REPUBLIC OF BRAZIL

Rating Analysis - 8/30/22

After a strong recovery by 5% in 2021, despite backed by an improvement in the job market, an increase in private investments and strong foreign trade, OECD expects Brazil's GDP growth to slow significantly in 2022, to 0.6%, before picking up to 1.2% in 2023.

Rising inflation, the war in Ukraine, and tighter financial conditions have eroded economic sentiment and purchasing power, which is expected to strongly dent domestic demand in H1 2022. The 2022 presidential election is adding uncertainty, helping to keep investment subdued until 2023. Despite government proposals to lower fuel prices, policymakers have not seen a relevant change in the balance of risks for inflation, which are indicated were still not tilted to the upside. Increasing food, fuel and energy prices significantly eroded households' purchasing power. Weather conditions were particularly unfavourable until recently, affecting agriculture and hydro-electricity production, while shortages and higher production costs weighted on industrial production. The central bank should continue monetary policy tightening if pro-inflationary factors persist. Affirming with a developing

walch.	Annual Ratios (source for past results, livir)					<u> [] </u>
CREDIT POSITION	<u>2019</u>	<u>2020</u>	<u>2021</u>	P2022	P2023	P2024
Debt/ GDP (%)	90.0	97.1	93.0	96.4	97.8	97.6
Govt. Sur/Def to GDP (%)	-5.3	-12.3	-2.4	0.5	2.7	4.3
Adjusted Debt/GDP (%)	90.0	97.1	93.0	96.4	97.8	97.6
Interest Expense/ Taxes (%)	30.1	25.3	27.4	26.6	25.8	25.1
GDP Growth (%)	5.5	1.1	16.2	5.8	5.2	5.2
Foreign Reserves/Debt (%)	19.8	22.8	23.3	26.0	27.6	30.7
Implied Sen. Rating	BBB	BB+	BBB	BBB	BBB	BBB

INDICATIVE CREDIT RATIOS	AA	A	BBB	<u>BB</u>	<u> </u>	CCC
Debt/ GDP (%)	100.0	115.0	130.0	145.0	170.0	200.0
Govt. Sur/Def to GDP (%)	2.5	0.5	-2.0	-5.0	-8.0	-10.0
Adjusted Debt/GDP (%)	95.0	110.0	125.0	140.0	160.0	190.0
Interest Expense/ Taxes (%)	9.0	12.0	15.0	22.0	26.0	35.0
GDP Growth (%)	3.5	3.0	2.0	1.0	-1.0	-5.0
Foreign Reserves/Debt (%)	3.0	2.5	2.0	1.5	1.0	0.5

	Other	Debt	Govt. Surp.	Adjusted	Interest	GDP	Ratio-
	NRSRO	as a %	Def to	Debt/	Expense/	Growth	Implied
PEER RATIOS	<u>Sen.</u>	<u>GDP</u>	GDP (%)	<u>GDP</u>	Taxes %	<u>(%)</u>	Rating*
Federal Republic Of Germany	AAA	77.8	-3.6	77.8	2.4	6.0	AA+
French Republic	AA	137.3	-6.0	137.3	4.6	8.2	A-
Kingdom Of Belgium	AA	128.0	-5.0	128.0	5.6	10.8	BBB
Republic Of Italy	BBB-	173.7	-7.2	173.7	11.9	7.2	BB+
Portugal Republic	BB+	145.5	-3.1	145.5	9.8	5.6	BBB-

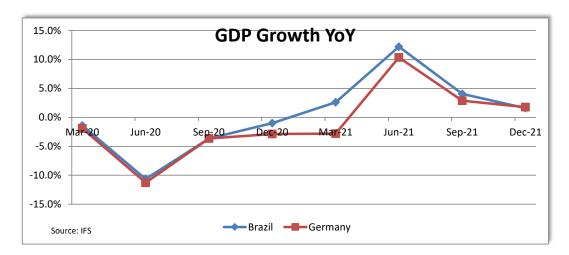
	CDS Spreads (bps)	
400		→ Brazil
300 -		Italy
200 -		Portugal
100 -		Belgium
	Mar-22 Apr-22 May-22 Jun-22 Jul-22 Curr. CDS	France

Country	EJR Rtg.	CDS
Brazil	NR	221
Italy	BBB-	98
Portugal	BBB-	43
Belgium	BBB	13
France	A+	23



