鵬元國際
PENGYUAN

Sovereign Rating Criteria – Request for Comments

Contents

Contacts

Name **Liang Zhong**
Title Managing Director
Direct +852 3615 8341
Email Liang.zhong@pyrating.com

Name **Tony Tang**
Title Chief Analytics Officer
Direct +852 3615 8278
Email Tony.tang@pyrating.com

Summary

These rating criteria describe PENGYUAN's analytical approach to assigning issuer credit ratings (ICRs) and issuance credit ratings to sovereigns globally. PENGYUAN intends to use these criteria to provide markets and the participants with clarity on our fundamental analysis of sovereign credit risks and our ratings that reflect such risks. We recognize that these criteria cannot exhaust all rating factors that are driving sovereign creditworthiness in all circumstances and reflected in our ratings. However, it should enable readers to gain understanding on our approach to assessing sovereign credit risks.

For these criteria, we define a sovereign as a member state of United Nations or a state that runs its own government, enjoys fiscal independence and determines its own monetary regime. "Country" in these criteria refers to either a country or a district pertains to a sovereign specified above.

PENGYUAN's sovereign ICRs reflect our views on sovereign creditworthiness, which is based on our quantitative and qualitative forward-looking assessment on a sovereign's capacity and willingness to service financial obligations (hitherto referred to as "debt") to nonofficial creditors.

These criteria will be effective immediately on the date of final publication. We intend to complete the review of all affected ratings, if any, within six months thereafter, and we expect no impact to our current rating portfolio.

Understanding Drivers of Sovereign Default

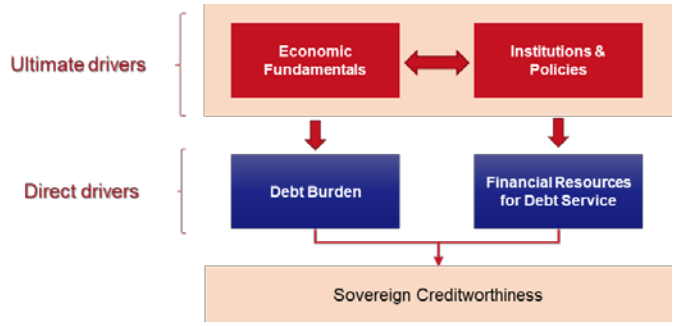
We believe a sovereign's willingness to service its debt would be in general positively related to its capacity of debt service. Sovereign creditworthiness would be driven primarily by its capacity for debt repayment. In few cases willingness to service debt may become the key driver of sovereign default.

A sovereign's capacity to service its debt depends on its abilities—in comparison to its debt burden—to generate primary fiscal surplus, accumulate and tap reserve, create money, access new borrowing or take a combination of these measures, and would typically depend on the availability of foreign exchange in case of serving foreign-currency debt.

A country may accumulate sovereign debt for various economic, institutional and policy reasons, such as to compensate for revenue shortfall amid weak economic performance, to pursue countercyclical fiscal policy or to finance populist spending. When a country with indebted sovereign is hit by shocks (such as a war, sharp decline in the prices of its key export commodities or adverse change in global monetary and financial conditions) or suffers from prolonged weak economic performance otherwise, its budgetary performance could deteriorate markedly. To make timely and full debt repayment in such circumstance, the government would need to tap if any its fiscal reserve and possibly foreign exchange reserves, resort to monetary expansion, or access new borrowing. In the last case, the government may need to adopt policy changes and reforms on time to secure confidence of private and/or official lenders in the country's economic and fiscal sustainability. If funding obtained from these channels turns to be insufficient, sovereign default could happen.

Apparent from the above analysis of a simplified sovereign default scenario, debt accumulation and financial resources for debt services are direct drivers of sovereign creditworthiness; both of them are in turn driven mainly by a broad aspects of a country's *economic fundamentals* (growth performance and external performance), *institutions and policies* and the interaction among them. This makes economic fundamentals and institutions & policies the key ultimate drivers of sovereign creditworthiness (chart 1).

Chart 1 A Simplified Chart of Drivers of Sovereign Creditworthiness

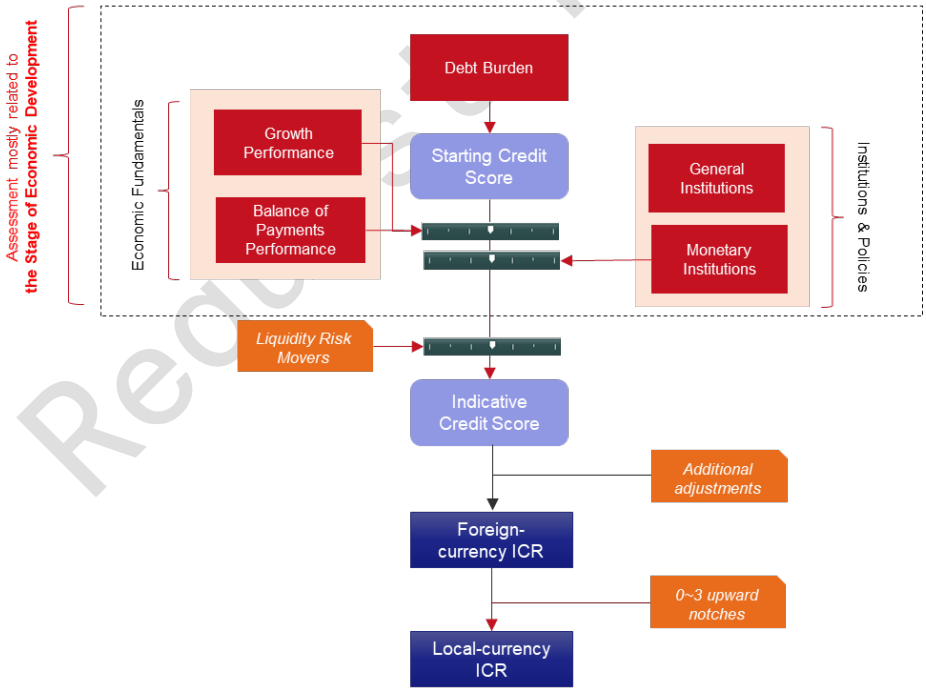


Note: This simplified chart does not cover explicitly factors affecting sovereign creditworthiness through driving liquidity risk, nor the few cases where a sovereign's willingness to service debt is a major independent driver of sovereign creditworthiness.

Sovereign Rating Framework

Our sovereign rating framework reflects but not mirrors the above simplified chart of drivers of sovereign creditworthiness (chart 2). The framework attempts to untangle the complicated interaction among drivers of sovereign creditworthiness in a way to facilitate the rating assignment and the communication with users of our sovereign rating.

