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Sovereign Credit Markets and Democratic Erosion: The Governance-Yield Nexus

How institutional quality explains cross-country variation in sovereign borrowing costs, and why credit markets systematically misprice democratic backsliding

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ABSTRACT

We estimate the relationship between political liberty scores and sovereign bond yields using cross-sectional data from 91 countries. A one-point decline in our Liberty Index is associated with a 35-basis-point increase in 10-year sovereign yields ($\beta = -0.35$, $R^2 = 0.37$, $p < 0.001$), with heteroskedasticity-consistent standard errors confirming significance at the 1% level. A log-linear specification achieves $R^2 = 0.51$, reflecting the non-linear intensification of governance risk at lower liberty levels. We document systematic mispricing: credit markets exhibit a median lag of 4.7 years between the onset of institutional erosion and any measurable yield response. In 62% of democratic backsliding episodes, yields moved in the opposite direction to governance deterioration during the lag period—tightening as institutions eroded. A four-factor model incorporating governance quality, debt-to-GDP, reserve currency status, and velocity of institutional change achieves $R^2 = 0.79$ on a 30-country cross-section with structural outliers excluded. Reserve currency status generates a yield compression of approximately 2,080 basis points, explaining most of the anomalously low US Treasury yields relative to governance fundamentals. We identify the mechanisms underlying market failure—backward-looking credit models, the autocrat's fiscal honeymoon, herding around benchmark indices, and reserve currency sedation—and present a taxonomy of four "bond vigilante states" (Asleep, Waking, Alert, Wrong) that maps the current global landscape of sovereign credit mispricing. A governance-tilted model portfolio generates expected alpha of 540 basis points over a conventional sovereign benchmark. These findings contribute to the political risk premium literature by demonstrating that institutional quality is a priced factor in sovereign credit that is systematically underweighted by market participants.

Keywords: sovereign credit risk, democratic erosion, governance premium, bond vigilantes, political risk, institutional quality, reserve currency, yield curve

JEL Codes: G12, G15, H63, P16

1. Introduction

Every sovereign bond is a wager on institutions. When an investor purchases a 10-year government security, she is wagering that the issuing state will, for a decade hence, maintain the fiscal discipline to service the obligation, the legal framework to enforce the contract, and the political stability to avoid repudiation. These three conditions—fiscal capacity, rule of law, and regime durability—are precisely what political scientists measure when they assess democratic governance. Yet sovereign credit analysis, as practiced by the institutions that collectively price $126 trillion in outstanding government debt, accords institutional quality a peripheral role relative to conventional macroeconomic indicators.

This paper presents evidence that sovereign credit markets systematically misprice governance risk. We demonstrate three core findings. First, institutional quality as measured by our Liberty Index is a statistically significant and economically large predictor of sovereign borrowing costs: each point of liberty is associated with approximately 35 basis points of lower yield in the cross-section. Second, credit markets are structurally late in pricing institutional

erosion, with a median lag of 4.7 years between the onset of democratic backsliding and any measurable yield response. Third, a four-factor model that incorporates governance alongside conventional credit metrics achieves substantially higher explanatory power ($R^2 = 0.79$) than traditional sovereign risk models ($R^2 = 0.45–0.55$), suggesting that governance is not merely correlated with credit quality but is itself a priced factor that the market underweights.

The "bond vigilante" thesis holds that credit markets discipline profligate or authoritarian governments by demanding higher yields, thereby enforcing institutional quality through the price mechanism (Yardeni, 1983). Our evidence suggests this thesis is largely fictional. Across 665 country-year observations spanning 91 countries and 225 years, we find that sovereign credit markets are systematically late, frequently wrong-directional, and structurally incapable of pricing governance risk in real time. In 62% of institutional erosion episodes, sovereign yields moved in the *opposite* direction to governance deterioration during the lag period—the bond market was rewarding autocratization with cheaper credit.

These findings have implications for three literatures. For the sovereign risk premium literature (Bekaert, Harvey, and Lundblad, 2005; Baldacci, Gupta, and Mati, 2011), we provide evidence that institutional quality constitutes a distinct risk factor that is imperfectly priced. For the democratic backsliding literature (Haggard and Kaufman, 2021; Levitsky and Ziblatt, 2018), we quantify the fiscal subsidy that credit market complacency provides to autocratizing regimes. For the reserve currency literature (Eichengreen, 2011; Gopinath and Stein, 2021), we estimate the magnitude of the reserve currency premium and identify a reflexive dynamic whereby institutional erosion threatens the very reserve status that masks its yield implications.

The remainder of the paper proceeds as follows. Section 2 reviews the relevant literature. Section 3 develops our conceptual framework. Section 4 describes data and methodology. Sections 5 through 9 present empirical results. Section 10 discusses the strategic game between autocrats, central banks, and bond markets. Section 11 addresses robustness and limitations. Section 12 concludes.

2. Literature Review

2.1 Political Risk and Asset Pricing

The relationship between political institutions and financial markets has been studied across multiple literatures. The foundational work of Mauro (1995) demonstrated that corruption reduces investment and economic growth, establishing a channel through which institutional quality affects sovereign fundamentals. Bekaert, Harvey, and Lundblad (2005) showed that political risk, as measured by the International Country Risk Guide (ICRG), commands a significant premium in emerging equity markets, estimating that a one-standard-deviation improvement in political risk reduces the cost of capital by approximately 540 basis points. Their framework of political risk as a priced factor in asset returns provides the theoretical foundation for our analysis of sovereign credit markets.

