

Trustworthy  
Digital Society

# A Global **Trust** Index for Sovereign & Sub-Sovereign Assessments

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# Preface

This paper introduces the concept of a Global Trust Index (GTI), a proposal to fundamentally improve the reliability and timeliness of sovereign and sub-sovereign credit ratings assessments. Current assessment frameworks employed by major rating agencies (Moody's, S&P, and Fitch) rely heavily on the World Bank's Worldwide Governance Indicators (WGI) to quantify institutional and governance factors, significantly affecting credit rating determinations. However, these annual metrics suffer from significant methodological limitations, including substantial time lags, perception-based biases, wide uncertainty intervals, and limited granularity. Most critically, in November 2024, the World Bank itself issued an explicit advisory warning against using the WGI for credit assessments or other critical financial decisions, underscoring the need for alternative measures.

The proposed GTI addresses these deficiencies by leveraging the digital transformation of government services to create a new generation of governance indicators. Rather than relying on subjective surveys and expert opinions, the GTI would incorporate real-time operational data from digital government platforms, including objective service delivery metrics, system performance indicators, user experience feedback, and measures of digital trust and cybersecurity resilience. This approach would transform the measurement of institutional quality from its current annual, national-level and perception-based exercise into a continuous, evidence-based monitoring system that extends to the subnational level.

For sovereign assessments, the GTI would provide a new level of transparency into government effectiveness, offering capital markets timely signals of institutional performance without the significant delays involved with current methodologies. For sub-sovereign assessments, where comparable governance data is currently absent, the GTI's granular, service-level metrics would enable differentiation between regional and local government performance within countries, potentially identifying credit-relevant factors that are invisible under current frameworks.

By linking public service delivery standards to capital market confidence, the GTI would incentivise governments to invest in digital transformation initiatives and service improvements, better aligning public and investor interests. Although requiring significant international coordination, the implementation of such an index would deliver more accurate, timely, and actionable assessments of government creditworthiness, while driving improvements in public service delivery worldwide.

# Introduction

The governing institutions of a country, region, or municipality express their effectiveness through the quality of public services that they deliver. Institutions translate policy into practice through planning, funding, implementing, and maintaining service operations that fulfil complex social and economic needs. Standards of public services enjoyed by different populations reflect the competence, reliability, adaptability, innovation, and accountability of their respective governments. The capacity of governments to deliver necessary services to individuals – both on a general basis and during individuals' critical life-events – forms a basis for their popular legitimacy. Credit rating agencies, in their assessments of sovereign and sub-sovereign borrowers, may reasonably consider the quality of government services to inform evaluations of institutional trustworthiness.

The accelerating digital transformation of government enables increasingly detailed monitoring of credit-relevant institutional performance. Digital public service platforms support the generation of voluminous data on service quality; objective metrics for processes and outcomes, and subjective metrics for user experience and trust. Measures of public service quality constructed from this data may be able to proxy as indicators for institutional credibility at the national, regional, and local levels of government. A benchmarking

indicator that standardises the measurement of government service quality – leveraging data on user-experience and public trust – could be designed for use as an input in sovereign and sub-sovereign credit assessments. Such an indicator – a **global trust index** – would be constructed as a summary statistic of quality and performance metrics across the public-service portfolios of debt-issuing governments. In addition to standards of service delivery, the index would incorporate formal assessments of the trustworthiness of digital systems underlying government service provision, capturing an emerging element of critical institutional risk.<sup>1</sup>

This paper will describe current assessment methodologies of the three major credit ratings agencies – Moody's, Standard & Poor's, and Fitch – before considering the role that a global trust index could play in supporting credit assessments in the digital age.

<sup>1</sup> See the accompanying TDS article *An Index for Trustworthy Government in the Digital Age* (TDS, 2025).

# Assessment Frameworks

The three major credit rating agencies account for around 95% of credit ratings industry market share. The agencies categorise long-term debt instruments into *investment* (higher-price, lower-yield) and *speculative* (lower-price, higher-yield) grades (**Table 1**). In addition to assigning ratings to government debt-instruments, agencies may also assign a positive or negative outlook in their assessments – indicating the direction of an expected future rating change. Major agency ratings significantly affect governments' financing costs, with prices of bonds and credit default swaps highly sensitive to the potential of agency rating upgrades or downgrades. **Figures 1 and 2** show the sovereign ratings currently assigned by the three major agencies and their negative correlation to ten-year sovereign yield spreads. Agency ratings grades

have here been converted into a common scale, with fractional adjustments for *positive* and *negative* outlooks.

Varying levels of detail on assessment frameworks have been made public by the three major agencies, although the precise methods used to determine credit ratings are proprietary and subject to regular change. All three agencies assign ratings based on similar sets of factors, making extensive use of primary data from established international sources including the World Bank, the International Monetary Fund (IMF), national statistics offices, and central banks. These are supplemented using secondary (external) data sources, which commonly provide the indicative metrics used to score the qualitative institutional characteristics of governments.

**Table 1. Ratings Agency Grades**

Grade	Description	S&P / Fitch	Moody's	Countries (Averages)
Investment	Prime	AAA	Aaa	Australia, Denmark, Germany, Netherlands, Norway, Singapore, Sweden, Switzerland
	High Medium Grade	AA+ AA AA-	Aa1 Aa2 Aa3	United States, Austria, Finland, Qatar, Taiwan, Ireland, Hong Kong, South Korea, United Kingdom, Czech Republic
	Upper Medium Grade	A+ A A-	A1 A2 A3	Slovenia, Iceland, Japan, China, Lithuania, Malta, Chile, Portugal, Slovakia, Latvia
	Lower Medium Grade	BBB+ BBB BBB-	Baa1 Baa2 Baa3	Bulgaria, Thailand, Philippines, Italy, Indonesia, Kazakhstan, Peru, Mexico, Greece, Hungary
Speculative	Speculative	BB+ BB BB-	Ba1 Ba2 Ba3	Colombia, Vietnam, Brazil, South Africa, Jordan
	Highly Speculative	B+ B B-	B1 B2 B3	Bangladesh, Bahrain, Nigeria, Uganda, Egypt
	Substantial Risk	CCC+ CCC CCC-	Caa1 Caa2 Caa3	Argentina, Sri Lanka
	Extremely Speculative	CC C	Ca	Zambia
	In Default	D	C	Venezuela
No Rating				Russia

Figure 1.

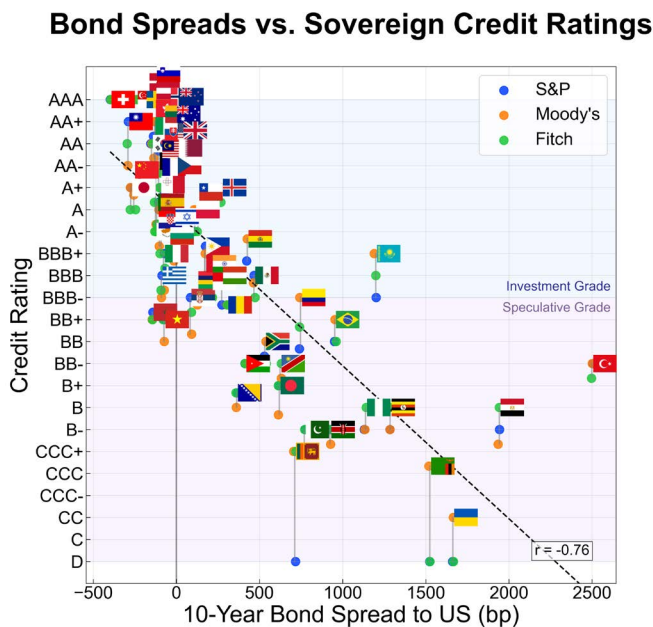
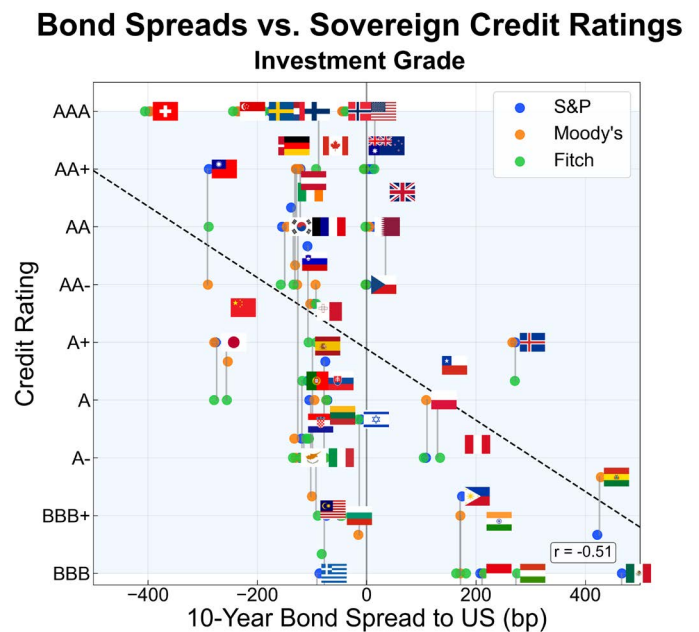


Figure 2.



