

## Rating Analysis - 8/19/20

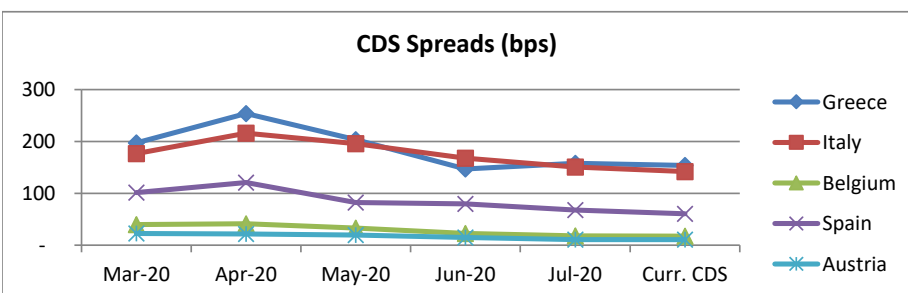
The COVID-19 pandemic and containment measures are projected to reduce GDP. By certain estimates, the impact could be as high as -8% in 2020 if there are no further virus outbreaks (the single-hit scenario), before it recovers by 4.5% in 2021. In there is a second virus outbreak later in the year (the double-hit scenario), the fall in GDP in 2020 will amount to 9.8%. Broadly, the losses in output, employment and the budgetary costs from this crisis are projected to be less severe than the crises over 2009-16.

Greece managed to contain the outbreak largely to the Athens area, which has the strongest health system capacity, and contained outbreaks in refugee camps. Greece's health spending was cut during the economic crisis but had stabilized in recent years and has been boosted as part of the crisis response. EJR believes improving the effectiveness of public administration, simplifying regulations, upgrading adult skills, and investing in infrastructure would help to spur a sustainable recovery. The item which is perhaps the greatest concern is the high Debt/GDP ratio which severely restricts Greece's alternatives especially at a time when COVID19 has restricted tourism and other economic activities and increased social support payments. We are upgrading with a developing watch. Other raters are likely to take positive actions.

CREDIT POSITION	Annual Ratios (source for past results: IMF, CountryEconomy)					
	2017	2018	2019	P2020	P2021	P2022
Debt/ GDP (%)	176.3	181.1	176.6	180.0	185.1	190.4
Govt. Sur/Def to GDP (%)	-0.2	-0.2	0.2	-0.1	-0.4	-0.5
Adjusted Debt/GDP (%)	176.3	181.1	176.6	180.0	185.1	190.4
Interest Expense/ Taxes (%)	11.5	12.1	11.0	11.3	11.5	11.7
GDP Growth (%)	2.2	2.5	1.3	2.3	2.3	2.5
Foreign Reserves/Debt (%)	0.6	0.5	0.6	0.5	0.5	0.4
Implied Sen. Rating	B	B	B	B	B-	B-

INDICATIVE CREDIT RATIOS	AA	A	BBB	BB	B	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

PEER RATIOS	Other NRSROs	Debt	Govt. Surp.	Adjusted	Interest	GDP	Ratio-
		as a % GDP	Def to GDP (%)	Debt/ GDP	Expense/ Taxes %	Growth (%)	Implied Rating*
Austria	AA+	70.3	1.2	70.3	5.2	3.1	AA+
French Republic	AA	98.1	-2.5	98.1	4.7	2.9	A
Kingdom of Belgium	AA	98.7	-1.5	98.7	6.6	4.8	AA+
Kingdom of Spain	BBB	95.5	-3.1	95.5	10.3	2.8	AA-
Republic of Italy	BBB-	134.8	-2.1	134.8	11.7	1.6	BBB-

