Trustworthy Digital Society Hub

UNSW

May 2025

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

# Introduction

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 responsibilities. Standards of public services enjoyed by different populations reflect the competence, reliability, adaptability, innovation, and accountability of their governments. The capacity of these governments to deliver necessary services to individuals – both day-to-day and during critical life events – forms a basis for their popular legitimacy. Credit ratings agencies, assessing sovereign and sub-sovereign borrowers, can reasonably consider the quality of government services as an indicator of institutional trustworthiness.

Digital transformation enables increasingly real-time monitoring of institutional performance, through platforms supporting the generation of voluminous data on public service quality: objective metrics for processes and outcomes, and subjective metrics for user experience and trust. Digitisation initiatives can increasingly inform credit ratings agencies on the institutional credibility of governments at national, regional, and local levels. A *global trust index* to track and benchmark standards of government service quality could be introduced for use as an input in credit assessments of bond-issuign governments. This index should summarise information across numerous dimensions of service quality, including the maturity of digital systems underlying service provision.[[1]](#footnote-1)

This note will briefly introduce the 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.

# Assessment Frameworks

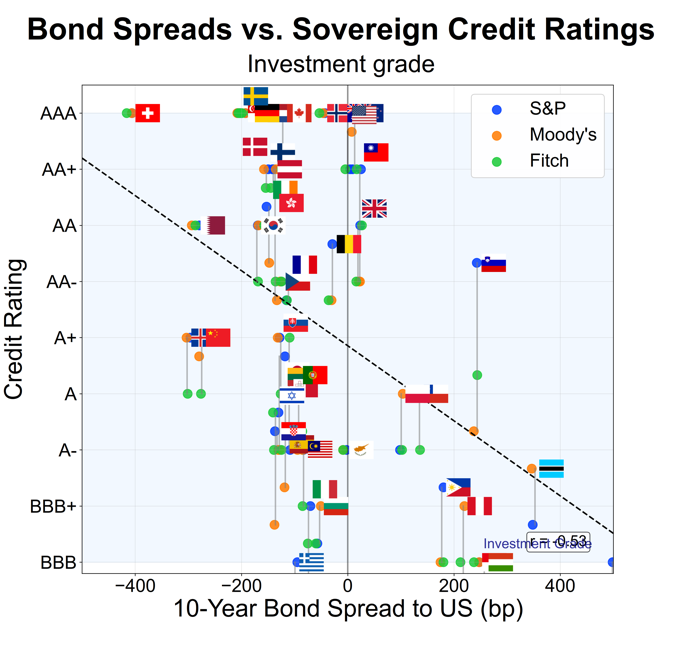
The three major credit ratings agencies categorise long-term debt instruments into *investment* (higher-price, lower-yield) and *speculative* (lower-price, higher-yield) grades (**Table 1**). Major agency ratings significantly affect governments’ financing costs, with the prices of bonds and credit default swaps highly sensitive to the potential of major agency ratings upgrades or downgrades. In addition to assigning a rating to government debt instruments, agencies can also assign a positive or negative *outlook* in their assessments – indicating the direction of an expected future rating change. **Figures 1 and 2** show 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 to a common scale, with fractional adjustments for *positive* and *negative* outlooks.