## Moody's

Moody's sovereign ratings are the outcome of a committee process that applies qualitative judgement to a quantitative scorecard. The scorecard is based on four factors:

1. **Economic Strength.** Assesses the inherent strength and resilience of the sovereign's economy using Gross Domestic Product (GDP) statistics for *Economic Scale* (35%), *Income Level* (25%), *Growth* (30%) and *Volatility* (10%).<sup>2</sup>
2. **Institutions & Governance Strength.** A weighted average of four sub-factors:
  - the quality of legislative and executive institutions (20%)
  - the strength of civil society and the judiciary (20%)
  - the effectiveness of fiscal policy (30%)
  - the effectiveness of monetary and macroeconomic policy (30%).

These qualitative characteristics of sovereigns are scored using quantitative external indicators, with the main source being the World Bank Worldwide Governance Indicators (WGI). This annual publication assigns ratings to nations for institutional aspects including the rule of law, government effectiveness and regulatory quality. The World Economic Forum (WEF) Global Competitiveness Index (CGI) has also been referenced for components relating to market efficiency, infrastructure, and education, and the IMF referenced for information on standards of data availability. Assessments of **Institutions & Governance Strength** are adjusted according to government default history and track record of arrears.

3. **Fiscal Health.** Assesses the sustainability of government finances using *government debt burden* (50%) – the average of debt-to-GDP and debt-to-revenue ratios – and *government debt affordability* (50%) – the average of the ratios of interest-payments-to-GDP and



interest-payments-to-revenue. Adjustments to this factor are made according to expected changes in debt burden, the share of foreign-currency-denominated debt, and the value of public assets (including sovereign wealth funds).

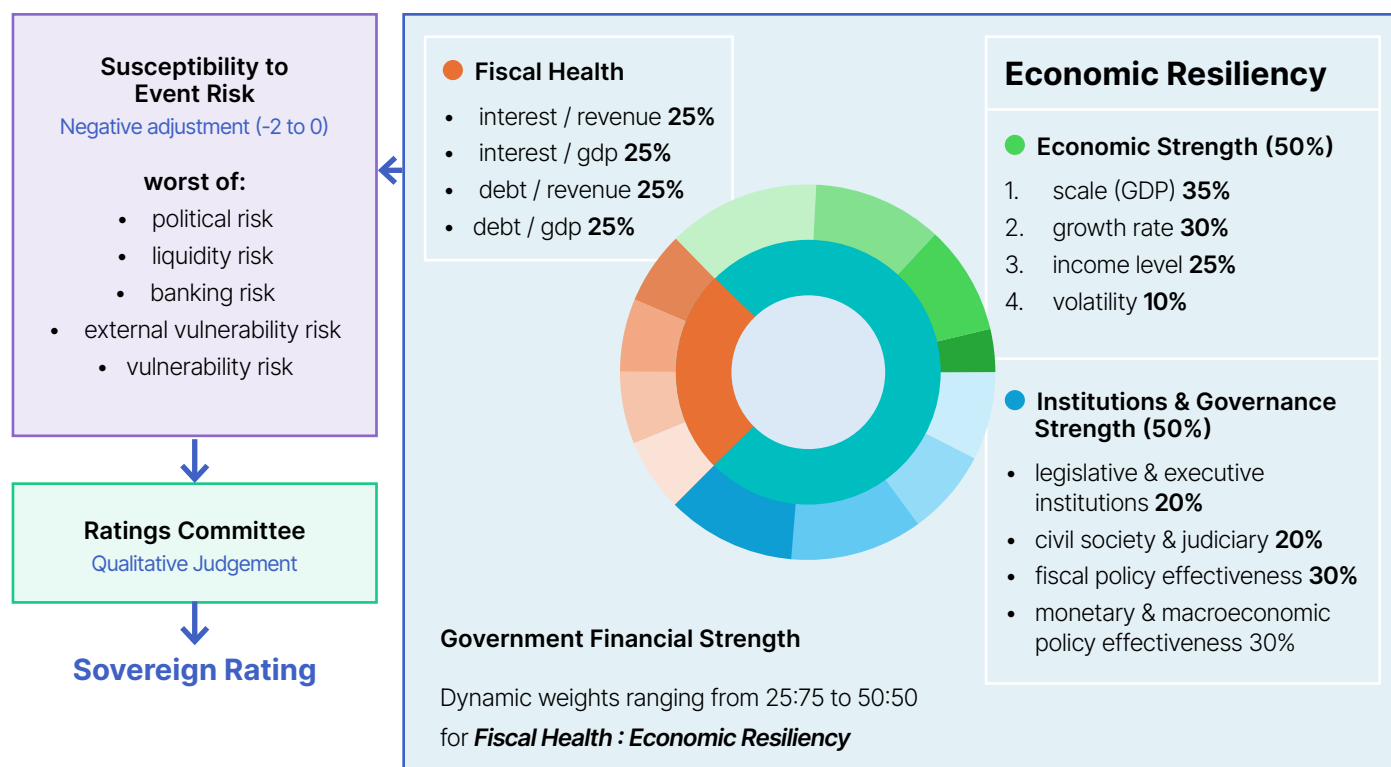
4. **Susceptibility to Event Risk.** Assesses vulnerability to sudden, disruptive events, using four sub-factors:
  - **Political Risk:** domestic political and geopolitical instability. This assessment refers to the World Bank WGs, along with socioeconomic indicators for unemployment and inequality.
  - **Government Liquidity Risk:** failure of government cash flow.
  - **Banking Sector Risk:** failure of national banking or payments systems.
  - **External Vulnerability Risk:** risks originating from the sovereign's current account position and its financing structure, sustainability of external liabilities, and access to hard currency. Environmental risks are also included in this sub-factor.

To produce the sovereign rating, the Moody's framework first combines the **Economic Strength** and **Institutions & Governance Strength** factors with equal weights to produce an **Economic Resiliency** score. This is combined with the **Fiscal Health** factor to produce the **Government Financial Strength** assessment, using dynamic weights that increase the relative importance of Economic Resiliency for wealthier sovereigns, and increase the relative importance of Fiscal Health for less wealthy sovereigns. **Figure 3** shows weights typical for the wealthiest sovereigns, with only one-quarter assigned to the Fiscal Health factor. The **Government Financial Strength** assessment can then be adjusted (*downward only*) according to the **Susceptibility to Event Risk** assessment, which uses a **minimum function** for aggregation.<sup>3</sup> The final ratings decision is determined by the qualitative judgement of a **ratings committee**, which may consider various factors idiosyncratic to the sovereign.

<sup>2</sup> **Scale** is measured using Nominal GDP, the annual value of all final domestic production (production for final consumption, investment, or export) gross of capital depreciation and net of imports. **Income** is per capita GDP adjusted for Purchasing Power Parity (PPP). PPP accounts for price differentials between countries and generally raises real-income estimates for lower-income countries. **Growth** is ten-year centred-average GDP growth, using five-year future growth forecasts published by the annual IMF World Economic Outlook (WEO). **Volatility** is measured as the Median Absolute Deviation in GDP growth over ten years.

<sup>3</sup> This minimum function lets the most negative score of the four **Susceptibility to Event Risk** sub-factors determine that factor's overall influence.

Figure 3.  
Moody's Sovereign Assessment Framework



Moody's methodology for international sub-sovereign (Regional and Local Government or RLG) ratings begins with a **Baseline Credit Assessment** of the sub-sovereign's standalone credit strength, aggregating four **Weighted Factors**:

1. **Economy (25%):** *Regional Income (15%; per capita GDP PPP), Economic Growth (5%), and Economic Diversification (5%; balance of local / regional economic activity across economic sectors).*
2. **Institutional Framework and Governance (30%):**
  - *Institutional Framework (15%):* the extent to which the prevailing framework for government powers and responsibilities is mature, robust, stable, and clearly defined in law; the process to change the framework is transparent and deliberate;

and the framework provides for strong revenue-generating and expenditure flexibility.

- *Governance (15%):* the strength and transparency of fiscal planning and budget management.
3. **Financial Performance (20%):** *Operating margin (10%), liquidity ratio (5%), and ease of access to funding (5%).*
  4. **Leverage (25%):** *Debt burden (15%) and interest burden (10%), as ratios of operating revenue.*

The preliminary **Baseline Credit Assessment** is then adjusted according to:

- three **Idiosyncratic Notching Factors:** *Significant Pressures from Material*

*Pension Obligations or Contingent Liabilities* (negative); *Ample Liquidity that Minimizes Borrowing Needs* (positive) and *Expected Trend in Fiscal Performance* (negative or positive); and

- a **Macro Operating Assessment** incorporating two factors: one for the influence of the Sovereign Rating on the Sub-sovereign; and an *Operating Environment* factor that considers the broader macroeconomic environment and institutional framework along with the extent of ordinary support from higher tiers of government.

The resulting **Baseline Credit Assessment** is evaluated together with an assessment of **Extraordinary Support**; the willingness and ability of a higher-tier government to support an RLG in financial stress beyond ordinary levels. The latter assessment is primarily based on five factors:<sup>4</sup>

1. *Legal Framework / Policy*: the institutional requirements for (or barriers to) a higher-tier government providing support.
2. *Reputational Risk*: incentives for higher-tier government to mitigate the damage caused by the RLG default.
3. *Moral Hazard*: incentives for higher-tier government to avoid setting bailout precedents that may foster imprudent budgetary practices.
4. *Strategic Role*: attributes of the RLG that are relevant to the support decision.