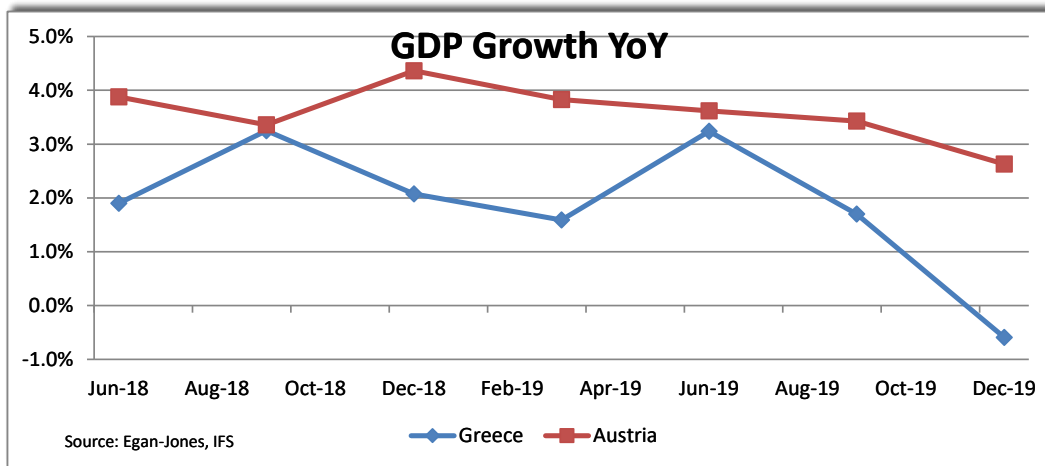


(Source: Thomson Reuters)

Country	EJR Rtg.	CDS
Greece	B	154
Italy	BBB-	142
Belgium	BBB	17
Spain	BBB+	61
Austria	A+	11

**Economic Growth**

GDP fell by 1.6% in the first quarter of 2020 - the sharpest decline since Q3 2015. Containment measures were strictest from mid-March to early May, affecting firms generating 20% of Greece's value-added. The government has announced measures to support household incomes and firms' liquidity, totaling €11.4 billion for 2020 (6.1% of 2019 GDP). Business Confidence in Greece increased to 90.80 points in July from 87.60 points in June of 2020, and compares against 113.2 in Feb 2020. IHS Markit Greece Manufacturing PMI decreased to 48.6 in July of 2020 from 49.4 in the prior month, reversing the trend towards recovery seen following April's record low. Output and new orders declined at a quicker pace, as uncertainty surrounding the coronavirus pandemic weighed on domestic and foreign client demand.



**Fiscal Policy**

The COVID-19 crisis is an external shock that sets back Greece's recovery from its earlier crises, and delays some of the government's reform efforts while accelerating others. While Greece has contained the pandemic effectively, the negative impact on tourism, investment and public finances is a setback to Greece's longer-term recovery. Lower activity and income will reduce tax and social contribution payments, shifting the budget from a substantial primary surplus to deficit. Along with the drop in nominal GDP, this will raise public debt ratios. National debt in relation to GDP stands at appx 177%. In January-July 2020, the central government cash balance recorded a deficit of €12,767 million, compared to a deficit of €2,432 million in the same period of 2019.

	Surplus-to-GDP (%)	Debt-to-GDP (%)	5 Yr. CDS Spreads
Greece	0.23	176.61	153.82
Austria	1.17	70.34	10.64
France	-2.53	98.12	19.54
Belgium	-1.52	98.75	17.41
Spain	-3.06	95.51	60.53
Italy	-2.09	134.80	142.02

Sources: Thomson Reuters, IFS and CountryEconomy

**Unemployment**

Greece's unemployment rate rose to 17 percent in May of 2020 from an upwardly revised 15.7 percent in the previous month, the highest since July of 2019. Due to the measures taken to protect public health and tackle the COVID-19 pandemic, the labor market was affected because of the suspension of the operation of businesses in many sectors of the economy, mainly in the service sector, and the limitations in the population movements. By region, the highest unemployment rates were recorded in Crete (23.1 percent), Aegean Islands (22.1 percent), Thessaly – Sterea Ellas (18 percent) and Macedonia-Thrace (17.5 percent).

	Unemployment (%)	
	2018	2019
Greece	19.27	17.25
Austria	4.86	4.53
France	9.11	8.43
Belgium	5.98	5.44
Spain	15.26	13.96
Italy	10.62	9.90