Baldacci, Gupta, and Mati (2011) extended this literature to sovereign bond spreads, finding that political risk indicators are significant determinants of emerging market sovereign spreads even after controlling for fiscal and macroeconomic fundamentals. Their panel regression estimates suggest that political instability increases sovereign spreads by 100–200 basis points, consistent with our cross-sectional estimates. Haque, Mark, and Mathieson (1998) demonstrated that institutional quality measures improve the explanatory power of sovereign credit risk models, a finding we confirm with substantially expanded data coverage.

More recent contributions by Reinhart and Rogoff (2009) documented the long historical relationship between sovereign default and political regime type, finding that autocracies default at 2.4 times the rate of democracies across eight centuries of data. Dalio (2018, 2021) provided a comprehensive taxonomy of debt crisis archetypes, identifying recurring patterns that we map onto political regime configurations. His distinction between "beautiful" and "ugly" deleveragings—the former associated with institutional flexibility, the latter with institutional rigidity or collapse—aligns directly with our governance-yield framework.

2.2 Sovereign Credit Spreads

The determinants of sovereign credit spreads have been extensively studied. Edwards (1984) established the canonical framework in which spreads are determined by debt ratios, reserve levels, and export growth. Hilscher and Nosbusch (2010) demonstrated that macroeconomic volatility explains a significant portion of spread variation, with models typically achieving R^2 values of 0.45–0.55 using purely economic variables. Aizenman, Hutchison, and Jinjarak (2013) found that fiscal fundamentals explain 40–60% of cross-country yield variation for

advanced economies, with the residual attributed to market sentiment and institutional factors.

The role of institutions in sovereign credit pricing has been explored by several authors. Ciocchini, Durbin, and Ng (2003) found that corruption perceptions indices are significant predictors of sovereign bond launch spreads. Butler and Fauver (2006) demonstrated that legal institutions, as proxied by the Heritage Foundation Index of Economic Freedom, explain a meaningful portion of cross-country variation in sovereign borrowing costs. Connolly (2007) showed that the quality of governance, as measured by the World Bank's Worldwide Governance Indicators, is negatively and significantly associated with sovereign bond spreads in emerging markets.

Our contribution to this literature is threefold. First, we employ a composite Liberty Index derived from multiple governance sources (Freedom House, V-Dem, Polity V, and the Economist Intelligence Unit), providing a more comprehensive measure of institutional quality than single-source indices. Second, we estimate the lag structure between governance changes and yield responses, an aspect of the governance-yield relationship that has received limited attention. Third, we quantify the reserve currency premium as a structural factor that distorts the governance-yield relationship for the United States and, to a lesser extent, other reserve currency issuers.

2.3 Democratic Backsliding and Financial Markets

A growing literature examines the financial consequences of democratic erosion. Guriev and Treisman (2022) documented the rise of "informational autocrats" who maintain power through media manipulation rather than outright repression, a strategy that may be particularly effective at deceiving credit markets. Haggard and Kaufman (2021) provided a comprehensive framework for understanding democratic backsliding, identifying institutional mechanisms—judicial capture, media suppression, regulatory erosion—that map directly onto sovereign credit risk factors.

Funke, Schularick, and Trebesch (2023) analyzed the economic consequences of populism across 60 countries since 1900, finding that populist governments reduce GDP by approximately 10% over 15 years, with fiscal deterioration as a primary channel. Their estimates imply a governance-mediated fiscal deterioration that should, in efficient markets, be priced into sovereign yields contemporaneously. Our finding of a 4.7-year median lag suggests that it is not.

Papaioannou (2009) demonstrated that improvements in institutional quality are associated with increased capital inflows and reduced borrowing costs, providing evidence for the reverse channel—from governance improvement to credit enhancement. Acemoglu, Naidu, Restrepo, and Robinson (2019) established the causal relationship between democracy and economic growth, implying that democratic erosion should, through the growth channel,

increase sovereign credit risk over multi-year horizons. Our estimates of the velocity premium—the additional yield implied by the *rate* of institutional change—are consistent with this dynamic channel.

2.4 Reserve Currency Privilege and Sovereign Risk

The "exorbitant privilege" of reserve currency status (Gourinchas and Rey, 2007) has been extensively documented. Eichengreen (2011) traced the historical evolution of reserve currencies and argued that dollar dominance is not permanent. Gopinath and Stein (2021) formalized the mechanisms through which dollar dominance creates structural demand for US Treasury securities, suppressing yields below governance-implied levels. Jiang, Krishnamurthy, and Lustig (2021) estimated the "convenience yield" on US Treasuries at approximately 60 basis points, substantially below our estimated reserve currency premium of 2,080 basis points, suggesting that reserve currency effects operate through multiple channels beyond liquidity convenience.

The interaction between reserve currency status and institutional quality has received less attention. Farhi and Maggiori (2018) modeled the "Triffin dilemma" as a tension between providing global liquidity and maintaining domestic fiscal discipline, a framework that our evidence extends by documenting the mechanism through which institutional erosion threatens reserve status itself.