5. *Bailout History*: the higher-tier government's track record of providing extraordinary support.

Other factors – environmental, social, governance, liquidity, financial control, and event risk – may be considered by committee in final adjustments to the ratings decision (**Figure 4**). Unlike for sovereign assessments, Moody's does not report on the use of external indicators for sub-sovereign assessments.

Because the influence of the sovereign rating on the sub-sovereign rating is much less important for RLGs inside the United States than internationally, Moody's uses different frameworks for credit assessments of U.S. sub-sovereigns. These U.S. frameworks do not reference the sovereign rating, with no **Extraordinary Support** assessment made due to a long-standing precedent against U.S. federal bailouts of sub-national governments.

The same four **Weighted Factors** are used, with differences in factor weights and in the component sub-factors. One set of weights and sub-factors is used for U.S. state (and territory) governments, and another for municipal (city and county) governments (**Table 2**). Alternative quantitative inputs for sub-factors in U.S. RLG sub-sovereign assessments leverage the availability of consistent data based on U.S. financial reporting standards. Lower weights for the **Institutional Framework** factor reflect the United States' more homogenous institutional and legal environment. The **Macro Operating Assessment** is also omitted, and alternative **Notching Factors** are used to adjust the preliminary assessment.<sup>5</sup>

<sup>4</sup> The five factors determine a **Likelihood of Support** assessment, which is considered jointly in the **Extraordinary Support** assessment with the higher-tier supporting government's credit rating and a **Joint Default Analysis** which incorporates an estimate of the default correlation between the two entities.

<sup>5</sup> Notching factors differ for state and local governments. As with other assessments, final adjustments may be made based on various other considerations. The methodology for U.S. sub-sovereigns also includes **Instrument-Level Ratings**, adjustments to the issuer rating that are applied to rate the different types of securities issued in U.S. RLG debt markets; general obligation bonds (unlimited and limited tax), contingent obligations (appropriation, lease, and moral obligations), and special tax pledges.



Figure 4.  
Moody's Sub-Sovereign Assessment Framework  
International RLGs

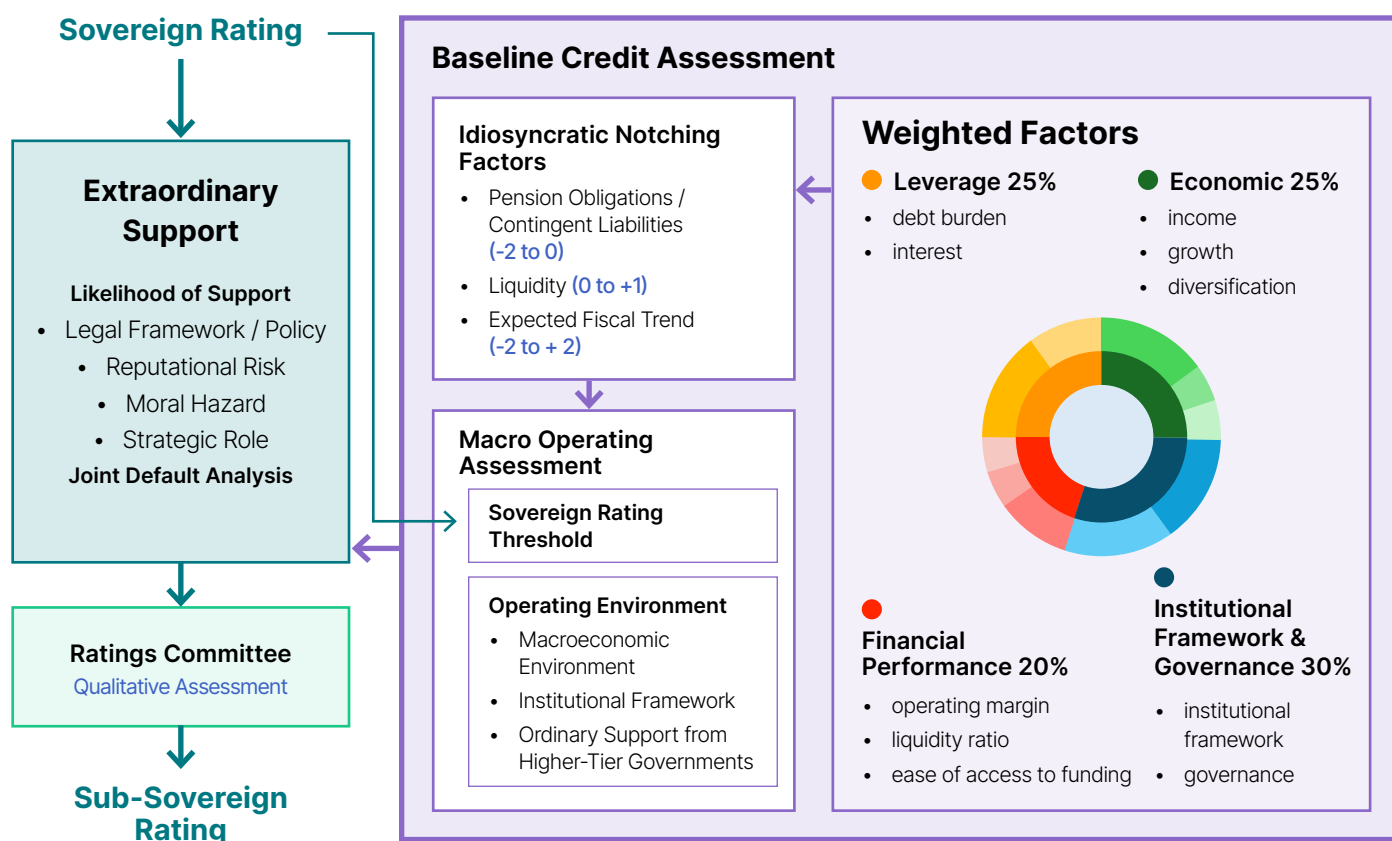


Table 2. Moody's Sub-Sovereign Weighted Factors Weight

Factor	International (non-U.S.)	U.S. States & Territories	U.S. Cities & Counties
<b>Economy</b>	<b>25%</b> <ul style="list-style-type: none"> <li>Regional Income / GDP PPP (15)</li> <li>Growth (5)</li> <li>Diversification (5)</li> </ul>	<b>30%</b> <ul style="list-style-type: none"> <li>Resident Personal Consumption Income (15)</li> <li>Growth vs U.S. National Growth (15)</li> </ul>	<b>30%</b> <ul style="list-style-type: none"> <li>Resident Median Household Income (10)</li> <li>Property Tax Base (10)</li> <li>Growth vs U.S. National Growth (10)</li> </ul>
<b>Institutional Framework &amp; Governance</b>	<b>30%</b> <ul style="list-style-type: none"> <li>Institutional Framework (15)</li> <li>Governance (15)</li> </ul>	<b>20%</b> <p>Qualitative assessment of fiscal planning &amp; management, debt management, revenue expenditure and flexibility</p>	<b>10%</b> <p>Qualitative assessment of fiscal planning &amp; management, debt management, revenue expenditure and flexibility</p>
<b>Financial Performance</b>	<b>20%</b> <ul style="list-style-type: none"> <li>Operating Margin (10)</li> <li>Liquidity Ratio (5)</li> <li>Ease of Access to Funding (5)</li> </ul>	<b>20%</b> <p>Qualitative assessment of fund balance levels, liquidity strength, and structural balance</p>	<b>30%</b> <ul style="list-style-type: none"> <li>Available Fund Balance Ratio (20)</li> <li>Liquidity Ratio (10)</li> </ul>
<b>Leverage</b>	<b>25%</b> <ul style="list-style-type: none"> <li>Debt Burden (15)</li> <li>Interest Burden (10)</li> </ul>	<b>30%</b> <ul style="list-style-type: none"> <li>Long-term Liabilities Ratio (20)</li> <li>Fixed-costs Ratio (10)</li> </ul>	<b>30%</b> <ul style="list-style-type: none"> <li>Long-term Liabilities Ratio (20)</li> <li>Fixed-costs Ratio (10)</li> </ul>

# Standard & Poor's (S&P)

S&P's sovereign assessment methodology is based on two profiles incorporating five assessments:

1. **Institutional and Economic Profile:** the average score from two assessments:
  - **Institutional Assessment:** the capacity to deliver sustainable public finances and balanced economic growth, and to respond effectively to economic and political shocks.<sup>6</sup>
  - **Economic Assessment:** income levels (GDP per capita at PPP), economic growth prospects, and economic diversity and volatility (based on sectoral composition of production and exports).
2. **Flexibility and Performance Profile:** the average score from three assessments:
  - **External Assessment:** external position and liquidity with the rest of the world; status of a sovereign's currency in international transactions
  - **Fiscal Assessment:** sustainability of a sovereign's fiscal policy, with components *Fiscal Performance and Flexibility* (trends and vulnerabilities) and *Debt Burden* (structure of debt, funding access, and contingent liabilities)
  - **Monetary Assessment:** evaluation of monetary policy credibility, the exchange-rate regime and its impact on policy coordination, and the diversification of the financial system and capital markets.