Source: Intl. Finance Statistics

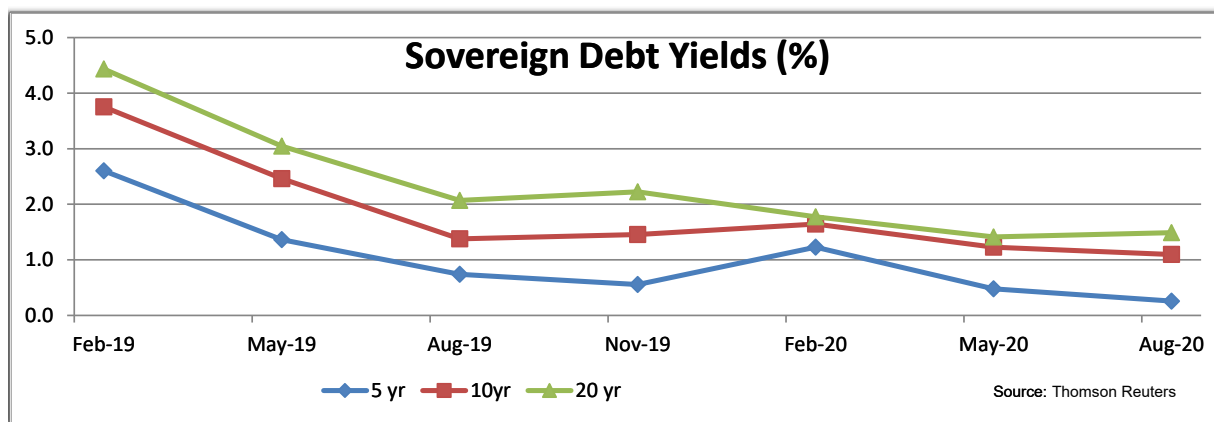
**Banking Sector**

In June 2020, the annual growth rate of total credit extended to the domestic economy increased to 6.0% from 4.0% in the previous month and the monthly net flow was positive by €3,713 million, compared with a positive net flow of €3,037 million in the previous month. The annual growth rate of total deposits decreased to 4.6% from 6.1% in the previous month; the monthly net flow was positive by €270 million, compared with a negative net flow of €200 million in May 2020. In June 2020, the annual growth rate of credit to the private sector decreased to 0.4% from 0.7% in the previous month. The monthly net flow of credit to the private sector was positive by €359 million, compared with a positive net flow of €356 million in the previous month.

	Assets	Mkt Cap/ Assets %
NATL BANK GREECE	64.2	1.68
EUROBANK ERGASIA	64.8	2.41
ALPHA BANK A.E.	63.5	1.35
PIRAEUS BANK	61.2	0.91
ATTICA BANK SA	3.5	2.42
<b>Total</b>	<b>257.2</b>	
EJR's est. of cap shortfall at 10% of assets less market cap		21.6
Greece's GDP		187.4

**Funding Costs**

After falling to historical lows in February, government bond yields spiked in March until the ECB announced its main policy responses and that it would include Greek government securities in its security purchases, and yields have since traded below levels of mid-2019. The government sold €2 billion of 7-year bonds at a 2.0% yield in mid-April. Greece 5 Years CDS value is 155 which reveals a 2.58% implied probability of default, on a supposed 40% recovery rate.



**Ease of Doing Business**

Major factors for growing an economy are the ease of doing business and economic freedoms. 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 an overall rank of 79 (1 is best, 189 worst) is mediocre.

	2019	2018	Change in
	Rank	Rank	Rank
<b>Overall Country Rank:</b>	<b>79</b>	<b>67</b>	<b>-12</b>
<b>Scores:</b>			
Starting a Business	11	37	26
Construction Permits	86	58	-28
Getting Electricity	40	76	36
Registering Property	156	145	-11
Getting Credit	119	90	-29
Protecting Investors	37	43	6
Paying Taxes	72	65	-7
Trading Across Borders	34	29	-5
Enforcing Contracts	146	131	-15
Resolving Insolvency	72	57	-15

\* Based on a scale of 1 to 189 with 1 being the highest ranking.

**Economic Freedom**

As can be seen below, Greece is mediocre in its overall rank of 59.9 for Economic Freedom with 100 being best.

Heritage Foundation 2020 Index of Economic Freedom				
World Rank 59.9*				
	2020	2019	Change in	World
	Rank**	Rank	Rank	Avg.
Property Rights	57.0	52.4	4.6	56.6
Government Integrity	51.2	49.5	1.7	43.8
Judicial Effectiveness	48.6	37.7	10.9	45.1
Tax Burden	59.0	59.1	-0.1	77.3
Gov't Spending	31.5	23.3	8.2	66.0
Fiscal Health	80.0	79.0	1.0	69.1
Business Freedom	73.7	74.1	-0.4	63.3
Labor Freedom	52.0	52.5	-0.5	59.4
Monetary Freedom	79.4	79.1	0.3	74.6
Trade Freedom	81.4	81.0	0.4	73.8

\*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:

HELLENIC REPUBLIC (GREECE) has seen a decline in taxes of 0.5% per annum in the last fiscal year which is disappointing. We expect tax revenues will decline by approximately 0.5% per annum over the next couple of years and 0.5% per annum for the next couple of years thereafter.