Chart 2: Framework for Assigning Sovereign Issuer Credit Rating



The key rating factors under the framework are divided into four groups:

1. Debt burden and stage of economic development
2. Economic fundamentals
3. Institutions and policies
4. Distinctive mover of underlying liquidity risk

We begin with assigning a *starting credit score* (SCS) in the range of "b-" to "aaa" to a sovereign based on the *debt burden* (debt level and debt growth) of the sovereign and the country's *stage of economic development*. A sovereign with higher debt level, faster debt growth and lower stage of economic development gets weaker SCS. The SCS represents our view on the benchmark creditworthiness of all sovereigns with similar debt burden at the same stage of economic development.

Thereafter, we consider the impact of other groups of key rating factors (including sub-factors and main additional consideration factors) on sovereign creditworthiness by making upward or downward notching to SCS to arrive at *indicative credit score* (ICS).:

1. For the assessment of *economic fundaments*, we first decide whether and to which extent to apply upward or downward notching to the SCS based on comparing the sovereign's performance on anchoring indicators to the benchmark performance of countries at the applicable stage of economic development ("Stage Norm"); then we apply upward or downward notching to SCS regarding *main additional consideration factors* based on comparing the sovereign's quantitative and/or qualitative features to thresholds not tied to the country's *stage of economic development*.
2. For the assessment of *institutions & policies*, we decide whether and to which extent to apply upward or downward notching to the SCS based on comparing the sovereign's institutional score against applicable Stage Norm.
3. For the assessment on *distinctive movers of underlying liquidity risk*, we decide whether and to which extent to apply upward or downward notching to SCS based on comparing the sovereign's quantitative and/or qualitative features to the thresholds not tied to the country's *stage of economic development*.

Typically, aggregate adjustment to SCS based on the assessment of economic fundamentals and the assessment on distinctive movers of underlying liquidity risk will be capped respectively at three notches upward or downward.

Additional Adjustment Factors

On top of ICS, we consider a few additional factors below to arrive at foreign-currency ICR on a sovereign. These factors may lead to generally no more than three notches downward or upward adjustment to ICS according to our criteria.

(1) The willingness of a sovereign to service its debt that has not been captured by its positive correlation with the capacity of a sovereign to service its debt.;

(2) The risk of geopolitical conflicts and extreme natural disasters whose impacts are not sufficiently captured by analysis of individual key rating factors;

(3) Extreme risks related to economic fundamentals and/or institutions and policies that are not sufficiently captured by the greatest downward notching applied to the respective rating factor, such as extremely weak growth, extremely high inflation or extremely high external debt burden.

(4) Aggregate effect of rating factors on the sovereign creditworthiness that has not been captured sufficiently in the assessment on the Key Rating Factors individually.

One Notch Flexibility

If none of the above additional factors applies, our sovereign foreign-currency ICR is within one notch of the ICS level. Whether the ICR would be one notch higher or lower than the ICS level is dependent on our review of relevant factors, such as the relative strength or weakness in creditworthiness compared with sovereigns that have or may have similar ICRs (if it has not been captured elsewhere in the methodology).

Local-currency Rating

Local-currency ICR is equal to foreign-currency rating for most sovereigns. However, we believe sovereigns with some features (primarily strong monetary institutions and high foreign-currency ICR) have greater capacity to service local-currency

debt compared to foreign-currency debt, therefore their local-currency ICR could be one to three notches higher than foreign-currency rating.

Issuance Rating

We equalize the issuance credit rating on a senior unsecured sovereign foreign-currency debt with the sovereign foreign-currency ICR, unless the debt is fully guaranteed on which we assign issuance rating based on our applicable criteria.

We equalize the issuance credit rating on a senior unsecured sovereign local-currency debt with the sovereign local-currency ICR, unless the debt is fully guaranteed on which we assign issuance rating based on our applicable criteria.

Key Rating Factors

We explain in this section how we assess key rating factors to assign SCS and determine notching-up and notching-down thereafter to arrive at ICS.

For some key rating factors (including sub-factors and *main additional consideration factors*), we determine notching to SCS (or assign a score to facilitate the determination of notching to SCS) based on the value of an indicator. When the value of such indicator falls on or very close to a threshold between two different notching outcomes or two different scores, we will choose the one which in our judgement better captures the credit risk.

1. Debt Burden and Stage of Economic Development

We assign a SCS (from letter "b-" to "aaa") to a sovereign based on its debt burden—debt level and debt growth—and the country's stage of economic development (table 1). The matrixes are designed in a way that sovereign with higher debt level, faster debt growth and lower stage of economic development get weaker SCS.

Since higher debt burden demands greater financial resource for debt service, higher debt burden points to weaker sovereign creditworthiness, all other things equal. Indeed, many sovereigns that defaulted in the past had high and/or fast-growing debt level in a few years prior to default.

Meanwhile, the history of sovereign default over the past several decades indicates that advanced economies rarely experienced sovereign default, even though quite several of them had high government debt in relative to GDP. In contrast, most sovereign defaults happened to countries at lower stages of economic development, even though some of their government debt in relative to GDP didn't appear to be very high at the time of default. Some financial studies also suggest that advanced economies can sustain higher level of government debt than developing countries.

Table 1 Assigning Starting Credit Score

Table 1-1 Stage Five		Debt Level[1]					
	Typical Range	Below 0	0 ~ 30	30 ~ 60	60 ~ 90	90 ~ 120	>120
Debt Growth[2]	Less than 1	aaa	aa+	aa	aa-	a	bbb+
	1 ~ 3	aaa	aa	aa-	a+	a-	bbb
	3 ~ 5	aa+	aa-	a+	a	bbb+	bbb-
	More than 5	aa	aa-	a	a-	bbb	bb+

Table 1-2 Stage Four		Debt Level					
	Typical Range	Below 0	0 ~ 30	30 ~ 60	60 ~ 90	90 ~ 120	>120
Debt Growth	Less than 1	aa	aa-	a+	a	bbb+	bbb-
	1 ~ 3	aa	a+	a	a-	bbb	bb+
	3 ~ 5	a+	a	a-	bbb+	bbb-	bb
	More than 5	a	a-	bbb+	bbb-	bb+	bb-

Table 1-3 Stage Three		Debt Level					
	Typical Range	Below 0	0 ~ 30	30 ~ 60	60 ~ 90	90 ~ 120	>120
Debt Growth	Less than 1	a+	a	a-	bbb+	bb+	bb
	1 ~ 3	a	a-	bbb+	bbb	bb	bb-
	3 ~ 5	bbb+	bbb	bbb-	bb+	bb-	b+
	More than 5	bbb	bbb-	bb+	bb-	b+	b

Table 1-4 Stage Two		Debt Level				
	Typical Range	Below 20	20 ~ 40	40 ~ 60	60 ~ 90	>90
Debt Growth	Less than 1	bbb+	bbb	bbb-	bb+	b+
	1 ~ 3	bbb	bbb-	bb+	bb	b
	3 ~ 5	bb+	bb	bb-	b+	b-
	More than 5	bb	bb-	b+	b-	b-

Table 1-5 Stage One		Debt Level			
	Typical Range	Below 20	20 ~ 40	40 ~ 60	>60
Debt Growth	Less than 1	bbb-	bb+	bb	b+
	1 ~ 3	bb	bb-	b+	b
	3 ~ 5	bb-	b+	b	b-
	More than 5	b	b-	b-	b-

Note: 1. Debt level: actual/estimate of debt-to-GDP ratio at year$_{t-1}$. For these criteria, Year$_t$ refers to the year of rating assessment (current year). 2. Debt growth: average increase in the ratio of debt-to-GDP over ten years spanning year$_{t-7}$ and yea$_{t+3}$ in percentage points.