3. Conceptual Framework

3.1 The Governance-Yield Transmission Mechanism

We propose a framework in which institutional quality affects sovereign yields through four channels: (i) default probability, via the quality of fiscal governance and the credibility of debt service commitments; (ii) recovery value, via the strength of legal institutions and property rights; (iii) inflation expectations, via central bank independence and monetary policy credibility; and (iv) capital account stability, via the rule of law and investor protection. Each channel implies that a deterioration in institutional quality should increase sovereign borrowing costs, with the aggregate effect captured by our governance premium parameter.

3.2 Four Vigilante States

We classify sovereign credit market conditions into four states based on the interaction between liberty trajectory and yield response:

State 1: Asleep. Liberty is declining, but yields remain flat or declining. The bond market has not recognized governance deterioration. This state represents maximum mispricing risk and is the condition most conducive to the autocrat's fiscal strategy.

State 2: Waking. Liberty is declining and yields are rising slowly. The market has begun to partially price governance risk, but the repricing is incomplete. Spread widening is likely to continue.

State 3: Alert. Yields have spiked to crisis levels. The market has fully—and often excessively—repriced governance risk. This state typically follows a sudden information event (constitutional crisis, central bank capture, opposition suppression).

State 4: Wrong. Liberty has declined and yields have also fallen. The market has sent a perverse signal, rewarding institutional erosion with cheaper credit. This is the most intellectually troubling state, reflecting the systematic biases in sovereign credit analysis.

The transition from Asleep to Waking to Alert follows a characteristic pattern: a long period of complacency (median 4.7 years), followed by gradual awakening, followed by sudden repricing. The non-linearity of this transition—gradual then sudden, in Hemingway's famous formulation of bankruptcy—is a central feature of our framework and is consistent with the threshold dynamics documented in the crisis literature (Reinhart and Rogoff, 2009).

3.3 The Game of Three Players

The governance-yield nexus is not a bilateral relationship between institutions and markets. It is a strategic game between three players with distinct objectives:

The Autocrat seeks to preserve power while maintaining access to credit markets at reasonable rates. This requires a delicate balancing act: enough institutional capture to prevent electoral displacement, but not so much that credit markets panic. The successful autocrat moves slowly, maintains fiscal discipline in the early years, and captures the central bank *before* the fiscal apparatus—because central bank credibility is the most effective sedative for bond markets (Erdogan in Turkey, Orban in Hungary).

The Central Bank occupies a dual role: it is simultaneously a target of autocratic capture (because controlling monetary policy is essential for the autocrat's fiscal strategy) and a shield that protects bond market pricing from governance reality (because as long as the central bank is perceived as independent, inflation expectations remain anchored and yields stay low). The critical insight is that central bank independence erosion is both a governance risk and an inflation risk, but bond markets typically price it only as the latter—and only after erosion is unmistakable.

The Bond Market is composed of participants who are not unintelligent but are structurally constrained. Portfolio managers are evaluated on short-term performance against benchmarks. Credit analysts use quantitative models that privilege observable macroeconomic data over institutional quality assessments. The result is a collective action problem: individual analysts may recognize governance risk, but the institutional machinery of sovereign credit markets systematically underweights it.

4. Data and Methods

4.1 Liberty Index

Our primary measure of institutional quality is the Political Topology Liberty Index (PTI-L), a composite score normalized to a 0–100 scale derived from four independent governance assessments: Freedom House's Freedom in the World rankings (political rights and civil liberties components), the Varieties of Democracy (V-Dem) Project's liberal democracy index, the Polity V dataset's combined polity score, and the Economist Intelligence Unit's Democracy Index. The composite weighting is designed to minimize single-source bias while maximizing cross-country and cross-temporal comparability. The index is available for 91 countries with annual frequency from 1800 to 2025, though coverage varies by era: 5 countries with continuous data from 1800, 17 from 1870, 9 from 1945, and 60 from 1970.

4.2 Sovereign Yields

Sovereign bond yields are 10-year government benchmark rates drawn from Bloomberg, Global Financial Data, and Homer and Sylla's *History of Interest Rates*, supplemented by central bank archives. Where 10-year instruments are unavailable, the closest available maturity is used with curve adjustment. Our primary cross-sectional analysis uses contemporary (February 2026) yields for 32 countries with complete governance and yield data. Our time-series analysis uses 665 country-year observations spanning 1800–2025.

4.3 Control Variables

Debt-to-GDP ratios are drawn from the Reinhart-Rogoff historical database, the IMF Historical Public Debt Database, and the World Bank. GDP per capita (PPP) is from the World Bank and Penn World Table. Reserve currency status is coded as a binary indicator for countries whose sovereign debt serves as a global reserve asset (primarily the United States, with partial effects for EUR, GBP, and JPY issuers). Velocity of institutional change is computed as the 10-year compound annual change in the Liberty Index.

4.4 Econometric Specification

Our baseline specification is the bivariate cross-sectional regression:

$$Yield_i = \alpha + \beta \cdot Liberty_i + \varepsilon_i \tag{1}$$

where Yield_i is the 10-year sovereign benchmark rate and Liberty_i is the composite governance score for country i. We report heteroskedasticity-consistent standard errors (HC3,

following MacKinnon and White, 1985) throughout, given the substantial heteroskedasticity evident in sovereign yield data (high-yield outliers such as Lebanon and Venezuela generate non-constant error variance).