### Credit Quality Driver: Total Revenue Growth:

HELLENIC REPUBLIC (GREECE)'s total revenue growth has been less than its peers and we assumed a 0.5% growth in total revenue over the next two years.

Income Statement	Peer Median	Issuer Avg.	Assumptions	
			Yr. 1&2	Yr. 3,4,5
Taxes Growth%	2.3	(0.5)	<b>(0.5)</b>	<b>0.5</b>
Social Contributions Growth %	3.2	1.6	<b>1.6</b>	<b>1.6</b>
Grant Revenue Growth %	0.0	NMF		
Other Revenue Growth %	0.0	NMF		
Other Operating Income Growth%	0.0	6.1	<b>(1.0)</b>	<b>(1.0)</b>
Total Revenue Growth%	2.8	1.0	<b>0.5</b>	<b>0.5</b>
Compensation of Employees Growth%	2.5	0.9	<b>0.9</b>	<b>0.9</b>
Use of Goods & Services Growth%	2.8	(0.5)	<b>(0.5)</b>	<b>(0.5)</b>
Social Benefits Growth%	3.3	1.5	<b>1.5</b>	<b>1.5</b>
Subsidies Growth%	5.0	31.4		
Other Expenses Growth%	0.0			
Interest Expense	1.8	1.7	<b>1.7</b>	<b>1.7</b>
Currency and Deposits (asset) Growth%	(2.3)	0.0		
Securities other than Shares LT (asset) Growth%	7.3	0.0		
Loans (asset) Growth%	(1.1)	(3.0)	<b>(3.0)</b>	<b>(3.0)</b>
Shares and Other Equity (asset) Growth%	7.9	10.6	<b>10.6</b>	<b>10.6</b>
Insurance Technical Reserves (asset) Growth%	0.0	0.0		
Financial Derivatives (asset) Growth%	7.6	0.0		
Other Accounts Receivable LT Growth%	1.7	1.1	<b>1.1</b>	<b>1.1</b>
Monetary Gold and SDR's Growth %	0.0	0.0	<b>5.0</b>	<b>5.0</b>
Other Assets Growth%	0.0	0.0		
Other Accounts Payable Growth%	0.7	5.7	<b>3.0</b>	<b>3.0</b>
Currency & Deposits (liability) Growth%	3.3	4.5	<b>4.5</b>	<b>4.5</b>
Securities Other than Shares (liability) Growth%	6.8	30.9	<b>21.7</b>	<b>19.5</b>
Loans (liability) Growth%	(2.2)	(2.8)	<b>0.5</b>	<b>0.5</b>
Insurance Technical Reserves (liability) Growth%	0.0	0.0		
Financial Derivatives (liability) Growth%	14.4	156.9	<b>156.9</b>	<b>141.2</b>
Additional ST debt (1st year)(millions EUR)	0.0	0.0		

**ANNUAL OPERATING STATEMENTS**

Below are HELLENIC REPUBLIC (GREECE)'s annual income statements with the projected years based on the assumptions listed on page 5.

	<b>ANNUAL REVENUE AND EXPENSE STATEMENT</b>					
	<b>(MILLIONS EUR)</b>					
	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>P2020</b>	<b>P2021</b>
Taxes	48,092	48,504	50,090	49,850	49,601	49,353
Social Contributions	24,908	25,963	26,299	26,719	27,146	27,579
Grant Revenue						
Other Revenue						
Other Operating Income	<u>14,337</u>	<u>12,320</u>	<u>12,166</u>	<u>12,911</u>	<u>12,911</u>	<u>12,911</u>
Total Revenue	<u>87,337</u>	<u>86,787</u>	<u>88,555</u>	<u>89,480</u>	<u>89,657</u>	<u>89,843</u>
Compensation of Employees	21,424	21,511	21,722	21,915	22,110	22,306
Use of Goods & Services	9,188	9,296	8,467	8,425	8,383	8,342
Social Benefits	38,944	38,426	38,284	38,856	39,437	40,026
Subsidies	1,802	1,701	1,554	2,042	2,042	2,042
Other Expenses				5,792	5,792	5,792
Grant Expense						
Depreciation	6,642	6,560	6,514	6,514	6,514	6,514
Total Expenses excluding interest	<u>81,507</u>	<u>81,492</u>	<u>82,828</u>	<u>83,544</u>	<u>84,278</u>	<u>85,022</u>
Operating Surplus/Shortfall	5,830	5,295	5,727	5,936	5,380	4,821
Interest Expense	<u>5,612</u>	<u>5,566</u>	<u>6,078</u>	<u>5,505</u>	<u>5,597</u>	<u>5,690</u>
Net Operating Balance	218	-271	-351	431	-217	-869

**ANNUAL BALANCE SHEETS**

Below are HELLENIC REPUBLIC (GREECE)'s balance sheets with the projected years based on the assumptions listed on page 5.