Stage of economic development

We classify a country to one of five stages of economic development ranging from "Stage One" (lowest) to "Stage Five" (highest) based primarily on GDP per capita of the country (table 2). The classification also reflects our assessment of the level of industrialization and urbanization, the development of high value-added services and the level of infrastructure in the country.

When GDP per capita of a country falls within 20% of the threshold between two neighboring stages of economic development, we could assign the country to higher or lower stage of economic development if we believe the level of industrialization and other aspects of economic development show much higher or lower strength in relative to the stage of development purely based on GDP per capita.

If the GDP per capita of a country moves or could move back and forth between GDP per capita brackets corresponding to two neighboring stages of economic development due to volatile exchange rate or other reasons, we would determine the applicable stage of economic development based on other aspects of economic development.

Table 2 GDP per Capita Brackets by Stage of Economic Development

Stage of Economic Development	Stage Five	Stage Four	Stage Three	Stage Two	Stage One
GDP per capita ($)	>24,000	24,000~12,000	12,000~6,000	6,000~3,000	<3,000

Note: GDP per capita in current price calculated at market exchange rate of local currency against U.S. dollar or other applicable exchange rate we decide in the absence of meaningful market exchange rate.

In general, countries at higher stage of economic development have not only higher level of wealth and greater tax base than countries at lower stage of economic development, but also better debt management, more stable fiscal performance, lower reliance of government on foreign-currency debt, greater access to long-term borrow and foreign exchange market, lower liquidity risk, more disciplined and effective monetary policies and greater political stability. Consequently, countries at higher stage of economic development can generally sustain higher debt burden than countries at lower stage of economic development.

Debt Burden

Our assessment on debt burden is focused on the level and trend growth of general government debt (measured by the average increased in the *general government debt t*o GDP ratio over a ten-year period). Debt affordability represented by the ratio of *general government interest expenditure* to *general government revenue* is implicitly captured by the trend debt growth, as lower debt affordability would lead to faster debt growth, all other things being equal.

For these criteria, general government means the aggregate of national and subnational governments (such as local, regional and state governments depending on country circumstance) and social security fund. We calculate net general government debt as the gross debt of general government minus its liquid financial assets. Typical liquid financial assets of general government include deposits in financial institutions. Some governments may also have access to liquid financial assets held under sovereign wealth fund or other funds.

- When the inflation in a country is very high (typically GDP deflator increased by more than 20 percentage points in a year) and thereby unsustainable, it could make standardized calculation of trend debt growth (i.e. average debt growth over $year_{t-7}$ to $year_{t+3}$) understate the medium-to long term debt growth in the future. In such case, we would assign a SCS corresponding to the higher category of debt growth than that corresponds to the standardized calculation of trend debt growth. (For instance, if the general government debt to GDP ratio of a country at the "Stage 3" of economic development is 50% and the country experiences increase in GDP deflator by more than 20 percentage points per year for several years over the 10-year period for calculating trend debt growth, the SCS of the sovereign could be "bbb+" or even "bbb-").
- If the trend debt growth of general government debt of a country is much faster than 5% annually (highest debt growth bracket) and the debt-to-GDP ratio is likely to move into the next higher bracket of debt level in the next one or two years, we may assign SCS corresponding to the next higher bracket of debt level. If the trend debt growth of general

government debt of a country is much slower than 1% annually (lowest debt growth bracket) and the debt-to-GDP ratio is likely to move into the next lower bracket of debt level in the next one or two years, we may assign SCS corresponding to the next lower bracket of debt level.

Additional Consideration

1. **Contingent liabilities**: For these criteria, we define contingent liabilities as off-balance sheet liabilities that may move onto the government's balance sheet if they materialize. Some of these contingent liabilities are legally-based, such as contingent liabilities stemming from a guarantee provided by the government. Others may be related to government policies and intention to financially support non-government sector for financial, economic and/or social stability. History indicated that materialization of contingent liabilities (especially that related to banking sector under stress) can add great debt to government, weakening fiscal strength and even leading to sovereign default.

   When we could pin down quantitative estimate on contingent liabilities of general government, we add the estimated contingent liabilities to the general government debt towards determining SCS (see below section on Estimate Contingent Liabilities). For countries lacking of statistics and information to quantify the contingent liabilities, if we believe the contingent liabilities is substantial and its materialization could weaken sovereign creditworthiness, we would generally lower the SCS by one notch.

   We estimate total contingent liabilities of general government as the aggregation of contingent liabilities from these four segments: (1) banking sector; (2) non-bank financial institutions; (3) non-financial public enterprises (NFPEs); (4) guarantee and other off-budget contingent liabilities. Typically, the largest contingent liability usually stems from banking sector, partly because government has relatively higher propensity to support banking sector given its key role in the financial and economic system. As happened in several European countries over 2009-2011, sovereigns may choose to support banking sector through providing blanket guarantee on bank deposits or injecting capital to banking sector to ensure financial stability and prevent economic collapse.

   We estimate the banking sector contingent liabilities as the capital injection necessary to safeguard normal functioning of banking system and financial stability in stress scenarios. This normally requires that the recapitalization to bring banking sector capital adequacy ratio in stress scenarios up to meet with regulatory standards. We estimate a *recapitalization ratio* applicable for a country's banking sector, which timed by banking sector total assets yields banking sector contingent liabilities. We estimate the banking sector recapitalization ratio for a country by assessing a number of factors, such as: (1) indicators of banking sector asset quality, including but not limited to non-performing loan (NPL) ratio and its dynamics through economic cycle; (2) bank capital adequacy ratios and related regulatory requirement; (3) economic and financial development of the country; (4) historical government support to banking sector in stress scenarios and related regulatory and policy development. The estimate is also informed by relevant analyses and reports of national authorities, IMF and other researchers.

   For non-bank financial institutions, we believe government would generally support those having systematical importance in stress scenarios. The *non-bank financial institution contingent liabilities* are equal to the product of total assets of systemically important non-bank financial institutions and applicable recapitalization ratio. The applicable recapitalization ratio is estimated in analysis similar to that applied to banking sector.