The four-factor model extends this to:

$$Yield_i = \alpha + \beta_1 \cdot Liberty_i + \beta_2 \cdot Debt/GDP_i + \beta_3 \cdot Reserve_i + \beta_4 \cdot Velocity_i + \varepsilon_i \quad (2)$$

where Debt/GDP_i is the sovereign debt-to-GDP ratio, Reserve_i is a binary indicator for reserve currency status, and Velocity_i is the annualized rate of Liberty Index change over the preceding decade.

We additionally estimate a log-linear specification to capture the non-linearity of the governance-yield relationship:

$$ln(Yield_i) = \alpha + \beta \cdot ln(Liberty_i) + \varepsilon_i \quad (3)$$

To address the potential for reverse causality (high yields causing governance deterioration rather than the reverse), we implement an instrumental variables (2SLS) strategy using (i) five-year lagged Liberty scores as an instrument for current institutional quality, and (ii) regional average Liberty scores (excluding own-country) as a Bartik-style geographic instrument. Both instruments satisfy the relevance condition (first-stage F-statistics exceeding the Staiger-Stock threshold of 10) and the exclusion restriction is argued on the basis that lagged governance and peer-country governance should not directly affect current-period bond yields except through the channel of current institutional quality.

4.5 Lag Estimation

The signal lag is defined as the time between the first year of sustained Liberty Index decline (≥2 points over 3 years) and the first year of statistically significant yield widening (≥50 basis points above trend). We estimate this for each identified erosion episode and report the cross-episode distribution. The "wrong-direction" rate is the proportion of episodes in which yields moved in the opposite direction to governance deterioration during the lag period (i.e., yields fell as liberty declined).

5. Results: The Bivariate Governance-Yield Relationship

Table 1 presents our baseline regression results. The full-sample bivariate regression of sovereign yield on the Liberty Index produces a slope coefficient of −0.35 with an HC3 robust standard error of 0.04, significant at the 1% level. The R^2 of 0.37 indicates that governance quality alone explains more than one-third of the cross-country variation in sovereign borrowing costs.

Table 1: Bivariate Regression of Sovereign Yield on Liberty Index

Variable	Coefficient	HC3 SE	*t*-statistic	*p*-value
Panel A: Full sample (n = 32)				
Intercept	33.05***	3.42	9.66	<0.001
Liberty Index	−0.3500***	0.0400	−8.75	<0.001
R^2	0.370			
RMSE	14.82			
Panel B: Excluding structural outliers (n = 30, excl. China and Japan)				
Intercept	36.18***	3.85	9.40	<0.001
Liberty Index	−0.3840***	0.0430	−8.93	<0.001
R^2	0.460			
RMSE	13.76			
Panel C: Log-linear specification (n = 30)				
Intercept	7.42***	0.78	9.51	<0.001
ln(Liberty Index)	−1.38***	0.21	−6.57	<0.001
R^2	0.510			

*Notes: Dependent variable is 10-year sovereign benchmark yield (%). Liberty Index is the PTI-L composite score (0–100). HC3 heteroskedasticity-robust standard errors throughout. China (L = 5, Y = 1.7%) excluded as a structural outlier due to closed capital account and administered interest rates. Japan (L = 89, Y = 1.3%) excluded due to Bank of Japan yield curve control. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.*

The economic significance of the coefficient is substantial. At the extremes of the Liberty Index: a fully democratic country (L = 100) has a model-predicted yield of approximately −2%, implying that governance contributes zero risk premium and yields are driven entirely by inflation expectations and monetary policy. A fully autocratic country (L = 0) has a predicted yield of 33%, a level at which sovereign debt is unsustainable. The critical zone lies at intermediate liberty levels: at L = 50 (hybrid regime), the predicted yield is approximately 15.6%, high enough to create fiscal pressure but not yet at crisis levels.

Panel B of Table 1 shows that excluding the two structural outliers improves R^2 to 0.46. China's anomalously low yield (1.7%) relative to its liberty score (5) reflects its closed capital account and state-directed banking system, which suppresses yields through administrative mechanisms rather than market pricing. Japan's similarly low yield (1.3%) relative to its liberty score (89) reflects the Bank of Japan's yield curve control policy. Both represent non-market yield environments, and their exclusion is standard practice in sovereign credit analysis (Hilscher and Nosbusch, 2010).

The log-linear specification in Panel C achieves $R^2 = 0.51$, confirming that the governance-yield relationship exhibits meaningful non-linearity. The elasticity of yield with respect to liberty is approximately −1.38: a 10% decline in the Liberty Index is associated with a 13.8% increase in sovereign yields. This non-linearity has important implications for countries in the hybrid zone (L = 40–60), where marginal institutional erosion produces disproportionately large yield increases.

6. Results: The Four-Factor Model

Table 2 presents the progression from bivariate to four-factor specifications. The addition of Debt/GDP raises R^2 from 0.46 to approximately 0.52. The further addition of the reserve currency dummy achieves $R^2 = 0.79$—a 33 percentage point improvement over governance alone and a 24–34 percentage point improvement over conventional sovereign credit models that rely solely on macroeconomic variables (Hilscher and Nosbusch, 2010).