The two profiles are combined using a **risk matrix**, which specifies a particular outcome for every possible combination of profile levels.<sup>7</sup> The resulting **indicative rating level** may then be modified according to **supplemental adjustment factors** (such as liquidity positions or significant event risk) to determine the final sovereign credit rating. Unlike Moody's, S&P does not prescribe specific external indicators for sovereign assessments, although explanatory documentation implies that similar sources (i.e. World Bank WIGs) are likely to be referenced.

S&P's international sub-sovereign (RLG) assessments are based on two primary assessments:

1. **Institutional Framework Assessment:** a composite of three factors:
  - **Predictability (25%):** stability and predictability of institutional framework; frequency and impact of changes in laws, regulations, and intergovernmental fiscal arrangements.
  - **Revenue and Expenditure Balance (50%):** the adequacy of revenue to cover mandated services, the flexibility to adjust revenues and expenditures, and overall fiscal discipline.
  - **Transparency and Accountability (25%):** the quality of financial statements, level of disclosure and effectiveness of oversight mechanisms.

<sup>6</sup> Regarding specific data sources, S&P's publicly available documentation reveals only that the agency's qualitative analysis "may be informed by external sources such as the World Bank or the IMF".

<sup>7</sup> Combining two indicators in a risk matrix means that the resulting assessment score does not need to be a simple function of the component scores, such as a weighted average.

2. **Individual Credit Profile Assessment:** a composite of five equally weighted factors:
- **Economy:** socioeconomic profile, economic diversification, and growth prospects.
  - **Financial Management:** managerial quality and political impact on willingness and ability to service debt.
  - **Budgetary Performance:** level and volatility of cash flows for debt service.
  - **Liquidity:** adequacy of internal and external liquidity sources relative to servicing needs.
  - **Debt burden:** debt and interest relative to consolidated operating revenues.

The **Institutional Framework Assessment** and **Individual Credit Profile Assessment** are combined using a risk matrix to create a preliminary rating, which may then be adjusted according to the influence of the sovereign rating and other supplemental factors to arrive at the final credit assessment. For the same reasons as Moody's, S&P distinguishes the assessment methodology for sub-sovereigns inside the United States. The U.S. framework is similar but removes the influence of the sovereign rating, while employing a slightly modified set of factors and quantitative inputs for the **Individual Credit Profile**.<sup>8</sup>

<sup>8</sup> The Individual Credit Profile for U.S. sub-sovereigns incorporates a range of standardised U.S. financial reporting metrics and places more importance on RLG cash reserves and retirement liabilities.

# Fitch

Fitch's framework is based on a quantitative **Sovereign Rating Model** that incorporates eighteen macro-fiscal and external features. These features are organised into four categories and combined using variable weights that are based on coefficients yielded by regression modelling:<sup>9</sup>

1. **Structural Features (53.7%):** *Composite governance indicator (22);<sup>10</sup> GDP per capita (11.8); Share in world GDP (14.3); Default / restructuring record (4.5); Money supply (1.1)*
1. **Macroeconomic Performance (9.9%):** *Real GDP growth volatility (4.5); Consumer price inflation (3.6); Real GDP growth (1.8)*
2. **Public Finances (18.8%):** *Gross government debt (9); Interest payments (4.6); Budget balance (2.1); Foreign-currency government debt (3.0)*
3. **External Finances (17.6%):** *Reserve currency flexibility (7.2); Sovereign net foreign assets (7.5); Commodity dependence (1.1); Official international reserves (1.3); External interest service (0.2); Current account plus net Foreign Direct Investment (0.3)*

The rating generated by the **Sovereign Rating Model** is then refined by a **Qualitative Overlay** which adjusts the four factors based on considerations including forward-looking governance, policy credibility, fiscal financing flexibility, event risk,

and banking-sector liabilities. Final adjustments to the rating may be made based on **Extraordinary Considerations**, which include tail-events such as war or banking crises.

Fitch's methodology for international Sub-Sovereigns is based on a risk matrix combining:

1. **Risk Profile:** a composite of scores for six factors associated with risks to a borrower's capacity to meet financial commitments; *Revenue robustness; Revenue adjustability; Expenditure sustainability; Expenditure adjustability; Liabilities-and-liquidity robustness; Liabilities-and-liquidity flexibility.*
2. **Financial Profile:** an evaluation of debts relative to funding resources, with different ratios and formulae used depending on the nature of government revenue structures (either municipalities or broad-taxing regions and provinces).

The risk matrix produces a **Standalone Credit Profile**, which may then be adjusted according to the sovereign rating, estimations of extraordinary support, and other considerations. Like the other two major agencies, Fitch uses an alternative methodology (without any risk matrix) to rate sub-sovereigns inside the United States. Assessments of U.S. state governments are based on four "key rating drivers":

<sup>9</sup> Fitch Sovereign Rating Model weights are regularly updated based on the share of bond-spread variances explained by the indicators; weights given here are the most-recently published (for 2025 assessments).

<sup>10</sup> The *Composite Governance Indicator* is an average of World Bank WGLs.

1. **Revenue Framework:** Long-term growth prospects and the ability to raise taxes or fees.
2. **Expenditure Framework:** Expected baseline spending growth versus revenue trend and the ability to cut or defer costs.
3. **Long-Term Liability Burden:** Net tax-supported debt plus unfunded retirement liabilities.
4. **Operating Performance:** Reserve levels, historical budget management, stress-test performance (severe-but-plausible downturn scenario).

Analyst judgement – rather than a specific set of weights – is used to combine the four drivers, with a minimum function potentially used for aggregation. A resulting provisional rating may then be adjusted according to considerations (such as event risk) to arrive at a final rating. The methodology for states differs from local governments; the latter replacing the four key drivers with a **Local Government Rating Model (LGRM)** based on twelve standard metrics that capture the local government's financial profile, demographic and economic strength, and long-term liability burden. Model weights correspond to regression coefficients (similarly to those in the Fitch Sovereign Rating Model).

# Institutional and Governance Quality in Credit Assessments

Ratings agencies recognise that 'objective' statistical measures – official economic and financial indicators, such as GDP, debt ratios, and fiscal balances – do not capture the full range of factors relevant to a government's ability and willingness to meet financial obligations to creditors. Effective and reliable institutions – stable and transparent systems for law-making, judicial integrity, and professional

public administrations – are also important elements of creditworthiness, although they resist direct measurement. While official statistics inform the larger part of sovereign assessments, qualitative evaluations of institutions and governance are nevertheless assigned substantial importance in the frameworks of all three major rating agencies (**Table 3**).



**Table 3. Qualitative Institutional and Governance Components in Credit Ratings Agency Frameworks**

Assessment Dimension	Moody's	S&P	Fitch
<b>Framework component</b>	Institutions & Governance Strength scorecard factor; Political risk scorecard sub-factor	Institutional Assessment factor in Institutional and Economic Profile	Composite Governance Indicator in Structural Features factor of Sovereign Rating Model
<b>Direct Weighting</b>	~20-30% Varies due to dynamic weights	~25% Varies due to risk matrix	~22% Varies due to Qualitative Overlay
<b>Sub-components</b>	<ul style="list-style-type: none"> <li>Legislative &amp; Executive Institutions (20%)</li> <li>Civil Society &amp; Judiciary Strength (20%)</li> <li>Fiscal Policy Effectiveness (30%)</li> <li>Monetary Policy Effectiveness (30%)</li> <li>Political Risk within Event Risk assessment</li> </ul>	<ul style="list-style-type: none"> <li>Policy effectiveness and predictability</li> <li>Transparency and accountability</li> <li>Debt payment culture</li> <li>Security risks assessment</li> </ul> <p>Specific weights not publicly disclosed</p>	<p>Single composite score incorporating:</p> <ul style="list-style-type: none"> <li>Governance quality</li> <li>Rule of law</li> <li>Political stability</li> <li>Corruption control</li> </ul>
<b>External data sources</b>	<ul style="list-style-type: none"> <li>World Bank Worldwide Governance Indicators (WGI) and Country Policy &amp; Institutional Assessments</li> <li>World Economic Forum Global Competitiveness Index</li> <li>IMF data adequacy assessments</li> </ul>	Specific indicators not publicly disclosed but documentation suggests similar sources to other agencies	Composite governance indicator directly incorporates simple average of six World Bank WGI scores
<b>Methodological features</b>	Higher institutional strength weighting in Government Financial Assessment for wealthy sovereigns. Institutional weakness penalises multiple rating components.	Combines institutional and economic profiles through risk matrices rather than weighted averages.	Governance integrated into regression-based sovereign rating model using transparent governance factor, directly incorporating simple average of four WGIs
<b>Qualitative adjustment process</b>	Ratings committee can make qualitative adjustments to scorecard output based on institutional factors not captured in quantitative metrics	Institutional considerations can modify indicative rating level through supplemental factors	Forward-looking governance assessments, policy credibility, and institutional flexibility can adjust model-generated ratings
<b>Sub-sovereign treatment</b>	<p>Institutional Framework &amp; Governance (30% international, 20% US states, 10% US cities)</p> <p>Macro Operating Assessment incorporates evaluation of institutional framework</p>	<p>Institutional Framework Assessment (25%):</p> <ul style="list-style-type: none"> <li>Predictability;</li> <li>Revenue/Expenditure Balance;</li> <li>Transparency &amp; Accountability</li> </ul>	<p>Risk Profile assessment</p> <p>Risk matrix approach used for non-U.S. sub-sovereigns. Governance considerations integrated into revenue and expenditure adjustability factors.</p> <p>Integrated into Operating Performance key rating driver / LGRM factor for U.S. sub-sovereigns</p>