   For NFPEs, we expect governments to support debt repayment of NFPEs that play important policy role for government or whose failure would frustrate key policy targets of government. The contingent liabilities equal to the product of *total debt of supported NFPEs* and *share of not self-supporting debt.* Depending on the number of NFPEs that the government may support and the availability of relevant information, we may estimate the *share of not self-supporting debt* with bottom-up approach (a "share" for every supported NFPE), blanket approach (a "share" for all supported NEPEs) or mixed approach (bottom-up approach for some NFPEs and blanket approach for other NFPEs or groups of NFPEs).

2. **High reliance on foreign-currency denominated debt**: When a country has high share (typically close to 40% or more) of foreign-currency denominated general government debt, we would generally lower the SCS by one to two notches. In case of large exchange rate depreciation, the debt level of the government could deteriorate materially.

3. **General government borrowing for capital spending**: Capital spending on key infrastructures and utilities could enhance the growth potential and trend growth of a country if such spending helps remove bottleneck in infrastructure and utilities. Effective capital spending could also lead to formation of sellable assets. All other things equal, government debt incurred for capital spending could be a less drag on sovereign creditworthiness than the same level

of government debt incurred to finance current expenditure. We would apply one notch upward adjustment to the SCS if the capital spending is sizable and the resulted assets is expected to benefit the economy growth substantially over medium to long term.

4. **Use of alternative data**: When data about the general government is not available or quality of available data appears to be poor, we use the available data ("alternative data") that we believe most relevant to assess the sovereign creditworthiness, such as fiscal data about central government and gross general government debt. When we believe using such alternative data could miss material part of credit risk posed by true debt profile of general government (because of the narrower coverage of the alternative data and/or the quality of the alternative data), we would generally lower the SCS derived from the alternative data by one notch to capture the underlying sovereign creditworthiness.

2. Economic Fundamentals

We assess economic fundamentals in two aspects (sub-factors): growth performance and balance of payment performance. A sovereign with materially better or weaker performance on these sub-factors in relative to peers at the same stage of economic development would get upward or downward notch from SCS.

For each sub-factor, we would apply one notch of downward (or upward) adjustment to SCS if the performance of a country is weak (or strong) on an anchoring indicator compared to Stage Norm for the indicator, or two notches of downward (or upward) adjustment to SCS if the performance of a country is very weak (or very strong) compared to the Stage Norm (table 3).

We set Stage Norm and thresholds for notching for each stage of economic development based on the average trend growth of all countries at the stage and our understanding of normal performance across stages of economic development and over time. For illustration and with the caveat for oversimplification, "weak" or "strong" means roughly the performance of a country is off the average of the countries at the same stage of economic development by one standard deviation; "very weak" or "very strong" means roughly the performance of a country is off the average of the countries at the same stage of economic development by one and half standard deviation.

Table 3 A simplified and Illustrative Way to Set Threshold for Notching

Notching to SCS	Two downward notches	One downward notch	One upward notch	Two upward notches
Performance compared to Stage Norm (= Stage Mean[1])	Very Weak	Weak	Strong	Very Strong
Threshold for notching	1.5x SD[2] weaker than Stage Mean	1x SD weaker than Stage Mean	1x SD Stronger than Stage Mean	1.5x SD Stronger than Stage Mean

Note: 1. Stage Mean: average of indicator value of countries at the same stage of economic development. 2. SD: standard deviation of anchor indicator value of countries at the same stage of economic development.

Thereafter, we apply further notching to SCS if a country has features listed in the "Main Additional Consideration" section, which are not common to majority of sovereigns. In most cases, if a sovereign demonstrates a listed feature, we would apply one notch upward or downward adjustment to the SCS.

Aggregate adjustment to SCS under each sub-factor is generally capped at two notches downward or upward.

2.1 Growth Performance

Our anchoring indicator for growth performance is the trend growth of a country. Robust and sustainable economic growth of a country could provide the sovereign with strong revenue base. This supports sovereign creditworthiness through helping make the debt burden of the sovereign more sustainable in the long term. From the perspective of economic

resilience, countries with strong trend growth are generally more competitive than countries with low trend growth and is likely to perform better under stress scenarios by standing out as relatively favorable place for business and investment. History of sovereign defaults also indicates that weak growth performance for prolonged time caused or led sovereign default in a number of cases.

The trend growth is generally calculated over a long-time period, typically equal to the weighted average of real GDP growth over 10 years (including current year estimate and three-year projection, with historical growth carrying less weight) and adjusted for impact of factors not related to the credit fundamentals of a sovereign (such as change in base year for GDP accounting. If a country is experiencing marked idiosyncratic structural change (structural change not similarly experienced by peers at the same stage of economic development) and the impact on trend growth is not sufficiently captured by the 10-year weighted average growth, we will adjust the weighted average growth to capture the impact. Calculating trend growth in this way help grasp the relative fundamental growth strength of a country in a forward-looking perspective.

Main Additional Consideration

- **Economic concentration or other driver of growth volatility**: For countries with high reliance on a single volatile industry or segment of an economy (typically accounting for much higher than 10% of GDP around current year) or other kind of volatile economy, we generally lower the SCS by one notch. The calculated trend growth of such countries is less informative for predicting growth performance of the country in the coming years compared to countries with more balanced economic structure and stable growth. Thus, the calculated growth score could overstate the strength of economic fundamentals.

  History suggested that countries with high reliance on a single volatile industry, sector or segment of an economy could experience great deterioration in growth performance and marked rise in debt burden when the prices or revenue of that economic segment declined sharply. Some of these countries defaulted eventually.

  However, if the prices of major output of the above-mentioned volatile segment appear to be close to the bottom of the medium to long term price cycle with limited downside risk, we will not apply the downward adjustment to SCS.

2.2 Balance of Payments Performance

Our anchoring indicator for balance of payment performance is trend level of current account balance, which in our view is the main driver of a country's external sustainability in the long term. Besides, weaker current account balance could also dampen investor confidence in a country and constrain a sovereign's access to foreign exchange for repayment of foreign-currency debt. Moreover, a country with weaker trend level of current account balance is more likely to experience adjustment in policies and financial conditions (including but not limited to exchange rate) that could dampen growth performance and push up debt burden of the sovereign. Thus, sovereign creditworthiness of such country would be weaker than that of a country with strong external sustainability.

The balance of payments is a statistical statement that summarizes transactions between residents and nonresidents during a period. It consists of current account, capital account and financial account. The current account receipts refer to the sum of proceeds from exports of goods and services and some income (mostly compensation of employees and investment income from non-residents). The balance of current account always equal to the total balance of capital account and financial account (inclusive of statistical error & omission). Thus, assessment on current account balance in long term help grasp the external sustainability of a country.