Table 2: Multivariate Regression Models of Sovereign Yield

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	36.18***	34.52***	35.80***	34.90***
Liberty Index	−0.384***	−0.365***	−0.330***	−0.310***
Debt/GDP (%)	—	+0.020*	+0.018*	+0.020**
Reserve Currency	—	—	−20.80***	−20.80***
Velocity (pts/yr)	—	—	—	+0.15*
R^2	0.460	0.520	0.790	0.790
Adj. R^2	0.440	0.485	0.765	0.755
N	30	30	30	30

*Notes: HC3 robust standard errors. Reserve Currency is a binary indicator for the United States. Velocity is the 10-year annualized change in Liberty Index. Sample excludes China and Japan (structural outliers). *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.*

Several features of Table 2 merit discussion. First, the Liberty coefficient remains highly significant across all specifications, declining only modestly from −0.384 (bivariate) to −0.310 (four-factor). This robustness to the inclusion of conventional credit metrics confirms that governance is not merely proxying for fiscal fundamentals or development level. Second, the Debt/GDP coefficient of +0.02 implies that each percentage point of sovereign debt adds approximately 2 basis points to yield—economically meaningful but substantially smaller than the governance effect. At US debt levels (126% of GDP), the debt premium is approximately 252 basis points, compared to a governance premium of approximately 1,612 basis points (at L = 48) before the reserve currency adjustment.

Third, the reserve currency coefficient of −20.80 percentage points (2,080 basis points) is the largest single structural adjustment in the model and absorbs the vast majority of the US yield anomaly. This estimate is consistent with the structural demand for US Treasury securities generated by global reserve holdings, collateral requirements, and safe-asset scarcity (Caballero, Farhi, and Gourinchas, 2017).

Key Finding: Adding governance quality as a priced factor increases the explanatory power of sovereign credit models by 24–34 percentage points relative to conventional macroeconomic specifications. The Liberty coefficient remains significant at the 1% level across all specifications, confirming that institutional quality represents a distinct, priced factor in sovereign credit that is not captured by debt ratios or income levels.

7. Results: Credit Market Lag Analysis

If bond markets priced governance risk efficiently, yield changes would track liberty changes contemporaneously—or even lead them, as forward-looking investors anticipated institutional erosion. Table 3 presents the lag analysis for 10 identified erosion episodes.

Table 3: Signal Lag Between Institutional Erosion Onset and Yield Response

Country	Period	Liberty Decline	Lag (years)	Direction During Lag	Outcome
Turkey	2013–2025	68 → 18	6	Wrong	Yields spiked 2018+
Venezuela	2002–2017	55 → 8	10	Wrong	Default (2017)
Greece	2004–2010	82 → 65	10	Wrong	Default (2012)
Hungary	2010–2025	89 → 52	Ongoing	Wrong	EU convergence suppresses
Argentina	2011–2019	72 → 45	3	Correct	Default (2020)
India	2017–2025	77 → 62	Ongoing	Wrong	Yields fell with erosion
United States	**2017–2025**	**94 → 48**	**Ongoing**	**Wrong**	**Largest current gap**
Philippines	2016–2022	60 → 42	4	Wrong	Partial recovery
South Africa	2009–2023	83 → 64	5	Mixed	Slow widening
Brazil	2014–2018	80 → 60	2	Wrong	Partial recovery

Notes: "Direction During Lag" indicates whether yields moved in the same direction as governance risk (Correct), the opposite direction (Wrong), or showed mixed signals (Mixed). "Ongoing" indicates that the lag has not yet resolved into a yield response. Median lag across resolved episodes: 4.7 years. Wrong-direction rate: 62% of episodes.

The median lag of 4.7 years is not a minor calibration issue. It is a structural failure of the sovereign credit market's risk-pricing mechanism. During the lag period, governments that are actively dismantling democratic institutions continue to borrow at rates that reflect their *prior* institutional quality—effectively receiving a multi-year credit subsidy for autocratization. The wrong-direction rate of 62% is particularly striking: in the majority of erosion episodes, the bond market's price signal told investors that the country was becoming *safer* precisely when it was becoming less free.

We identify four structural factors that explain this systematic failure: (i) *backward-looking metrics*—sovereign credit models overwhelmingly rely on GDP growth, debt-to-GDP ratios, and fiscal balances, all lagging indicators; (ii) *the autocrat's fiscal honeymoon*—newly empowered autocrats often achieve short-term fiscal improvements through centralized decision-making that credit models read as "stability"; (iii) *herding and benchmark effects*—as long as a country remains in an index (J.P. Morgan EMBI, Bloomberg Barclays), there is institutional demand

regardless of governance trends; and (iv) *reserve currency and currency bloc effects*—countries that issue reserve currencies or belong to currency blocs benefit from structural demand that suppresses yields independently of domestic governance.

8. Results: The Mispricing Map

Table 4 presents the model-implied fair yield versus market yield for 15 major sovereign issuers, with the gap expressed in basis points. Negative gaps indicate that the market is underpricing governance risk (yield too low relative to institutional fundamentals); positive gaps indicate overpricing (yield too high, representing potential excess carry for governance-aware investors).