## Quantifying Qualitative Factors

Scores for institutional and governance quality comprise weighted ('scorecard') components of all three agencies' sovereign ratings frameworks. These components representing various intangible factors that are taken to differentiate the creditworthiness of borrowers with similar economic and financial profiles. The Moody's framework assigns the **Institutions & Governance Strength** factor approximately 20-30% of the initial sovereign assessment (varying due to dynamic scorecard weights), with additional influence coming through the **Political Risk** sub-component of the **Susceptibility to Event Risk** factor. S&P's **Institutional Assessment** effectively represents about 25% of the preliminary rating calculation,<sup>11</sup> while a Composite Governance Indicator is the single most significant feature in Fitch's **Sovereign Rating Model**. Institutional quality factors are also important sub-sovereign assessment components, though carrying lower explicit weights (around 10% to 30% depending on the jurisdiction and agency).<sup>12</sup> In addition to the inclusion of institutional quality assessments as primary weighted components, all ratings frameworks allow their use in discretionary adjustment factors to final ratings.

Agencies cannot rely on primary data sources to quantify these institutional qualities in their assessment frameworks. Instead they rely on external ('secondary data') indicators, primarily the World Bank **Worldwide Governance Indicators (WGI)**.<sup>13</sup> Published annually since 1996, these composite indices measure six broad dimensions of governance for over 200 countries: *Rule of Law, Control of Corruption, Government Effectiveness, Political Stability & Absence of Violence/Terrorism, Voice & Accountability, and Regulatory Quality*.<sup>14</sup> The WGIs aggregate information from around 35 existing third-party (public- and private-sector) sources, including representative surveys of citizens, households, and firms, and structured evaluations by subject-matter experts.<sup>15</sup> Scores indicate relative performance in each year, averaged around zero. **Table 4** summarises the six WGI and basic details of their derivation.

<sup>11</sup> The Institutional Assessment is 50% of S&P's **Institutional and Economic Profile**. This yields the preliminary rating together with the **Flexibility and Performance Profile**, but because the two profiles are combined using a risk-matrix, weightings of individual component assessments will be variable.

<sup>12</sup> Qualitative institutional and governance factors also influence international sub-sovereign assessments through the significant influence of the corresponding sovereign rating. The direct incorporation of institutional factors into sub-sovereign assessment framework is generally focused on the transparency and accountability of RLG financial management practices.

<sup>13</sup> The WGI are explicitly incorporated in the sovereign assessment frameworks of Moody's and Fitch, and implicitly incorporated in the less transparent sovereign assessment framework of Standard & Poor's.

<sup>14</sup> The WGI are updated annually with a one-year lag. The latest available WGIs are for 2023 and were published in November 2024.

<sup>15</sup> Sources include the *Gallup World Poll*, the *World Economic Forum's Executive Opinion Survey*, the *IMD World Competitiveness Yearbook (WCY) survey*, the *PRS International Country Risk Guide (ICRG)*, the *World Justice Project (WJP) Rule of Law Index*, the *Institutional Profiles Database*, and the *World Bank's Enterprise Surveys and Country Policy and Institutional Assessments (CPIA)*, and other surveys including Eurobarometer and Afrobarometer. The WGI authors select source organisations but do not conduct surveys or ratings themselves, nor do they influence these organisations' methods for governance-measurement. Expert assessments are provided by analysts (using standardised rubrics) working for organisations that include Freedom House, Reporters Without Borders, the Bertelsmann Transformation Index (BTI), the Economist Intelligence Unit (EIU), the Varieties of Democracy (V-Dem) Project, the Political Risk Services (PRS) International Country Risk Guide, and the Asian and African Development Banks. Source indicators are combined and scaled using an Unobserved-Components Model (UCM) that determines weights according to source covariance; sources providing more independent information receiving stronger weights.

**Table 4. World Bank Worldwide Governance Indicators**

WGI	Summary Definition	Primary Expert Sources	
<b>Rule of Law</b>	Confidence in societal rules, quality of contract enforcement, property rights, police, courts, and control of crime and violence.	PRS ICRG Law & Order; World Justice Project (WJP) Rule of Law Index; Freedom House (judicial independence); Heritage Property Rights; BTI rule-of-law items; V-Dem judicial independence/equality before law indices.	
<b>Control of Corruption</b>	Extent to which public power is used for private gain, petty & grand corruption, state capture.	PRS ICRG Corruption risk; World Bank and African and Asian Development Bank CPIA Transparency & Accountability; Bertelsmann Transformation Index Anti corruption Policy; Global Integrity (Law enforcement, Anti corruption); PERC Asian Intelligence; V Dem public sector corruption.	
<b>Government Effectiveness</b>	Quality of public services, civil service professionalism, policy formulation and implementation, credibility of government commitments.	World Bank CPIA (Quality of Public Administration, Budget Management); African and Asian Development Bank CPIA; PRS ICRG Bureaucratic Quality; Bertelsmann TI (Resource Efficiency, Policy Coordination); V Dem public sector capacity.	
<b>Political Stability &amp; Absence of Violence / Terrorism</b>	Likelihood that government will be destabilised or overthrown by unconstitutional or violent means, including terrorism.	PRS ICRG (Government Stability, Internal & External Conflict, Ethnic Tensions); EIU Country Risk (Orderly Transfer of Power, Social Unrest); PTS (Political Terror Scale); Crisis24/IHS Market security risk; V Dem political violence indices.	
<b>Voice &amp; Accountability</b>	Extent to which citizens can select government & enjoy freedom of expression, association, and a free media.	Freedom House Freedom in the World (Political Rights & Civil Liberties); Reporters Without Borders Press Freedom Index; EIU Democracy Index; Bertelsmann Transformation Index (Political Participation); Freedom House Nations in Transit; V Dem electoral & media sub indices.	
<b>Regulatory Quality</b>	Ability of government to formulate & implement sound, market friendly policies & regulations that support private sector development.	World Bank and African and Asian Development Bank CPIA Business Regulatory Environment; Heritage Economic Freedom (Business, Trade, Investment); Fraser Economic Freedom of the World; PRS ICRG Investment Profile; Institutional Profiles Database regulatory items.	

	Primary Survey Sources	Methodology
	World Justice Project (population poll part); Gallup (trust in police/courts, safety at night); Afrobarometer/ Latinobarometro (courts enforce law fairly, officials punished); Enterprise Surveys (cost of crime, security payments).	Indicators inverted (where negative), rescaled and aggregated via Unobserved Components Model (UCM).
	Transparency International Global Corruption Barometer (bribery prevalence); World Bank Enterprise Surveys (% firms paying bribes, bribe tax); Gallup (perceived corruption in government); Afrobarometer/ Latinobarometro corruption perception questions.	Bribery frequencies inverted; scores rescaled and aggregated via UCM, adjusting for bias across sources.
	WEF Executive Opinion Survey (quality of infrastructure, education, wasteful spending); IMD WCY survey (bureaucracy doesn't hinder business, adaptability of policy); Gallup (satisfaction with education, healthcare, roads); Afrobarometer service delivery questions.	Service quality questions scaled with multiple service areas averaged within source. UCM assigns greater weight to broadly covered CPIA/WEF indicators.
	World Bank Enterprise Surveys (political instability obstacle); Gallup World Poll (feel safe, confidence in police); IMD Executive Survey (low risk of political instability); Human Rights Measurement Initiative human rights surveys.	Violent risk metrics inverted where necessary, rescaled and aggregated via UCM with time varying weights reflect differing coverage of conflict datasets.
	Gallup World Poll (confidence in elections/media); Afrobarometer, Latinobarometro, AmericasBarometer (satisfaction with democracy, trust in parliament, electoral fairness); Eurobarometer / European Quality of Government Index.	Multiple questions within each source averaged and aggregated via UCM, sources with lower variance get higher weight.
	WEF Executive Survey (burden of regulation, ease of starting a business); IMD WCY (competition legislation efficient); World Bank Enterprise Surveys (time & cost of regulation, licensing); Gallup (confidence in economic regulation).	Indicators inverted where necessary, rescaled and aggregated via UCM. Confidence bands narrow due to high correlation in sources.

Aggregate scores (measured in standard deviations and normally between -2.5 and 2.5) and percentile ranks are published, along with confidence intervals that reflect data coverage and inter-source agreement.