The trend level of current account balance is generally calculated over a long-time period, typically equal to the weighted average of current account balance (as a percentage of GDP) over 10 years (including current year estimate and three-year projection, with historical growth carrying less weight), and adjusted for impact of factors not related to the credit fundamentals of a sovereign (such as statistical change in balance of payment compilation). If a country is experiencing marked idiosyncratic structural change (structural change not similarly experienced by peers at the same stage of economic development) and the impact on trend level of current account balance is not sufficiently captured by the 10-year weighted average level, we will adjust the weighted average level to capture the impact. Calculating trend current account balance in this way help grasp the relative fundamental external sustainability of a country in a forward-looking perspective.

Additional Consideration

- **Very volatile current account performance:** If a country's balance of payment could be very volatile, for instance due to highly concentrated export base and/or high volatility in terms of trade (mostly seen in commodity-exporting countries), the trend growth could overstate the external sustainability of the country. In such cases, we would typically apply one notch downward adjustment to SCS. Terms of trade are defined as the ratio between the index of export prices and the index of import prices.

  History of sovereign defaults suggests that volatile current account balance performance of commodities exporters was a major driver of sovereign defaults in a number of cases.

- **High external debt burden:** Country's with same trend of current account balance of payments may have quite divergent external debt burden. For countries with very high external debt burden, we believe the starting BOP score overstates the external sustainability. Thus, we would generally lower the starting BOP score by one to two notches (one notch if the ratio of external debt to current account receipt is greater than 150% or two notches if the ratio is greater than 300%).

  We typically measure net external debt as the total debt-type liabilities to non-residents (equal to total external liabilities minus foreign direct investment and portfolio equity investment) minus official reserve. Therefore, inter-company lending that is reported as a component of foreign direct investment according to the Balance of Payment Manual of IMF does not typically enter our measure of external debt burden.

  For countries where banking sector has large external assets, we will deduct banking sector debt-type external assets from total debt as well to arrive at net external debt if we believe the banking sector is sound and resilient.

- **Very strong international investment position**: Country's with same BOP score may have quite divergent international investment position (IIP). For countries with very strong international investment position (net IIP generally greater than 50% of current account payment for countries with positive trend level of current account balance, or greater than 100% for countries with negative trend level of current account balance), we believe the starting BOP score understates the external sustainability. Thus, we would generally raise the SCS by one notch.

- **Current account deficit induced by sustained capital inflow**: If a country issuing or controlling otherwise a reserve currency or is a long-preferred investment destination of international capital for other fundamental reasons, it may show current account deficit that is partly induced and accommodated by sustained capital inflow. Trend current account balance could understate the external sustainability of such countries. Thus, we apply one notch upward adjustment to SCS if the trend current account balance of such a country is in deficit, and apply two notches upward adjustment to SCS for the country issuing the most important reserve currency in the world.

  Typically, the status of a reserve currency is quite stable in very long period, as it is supported by widespread and entrenched investor confidence in the economic and institutional strength of the country issuing the reserve currency, the country's the deep and open capital markets, and the soundness of financial systems. Thus, we could identify "reserve currency" for these criteria as currency that accounts for more than 2% of the world's total allocated foreign exchange reserves based on the IMF report "Currency Composition of Official Foreign Exchange Reserves." Currently we regard US dollar, Euro, Japanese Yen and British Pound as reserve currency for these criteria, and US dollar is the most important reserve currency in the world.

3. Institutions and Policies

Our assessment on institutions and policies focus on the extent to which a country's institutions and policymaking would -- in relative to all other countries -- support (or constrain) a sovereign's capacity to service its debt. A country's institutions and policymaking shapes the sovereign's creditworthiness through affecting debt burden and many aspects of economic fundamentals. Some of these impacts have been captured directly or indirectly under the discussion of key rating factors in the previous sections, for instance through affecting the projection on key economic and fiscal indicators. However, it is worthwhile to dedicate a section to assess institution and policymaking to better grasp the debt burden and economic fundamentals in longer time, the dynamics in stress scenarios and possible investor confidence that affect sovereign creditworthiness.

In addition to our assessment on general institutions, we dedicate a sub-section to assess monetary institution given its importance to sovereign creditworthiness and the complexity of monetary institutions. For these criteria, we define monetary institutions as the monetary and financial system of a country. Strong monetary institutions could help a country allocate financial resources effectively to support economic fundamentals and provide a government with an option (monetary flexibility) to use monetary expansion to stimulate economic activities in stress scenarios.

Our assessment on monetary institutions and general institutions focus on two aspects:

(1) How well the institutions & policies respond to internal and external shocks to support economic performance and fiscal sustainability in long term; and

(2) To which extent that institutions & policies are creating stable/predictable environment for business activities, mitigating emerging economic imbalance and thus facilitating sustainable economic growth and public finance development over medium-to long-time; or to the contrary, leading to unstable/unpredictable business environment, giving rise to economic and fiscal imbalances and thus the risk of sharp correction even in the absence of exogenous shocks.

In assessing general institutions and monetary institutions, we first determine a score for the sub-factor in the range of "1" (weakest) to "7" (strongest). We then apply one notch of downward (or upward) adjustment to SCS if the monetary institution score of a country is weak (or strong) compared to Stage Norm, or two notches of downward (or upward) adjustment to SCS if the monetary institutions score of a country is very weak (or very strong) compared to the Stage Norm.

3.1 General Institutions

We score the general institutional strength of a sovereign by taking a holistic view on key aspects and components of institutions and polices relevant to sovereign creditworthiness (except for monetary institutions), considering both the features of institutions and policymaking and their track record and prospect to support sustainable economic growth and public finance.

Then we apply downward (or upward) notching to SCS if the general institutions score is weak (or strong) compared to the Stage Norm (table 4).

Table 4 Determining Notching for Relative Strength of General Institutions

Notching to SCS	number of notches = General Institutional Score – Stage Norm				
Stage of Economic Development	Stage Five	Stage Four	Stage Three	Stage Two	Stage One
Stage Norm	6	5	4	3	2

The key aspects and components of general institutions and policies include:

1. **Political and social stability**. Stable political environment reflects and reinforces social stability, which facilitates business activities and economic development. In contrast, political conflict, frequent outbreak of strikes and social turmoil hurt an economy by hindering business and government operations and dampening the predictability of macroeconomic policies and regulations. Typically, a country with political stability tends to be governed by a majority party for at least two consecutive terms for most of the time over a few decades and sees smooth transfer of power from one administration to the next. Whether a coalition government without a majority party could be potentially instable would be assessed in country-specific circumstance.

2. **Effectiveness of institutions and policymaking** in promoting sustainable economic growth and public finance.