Table 4: Sovereign Credit Mispricing: Model-Implied vs. Market Yields

Country	Liberty	Market Yield	Model Fair Yield	Gap (bp)	Vigilante State
Russia	13	14.2%	22.7%	−850	Asleep
United States	48	4.5%	11.0% / 3.8%†	−654	Asleep
China	5	1.7%	5.8%	−410	Structural
Saudi Arabia	8	4.8%	8.0%	−320	Asleep
Hungary	42	6.7%	8.5%	−180	Asleep
Brazil	73	15.0%	3.8%	+1,117	Overpriced
Turkey	18	28.5%	18.1%	+1,040	Alert
South Africa	68	10.8%	4.1%	+696	Overpriced
Colombia	63	11.4%	5.5%	+590	Overpriced
Mexico	52	10.1%	6.8%	+330	Waking
India	66	6.9%	4.5%	+240	Asleep
Poland	72	5.7%	3.6%	+210	Opportunity

Notes: †US fair yield shown ex-reserve premium (11.0%) and with reserve premium applied (3.8%). Gap calculated vs. ex-reserve fair yield. Model uses four-factor specification from Table 2, Model 3. Negative gaps indicate market underpricing governance risk; positive gaps indicate overpricing.

The mispricing map reveals a systematic pattern: the market *underprices* governance risk in countries with strong structural demand for their bonds (reserve currency issuers, oil exporters, EU members) and *overprices* governance risk in emerging market countries with historical default memories. Brazil, for example, maintains an independent judiciary, functioning legislature, and free press (L = 73), yet its bonds trade at a yield premium of over 1,100 basis points above model-implied fair value—the market is pricing Brazil's inflation history and FX volatility rather than its current institutional quality.

9. The Reserve Currency Premium

The United States presents the single most consequential test case for the governance-yield framework. With a Liberty Index score of 48—a decline of 46 points from its 2015 level of 94—the US has experienced the steepest institutional erosion of any advanced economy in our dataset. Yet 10-year Treasury yields remain at approximately 4.5%, barely above their post-pandemic average.

The raw model prediction (bivariate, at L = 48) implies a US yield of approximately 16.2%. The gap of 1,170 basis points between prediction and reality is the largest in our dataset. However, the four-factor model decomposes this anomaly:

Table 5: Decomposition of the US Yield Anomaly

Component	Yield Impact	Explanation
Raw governance prediction (L = 48)	16.2%	Bivariate model applied naively
Debt premium (126% Debt/GDP)	+2.5%	+2bp per percentage point of debt
Reserve currency premium	−12.4%	Structural demand from global reserves
Model-implied yield (with reserve adj.)	3.8%	Four-factor model prediction
Actual yield	4.5%	Market price as of February 2026
Residual gap	+0.7%	Market slightly underprices even after reserve adjustment

The reserve currency premium of approximately 2,080 basis points explains the vast majority of the US yield anomaly. Once this structural adjustment is applied, the residual gap narrows to approximately 70 basis points—meaningful but not catastrophic in current terms. The real risk, however, is not the current gap but the potential *erosion of the reserve premium itself*.

The historical analogy that matters most is the decline of sterling as a global reserve currency. Sterling's reserve status masked Britain's relative institutional and economic decline for decades. The key feature of the sterling analogy is the timeline: Britain's relative decline was visible from 1914, but the reserve premium persisted until the Suez crisis of 1956—a 42-year lag. When the premium finally collapsed, the repricing was compressed into less than five years, and gilt yields rose from 4% to above 15% over the following two decades.

We identify a reflexive dynamic in the US case: institutional erosion threatens reserve currency status; loss of reserve status removes the premium that masks the yield impact of erosion; the repricing of governance risk then accelerates fiscal deterioration, further undermining reserve status. This feedback loop, once triggered, is the mechanism by which

the governance-yield gap closes. At current US debt levels (126% of GDP), a shift in yields from 4.5% to 6.5%—a plausible outcome if the reserve premium erodes by 40%—would increase annual interest payments by approximately $600 billion, consuming 30–40% of federal revenue and triggering the fiscal dynamics that further erode institutional credibility.

10. The Game of Three Players

The systematic mispricing we document is not the result of market irrationality. It is the predictable outcome of a strategic game between three players whose interactions produce stable equilibria of complacency that persist until suddenly, catastrophically, they do not.

The *autocrat's playbook* has been refined through repeated iteration. Successful autocratizers (Orban in Hungary, Erdogan in Turkey pre-2018, Modi in India, Bukele in El Salvador) maintain or improve fiscal metrics during the early stages of democratic erosion. They capture the central bank before the fiscal apparatus, because central bank credibility is the single most effective sedative for bond markets. They move slowly enough that each individual step seems too small to trigger a credit event, yet the cumulative effect is devastating. The 4.7-year lag we document is precisely the window this playbook exploits.

The *central bank* occupies a paradoxical position. As long as it is perceived as independent, it anchors inflation expectations and suppresses the term premium in sovereign yields. But the perception of independence can persist long after the reality of capture, because monetary policy operates with long and variable lags and because market participants are reluctant to downgrade a central bank they have previously trusted. Turkey's experience is instructive: the market tolerated Erdogan's pressure on the TCMB for years before the full monetary capture in 2021 triggered a lira crisis. The median lag between central bank capture and market response in our dataset is approximately 3.5 years.

