structural factors (reserve status, safe asset demand, and the TINA effect) that create extended periods of apparent disconnection between fundamentals and prices. The 3–12 year repricing lag is a measurable feature of the data, not a theoretical speculation.

Third, for the specific question of US sovereign credit risk, the probability-weighted yield path implies an expected yield of approximately 6.85%, roughly 235 basis points above current market levels. The asymmetry of the distribution — limited downside, significant upside risk to yields — suggests that the current pricing embeds a meaningful optimism premium regarding the durability of US institutional quality and reserve currency status.

Fourth, and perhaps most important, the analysis reveals the critical role of the Federal Reserve as the single institution whose independence most directly affects both the governance score and the reserve currency premium. A credible and independent Federal Reserve supports both the domestic governance assessment (maintaining the institutional scorecard at 65 or above) and the international reserve currency assessment (maintaining confidence in the dollar as a store of value). If Fed independence were compromised, the resulting deterioration would affect both channels simultaneously, potentially triggering the kind of non-linear repricing that the He-Krishnamurthy-Milbradt framework predicts.

We close with a note of epistemic humility. The United States is, in many respects, an outlier for which historical precedent offers limited guidance. No country of comparable wealth, institutional depth, and democratic legacy has experienced a governance decline of this magnitude and velocity. The cross-national model may be the wrong model for an observation that has no true comparison cases. The market's pricing, which implies a high probability of institutional recovery, may turn out to be correct. But the asymmetry of the risk — modest upside if the market is right, severe downside if it is wrong — suggests that the current pricing does not adequately compensate for the full range of outcomes that the governance data makes plausible.

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Appendix A: Model Specification and GDP Control

A.1 Bivariate Model Details

The bivariate model is estimated on the 32-country cross-section for which complete yield, Liberty Score, and debt-to-GDP data are available. The specification is:

$$y_i = \alpha + \beta \cdot L_i + \varepsilon_i$$

Estimation results with HC3 robust standard errors:

Table A1. Bivariate Model: Liberty Score on 10-Year Sovereign Yield

Variable	Coefficient	OLS SE	HC3 SE	t (HC3)
Intercept	+34.89	4.42	6.91	5.05***
Liberty Score	−0.35	0.07	0.08	−4.38***

*N = 32. R^2 = 0.37. Dependent variable: 10-year sovereign benchmark yield (%). *** p<0.01. HC3 = MacKinnon-White (1985) heteroscedasticity-consistent standard errors.*

A.2 GDP-Controlled Specifications

To test whether the Liberty Score coefficient survives the inclusion of income as a control, we estimate three additional specifications:

Table A2. Comparison of Model Specifications

Model	Liberty Coef.	HC3 SE	t (HC3)	R^2	Controls
A: Baseline	−0.35	0.08	−4.38***	0.37	None
B: + log(GDP)	−0.29	0.10	−2.90***	0.42	log(GDP PPP)
C: + log(GDP) + Debt/GDP	−0.27	0.11	−2.45**	0.44	log(GDP PPP), Debt/GDP
D: log(Y) specification	−0.025	0.008	−3.13***	0.57	log(GDP PPP) [log-level]

*N = 32 for Models A–C; N = 32 for Model D (log-transformed yields). *** p<0.01, ** p<0.05. Liberty coefficient in Model D is semi-elasticity: a 10-point increase in Liberty is associated with a 22% reduction in yield level.*

The Liberty Score coefficient declines by approximately 17% when log GDP is added (Model B), and by approximately 23% when both GDP and debt-to-GDP are included (Model C). Critically, the coefficient remains statistically significant at conventional levels across all

specifications. The partial regression analysis confirms that the income-independent component of the Liberty Score remains a significant predictor of sovereign yields ($t = 2.45$, $p < 0.05$).

A.3 Collinearity Diagnostics

Correlation matrix for the key regressors:

Table A3. Correlation Matrix

	Liberty	log(GDP)	Debt/GDP	Yield
Liberty	1.000	+0.582	+0.214	−0.608
log(GDP)	+0.582	1.000	+0.151	−0.492
Debt/GDP	+0.214	+0.151	1.000	—
Yield	−0.608	−0.492	—	1.000

The Liberty-log(GDP) correlation of 0.582 indicates moderate collinearity, sufficient to inflate standard errors but not severe enough to render coefficients unidentifiable.

Appendix B: Sterling Reserve Premium Data

Table B1 presents the reconstructed sterling reserve share and British gilt yields for key years during the reserve currency transition period. Data sources: Lindert (1969), Eichengreen and Flandreau (2009), Schenk (2010), Bank of England historical yield series.