- **Role of government and market**: We believe effective political institutions would assign proper roles to government and market respectively in an economic system, considering the stage of development and other relevant social-political circumstances of the country. Government of a country at early stage of development may need to lay down market institutions, take the lead in building infrastructure and nurture competitive advantage. As an economy becomes more wealthy and sophisticated and moves onto higher stage of economic development, government would usually focus more on fostering stable macroeconomic environment, enforcing fair and effective regulation and

providing reasonable level of social service and welfare. If a government plays excessive or inadequate role (such as intervening intensively in economic activities or providing insufficient public service and regulation), it could constrain sustainable economic growth and eventually detrimental to the health of public finance.

- **Policy framework and targets**: The most effective institutions and policymaking would set realistic/reasonable policy framework and targets; make use of appropriate policy instruments; ensure stability of institutions and consistency of polices that work effectively through rule by law and well-established practices; make necessary policy adjustment (learning and error-correction) and implement reform based on changing circumstance and outlook; address both short-term priority and long-term needs; and learn from past experience. Policy changes and reforms should happen at timely manner. An instance of effective policy is that promotes diversification of an economy which relies highly on the export of a few key commodities or reserve large chunk of revenue from such export in good years for cushioning commodity price shock in the future. In contrast, resorting to aggressive fiscal expansion prior to election or related to political cycle is detrimental to sustainable public finance.
- **Crisis prevention and risk management**: A country with most effective institutions & policies would have capacity to manage stress and crisis, including through setting aside fiscal reserve and foreign exchange reserve and having fiscal and monetary space to response to crisis. Response to crisis would be swift and decisive. For countries lacking capacity to resort to counter-cyclical measures, effective crisis management may take the form of fiscal consolidation and structural reform to strengthen long-term vitality of the economy and public finance (such as through pension reform) and thereby maintain investor confidence and secure financial support from international financial institutions.
- **People and social-political aspects of effective governance:** Strong leadership, capable technocrats, social cohesion and alignment of policies targets with fundamental and realistic social needs and inclusive growth facilitate efficient and effective policymaking. Check-and-balance generally helps reduce the odds and severity of policy misstep, although extensive check-and-balance makes timely policymaking more challenging in a country experiencing political polarization. Corruption and other form of unduly influence by interest groups could dampen the inclusiveness of economic growth and in many cases effective allocation of resources, which is detrimental to sustainability of economic growth and the health of public finance.
- **Data and transparency**: Availability of relevant and quality statistics, especially economic, fiscal, financial and trade statistics that help make realistic and effective policies and mitigate the risk of policy misstep.

We factor in relevant country circumstance in assessing the effectiveness of institutions & policies in countries, and factor in the evolution of institution along the path of economic development. Effective check-and-balance may take varied form given the country circumstance. Monetary policies may tolerate higher inflation in developing countries.

3.2 Monetary Institutions

For monetary institutions, we first assign an initial score based on inflation performance ("inflation score"), then adjust the initial score by factoring in *Main Additional Consideration* factors to arrive at final monetary institutions score. The adjustment to inflation score is additive except that the final monetary institutions score is capped at "7" and no less than "1".

We then apply downward (or upward) notching to SCS if the score is much weak (or strong) compared to Stage Norm (table 5).

Table 5 Determining Notching for Relative Strength of Monetary Institutions

Notching to SCS	Two notches downward	One notch downward	One notch upward	Two notches upward
Monetary Institutions Score minus **Stage Norm**	<-2	-2~ -1	1~2	>2

Stage of Economic Development	Stage Five	Stage Four	Stage Three	Stage Two	Stage One
Stage Norm	5.5	5	4.5	4	3.5

We believe low and stable inflation signals strong monetary institution, since it facilitates sustainable economic growth, helps build confidence in monetary policy and enable government to resort to monetary expansion in stress scenarios without bringing about high inflation and disrupting economic activities. Thus, low and stable CPI inflation corresponds to stronger score.

The inflation score is the weighted average of score on the level of consumer price inflation (CPI inflation) and the score on volatility of CPI inflation over a 10-year period (including current year estimate and three-year forecast (table 6). The inflation level score carries a weight of 70%, while the inflation volatility score carries a weight of 30%. The volatility of CPI inflation is measured by its standard deviation.

In rare cases where a country experiences deflation, signally by tend CPI inflation below zero we will apply one notch downward adjustment to SCS without scoring monetary institution. This reflects our belief that deflation is not only symptom of economic weakness but also signal of ineffectiveness of monetary policy to bring the economy on a healthy path.

In cases of trend CPI inflation falling between zero and 1%, we will apply one notch downward adjustment to SCS without scoring monetary institution if we believe there is significant deflationary pressure. Otherwise, we assign inflation performance score of "6" based on low and stable but suboptimal inflation.

Table 6 Assign Score to Inflation Performance

Inflation level score	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Average CPI inflation*	1%~2.5%	2.5%~3.5%	3.5%~4.5%	4.5%~6%	6%~8%	8%~10%	>10%
Inflation volatility score	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Volatility of CPI inflation	<1	1~1.5	1.5~2	2~2.5	2.5~3	3~3.5	>3.5

Note: 1. Average CPI inflation over ten years spanning $year_{t-6}$ and $year_{t+3}$. 2. Volatility of CPI is represented by the standard deviation of CPI inflation (in percentage points) over same ten years. 3. For a country where average CPI inflation is lower than 1%, see the relevant context for scoring guidance.

Main Additional Consideration

- **Exchange rate regime**: If a country implements pegged or heavily-managed exchange rate regime (or other regimes that lack exchange rate flexibility), currency board or does not have local-currency, the practice constrains the country's ability to use monetary to support economic and financial stability (including through responding to crisis). In such cases, we generally lower the monetary score by one to two points depending on the extent of exchange rate rigidity and potential negative impact on sovereign creditworthiness. However, effective capital control, foreign exchange market intervention, financial regulation and other government measures may mitigate or offset the constraint of exchange rate regime on the monetary flexibility and justify smaller or no downward adjustment on monetary score.
- **Central bank independence**: If we believe the central bank or monetary authority of a country has much stronger (or weaker) independence than majority central bank peers evidenced by legislation and practice (or lack of legislation), we would raise (or lower) the score by one point accordingly.
- **Financial stability and financial development**: If we estimate that a country experiences high and fast rising macro-leverage (measured by the ratio of broad monetary aggregate to GDP or the ratio of *domestic credit to private sector* to GDP), significant risk of asset price bubble, high and unsustainable financialization (typically signaled by very high share of financial service sector in GDP) or severely under-developed financial system, we would lower the score typically by one point. If we believe a country's financial system experience significant underdevelopment and is a major constraint over economic development, we could lower the score by one point.
- **Currency union**: For a member country of currency union, if we believe it doesn't have substantial and effective influence on monetary policy, we lower the score by one point.

4. Distinctive Movers of Underlying Liquidity Risk

For sovereigns with similar solvency risk, the higher the liquidity risk, the weaker the sovereign creditworthiness. We explain in this section how we apply downward or upward notching to SCS to capture impact of distinctive movers of underlying liquidity risk on sovereign creditworthiness.