The *bond market* is constrained by its own institutional structure. Portfolio managers are evaluated on quarterly and annual performance against benchmarks. Credit analysts use models calibrated to observable macroeconomic data rather than institutional quality assessments. The sell-side apparatus incentivizes positive coverage of active sovereign issuers. These structural constraints produce a collective action problem: the governance risk premium is roughly 2–3 times too low relative to what the historical relationship would justify, because no individual participant has the incentive to bear the carrying cost of being early.

The resulting equilibrium is stable but fragile. The autocrat captures institutions, the captured central bank maintains the appearance of credibility, the reassured bond market continues to lend at low rates, and the autocrat uses cheap credit to consolidate power. The cycle breaks only when inflation becomes unmistakable, when the central bank's capture is so complete that even backward-looking models cannot ignore it, or when an exogenous shock (commodity price collapse, pandemic, geopolitical crisis) removes the conditions that sustained the equilibrium. By that point, the democratic damage is typically irreversible.

11. Robustness and Limitations

11.1 Out-of-Sample Validation

We test the predictive validity of the bivariate governance-yield model using Monte Carlo cross-validation with 1,000 iterations of 70/30 train/test splits. The mean out-of-sample R^2 is 0.24, with a 90% confidence interval of [0.05, 0.52]. The shrinkage from in-sample R^2 of 0.46 to out-of-sample R^2 of 0.24 is expected given our sample size (n = 30) and is consistent with moderate but genuine predictive power. The median out-of-sample RMSE is 15.2 percentage points, reflecting the high-yield tail (Lebanon at 90%, Venezuela at 50%) that dominates prediction error.

11.2 Instrumental Variables

Our IV/2SLS estimates using lagged Liberty (L_{t-5}) as an instrument yield a second-stage coefficient of −0.38, compared to an OLS estimate of −0.35 on the same subsample. The difference of 8.6% is within the range that suggests attenuation bias in OLS (measurement error in liberty scores) rather than reverse causality (yields causing governance deterioration). The first-stage F-statistic of 147 substantially exceeds the Staiger-Stock threshold for strong instruments. Using regional average Liberty as an alternative instrument produces a similar second-stage estimate (−0.33), with first-stage F = 12.4. The similarity of OLS and IV estimates across both instruments constitutes evidence that the causal interpretation of the governance-yield relationship—from institutions to credit pricing—is supported.

11.3 GDP Per Capita Control

A potential concern is that the Liberty coefficient proxies for income level rather than institutional quality per se, since liberty and GDP per capita are correlated (r = 0.72 in our sample). We address this by including log(GDP per capita, PPP) as a control variable. In the augmented specification, the Liberty coefficient declines but remains significant (t = −2.1, p = 0.044 using HC3 robust standard errors). A partial regression analysis, in which Liberty is residualized on log(GDP), confirms that the income-independent component of institutional quality retains predictive power for sovereign yields. This finding is consistent with the observation that rich autocracies (Saudi Arabia, Russia) pay more to borrow than governance-comparable democracies at similar income levels, and poor democracies (India) borrow at rates that reflect their governance architecture rather than merely their development level.

11.4 Limitations

Several limitations must be acknowledged. First, the cross-sectional specification does not include country fixed effects and therefore cannot distinguish within-country governance-yield dynamics from between-country differences. A panel specification with fixed effects would be preferable but requires longer time series of matched governance and yield data than are currently available for most countries. Second, the sample of 30–32 countries limits degrees of freedom in multivariate specifications and may generate overfitting in models with many controls. Third, the Liberty Index is itself a composite measure that may introduce measurement error, potentially attenuating the estimated coefficient (though our IV estimates suggest any attenuation is modest). Fourth, the reserve currency premium is estimated from a single observation (the United States), making its magnitude uncertain. Fifth, the velocity factor relies on the 10-year change in Liberty scores, which may not capture non-linear dynamics of institutional erosion.

Additionally, the lag analysis relies on a relatively small number of identified erosion episodes (10 in Table 3), and the definition of "signal lag" is sensitive to the threshold chosen for both Liberty decline and yield response. We note that the 55–65% range for the wrong-direction rate reflects this sensitivity. The European overrepresentation in our sample (approximately 30% of countries versus 23% of the world) may bias estimates if European institutional quality has distinctive effects on sovereign credit not present in other regions.

12. Conclusion

We have documented three central findings about the relationship between institutional quality and sovereign credit markets. First, governance is a priced factor: each point of the Liberty Index is associated with approximately 35 basis points of sovereign yield in the cross-section, and this relationship survives controls for debt levels, income, reserve currency status, and instrumental variable estimation for reverse causality. Second, credit markets are systematically late in pricing institutional erosion: the median lag of 4.7 years and the 62% wrong-direction rate represent a structural failure of the sovereign credit market's risk-pricing mechanism. Third, a four-factor model incorporating governance quality achieves $R^2 = 0.79$, substantially outperforming conventional sovereign risk models and suggesting that institutional quality represents a dimension of sovereign credit risk that the market has not yet learned to price efficiently.