Economic Growth

Due to deteriorating economic sentiment and the challenging domestic and global environment, growth prospects are limited in 2022 and 2023. GDP growth is expected to slow considerably this year, to 0.6%, before picking up to 1.2% in 2023. Inflation, tight financial conditions and uncertainty are restricting domestic and external demand. Brazil's GDP rose 1% on the quarter in Q1 2022, extending the expansionary momentum from the upwardly revised 0.7% increase in the previous period but missing expectations of a 1.2% rise. Growth was driven by a 0.7% advance in household consumption, expanding at a constant rate from the previous period as pandemic related restrictions continued to relax. At the same time, government expenditure was 0.1% higher, easing from the 0.9% increase in the prior quarter. On a yearly basis, the economy grew by 1.7% during the period - a long way to go for a sustained improvement in the economy.



Fisical Policy

Strong rate hikes in Brazil managed to moderate inflation, reflecting a 0.68% drop in consumer prices in July, and push the real higher. Brazil's government debt as a share of gross domestic product fell to 78.5% in March, the lowest level in almost two years, with improved revenues in states and municipalities leading to a new primary surplus for the month. That compares with a gross debt of 79.2% of GDP in February, to the best result since April 2020 (78.4%), when the country was beginning to be hit by the coronavirus pandemic.

	Surplus-to-	Debt-to-	5 Yr. CDS
	GDP (%)	GDP (%)	Spreads
Brazil	-2.38	93.00	220.67
Germany	-3.62	77.80	10.21
France	-5.97	137.28	23.02
Belgium	-4.98	128.02	12.93
Italy	-7.19	173.71	97.55
Portugal	-3.09	145.47	43.34
Sources: T	homson Reuters and	IFS	

Unemployment

Labour incomes are not recovering fast enough to compensate for the withdrawal of pandemic-related emergency support and rising inflation. Growth in the local economy, will likely to be driven by the strength of the labor market and the normalization of economic activities that have suffered during the pandemic, with an emphasis on the services sector.

Unemployme	ent (%)	
	<u>2020</u>	<u>2021</u>
Brazil	13.49	13.50
Germany	3.83	3.58
France	8.03	7.88
Belgium	5.73	6.28
Italy	9.30	9.56
Portugal	7.12	6.60
0 1 11 5	0,	
Source: Intl. Fi	nance Statistic	S



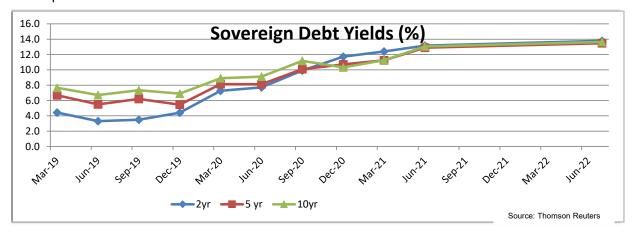
Banking Sector

Brazil's central bank reported that Brazilian banks' profitability had returned to pre-pandemic levels in 2021, but opined that profits could grow more slowly going forward, mentioning higher loan defaults and funding costs. The central bank's Financial Stability Report states the banking system's return on equity (ROE) stood at 15.1% in 2021, up from 11.5% in 2020. Loan defaults, which were lower during the pandemic, are expected to "moderately" increase this year.

Bank Assets (billions of local cu	ırrency)	
BANK OF BRAZIL	Assets 1,932.5	Mkt Cap/ Assets % 5.12
Total EJR's est. of cap shortfall at 10% of assets less market cap	1,932.5	94.4
Brazil's GDP		8,679.5

Funding Costs

The yield on Brazil's 10-year government bond fell to 12.2%, closing in on its lowest level since April, as global investors moved into riskier assets on expectations of less aggressive tightening by major central banks. The Brazil Government Bond 10Y is expected to trade at 12.39 percent by the end of this quarter, according to Trading Economics global macro models and market consensus expects this to trade at 13.20 percent in 12 months' time.