We believe that liquidity risk is partly correlated with solvency risk. For instance, sovereigns with little solvency risk tend to have access to greater and more diversified investor base, which reduces their rollover risk compared to sovereigns with high solvency risk. We assess in this section key risk factors that drive mainly liquidity risk of a sovereign ("distinctive movers of underlying liquidity risk").

4.1 Government Borrowing Needs and Pattern

- Funding needs and borrowing pattern of governments have implication for fundamental liquidity risk of the sovereign. All other things equal, higher funding needs or borrowing from more volatile sources increase the liquidity risks. Thus, if a government has very high borrowing needs (for instance due to high budgetary deficit, maturation of large size debt or materialization of large contingent liabilities) or the government borrows heavily from non-residents, we would typically lower the SCS by one notch.

  We regard a government as "having high borrowing needs" if the needs are close to 10% of GDP or more in a single year over the next three years or close to high single-digit of GDP at one point of time over the next three years.

  We regard a government as "borrowing heavily from non-resident" if such borrowing accounts for 40% or more of government commercial debt in a developing country or 60% or more of government debt in a developed country. Country classification for this purpose is in line with latest classification in the World Economic Outlook report of IMF, with advanced economies under WEO terminology corresponding to developed countries in these criteria. For countries issuing or otherwise controlling a reserve currency, we do not apply downward adjustment to SCS.

  In case a government has or close to have both features, we would decide to apply one or two notches of downward adjustment could better capture the impact of resulting liquidity risk on sovereign creditworthiness.

  Aggregate downward adjustment to SCS based on government borrowing needs and pattern is capped at two notches.

- For government with high liquid financial assets in the form of fiscal reserve or other readily usable form, we raise the SCS by one notch to reflect low liquidity risk.

4.2 External Liquidity Risk

We apply one to two notches of downward or upward adjustment to SCS to reflect distinctive external liquidity risk.

1. **For sovereigns issuing or otherwise controlling a reserve currency**: We raise the SCS by two notches for the countries issuing or otherwise controlling reserve currency to reflect very low external liquidity risk. These sovereigns are likely to have little difficulty to access new borrowing in the market at times of global economic stress, largely as investors appear to prefer to hold debt securities of these sovereigns at such stress scenario (a phenomenon frequently called "flight to quality").

2. **For other countries**: We assess their external liquidity risk based on sub-scores on the *basic balance of payments* and a *narrow measure of reserve adequacy*. We apply one to two notches upward adjustment to SCS for countries with low and very low external liquidity risk and one to two notches upward adjustment for countries with high and very high external liquidity risk (table 7).

   In assessing the external liquidity risk of developing countries, we apply harsher conditions regarding reserve adequacy on developing countries. This is because developed countries have generally well-established better access to international bond market and have much less needs for reserve to support external liquidity.

Table 7 Determining Notching Based on Relative External Liquidity Risk

	External liquidity risk category	Adjustment to SCS	Category conditions[1]	
			Basic balance of payments[2]/GDP	Narrow measure of reserve adequacy[2]
Developed[3] countries	Very Low	2 notches up	>5%	<40%
	Low	1 notch up	>0%	<60%
	High	1 notch down	<-2%	>300%
	Very High	2 notches down	<-5%	>600%
Developing countries	Very Low	2 notches up	>5%	<20%
	Low	1 notch up	>0%	<30%
	High	1 notch down	<-2%	>150%
	Very High	2 notches down	<-5%	>300%

Note: 1. A country would need to satisfy both the conditions on basic balance of payments and narrow measure of reserve adequacy to be assigned into one of the above four ranking of external liquidity risk. 2. Based on actual/estimate of $year_{t-1}$ and trend over $year_t$~$year_{t+2}$. 3. Country classification in line with latest classification in the World Economic Outlook report of IMF, with advanced economies under WEO terminology corresponding to developed countries in these criteria.

The *basic balance of payments* is defined as the sum of current account balance and net flow of foreign direct investment, which largely measures whether and to which extent the real economic sector provides external liquidity (in case of basic surplus) or needs external liquidity (in case of basic deficit). The net flow of foreign direct investment equals to the *net inflow of foreign direct investment* by non-residents minus *net outflow of overseas direct investment* by residents.

The *narrow measure of reserve adequacy* is defined as the ratio of the short-term debt by remaining maturity (inclusive of short-term deposit in domestic banks by non-residents) to *accessible foreign exchange reserve*, which reflects largely a country's ability to service external debt with official reserve in the stress scenario that external creditors do not roll over debt due in the upcoming year.

For the criteria, *accessible foreign exchange reserve* equals to official reserves minus items not readily available for foreign exchange operations and repayment of external debt. For instance, reserves sold forward is not readily available and should not be included in *assessible foreign exchange reserve*.

- Some countries may have access to substantial foreign-currency liquidity under facilities such as IMF Standby Arrangement or bilateral or multilateral currency swap. When there is sufficient evidence that the country can access such facility at times of distress and the drawable funds—if regarded as accessible reserve of the government—could help bring down external liquidity risk from high level, we would not apply downward notching to SCS.
- If a developing country's high level of *narrow reserve adequacy* is driven by low external debt that resulted from very limited market access, recent debt reduction or similar restructuring rather than very low underlying external liquidity risk, we would not apply upward notching to the SCS.
- For sovereign with limited external data, we equal the external liquidity notching to that of another country ("reference country") with similarity in income level (approximated by GDP per capita in U.S. dollar), trend level of current account balance and volatility of current account performance, subject to one-notch additional downward adjustment to the SCS if we believe its external strength is notably weaker than the reference country.

3. **Poor quality of external data**: If external data of a country lacks consistency (for instance, reflected in large errors and omissions for several years, or unjustified large mismatch between the balance of payment and international investment position numbers) or appears to be of very weak quality otherwise, we may apply one notch downward adjustment to SCS as the weak external data may conceal very high external liquidity risk.

Additional Adjustment Factors After Indicative Credit Score

On top of indicative credit score, we consider a few additional factors when relevant to arrive at a foreign-currency rating on a sovereign:

(1) **A sovereign government's willingness to service its debt**: When a sovereign government may not be willing to service its debt despite the lack of apparent constrain on its debt servicing capacity, it could have great implication for the likelihood of sovereign default. Although a government's willingness (or lack of it) to pay its debt is related to its institutional feature (especially political setting), we believe the impact on sovereign creditworthiness could be quite substantial in some cases and not to be fully captured through assessment on general institutions. Thus, we consider the uncaptured willingness to pay as an adjustment factor after ICS.

Typically for a country with sovereign default history in the past decade, we would apply up to three notches downward adjustment to ICS. However, if we believe the institutional change and political development since the previous sovereign default has brought about material improvement in debt payment culture, we may just lower the ICS by one notch or apply no downward notch at all.