WGI metrics are the core input for qualitative components of Moody's sovereign assessments, although other external indicators are also referenced. The Moody's framework directly maps various WGI dimensions to numerical ratings using explicit benchmarks (Table 5). The Institutions & Governance Strength scorecard factor comprises around one-quarter to one-third of the framework's Government Financial

Strength assessment, however only 40% of this factor - the Quality of Legislative and Executive Institutions, and the Strength of Civil Society and the Judiciary components – is reliant on the WGIs.<sup>16</sup> WGI scores are also used in the Susceptibility to Event Risk Factor, which may downwardly adjust the Government Financial Strength assessment toward the final sovereign rating.

**Table 5. Incorporation of World Bank WGI in Moody's Sovereign Assessment Framework**

Framework Element	Inclusion in Framework	Factors Measured	WGIs Used
<b>Quality of Legislative and Executive Institutions</b>	20% of Institutions & Governance Strength scorecard factor;  10% of Economic Resiliency Score;  5-7.5% of Government Financial Strength assessment	Quality of public actions at legislative and executive levels; efficiency of government and public administration; institutional capacity; policy implementation effectiveness	<ul style="list-style-type: none"> <li>Regulatory Quality</li> <li>Government Effectiveness</li> </ul> <p>Used as "primary considerations" to "inform qualitative assessment".</p> <p>Specific WGI score ranges provided for each rating category.</p>
<b>Strength of Civil Society and the Judiciary</b>	20% of Institutions & Governance Strength scorecard factor;  10% of Economic Resiliency Score;  5-7.5% of Government Financial Strength assessment	Rule of law strength; judicial independence; corruption control; capacity of civil society to check government power; predictability of enforcement	<ul style="list-style-type: none"> <li>Voice and Accountability</li> <li>Rule of Law</li> <li>Control of Corruption</li> </ul> <p>Used to "inform qualitative assessment"</p> <p>Specific WGI score ranges provided for each rating category.</p>
<b>Political Risk</b>	One of four components of Susceptibility to Event Risk Factor, aggregated using minimum function and used to downwardly adjust Government Financial Strength assessment	Domestic political stability; social tensions; policy continuity; geopolitical tensions and conflicts	<ul style="list-style-type: none"> <li>Voice and Accountability</li> <li>Political Stability &amp; Absence of Violence / Terrorism</li> </ul> <p>Used to assess people's ability to voice preferences and impact policymaking, and to assess government transition orderliness and policy predictability.</p> <p>Specific WGI score ranges provided for each rating category</p>



While S&P's does not reveal its methods for incorporating the WGI in sovereign assessments, Fitch is transparent regarding their use in the agency's Sovereign Ratings Model (SRM). The Composite Governance Indicator feature is calculated as a simple arithmetic mean of the six WGI dimensions, and it is the SRM's most significant feature, with a 22% explanatory power (before Qualitative Overlay).<sup>17</sup>

The strong reliance by ratings agencies on the WGI has raised concerns regarding the appropriateness of their use in credit assessments, especially on the part of developing economies.<sup>18</sup> The indicators' derivation is relatively opaque, using Bayesian computational techniques to combine data from highly diverse sources that employ varying degrees of subjective opinion and methodological soundness.<sup>19</sup> While credit ratings assessments are based on WGI point-estimates, some indicators (particularly for data-poor countries) are published with extremely wide confidence intervals, indicating a high degree of uncertainty and inconsistency in the source data. WGIs are unsuitable for time-sensitive assessments; they are published (annually)

with a time lag of around one year, drawing on sources that may also be published with a delay, and incorporating survey data that are based on subjective, retrospective perceptions, which can take considerable time to reflect changing conditions.

A recent external review of the WGIs, commissioned by the World Bank and published in September 2024, noted that:

*It is the combination of methodological limitations and the wide-spread use of the WGI for real-world decision-making that has been the source of misgivings for [Lower Middle Income Country] governments. They are understandably concerned that the WGI is based on perceptions, which may reflect biases of high-income country respondents, and could result in higher costs of capital for them (compared to a greater focus on objective measures such as default history and risk). This concern is non-trivial given the high concentration in the ratings industry and the associated risk of 'herding' of perceptions-based ratings.*

<sup>16</sup> Measures for the effectiveness of fiscal, monetary and macroeconomic policy (constituting the remaining 60% of the **Institutions & Governance Strength** scorecard factor) are derived from other data, including IMF structural balance data, Open Budget Survey scores, inflation targeting performance, and banking crisis history.

<sup>17</sup> Fitch cites the WGI's "comprehensiveness, methodological transparency, widespread use in other cross-country studies, and completeness of coverage geographically and over time".

<sup>18</sup> An example of this criticism was given by India's Chief Economist in 2023:

*"Over-reliance on non-transparent qualitative factors, including perceptions, value judgements, views of a limited number of experts, and surveys with loose methodologies in sovereign rating, results in unacceptable outcomes from a global point of view. It makes the rating of developing countries almost invariant with respect to even sizeable movements in relevant macroeconomic fundamentals. This happens because the base rating, estimated through quantitative scoring of macro-fundamentals, is overridden by qualitative considerations while finalising the published ratings. The set of loose qualitative information fed into the quantitative scoring of countries and the final qualitative overlay, based purely on the agency's subjective assessment of the countries' ability and willingness to pay, become heavily loaded against the developing countries"* (Nageswaran & Mishra, 2023).

<sup>19</sup> Some WGI sources rely heavily on self-reported data from the governments that they are evaluating. Some source organisations for WGI input data may also be non-transparent with respect to their funding and agendas. The shortcomings of the WGIs have been long recognised; the Organisation of Economic Cooperation and Development publishing a lengthy critique in 2006 entitled *Uses and Abuses of Governance Indicators* (Arndt and Oman).

The review resulted in the addition of a “usage advisory” on the WGI homepage, warning that **“WGI data are not intended to serve as definitive criteria for use in credit assessments, credit ratings, investment risk, or other critical financial decisions”**.<sup>20</sup>

Despite this advisory, the WGIs maintain their prominence in sovereign credit assessments due to an absence of credible alternative cross-country metrics on institutional and governance quality. Given the influence of sovereign ratings on sub-sovereign ratings, this makes the WGIs also, by extension, important elements of international RLG credit assessments. Sub-sovereign assessment frameworks all include ‘institutional’ properties of individual RLGs as primary components, though no data sources comparable to the WGIs exist for sub-national variation in governance. Sub-sovereign assessments’ institutional components generally focus

- broadly on the stability of systems defining RLG powers and responsibilities, and
- specifically on the presence (or absence) of particular RLG policies relating to financial planning; debt management, budgetary and accounting practices, transparency of operations, and reporting standards.

Information used by agencies to score these factors includes constitutions, legislation, judicial precedents, external audits reports, and fiscal history statistics. Aspects of general governance quality – such as Rule of Law or Control of Corruption – are largely absent from sub-sovereign assessment frameworks. This is partly due to the lesser degree of variation in these qualities within countries (as compared to between countries), but also necessarily due to an absence of relevant data at the sub-national level.

<sup>20</sup> The use by ratings agencies of WGI country rankings, rather than absolute scores, is specifically criticised in the review, which notes that ranks are relative and can change even if a country’s own performance does not. The WGI usage advisory also warns against using the data to measure governance over time (rather than making cross-country comparison for a single point in time), noting that the indicators “measure governance in units where the average score for the world as a whole is zero in every period [and therefore] cannot be used to study trends in world averages of governance”. The review also recommended the institution of a standing World Bank advisory panel on governance measurement, able to consider complaints regarding the WGI.

# Institutional Observability and Service Standards

The recognised limitations of the World Bank Worldwide Governance Indicators as credit assessment criteria raises the question of how to acquire alternative data for evaluating institutional and governance quality. A more accurate, timely, and granular system of indicators for assessing these qualitative factors could potentially be constructed from measures of the quality of public services delivered by national and sub-national governments.

The concept of a government-service-quality indicator for credit assessments rests on the expectation that the quality of public services delivered by a government will be reflective of the institutional qualities relevant to creditworthiness, such as administrative competence and political accountability. Government service quality standards present a type of *institutional observability*, revealing attributes of public institutions that are otherwise resistant to formal evaluation.<sup>21</sup> Service quality signals a range of institutional properties; administrative efficiency, technological competence, reliability of systems and processes, workforce skills and managerial capabilities, organisational initiative, regulatory and legal clarity, and data-driven decision-making. The key drivers of government trustworthiness are nowhere more transparently demonstrated than in a governments' provision of consistently high-quality public services.

Measures of service quality are therefore likely to capture the broad collection of intangibles represented in the institutional and governance factors of credit assessments. Government service quality and its immediate determinants – policy effectiveness and civil service professionalism – are the focus of one of the six WGs; the **Government Effectiveness (GE) Index** – which is currently relied upon by all three agencies in their sovereign

assessment frameworks. Like other WGs, the GE Index is an annual aggregate statistic at the national level, combining slow-moving indicators from various sources which vary in rigour. As a general governance indicator rather than a specific measure of service quality, the GE Index is largely derived from infrequent, subjective appraisals of bureaucratic competence by external analysts, along with results of perception-based citizen and business surveys. These inputs are subject to wide variability, attribution bias, and substantial delays in capturing improvements or deteriorations in service quality, and may also be influenced by media coverage, political polarisation, pro-cyclical sentiment, and other factors that are unrelated to observable service delivery. As with the other WGs, the complexity of the statistical techniques used to produce the GE Index, along with the broad scope of its definition, make specific aspects of governance that drive its impact on credit assessments difficult to identify. Like the other WGs, it is also unsuitable for measuring changes over time, as its scores are calculated relative to the global distribution for each specific year.