Ease of Doing Business

Major factors for growing the economy are the ease of doing business and the economic freedom; although not the sole factor for determining economic growth, a country which makes it easy for businesses to operate and provides a reasonably free environment to conduct business has a good chance for growth. The chart on the right indicates that with an overall rank of 124 (1 is best, 189 worst)

The World Bank's Doing Business Survey*					
	2021	2020	Change in		
	<u>Rank</u>	<u>Rank</u>	<u>Rank</u>		
Overall Country Rank:	124	124	0		
Scores:					
Starting a Business	138	138	0		
Construction Permits	170	170	0		
Getting Electricity	98	98	0		
Registering Property	133	133	0		
Getting Credit	104	104	0		
Protecting Investors	61	61	0		
Paying Taxes	184	184	0		
Trading Across Borders	108	108	0		
Enforcing Contracts	58	58	0		
Resolving Insolvency	77	77	0		
* Based on a scale of 1 to 189 with 1	being the highes	st ranking.			

Rating Analysis - 8/30/22

Economic Freedom

As can be seen below, Brazil is mediocre in its overall rank of 53.4 for Economic Freedom with 100 being best.

	2021	2020	Change in	World
	Rank**	Rank	Rank	Avg.
Property Rights	55.0	57.3	-2.3	53.6
Government Integrity	45.5	45.6	-0.1	45.9
Judical Effectiveness	47.5	46.7	0.8	45.4
Tax Burden	70.1	70.4	-0.3	77.7
Gov't Spending	56.5	54.6	1.9	67.1
Fiscal Health	5.3	4.6	0.7	72.1
Business Freedom	58.0	60.5	-2.5	63.2
Labor Freedom	50.7	49.5	1.2	59.5
Monetary Freedom	77.8	77.2	0.6	74.7
Trade Freedom	64.6	67.8	-3.2	70.7
*Based on a scale of 1-100 with 100 being the highest	ranking.			
**The ten economic freedoms are based on a scale of	0 (least free) to 100 (most free).			
Source: The Heritage Foundation				

Credit Quality Driver: Taxes Growth:

REPUBLIC OF BRAZIL has grown its taxes of 28.3% per annum in the last fiscal year which is more than the average for its peers. We expect tax revenues will grow approximately 3.0% per annum over the next couple of years and 3.0% per annum for the next couple of years thereafter.

Credit Quality Driver: Total Revenue Growth:

REPUBLIC OF BRAZIL's total revenue growth has been more than its peers and we assumed a 4.0% growth in total revenue over the next two years.

Income Statement	Peer Median	Issuer Avg.	Assumption Yr 1&2 Y	
Taxes Growth%	10.1	28.3	3.0	3.0
Social Contributions Growth %	6.0	11.2	11.0	11.0
Grant Revenue Growth %	0.0	(95.4)	0.5	0.5
Other Revenue Growth %	0.0	50.3	2.7	2.7
Other Operating Income Growth%	0.0	(103.9)	(10.0)	(10.0)
Total Revenue Growth%	9.1	26.4	4.0	3.6
Compensation of Employees Growth%	3.1	3.9	3.9	3.9
Use of Goods & Services Growth%	6.8	14.3	13.0	13.0
Social Benefits Growth%	2.8	(15.7)	(15.7)	(15.7)
Subsidies Growth%	9.3	4.7	(1011)	(1011)
Other Expenses Growth%	35.2	35.2	35.2	31.7
Interest Expense	1.8	0.0		•
'				
Currency and Deposits (asset) Growth%	1.3	0.0		
Securities other than Shares LT (asset) Growth%	7.0	0.0		
Loans (asset) Growth%	(73.1)	680.2	400.0	360.0
Shares and Other Equity (asset) Growth%	(9.9)	0.0		
Insurance Technical Reserves (asset) Growth%	2.7	0.0		
Financial Derivatives (asset) Growth%	0.0	0.0		
Other Accounts Receivable LT Growth%	4.2	0.0		
Monetary Gold and SDR's Growth %	0.0	0.0	5.0	5.0
•				
Other Assets Growth%	0.0	0.0		
Other Accounts Payable Growth%	5.8			
Currency & Deposits (liability) Growth%	1.8	0.0		
Securities Other than Shares (liability) Growth%	(0.1)	9.9	6.9	6.9
, ,	, ,			
Loans (liability) Growth%	2.8	6.7	6.7	6.7
Insurance Technical Reserves (liability) Growth%	6.1	0.0		
Financial Derivatives (liability) Growth%	(22.1)	0.0		
•				
Additional ST debt (1st year)(billions BRL)	0.0	0.0		

Rating Analysis - 8/30/22

Page 6

ANNUAL OPERATING STATEMENTS

Below are REPUBLIC OF BRAZIL's annual income statements with the projected years based on the assumptions listed on page 5.