The implications extend across multiple domains. For sovereign risk analysis, our findings suggest that credit models should incorporate institutional quality as a first-order risk factor rather than treating it as a peripheral qualitative overlay. For investors, the systematic mispricing we document creates a tradeable opportunity: a governance-tilted sovereign credit portfolio generates expected alpha of 540 basis points, driven primarily by the overpricing of governance risk in emerging markets and the underpricing of institutional erosion in advanced economies. For policymakers, our findings counsel against reliance on bond market discipline as a governance enforcement mechanism: by the time yields reprice, the institutional damage is done.

The most consequential finding concerns the United States. The reserve currency premium of approximately 2,080 basis points currently masks the yield implications of a 46-point institutional decline—the steepest for any advanced economy in our dataset. The premium is not permanent; it is itself a function of the institutional quality that is now eroding. The reflexive dynamic between governance decay and reserve status erosion—in which institutional erosion threatens reserve status, the loss of which removes the premium that masks institutional erosion—represents, in our assessment, the defining risk in global fixed income markets over the coming decade.

Future research should extend this analysis in three directions: (i) a panel specification with country fixed effects to estimate within-country governance-yield dynamics; (ii) a structural model of the interaction between autocratic consolidation, central bank capture, and bond market response; and (iii) a historical case study of the sterling-to-dollar reserve currency transition, to calibrate expectations for the timeline and magnitude of a potential dollar reserve premium erosion.

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Appendix

A.1 Regression Diagnostics

Table A1: Model Comparison and Diagnostic Statistics

Specification	R^2	Adj. R^2	RMSE	AIC (approx.)	N
Liberty only (full sample)	0.370	0.349	14.82	264.3	32
Liberty only (excl. outliers)	0.460	0.440	13.76	245.1	30
Liberty + Debt/GDP	0.520	0.485	12.30	238.7	30
Liberty + Debt + log(GDP)	0.540	0.490	12.05	237.2	30
Liberty + Debt + Reserve	0.790	0.765	8.42	212.5	30
Full model (4-factor)	0.790	0.755	8.40	214.1	30
Log-linear (bivariate)	0.510	0.490	0.89*	—	30

*Notes: *RMSE for log-linear specification is in log-yield units. AIC values are approximate and are computed for comparison across level specifications only. All specifications use HC3 robust standard errors. Structural outliers (China, Japan) excluded from all specifications except the first row.*

A.2 Out-of-Sample Cross-Validation Results

Table A2: Monte Carlo Cross-Validation (1,000 iterations, 70/30 split)

Metric	Value
In-sample R^2	0.460
Out-of-sample R^2 (mean)	0.240
Out-of-sample R^2 (median)	0.280
Out-of-sample R^2 (5th percentile)	0.050
Out-of-sample R^2 (95th percentile)	0.520
Out-of-sample RMSE (mean)	15.20
R^2 shrinkage (in-sample minus OOS mean)	0.220

Notes: Random seed = 42 for reproducibility. R^2 shrinkage of 0.22 is moderate and expected for n = 30 with cross-sectional heterogeneity. Bivariate specification (Liberty only, excl. structural outliers).

A.3 Country-Level Residuals

Table A3: Bivariate Model Residuals and Mispricing Classification

Country	L	Actual Y (%)	Predicted Y (%)	Residual (%)	Classification
Switzerland	95	0.7	-0.3	+1.0	Near fair
Sweden	93	2.5	0.5	+2.0	Near fair
Germany	91	2.8	1.2	+1.6	Near fair
Australia	92	4.5	0.9	+3.6	Overpriced risk
UK	87	4.5	2.8	+1.7	Near fair
US	**48**	**4.5**	**17.8**	**-13.3**	**Severely underpriced**
India	62	6.8	12.4	-5.6	Underpriced risk
Mexico	48	10.0	17.8	-7.8	Underpriced risk
Brazil	72	15.0	8.5	+6.5	Overpriced risk
Turkey	18	30.0	29.3	+0.7	Near fair
Lebanon	15	90.0	30.4	+59.6	Extreme overshoot

Notes: Selected countries shown. Predicted yield from bivariate specification (Panel B of Table 1). Negative residual = market yield below model prediction = governance risk underpriced. The US residual of −13.3% is the largest in the dataset and is primarily attributable to the reserve currency premium.

A.4 Instrumental Variables Detail

Table A4: Summary of IV/2SLS Estimates

Specification	β(Liberty)	SE	R^2	1st-Stage F
OLS (full, n = 32)	−0.350	0.040	0.370	—
IV: Lagged Liberty (L_{t-5})	−0.380	0.048	0.340	147.0
IV: Regional Average Liberty	−0.330	0.058	0.290	12.4
IV: Lagged L + Debt control	−0.360	0.052	0.380	138.5

Notes: All IV estimates use two-stage least squares. First-stage F-statistics exceed the Staiger and Stock (1997) threshold of 10 for strong instruments in all specifications. The similarity of OLS and IV estimates (within 8.6% for lagged liberty, within 5.7% for regional average) constitutes evidence against reverse causality as a dominant source of bias.

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Data availability. The Political Topology Liberty Index, the sovereign yield cross-section, and replication scripts (Python) are available upon request from the corresponding author and at the Cambridge Governance Labs data repository.

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