***Table 1.*** *Ratings Agency Grades*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Grade | Description | S&P / Fitch | Moody’s | Countries (Averages) |
| Investment | *Prime* | AAA | Aaa | 🇨🇭 🇸🇬 🇳🇴 🇳🇱 🇩🇪 🇦🇺 🇸🇪 🇩🇰 🇨🇦 |
| *High Medium Grade* | AA+ | Aa1 | 🇳🇿 🇺🇸 🇫🇮 🇦🇹 |
| AA | Aa2 | 🇶🇦 🇹🇼 🇮🇪 🇰🇷 🇭🇰 |
| AA- | Aa3 | 🇬🇧 🇧🇪 🇨🇿 🇫🇷 |
| *Upper Medium Grade* | A+ | A1 | 🇮🇸 🇸🇮 🇯🇵 🇨🇳 |
| A | A2 | 🇱🇹 🇲🇹 🇨🇱 🇵🇹 🇸🇰 |
| A- | A3 | 🇵🇱 🇪🇸 🇭🇷 🇨🇾 🇮🇱 🇲🇾 |
| *Lower Medium Grade* | BBB+ | Baa1 | 🇧🇼 🇧🇬 |
| BBB | Baa2 | 🇵🇭 🇮🇹 🇮🇩 🇵🇪 🇰🇿 🇲🇽 |
| BBB- | Baa3 | 🇭🇺 🇬🇷 🇮🇳 🇲🇺 🇷🇴 |
| Speculative | *Speculative* | BB+ | Ba1 | 🇨🇴 🇷🇸 🇲🇦 🇻🇳 |
| BB | Ba2 | 🇧🇷 |
| BB- | Ba3 | 🇿🇦 🇯🇴 🇳🇦 🇹🇷 |
| *Highly Speculative* | B+ | B1 | 🇧🇩 |
| B | B2 | 🇧🇭 |
| B- | B3 | 🇺🇬 🇳🇬 🇪🇬 🇰🇪 |
| *Substantial Risk* | CCC+ | Caa1 | 🇵🇰 |
| CCC | Caa2 |  |
| CCC- | Caa3 | 🇱🇰 |
| *Extremely Speculative* | CC | Ca |  |
| C | 🇿🇲 🇺🇦 |
| *In Default* | D | C |  |
| No Rating |  |  |  | 🇷🇺 |

***Figure 1. Figure 2.***

A graph of different countries/regions

Description automatically generated 

Moody’s, Standard & Poor’s, and Fitch collectively represent about 95% market share of the credit ratings industry.[[2]](#footnote-2) Exact methods used to determine credit ratings are proprietary and subject to regular change, but varying levels of detail on assessment frameworks have been made public. In making their assessments, all three agencies make extensive use of primary data from established international data sources, including the International Monetary Fund (IMF), the World Bank, national statistics offices, and central banks.

## 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 based on four statistics:
   * *Economic Scale (35%):* Nominal Gross Domestic Product (GDP)[[3]](#footnote-3)
   * *National Income (25%):* GDP per Capita at Purchasing Power Parity (PPP)[[4]](#footnote-4)
   * *Economic Growth (30%):* Average ten-year GDP Growth[[5]](#footnote-5)
   * *Economic Volatility (10%):* Median Absolute Deviation in GDP Growth over ten years.
2. **Institutions & Governance Strength.** Evaluates more qualitative properties of sovereigns:

* 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%)*.

Although qualitative, assessments of Institutions & Governance Strength are largely based on quantitative external indicators, primarily the **World Bank Worldwide Governance Indicators (WGI).** The WGI include indicators for *Regulatory Quality*, *Government Effectiveness*, *Voice & Accountability, Rule of Law,* and *Control of Corruption*. This factor has also referenced the World Economic Forum (WEF) Global Competitiveness Index (CGI) for components relating to market efficiency, infrastructure, innovation, and education. Information on data adequacy for surveillance and assessments has been sourced from the IMF. World Bank Country Policy and Institutional Assessments (CIPA) have also been referenced, along with other numerous external and independent sources. Assessments of Institutions & Governance Strength are adjusted according to government default history and track record of arrears.

1. **Fiscal Health:** assesses the sustainability of government finances using:
   * *Government debt burden (50%)* : average of general government debt-to-GDP and debt-to-revenue ratios
   * *Government debt affordability (50%)* : average of general government interest payments to GDP and interest payments to revenue ratios.

Adjustments may be 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.

1. **Susceptibility to Event Risk:** assesses vulnerability to sudden, disruptive events, composed of four sub-factors:

* *Political Risk* (domestic political and geopolitical instability, refers to World Governance Indicators along with socioeconomic indicators for unemployment and inequality)
* *Government Liquidity Risk* (failure of government cash flow)
* *Banking Sector Risk*
* *External Vulnerability Risk* (which includes environmental factors).

This factor employs a **minimum function** for aggregation, letting the weakest sub-factor determine the overall score.

Moody’s combines the factors **Economic Strength** and **Institutions & Governance Strength** with equal weights to produce an **Economic Resiliency** score and, using dynamic weights, combines this with the **Fiscal Health** factor to produce the **Government Financial Strength** assessment. The dynamic weights are used to make *Economic Resiliency*more important for wealthier sovereigns, and *Fiscal Health* more important for less wealthy sovereigns. **Figure 3** shows components of the Government Financial Strength assessment typical for the wealthiest sovereigns.