ANNUAL REVENUE AND EXPENSE STATEMENT						
	(BILLIONS B	RL)				
	2018	2019	2020	2021	P2022	P2023
Taxes	1,658	1,749	1,717	2,201	2,268	2,336
Social Contributions	758	811	799	889	987	1,095
Grant Revenue	0	0	0	0	0	0
Other Revenue	420	527	371	557	572	587
Other Operating Income	<u>0</u>	<u>0</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>0</u>
Total Revenue	2,837	3,087	2,886	3,647	3,826	4,018
Compensation of Employees	910	964	980	1,018	1,057	1,098
Use of Goods & Services	357	382	392	448	507	572
Social Benefits	1,215	1,331	1,740	1,467	1,237	1,043
Subsidies	26	18	14	14	14	14
Other Expenses	104	142	120	162	218	295
Grant Expense	4	2	4	5	7	9
Depreciation	107	115	122	142	142	142
Total Expenses excluding interest	<u>2,723</u>	<u>2,954</u>	<u>3,371</u>	<u>3,251</u>	<u>3,182</u>	<u>3,174</u>
Operating Surplus/Shortfall	114	133	-485	396	644	845
Interest Expense	<u>613</u>	<u>526</u>	<u>434</u>	<u>603</u>	<u>603</u>	<u>603</u>
Net Operating Balance	-499	-394	-919	-207	41	242



REPUBLIC OF BRAZIL

Rating Analysis - 8/30/22

Page 7

ANNUAL BALANCE SHEETS

Below are REPUBLIC OF BRAZIL's balance sheets with the projected years based on the assumptions listed on page 5.

	ANNUAL BALANCE SHEETS (BILLIONS BRL)						
Base Case							
ASSETS	2018	2019	2020	2021	P2022	P2023	
Currency and Deposits (asset)	1,755	1,978	2,110	2,504	3,361	5,441	
Securities other than Shares LT (asset)	,	,	,	•	,	•	
Loans (asset)	-110	-122	-9	-73	-365	-1,825	
Shares and Other Equity (asset)							
Insurance Technical Reserves (asset)					0	0	
Financial Derivatives (asset)							
Other Accounts Receivable LT					0	0	
Monetary Gold and SDR's							
Other Assets					224	224	
Additional Assets	<u>459</u>	<u>350</u>	<u>232</u>	224			
Total Financial Assets	2,105	2,205	2,333	2,655	3,220	3,840	
LIABILITIES							
Other Accounts Payable							
Currency & Deposits (liability)					0	0	
Securities Other than Shares (liability)	5,610	6,080	6,882	7,563	8,086	8,646	
Lagra (Babilita)		057	40.4	450	444	470	
Loans (liability) Insurance Technical Reserves (liability)	328	357	424	452	411	170	
Financial Derivatives (liability)							
Other Liabilities	<u>o</u>	<u>0</u>	<u>o</u>	<u>o</u>	<u>o</u>	<u>0</u>	
Liabilities	5,938	6,437	7,306	8,015	8,538	8,917	
Eldonitios	0,000	0,407	7,000	0,010	0,000	0,511	
Net Financial Worth	-3,833	-4,232	<u>-4,973</u>	-5,360	-5,319	-5,077	
Total Liabilities & Equity	2,105	2,205	2,333	2,655	3,220	3,840	

Page 8

Copyright © 2022, Egan-Jones Ratings Company, Inc. ("Egan-Jones"). All rights reserved. The information upon which Egan-Jones ratings and reports are based is obtained by Egan-Jones from sources Egan-Jones believes to be accurate and reliable. Egan-Jones relies on third party reports and information and data provided and Egan-Jones has not, unless required by law or internal policies/procedures, independently verified, or performed due diligence related to the accuracy of information, data or reports. Egan-Jones has not consented to, nor will consent to, being named an "expert" under federal securities laws, including without limitation, Section 7 of the Securities Act of 1933. Please note that expected or final ratings are not recommendations to buy, hold or sell the securities. Egan-Jones is not an advisor and is not providing investment advice, strategy, or related services. Egan-Jones and its third-party suppliers ("Suppliers") hereby disclaim any representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability, and fitness for any particular purpose or non-infringement of any of such information. In no event shall Egan-Jones or its directors, officers, employees, independent contractors, agents, representatives, or Suppliers (collectively, Egan-Jones Representatives) be liable (1) for any inaccuracy, delay, loss of data, interruption in service, error. (negligent or otherwise) or other circumstance or contingency within or outside the control of Egan-Jones or any Egan-Jones Representative, in connection with or related to obtaining, collecting, compiling, analyzing, interpreting, communicating, publishing or delivering any such information. Ratings and other opinions issued by Egan-Jones are, and must be construed solely as, statements of opinion and not statements of fact as to credit worthiness or recommendations to purchase, sell or hold any securities. A report providing an Egan-Jones rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Egan-Jones is not responsible for the content or operation of third-party websites accessed through hypertext or other computer links and Egan-Jones shall have no liability to any person or entity for the use of such third-party websites. This publication may not be reproduced, retransmitted or distributed in any form without the prior written consent of Egan-Jones. Egan-Jones ratings are subject to disclaimers. Egan-Jones is not an NRSRO (as defined by the SEC) for sovereign/municipal issuers and structured