A purpose-designed index for standardised and verifiable measures of government service quality would offer a superior proxy for institutional and governance factors than any currently available international statistic. Unlike the GE Index, this type of indicator would rely primarily on objective service-level metrics that are free from perception bias, and observable without a substantial time lag. Oriented toward absolute (rather than relative) performance benchmarks, the index would aim to harmonise relevant objective metrics, including the largely under-utilised streams of transaction-generated operational micro-data continuously generated by digital service delivery platforms. Objective metrics would be complemented with

<sup>21</sup> "Observability" refers to 'the ability to understand the internal state or condition of a complex system based solely on knowledge of its external outputs'.

high-frequency feedback on user experience and trust. The investment in data infrastructure and analytical capacity required for a country to produce such an index, although considerable, is a marginal cost when undertaken as a concomitant to the general digitisation of government service delivery.

The granularity of service-quality data produced by digital service platforms can highlight local and regional differences in governance performance that are obscured in national aggregates. This supports the construction of evidence-based institutional quality indicators at the sub-national level, potentially allowing credit-relevant sub-sovereign risks to be identified at a much earlier stage than current methodologies allow. The proposed index could track relevant observables at a high frequency, including the reliability of essential utilities and infrastructure, process and outcome achievements in social service delivery (e.g. public health and education), as well as the speed and transparency of core administrative processes.<sup>22</sup> The design of this index would also offer an opportunity to incorporate measures of digital trust, reflecting the growing dependence of institutional credibility on the technological systems that underpin the critical functions of government, an important emerging risk factor that is not yet adequately considered in credit assessments.<sup>23</sup>

As an input for credit assessments, such a proposed global trust index would be superior not only to the World Bank's GE Index, but arguably to the whole collective suite of Worldwide Governance Indicators. This is because the WGs – which purport to measure distinct aspects of governance – exhibit a very high degree of cross-correlation (especially when excluding *Voice & Accountability* – see **Table 6**). This accords with the substantial degree of conceptual overlap in individual WGI definitions, particularly for the *core four* indicators – *Government Effectiveness*, *Regulatory Quality*, *Rule of Law* and *Control of Corruption*. This overlap makes many of the underlying input data sources relevant to multiple WGs, not only the one to which they were assigned. Statistical analyses of the WGs suggests that they do not actually measure

six meaningfully distinct aspects of governance but are instead simply differently-labelled variations on the measurement of the same latent factor – which could be simply named “**good governance**” – with the *core four* WGs effectively indistinguishable for analytical purposes.<sup>24</sup>

These results lend support to the approach taken by the Fitch sovereign assessment framework, which simply averages the six WGs into a single *Composite governance indicator*.<sup>25</sup> Accordingly, the proposed global trust index should promise a more transparent, objective, granular, timely, and verifiable means of assessing not only the service-quality aspect of “government effectiveness”, but the credit-relevant institutional and governance qualities of sovereigns generally.

Outside of the World Bank's Worldwide Governance Indicators, few attempts have been made at comparative cross-country, or intra-country, comparisons of government service standards. The World Bank's **Service Delivery Indicators (SDI)** program audits frontline education and healthcare provision in lower-income countries that lack domestic monitoring capacity, but the SDIs frequency, coverage, and scope is too limited to be considered as a general measure of service quality for international comparisons.

For developed economies, the Organisation of Economic Cooperation and Development (OECD) produces a biennial publication – **Government at a Glance** – benchmarking members' public-sector performance. The initiative collects several hundred internationally comparable indicators that capture institutional inputs and processes (drawn mainly from administrative data supplied by member governments) but does not attempt to construct general indices of service (or institutional) quality. Separately, the OECD produces a biennial **Survey on the Drivers of Trust in Public Institutions**, which polls public trust in governments (and government services) but does not incorporate service outcome metrics. Various OECD initiatives gather survey and administrative data relating to the provision of particular services – mainly healthcare and education – with some producing

*Table 6.*  
**Worldwide Governance Indicator Average Yearly  
 Correlation Matrix (2010-2023)**

	VA	PSV	GE	RQ	RL	CC
<b>Voice &amp; Accountability (VA)</b>	1					
<b>Political Stability &amp; Absence of Violence (PSV)</b>	0.71	1				
<b>Government Effectiveness (GE)</b>	0.72	0.72	1			
<b>Regulatory Quality (RQ)</b>	0.75	0.65	0.92	1		
<b>Rule of Law (RL)</b>	0.81	0.78	0.93	0.91	1	
<b>Control of Corruption (CC)</b>	0.77	0.76	0.91	0.86	0.94	1

composite outcome-oriented indices useful for cross-country comparisons, but none are comprehensive or released at a high (or even medium) frequency. In Europe, the University of Gothenburg's **European Quality of Government Index (EQI)** is a uniquely granular international release, polling around 130,000 European Union citizens on service and governance quality across more than 200 sub-national regions spanning multiple countries. However, the EQI relies almost entirely on respondents' subjective perceptions,

without incorporating data on service processes or outcomes, and is conducted infrequently – with a two-to-three-year gap between waves – limiting its relevance for credit assessments.

Even at the level of individual nations, initiatives redolent of a service quality index are scarce. However, a few national statistical agencies have in recent years begun publishing official **public sector productivity** indices as a complement to their official national accounts statistics (e.g. GDP). Producing

<sup>22</sup> This could include data on the prevalence of grievances and the timeliness of their resolution, promoting institutional accountability. A services-based benchmarking system for sub-national government was proposed to promote regional productivity in a 2018 OECD Working Paper (Phillips), but without reference to credit assessments.

<sup>23</sup> See World Economic Forum white paper *Measuring digital trust: Supporting decision-making for trustworthy technologies* (2023).

<sup>24</sup> Using principal-component analysis, Langbein & Knack (2010) found that a single factor explains virtually all the variation across the six WGI indicators, comparing an eigenvalue of 4.58 for the first principal component and 0.14 for the second. When testing whether the indicators were causally related (as opposed to measuring a single underlying concept), both models fit the data equally well, suggesting that the indicators cannot distinguish between different theoretical relationships and so do not possess analytically meaningful differences.



meaningful estimates of the real value of public sector **output volume** (a requirement for measuring public sector productivity) is a challenging statistical undertaking that requires the systematic analysis of service-quality indicators.<sup>26</sup> These indicators – such as patient survival and educational attainment rates – are used to adjust the ‘value’ of quantitative service ‘production’ indicators – such as patient or student numbers.<sup>27</sup> Few countries have the statistical capacity to produce credible measures of public sector output volume with even limited coverage, and only a handful of countries currently publish extensive metrics (the most extensive being by the United Kingdom, which pioneered the measurement of government output and productivity beginning with the Atkinson Review in 2005). The countries that are most advanced in terms of the systematic collection and publication of public service quality metrics are shown in **Table 7**, with some examples of the metrics used by their respective national statistical agencies in government output quality-adjustment measures.<sup>28</sup>

While indicators such as these resemble the type of data suitable for inclusion in the proposed global trust index, a major limitation is the delay often involved in the publication of these statistics, which can come over a year after their reference period. While the lengthy process of data collection, adjustment, and verification helps ensure the accuracy of these releases, it reduces their relevance for time-sensitive credit assessments.<sup>25</sup> However, a few nations at an advanced stage of digital government maturity have implemented integrated national systems that support real-time service quality measurement:

- **South Korea’s Government 24:** This integrated government services portal tracks real-time service delivery metrics – e.g. processing times, success rates, and user volumes – across over 4,000 administrative services. Performance dashboards enable identification and resolution of service problems.
- **Singapore’s Whole-of-Government Application Analytics (WOGAA):** This centralised government system provides live monitoring of user interactions, service completion rates, system performance, and integrated post-transaction satisfaction surveys across all major government digital services.
- **Estonia’s X-Road Infrastructure:** This secure data exchange layer used across government mandates signed logging of every transaction and generates continuous performance data, which feeds into monitoring systems that track service availability and response times, enabling real-time oversight of delivery.

These digital performance tracking systems show that real (or near-real time) government service performance tracking is a realistic prospect with existing technology. As digital government maturity progresses worldwide, systems for government service quality measurement can begin to support the development of far more timely, objective, and granular indicators than those currently relied upon by credit ratings agencies.

Incorporating a consistent and transparent measure of service standards into credit assessments could also address an over-emphasis in existing frameworks on the flexibility of governments to reduce expenditure through service cuts. This is especially true of sub-sovereign assessments, where such flexibility constitutes a primary element in evaluating institutional and governance quality. Frameworks treat service-reduction capacity as a core governance quality, dismissing the maintenance of service standards under economic pressure as a demonstration of institutional resilience. The positive contribution of government services to long-term economic performance is overlooked in these frameworks.<sup>30</sup> Directly incorporating observable service quality in credit assessments could balance governments’ incentive to pursue revenue adequacy and

efficiency improvements against the incentive to pursue austerity.<sup>31</sup> The shift in emphasis would better align the interests of citizens – who require quality services – with the interests of investors – who require credible repayment commitments – strengthening both political legitimacy and market confidence. In addition, the development of a standardised system for measuring sub-

national service quality internationally would contribute greatly to data-driven policy research, development, and targeted interventions. The proposed global trust index would not only improve credit assessments of sovereign risk, but also help policymakers identify the institutional reforms most likely to benefit their populations.