***Figure 3.***

**Moody’s Sovereign Assessment Framework**

**Fiscal Health**

**- interest / revenue**

**- interest / gdp**

**- debt / revenue**

**- debt / gdp**

**Government Financial Strength**

*Dynamic weights ranging from* ***25:75*** *to*

***50:50*** *for* ***Fiscal Health : Economic Resiliency***

**Economic Resiliency**

**Susceptibility to Event Risk**

**- political risk**

**- liquidity risk**

**- banking risk**

**- external vulnerability risk**

**Institutions & Governance Strength**

**- legislative & executive institutions**

**- civil society & judiciary**

**- fiscal policy effectiveness**

**- monetary & macroeconomic policy effectiveness**

**Economic Strength**

**- scale**

**- income level**

**- growth rate**

**- volatility**

**Ratings Committee**

Sovereign

Rating

Moody's methodologies for Sub-Sovereign or Regional and Local Government (RLGs) ratings are different inside and outside the United States.[[6]](#footnote-6) For RLGs outside the United States, Moody’s employs a two-component approach. **A Baseline Credit Assessment** is made for the Sub-Sovereign’s intrinsic (standalone) credit strength, with an **Extraordinary Support Uplift** adjustment to account for the support an RLG would likely receive from a higher level of government (e.g. the sovereign) in the event of acute financial distress.

The Baseline Credit Assessment is based on the combined assessments of **Systemic Risk** – the underlying risk for the RLG’s respective sovereign, reflected in the sovereign bond rating – and **Idiosyncratic Risk** – the risk specific to the RLG entity. Idiosyncratic risk is based on a four-factor scorecard:

1. **Economic Fundamentals (20%):** *Economic Strength*, based on regional GDP per capita as a percentage of national GDP per capita, and *Economic Volatility*, based on industrial concentration vs diversification across economic sectors.
2. **Institutional Framework (20%):** *Legislative Background*; mature and robust legislative framework, predictable revenues and spending responsibilities; *Financial Flexibility*; strong revenue and expenditure flexibility (including flexibility to cut public service standards).
3. **Financial Performance and Debt Profile (30%):** *Operating margin* (balance vs revenues), *interest burden* (payments vs revenues), *liquidity* (cash flow), *debt burden* (net debt vs revenus), *debt structure* (short term share of total debt).
4. **Governance and Management (30%):** Scores for risk controls and financial management; investment and debt management; transparency and disclosure.

Systemic and Idiosyncratic Risk are combined using a **risk matrix** to determine the Baseline Credit Assessment.[[7]](#footnote-7) The size of the Extraordinary Support Uplift adjustment to the Baseline Credit Assessment is determined according to factors that include assessments of the wider repercussions of a particular RLG default, the supporting government’s capacity to provide aid, and historical precedents.

Within the United States, a different framework is used for RLGs.[[8]](#footnote-8) Unlike for sovereign assessments, Moody’s does not report on the use of external indicators for sub-sovereign assessments.

***Figure 3.***

**Moody’s Sub-Sovereign Assessment Framework**

Sovereign Rating

**Idiosyncratic Risk**

**Systemic Risk**

**Risk** **Matrix**

**Baseline Credit Assessment**

**Extraordinary Support Uplift**

***Expected Emergency Support from Higher Level of Government***

**Sub-Sovereign Rating**

## Standard & Poor’s (S&P’s)

S&P’s sovereign assessment methodology is based on scores assigned for five “pillars”:

1. **Institutional Assessment:** capacity to deliver sustainable public finances and balanced economic growth, and to respond effectively to economic and political shocks.

**Economic Resiliency**

**Economic Strength**

**- scale**

**- income level**

**- growth rate**

**- volatility**

1. **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).

**Institutions & Governance Strength**

**- legislative & executive institutions**

**- civil society & judiciary**

**- fiscal policy effectiveness**

**- monetary & macroeconomic policy effectiveness**

1. **External Assessment:** external position and liquidity with the rest of the world; status of sovereign’s currency in international transactions
2. **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)
3. **Monetary Assessment:** evaluates monetary policy credibility, diversification of financial system and capital markets, and the exchange rate regime and its impact on policy coordination.