finance/ABS issuers.

Comments on the Difference between the Model and Assigned Rating

In this case, there has been little change in the recent results and therefore we have used our best judgement in making adjustmer which are reflected in the results for the projected ratings. We have assigned a rating of "BB-" whereas the ratio-implied rating for t most recent period is "BBB"; the median rating for the peers is significantly higher than the issuer's rating.

Changes in Indicative Ratios

There were no prior Industry Ratios.



Page 9

SEC Rule 17g-7(a) Disclosure (Non-NRSRO)

Below are the disclosures as required by Paragraph (a) of Rule 17g-7.

- 1. The symbol in the rating scale used to denote the credit rating categories and notches within categories and the identity of the obligor, security, or money market instrument as required by Paragraph (a)(1)(ii)(A) of Rule 17g-7: For the issuer REPUBLIC OF BRAZIL with the ticker of 1323Z BZ we have assigned the senior unsecured rating of BB. There are three notches in our rating categories (e.g., A- A, and A+) except for AAA and those deep into speculative grade, i.e., CC, C, and D do not have notches.
- 2. The version of the procedure or methodology used to determine the credit rating as required by Paragraph (a)(1)(ii)(B) of Rule 17g-7:

We are using the Methodologies for Determining Credit Ratings (Main Methodology) version #15a available via egan-jones.com under the tab at the bottom of the page "Methodologies".

3. The main assumptions and principles used in constructing the procedures and methodologies used to determine the credit rating as required by Paragraph (a)(1)(ii)(C) of Rule 17g-7:

The credit rating assigned reflects our judgement regarding the future credit quality of the issuer. Regarding the specific assumptions used, please refer to projections on pages 1, 6, and 7 of this Rating Analysis Report.

- 4. The potential limitations of the credit rating as required by Paragraph (a)(1)(ii)(D) of Rule 17g-7:

 Our rating pertains solely to our view of current and prospective credit quality. Our rating does not address pricing, liquidity, or other risks associated with holding investments in the issuer.
- 5. Information on the uncertainty of the credit rating as required by Paragraph (a)(1)(ii)(E) of Rule 17g-7:

 Our rating is dependent on numerous factors including the reliability, accuracy, and quality of the data relied used in determining the credit rating. The data is sourced from publicly available information from the IMF and other similar sources. In some cases, the information is limited because of issues such as the lack of reported data, a delay in reporting data, restatements, inaccurate accounting and other issues. Such issues are not always readily apparent. EJR aims to identify such shortcomings and make adjustments using its best judgement.
- 6. Whether and to what extent third-party due diligence services have been used in taking the rating action as required by Paragraph (a)(1)(ii)(F) of Rule 17g-7:

EJR does not utilize third-party due diligence services.

7. How servicer or remittance reports were used, and with what frequency, to conduct surveillance of the credit rating as required by Paragraph (a)(1)(ii)(G) of Rule 17g-7:

Servicer or remittance reports normally pertain to structured finance issuers; this report does not pertain to a structured finance issuer (EJR is not an NRSRO for structured finance or sovereigns/ municipal issuers). Regarding surveillance, the minimum time period for corporation issuers is normally one year.

8. A description of the data that were relied upon for the purpose of determining the credit rating as required by Paragraph (a)(1)(ii)(H) of Rule 17g-7:

EJR uses publicly available information from the IMF, governmental filings and other similar sources for ratings on sovereign issuers.