Base Case	ANNUAL BALANCE SHEETS					
	(MILLIONS EUR)					
ASSETS	2016	2017	2018	2019	P2020	P2021
Currency and Deposits (asset)	21,309	24,491	43,523	43,987	69,923	69,923
Securities other than Shares LT (asset)	1,308	1,289	2,362	2,437	2,437	2,437
Loans (asset)	4,621	4,398	4,119	3,995	3,875	3,758
Shares and Other Equity (asset)	32,296	33,918	30,795	34,047	37,642	41,618
Insurance Technical Reserves (asset)	179	96	120	123	123	123
Financial Derivatives (asset)						
Other Accounts Receivable LT	19,516	18,723	19,058	19,264	19,472	19,683
Monetary Gold and SDR's						
Other Assets						
Additional Assets			-1			
<b>Total Financial Assets</b>	<b>79,229</b>	<b>82,915</b>	<b>99,976</b>	<b>103,853</b>	<b>133,473</b>	<b>137,542</b>
<b>LIABILITIES</b>						
Other Accounts Payable	20,717	18,887	17,356	18,350	18,901	19,468
Currency & Deposits (liability)	5,987	6,008	6,245	6,525	6,525	6,525
Securities Other than Shares (liability)	44,238	52,136	49,246	64,485	78,453	95,447
Loans (liability)	258,019	263,441	283,930	276,028	276,245	277,113
Insurance Technical Reserves (liability)	38	54	59	59	59	59
Financial Derivatives (liability)	4,221	3,936	3,801	9,764	25,082	64,430
Other Liabilities	<u>997</u>	<u>929</u>	<u>950</u>	<u>966</u>	<u>966</u>	<u>966</u>
<b>Liabilities</b>	<b>334,217</b>	<b>345,391</b>	<b>361,587</b>	<b>376,177</b>	<b>406,013</b>	<b>410,951</b>
<b>Net Financial Worth</b>	<b><u>-254,988</u></b>	<b><u>-262,477</u></b>	<b><u>-261,611</u></b>	<b><u>-272,324</u></b>	<b><u>-272,541</u></b>	<b><u>-273,409</u></b>
<b>Total Liabilities &amp; Equity</b>	<b>79,229</b>	<b>82,914</b>	<b>99,976</b>	<b>103,853</b>	<b>133,473</b>	<b>137,542</b>

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**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 adjustments which are reflected in the results for the projected ratings. We have assigned a rating of "B" whereas the ratio-implied rating for the most recent period is "B"; the median rating for the peers is significantly higher than the issuer's rating.

**Changes in Indicative Ratios**

We have not made any adjustment in the indicative ratios at this time.



**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 HELLENIC REPUBLIC (GREECE) with the ticker of 1004Z GA we have assigned the senior unsecured rating of B-. 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 #15 available via [egan-jones.com](http://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 adequate and acceptable.

**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		
	Base	Optimistic	Pessimistic	Base	Optimistic	Pessimistic
Taxes Growth%	(0.5)	3.5	(4.5)	B-	B	B-
Social Contributions Growth %	1.6	4.6	(1.4)	B-	B	B-
Other Revenue Growth %	0.0	3.0	(3.0)	B-	B-	B-
Total Revenue Growth%	0.5	2.5	(1.5)	B-	B-	B-
Monetary Gold and SDR's Growth %	1.1	3.1	(0.9)	B-	B-	B-

**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:**

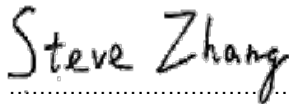


.....  
Subramanian NG  
Senior Rating Analyst

**Today's Date**

August 19, 2020  
.....

**Reviewer Signature:**



.....  
Steve Zhang  
Senior Rating Analyst

**Today's Date**

August 19, 2020  
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## **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 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.*