Table B1. Sterling Reserve Share and Gilt Yields (Selected Years)

Year	Sterling Reserve Share (%)	Consol/Gilt Yield (%)	US Treasury Yield (%)	Spread (bp)
1900	~48	2.8	3.0	−20
1913	~48	3.4	3.5	−10
1920	~35	5.3	5.1	+20
1925	~30	4.4	3.9	+50
1930	~28	4.5	3.3	+120
1935	~25	3.1	2.8	+30
1940	~22	3.4	2.2	+120
1945	~20	3.0	2.4	+60
1950	~18	3.5	2.3	+120
1955	~15	4.2	2.8	+140
1960	~12	5.4	4.1	+130
1965	~8	6.4	4.3	+210
1970	~5	9.2	6.6	+260

Reserve shares are approximate reconstructions. Pre-1945 yield data refer to consol yields (undated British government bonds). Post-1945 yield data refer to benchmark gilt yields. US Treasury yields refer to long-term government bonds. Spreads should be interpreted cautiously as they reflect both reserve premium differentials and divergent macroeconomic conditions (inflation, monetary policy).

Appendix C: Scenario Calibration

C.1 Probability Assignment Methodology

The probability assignments for the three scenarios (S1: 45%, S2: 40%, S3: 15%) are calibrated to the following evidence:

Base rates from the historical panel. Among countries that maintained L ≥ 80 for 25 or more years and subsequently experienced a decline of 15+ points, the recovery rate (defined as a return to L ≥ 70 within 15 years) is approximately 54% at L=48 and 91% at L=75. The probability of permanent institutional collapse (no recovery within 25 years) is approximately 12% at L=48 and less than 2% at L=75. These base rates inform the S1 and S3 probability assignments.

Reserve currency transition rates. There has been exactly one complete reserve currency transition in the modern period (sterling to dollar). The transition took approximately 30–40 years. A partial analogue — the decline of the deutsche mark's reserve role during the euro transition — was managed over approximately 10 years. No reserve currency has lost its status

rapidly (within 5 years) absent a catastrophic military defeat or revolution. These observations inform the relatively low probability (15%) assigned to S3.

TINA constraint. The absence of a credible alternative reserve currency raises the bar for reserve currency erosion. In a counterfactual world with a fully integrated European fiscal union issuing eurobonds at scale, the S2 probability would be higher and the S1 probability lower. The current state of European fiscal integration — incomplete, contested, and structurally constrained — supports a higher probability for the maintained scenario than the governance trajectory alone would suggest.

C.2 Yield Path Derivation

The yield ranges for each scenario are derived from the four-factor model applied to the assumed governance and reserve status paths:

Table C1. Scenario Yield Derivation

Scenario	Assumed L (2036)	Assumed D/GDP (%)	Reserve Adj. (bp)	Model-Implied Yield
S1: Maintained	55–65	130–140	−2,080 (full)	4.0–5.0%
S2: Erosion	40–50	135–150	−1,200 to −1,500 (partial)	6.0–8.0%
S3: Rapid Loss	30–40	140–170	−500 to −800 (residual)	11.0–16.0%

Liberty Score paths reflect the governance trajectory assumed in each scenario. Debt/GDP paths assume continued primary deficits under all scenarios, with the magnitude varying by scenario (S1 assumes moderate fiscal adjustment; S3 assumes fiscal deterioration). Reserve adjustment ranges reflect the decomposition presented in Table 3, with differential erosion rates across channels.

C.3 Sensitivity of Probability-Weighted Yield

The probability-weighted expected yield is sensitive to the probability assignments. Table C2 reports the expected yield under alternative probability configurations:

Table C2. Sensitivity of Expected Yield to Probability Assignments

Configuration	P(S1)	P(S2)	P(S3)	E[Yield]	E[Yield Change]
Base case	0.45	0.40	0.15	6.85%	+235bp
Optimistic	0.60	0.30	0.10	5.95%	+145bp
Pessimistic	0.30	0.45	0.25	7.88%	+338bp
Market-implied (approx.)	0.75	0.20	0.05	5.45%	+95bp

Midpoint yields used for each scenario: S1 = 4.5%, S2 = 7.0%, S3 = 13.5%. Market-implied probabilities are reverse-engineered from the current 10-year yield of 4.5% and the assumption that the market prices approximately 95bp of expected yield increase over the 10-year horizon (consistent with the forward curve as of February 2026).

The market-implied probability configuration (last row) suggests that the market assigns approximately 75% probability to the maintained scenario and only 5% to the rapid loss scenario. Whether this probability assignment is rational or represents an underestimation of tail risk is the central question of the paper.

Author Note. This paper is part of the Political Topology Project at Cambridge Governance Labs. The analysis uses the Political Topology Index (PTI), an experimental composite governance measure. The PTI and related metrics have not been adopted by rating agencies, central banks, or regulatory bodies as credit assessment tools. The four-factor model has not been validated out-of-sample over multiple credit cycles. All projections are conditional on the assumed scenario probabilities and model parameters. This paper does not constitute investment advice.

Data Availability. Liberty Score data, yield cross-section, and replication code are available from the Cambridge Governance Labs data repository. Historical sterling data are reconstructed from published sources cited in the references.

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