Institutional and Economic Assessments scores are averaged to derive an **Institutional and Economic Profile**. External, Fiscal, and Monetary Assessments are averaged to derive a **Flexibility and Performance Profile**. These profiles are combined using a risk matrix to determine an indicative rating level, which may then be modified according to **supplemental adjustment factors** (such as liquidity positions or significant event risk) to determine the final rating. Unlike Moody’s, S&P does not report on the use of specific external indicators used for sovereign assessments, although their explanatory documentation implies that similar sources are likely to be utilised.

Like Moody’s, S&P has different methodologies for Sub-Sovereign assessments inside and outside the United States. Outside the United States, components of LRG assessments include:

* **Institutional Framework Assessment:** a composite of three sub-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%):* adequacy of revenue sources to cover mandated services, flexibility to adjust revenues and expenditures and overall fiscal discipline.
  + *Transparency and Accountability (25%):* quality of financial statements, level of disclosure, effectiveness of oversight mechanisms.
* **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).

These two factors are combined using a risk matrix to create an “Anchor” rating, which is then subject to various judgement-based supplemental adjustment factors to arrive at the final credit ratings decision.[[9]](#footnote-9)

## Fitch

Fitch’s framework involves a quantitative Sovereign Rating Model (SRM) incorporates four categories of features, refined by a Qualitative Overlay (QO). The SRM without specified weightings:

1. **Structural Features:** the economy’s institutional and political environment, governance standards, and overall structural characteristics, incorporating “governance indicators” sourced from the World Bank WGI.
2. **Macroeconomic Performance, Policies and Prospects:** the sovereign’s economic performance and the credibility and flexibility of its macroeconomic policies; indicators such as GDP growth and Consumer Price Inflation.
3. **Public Finances:** the financing flexibility and sustainability of the sovereign’s fiscal position; factors include gross general government debt to GDP, fiscal balance to GDP, interest to revenue, foreign currency debt as a proportion of total debt.
4. **External Finances:** the sovereign’s external positions, including net foreign assets, foreign exchange reserves, external interest service burden, and commodity dependence.

Fitch’s SRM is computed on the basis of its component features to generate a Predicted Rating, which is then refined by a Qualitative Overlay (QO), which allows adjustments to be made on the basis of

# Incorporating a Global Trust Index in Credit Assessments

Sovereign credit rating methodologies are largely based on official statistics: GDP (nominal and per capita, growth, and volatility) similar weightingst to … . These statistics compute component element of assessment methodologies capturing economic and budgetary performance.

However a large part of credit assessments is applying qualitiative judgements to .

Considerations include transparency and accountability of data, processes, and institutions; sovereign’s debt repayment culture; and potential security risks.

These include indicators for *Regulatory Quality*, *Government Effectiveness*, *Voice & Accountability, Rule of Law,* and *Control of Corruption*.

**Quality of Legislative and Executive Institutions**

Policy is legistlated and implemented with the support of a highly professional, well-staffed and highly capable public admisnitration with exceptionally deep bench strength

These institutison have demonstrated the fexibiltiy to deal with changing circumstances and can absibr shocks while maintaining financial and economic stability.

Law making occurs under a well developed constitutional framework that is transparent and predictable.

Data sets are timely, stabkle, comprehensive, and are provided for all levels of government (central, regional, local, and social security).

Political independent government bodies, such as fiscal councils, have a strong voice in the policymaking process

The enforcement of laws is highly predictable and consistent, including as they apply to the government itself

An effective balance of power and separation of powers is consistnely and dependently maintained between rnacnhes of government and judicial independence is maintained nad respected

There are few instances of corruption that act to the detriment of the sovereigns credit profile

Judicial proceeses are imparticla, contracts are encorced, and legal cass are resolved in atimely manner

Instiutions in civil society consistenly act as an effective check on the ecercise of vovernmetn power

*Fiscal and Monetary POliocy effectiveness*

Domestic Political and Geopolitical Risk

Unemployment is typically low and distribution of wealth and incomes is relatively unifmr with ittle or not adverse impact on policy outcomes

There are no significant sources of social conflict that pose a material risk to economic or political outcomes

General consensuis on credit-positive policy outcomes that endure through changes in government