(2) **The risk of geopolitical conflicts and extreme natural disasters**: When we believe the impact of low-probability high-cost geopolitical conflicts and extreme natural disasters could not be sufficiently captured by analysis in individual key rating factors, we would lower the ICS by one or more notches to capture its impact on sovereign creditworthiness.

(3) **Extreme risk on key rating factors**: If the value of one or more anchoring indicators is remarkably weaker than the threshold value for the worst score associated to that anchor (for instance, trend growth or trend CPI inflation worse than Stage Norm by much more than two standard deviation), it may add to substantially more to sovereign credit risk. In such cases, we would lower the sovereign ICS by one or more notches to capture is impact on sovereign creditworthiness.

(4) **Uncaptured aggregate effect of rating factors:** If we believe the aggregate impact of rating factors on sovereign creditworthiness is substantially greater than that has been captured by ICS, we would lower or raise the ratings by typically one or two notches to fully capture the impact. For instance, if a sovereign performs weaker (or stronger) than Stage Norm regarding several anchoring indicators or main additional consideration factors but not to the extent of justifying notching down (or up) SCS in terms of any one of them, it may signal much higher (or lower) sovereign credit risk than reflected in ICS. We may lower (or raise) the ICS by one notch to better capture the sovereign creditworthiness in such case.

Assigning A Sovereign's Local-currency Rating

The history indicated that sovereigns defaulted less frequently on local-currency debt than on foreign-currency debt. This suggests that some governments should have stronger capacity and/or willingness to serve local-currency debt than foreign-currency debt in some circumstances.

In the globalized world, we expect most governments would not discriminate between repaying local-currency debt and repaying foreign-currency debt. Whether a sovereign's local-currency rating could be higher than its foreign-currency rating would be typically a matter of payment capacity, although in rare cases weaker willingness to pay foreign-currency debt compared to local-currency debt could lead to higher local-currency ICR than foreign-currency ICR.

Since a sovereign typically has power to creat money[1], a sovereign would hypothetically have greater capacity to pay local-currency debt. However, the extent to which a sovereign could resort to the power of money creation could be constrained by

[1] This is not the case for countries adopting currency of another country, or members of a currency union that cannot effectively influence the monetary policy of the currency union.

many factors. For instance, aggressive monetary creation could lead to intolerably high inflation and even political instability, thus a responsible government may refrain from aggressive monetary creation.

For a government with strong monetary institutions, we believe its sovereign could benefit from the power to creat money to serve local-currency debt if necessary. Meanwhile, we believe high investor confidence in a country—corresponding to high sovereign foreign-currency rating—support the country's realization of monetary flexibility.

Thus, for a sovereign with high foreign-currency ICR and high monetary institutions score, the local-currency ICR could be one to three notches higher than its foreign-currency ICR depending on the strength of moentary institutions, foreign-currency ICR and other relevant factors that may affect the difference between a sovereign's capaicty to pay local-currency and foreign-currency debt.

Assigning Issuance rating

We equalize the issuance credit rating on a senior unsecured sovereign foreign-currency debt with the sovereign foreign-currency ICR, unless the debt is fully guaranteed on which we assign issuance rating based on our applicable criteria.

We equalize the issuance credit rating on a senior unsecured sovereign local-currency debt with the sovereign foreign-currency ICR, unless the debt is fully guaranteed on which we assign issuance rating based on our applicable criteria.

Related Criteria and Research

- Rating Symbols and Definitions, 21 November 2017
- General Principles of Credit Ratings, 21 November 2017

DISCLAIMER

Pengyuan Credit Rating (Hong Kong) Company Ltd ("Pengyuan International", "Pengyuan", "the Company", "we", "us", "our") publishes credit ratings and reports based on the established methodologies and in compliance with the rating process. For more information on policies, procedures, and methodologies, please refer to the Company's website www.pyrating.com. The Company reserves the right to amend, change, remove, publish any information on its website without prior notice and at its sole discretion.

All credit ratings and reports are subject to disclaimers and certain limitations. CREDIT RATINGS ARE NOT FINANCIAL OR INVESTMENT ADVICE AND MUST NOT BE CONSIDERED AS A RECOMMENDATION TO BUY, SELL OR HOLD ANY SECURITIES AND DO NOT ADDRESS/REFLECT MARKET VALUE OF ANY SECURITIES. USERS OF CREDIT RATINGS ARE EXPECTED TO BE TRAINED FOR INDEPENDENT ASSESSMENT OF INVESTMENT AND BUSINESS DECISIONS.

CREDIT RATINGS ADDRESS ONLY CREDIT RISK. THE COMPANY DEFINES THE CREDIT RISK AS THE RISK THAT THE RATED ENTITY MAY NOT MEET ITS CONTRACTUAL AND/OR FINANCIAL OBLIGATIONS AS THEY BECOME DUE. CREDIT RATINGS MUST NOT BE CONSIDERED AS FACTS OF A SPECIFIC DEFAULT PROBABILITY OR AS A PREDICTIVE MEASURE OF A DEFAULT PROBABILITY. Credit ratings constitute the Company's forward-looking opinion of the credit rating committee and include predictions about future events which by definition cannot be validated as facts.

For the purpose of rating process the Company obtains sufficient quality factual information from sources believed by the Company to be reliable and accurate. The Company does not perform an audit and undertakes no duty of due diligence or third-party verification of any information it uses during the rating process. The issuer and its advisors are ultimately responsible for the accuracy of the information provided for the rating process.

Users of the Company's credit ratings should refer to the rating symbols and definitions published on the Company's website. Credit ratings with the same rating symbol may not fully reflect all small differences in the degrees of risk, because credit ratings are relative measures of the credit risk.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS OR COMPLETENESS OF ANY INFORMATION GIVEN OR MADE BY THE COMPANY IN ANY FORM OR MANNER. In no event shall the Company, its directors, shareholders, employees, representatives be liable to any party for any damages, expenses, fees, or losses in connection with any use of the information published by the Company.

The Company reserves the right to take any rating action for any reasons the Company deems sufficient at any time and in its sole discretion. The publication and maintenance of credit ratings are subject to availability of sufficient information.

The Company may receive compensation for its credit ratings, normally from issuers, underwriters or obligors. The information about the Company's fee schedule can be provided upon the request.

The Company reserves the right to disseminate its credit ratings and reports through its website, the Company's social media pages and authorised third parties. No content published by the Company may be modified, reproduced, transferred, distributed or reverse engineered in any form by any means without the prior written consent of the Company.

The Company's credit ratings and reports are not indented for distribution to, or use by, any person in a jurisdiction where such usage would infringe the law. If in doubt, please consult the relevant regulatory body or professional advisor to ensure compliance with applicable laws and regulations.