- 9. A statement containing an overall assessment of the quality of information available and considered in the credit rating as required by Paragraph (a)(1)(ii)(I) of Rule 17g-7: The information is generally high quality and readily avail.
- 10. Information relating to conflicts of interest as required by Paragraph (a)(1)(ii)(J) of Rule 17g-7: This rating is unsolicited.



- 11. An explanation or measure of the potential volatility of the credit rating as required by Paragraph (a)(1)(ii)(K) of Rule 17g-7: Our rating aims to assess the probability of the payment of obligations in full and on-time. Factors which affect such probability, and in turn our rating, include changes in the operating performance of the issuer, changes in capital structure, and merger and acquisition events.
- 12. Information on the content of the credit rating as required by Paragraph (a)(1)(ii)(L) of Rule 17g-7:
 Regarding the historical performance of the credit rating, our rating transition matrix is available in our Form NRSRO, exhibit 1. The expected probability of default and the expected loss in the event of default is listed on the first page of this report.
- 13. Information on the sensitivity of the credit rating to assumptions as required by Paragraph (a)(1)(ii)(M) of Rule 17g-7: Below is a summary of the impact of the 5 assumptions which independently would have the greatest impact on our "ratio-implied rating":

	Assumptions			Resulting Ratio-Implied Rating			
Bas	se O	ptimistic	Pessimistic	Base	Optimistic	Pessimistic	
Taxes Growth%	3.0	7.0	(1.0)	BBB	BBB+	BBB	
Social Contributions Growth %	11.0	14.0	8.0	BBB	BBB	BBB	
Other Revenue Growth %	2.7	5.7	(0.3)	BBB	BBB	BBB	
Total Revenue Growth%	4.0	6.0	2.0	BBB	BBB	BBB	
Monetary Gold and SDR's Growth %		2.0	(2.0)	BBB	BBB	BBB	

14. If the credit rating is assigned to an asset-backed security, a description of: (i) the representations, warranties, and enforcement mechanisms available to investors; and (ii) how they differ from the representations, warranties, and enforcement mechanisms in issuances of similar securities, as required by Paragraph (a)(1)(ii)(N) of Rule 17g-7: This credit rating is not assigned to an asset-backed security.

ATTESTATION FORM

In compliance with the US Securities and Exchange Commission (SEC) Rule 17g-7(a), the Egan-Jones analyst who published the report is responsible for the rating action and to the best knowledge of the person:

- 1) No part of the credit rating was influenced by any other business activities,
- 2) The credit rating was based solely upon the merits of the obligor, security, or money market instrument being rated, and
- 3) The credit rating was an independent evaluation of the credit risk of the obligor, security, or money market instrument.

Analyst Signature:	Today's Date
W.	August 30, 2022
Subramanian NG	
Senior Rating Analyst	
Reviewer Signature:	Today's Date
Steve Zhang	August 30, 2022
Steve Zhang Senior Rating Analyst	

Sovereign Rating Methodology (Non-NRSRO)

Scope and Limitations: Sovereign Issuer Credit Quality Ratings (CQR) are a forward-looking assessment of a sovereign's capacity and willingness to honor its existing and future obligations in full and on time. Sovereigns are assigned two CQRs: a Local-Currency CQR, which reflects the likelihood of default on debt issued and payable in the currency of the sovereign, and a Foreign-Currency CQR, which is an assessment of the credit risk associated with debt issued and payable in foreign currencies.

Key Rating Drivers: EJR's approach to sovereign risk analysis is a synthesis of quantitative and qualitative judgments. The quantitative factors EJR uses are:

- Debt in relation to GDP.
- Surplus or deficit in relation to GDP.
- Debt plus potential under-funding of major banks in relation to GDP.
- Interest expense in relation to taxes.
- GDP growth.
- Foreign reserves in relation to debt.

Debt levels for many sovereign issuers have increased at an accelerating rate over the past decade, affecting implied ratings. EJR also considers unemployment levels and funding costs. EJR recognizes that no model can fully capture all the relevant influences on sovereign creditworthiness, meaning that the its sovereign ratings can and do differ from those implied by the rating model. Some of the qualitative factors that impact its ultimate assessment of credit quality include the flexibility, stability and overall strength of the economy, efficiency of tax collection, acceptance of contract law, ease of doing business, trade balances, prospects for future growth and health and monetary policy, and economic freedom. These subjective and dynamic qualitative issues are not captured by the model but affect sovereign ratings

For additional information, please see Exhibit 2: Methodologies in EJR's Form NRSRO.