Key aspects include the transparency and accountability of data, processes, and institutions, the sovereign\_s debt repayment culture, and potential security risks (both external and domestic).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | aaa | aa | a | baa | ba | b | caa | ca |
| Quality of legislative & executive institutions : WGI scores for regulatory quality & government effectiveness (35%) | 1.5 | 1.5-1.0 | 0.5-1.0 | 0-0.5 | -0.5-0.0 | -0.5-  -1 | -1-1-.5 | -1.5 |
| Civil‑society & judiciary strength : WGI Rule of Law, Control of Corruption, Voice & Accountability (20%) | 1.5 | 1.5-1.0 | 0.5-1.0 | 0-0.5 | -0.5-0.0 | -0.5-  -1 | -1-1-.5 | -1.5 |
| Domestic Political and Geopolitical Risk : WGI for coive and accountability, political stability | 1.5 | 1.5-1.0 | 0.5-1.0 | 0-0.5 | -0.5-0.0 | -0.5-  -1 | -1-1-.5 | -1.5 |
|  |  |  |  |  |  |  |  |  |

Institutional strength is both a stand‑alone pillar and the glue that holds the rest of the model together. In Moody’s calibration a highly effective legislature, credible policy making and an independent judiciary are worth as much, numerically, as long‑run GDP growth. Strong institutions also dampen debt dynamics (by containing fiscal slippage) and make sudden crises less likely (by boosting policy predictability and social cohesion). Conversely, when trust in institutions erodes, the scorecard simultaneously penalises Economic Resiliency, raises the weight on Fiscal Strength (because high‑trust economies tend to be richer and therefore shoulder less fiscal weight in the dynamic algorithm), and widens the scope for Event‑Risk notches. In practice, therefore, institutional resilience can be the single biggest differentiator between two countries that look similar on raw macro‑fiscal numbers.

Taken together, the disclosed metric weights give outside observers a transparent map of Moody’s quantitative starting point. What ultimately matters, however, is how those numbers interact with qualitative judgments about a government’s willingness and capacity to keep its promises—an idea that, in Moody’s own words, “is inseparable from the quality of institutions that sustain the trust of citizens, investors and the international community.”

Studocu

About the Worldwide Governance Indicators

Moody’s accounts for about 40% market share…

# Conclusion

Developing a Global Trust Index as described would be

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1. See the accompanying note *An Index for Trustworthy Government in the Digital Age.* [↑](#footnote-ref-1)
2. Moody’s and S&P representing about 40% each, and Fitch about 15%. [↑](#footnote-ref-2)
3. GDP measures the value of all final domestic production (production for final consumption, investment or export) gross of capital depreciation over period (usually one year). [↑](#footnote-ref-3)
4. PPP adjusts the nominal value of GDP to account for price differentials between countries, generally increasing the measure of Per Capita GDP for lower-GDP countries relative to higher-GDP countries. [↑](#footnote-ref-4)
5. Average ten-year growth is a centred average using five-year future growth forecasts published by the annual IMF World Economic Outlook (WEO). [↑](#footnote-ref-5)
6. This is largely because the ratings of U.S. Sub-Sovereigns are less influenced by their nation’s Sovereign rating than are ratings for Sub-Sovereigns outside the United States, and because U.S. Sub-Sovereigns operate under relatively standardised systems with a high level of data availability. [↑](#footnote-ref-6)
7. Combining two indicators in a risk matrix means that this combination does not need to be a simple function of their levels. Instead, a constant outcome is specified for *every particular combination of levels* of those two indicators. [↑](#footnote-ref-7)
8. For US Sub-Sovereigns, Moody’s considers quantified factors for *Resident Income* (median household), *Full-Value Per Capita* (taxable real property per person), *Economic Growth* (five-year local growth minus five-year national growth), *Available Fund Balance Ratio* (fund balance and net assets vs revenue), *Liquidity Ratio* (cash vs revenue), Long-term Liabilities Ratio (long-term debt vs revenue) and *Fixed-Costs Ratio* (debt-service and pension obligations vs revenue). These factors yield a scorecard outcome which is then adjusted according to *Institutional Framework* (qualitative assessment of legal environment including taxing autonomy, mandated services, oversight laws) and *Community Impact of Outsized Events* (credit effects of rare but severe shocks). [↑](#footnote-ref-8)
9. For Sub-Sovereigns inside the United States, a similar weighted Institutional Framework Assessment factor is combined with separate Economic and Financial Profiles which together contain similar information as is contained in the Individual Credit Profile Assessments. [↑](#footnote-ref-9)