<sup>25</sup> This is not to suggest that equal weighting is the statistically optimal combination for a composite WGIs indicator; empirical research has found the GE Index to be a significant independent predictor of sovereign borrowing costs even after controlling both for agency ratings and their informing economic and financial variables (see Jeanneret 2018). This suggests that there are latent aspects of governance that are captured both by the GE Index and by capital markets but not fully reflected in the frameworks of credit ratings, and supports the argument that service standards are a superior indicator of latent good governance factors and the most appropriate focus for more transparent, timely and granular governance indicators.

<sup>26</sup> This is because the relative value of public services cannot be inferred using market prices.

<sup>27</sup> Quality-adjustment indicators are usually objectively observable, but sometimes include post-transaction user-experience surveys. Some countries publish extensive quality indicators as standalone statistical releases without using them for output volume adjustments.

<sup>28</sup> The Nordic countries publish extensive public service quality statistics through specialised agencies, but these are not generally used for constructing productivity indices.

<sup>29</sup> Notwithstanding that such time lags are not actually worse than those associated with the indicators that credit ratings agencies currently rely upon for assessments of institutional and governance quality.

<sup>30</sup> Government services account for a large share of economic activity, and higher-quality public services boost long-run growth by lowering business transaction costs, improving resource allocation, and building human capital. Because internationally-standardised service-quality metrics are limited, cross-country studies often rely on expenditure composition (Gupta et al. 2005; Baldacci et al. 2008; Egert, Kozluk & Sutherland 2009) or human-capital proxies (standardised-measures of educational attainment in Hanushek & Woessmann; health outcome statistics in Bloom, Canning & Sevilla 2004). Sub-national studies have found similar patterns (Charron, Lapuente & Rothstein 2019).

<sup>31</sup> Austerity measures can be self-defeating where the output loss caused by expenditure cuts is large enough that debt ratios remain unchanged or even rise (causing a 'downward spiral' in creditworthiness). International evidence places average fiscal multipliers as equal than or greater to one and confirms that consolidations sharply contract private demand, which can lift the debt-to-GDP ratio (Blanchard & Leigh 2013, Eyraud & Weber 2013, Guajardo, Leigh & Pescatori 2014, Jorda & Taylor 2016). Sub-national studies have shown similar effects (Suarez, Serrato and Wingender 2016).

**Table 7. Public Service Quality Indicators used by Official Agencies**

Country	Healthcare	Education	
<b>United Kingdom</b>	<ul style="list-style-type: none"> <li>• 30-day survival rates;</li> <li>• PROMs (Patient-Reported Outcome Measures);</li> <li>• QALYs (Quality-Adjusted Life Years);</li> <li>• GP clinical outcomes;</li> <li>• Waiting times;</li> <li>• Patient-experience surveys</li> </ul>	<ul style="list-style-type: none"> <li>• GCSE (General Certificate of Secondary Education) / Level-2 attainment;</li> <li>• Average grades;</li> <li>• Qualification completion rates</li> </ul>	
<b>The Netherlands</b>	<ul style="list-style-type: none"> <li>• 30-day hospital-mortality;</li> <li>• 5-year cancer-survival;</li> <li>• Patient-satisfaction surveys</li> </ul>	<ul style="list-style-type: none"> <li>• Exam-pass rates;</li> <li>• Cito primary-test scores</li> </ul>	
<b>Denmark</b>	<ul style="list-style-type: none"> <li>• 30-day mortality (AMI, stroke);</li> <li>• 5-year cancer survival;</li> <li>• Hip-fracture waiting time;</li> <li>• Patient-satisfaction surveys</li> </ul>	<ul style="list-style-type: none"> <li>• PISA (Programme for International Student Assessment) scores;</li> <li>• Upper-secondary drop-out rate</li> </ul>	
<b>Sweden</b>	<ul style="list-style-type: none"> <li>• 1-year cancer-survival;</li> <li>• 30-day cardiac-mortality;</li> <li>• Infection rates;</li> <li>• Patient-experience surveys</li> </ul>	<ul style="list-style-type: none"> <li>• Average final-grade points;</li> <li>• Basic-competency share;</li> <li>• PISA scores</li> </ul>	
<b>Finland</b>	<ul style="list-style-type: none"> <li>• Avoidable-mortality rate;</li> <li>• 30-day readmission; Patient-satisfaction surveys</li> </ul>	<ul style="list-style-type: none"> <li>• Matriculation-exam results;</li> <li>• PISA scores;</li> <li>• Educational-attainment rate</li> </ul>	
<b>Norway</b>	<ul style="list-style-type: none"> <li>• 30-day survival (AMI, stroke);</li> <li>• 5-year cancer survival;</li> <li>• Waiting times;</li> <li>• Hospital-infection rate;</li> <li>• Patient-experience surveys</li> </ul>	<ul style="list-style-type: none"> <li>• National-test scores;</li> <li>• Exam-pass rates;</li> <li>• Upper-secondary completion rate;</li> <li>• PISA scores</li> </ul>	

	Social Care	Public Order & Safety
	<ul style="list-style-type: none"> <li>• ASCOF (Adult Social Care Outcome Framework) quality-of-life index;</li> <li>• Re-referral rate;</li> <li>• Re-registration rate;</li> <li>• Placement stability;</li> <li>• Service-user satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• Severity-adjusted recidivism;</li> <li>• Prison-safety index;</li> <li>• Custody-escape rate;</li> <li>• Court-timeliness</li> </ul>
	<ul style="list-style-type: none"> <li>• Client-satisfaction surveys (elder care);</li> <li>• Youth-care re-entry rate</li> </ul>	<ul style="list-style-type: none"> <li>• Recidivism rate;</li> <li>• Clearance rate;</li> <li>• Public-safety perception survey</li> </ul>
	<ul style="list-style-type: none"> <li>• Eldercare client-satisfaction surveys;</li> <li>• Share of elderly living at home</li> </ul>	<ul style="list-style-type: none"> <li>• Recidivism rate;</li> <li>• Court-timeliness;</li> <li>• Clearance rate</li> </ul>
	<ul style="list-style-type: none"> <li>• Eldercare satisfaction survey;</li> <li>• Child-placement stability;</li> <li>• Repeat child-protection rate</li> </ul>	<ul style="list-style-type: none"> <li>• 1- &amp; 3-year recidivism;</li> <li>• Crime-victimisation survey;</li> <li>• Clearance rate</li> </ul>
	<ul style="list-style-type: none"> <li>• Eldercare client-satisfaction;</li> <li>• Functional-ability improvement;</li> <li>• Repeat child-protection rate</li> </ul>	<ul style="list-style-type: none"> <li>• Recidivism percentage;</li> <li>• Court-processing time;</li> <li>• Clearance rate</li> </ul>
	<ul style="list-style-type: none"> <li>• Eldercare user-satisfaction (KOSTRA);</li> <li>• Share elderly receiving home care;</li> <li>• Child-placement stability;</li> <li>• Repeat child-protection rate</li> </ul>	<ul style="list-style-type: none"> <li>• Recidivism rate (5-year);</li> <li>• Clearance rate;</li> <li>• Crime-victimisation survey;</li> <li>• Court-processing time</li> </ul>

# Conclusion

The World Bank's explicit November 2024 advisory against using its Worldwide Governance Indicators for critical financial decisions underscores a major shortcoming in current sovereign assessment frameworks; ratings intending to evaluate real-time credit risk lean heavily on annual opinion-driven indicators that arrive with a long delay, carry wide uncertainty, and embed biased perceptions and flawed methodologies. That reliance reflects a lack of available alternatives, but a growing recognition of the problem presents an opportunity for innovation with the development of a new indicator of observable service-delivery standards; a global trust index. Leveraging the digital transformation of government, this indicator would draw upon novel sources of high-frequency data to better reveal the credit-relevant institutional qualities of governments to global capital markets.

The construction of this index on an international scale would require an ongoing, large-scale research programme and significant collaboration and investment by governments. However, this is exactly the scale of undertaking proposed in the recommendations accompanying the World Bank's external review of its Worldwide Governance Indicators:

*We also recommend that the Bank invests in new measures of the absolute quality of governance, that can both guide efforts by countries to improve governance and serve as a data source for rating agencies and other users of WGI. However, this process is likely to take both time and resources (in our estimate 3-5 years at a minimum).*

With the support of this recommendation, capital markets are in a position to demand the development of an index for sovereign and sub-sovereign credit assessments that more credibly captures the qualities of good governance. The technical challenges in constructing such an index are substantial but can be realistically met by virtue of the proliferation of digital government platforms, open data standards and accelerating progress in information technologies. In supporting the shift to timely, granular, and outcome-driven criteria in institutional evaluation, a global trust index serves to justify investments in service improvement and digital infrastructure. In doing so, a powerful mechanism can be created that links lower borrowing costs directly to tangible improvements in governance.







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