

# HELLENIC REPUBLIC (GREECE)

Rating Analysis - 7/27/17

\*EJR Sen Rating(Curr/Prj) CC/ NR

\*EJR CP Rating: D

Although Greece recorded lower GDP declines recently and some actual growth last year, the growth rate of 0.71% is still low compared to other EU countries. The Debt-to-GDP ratio of 179% remains at its historical high.

Favorably, Greece is able to access the bond market with a €3B offering; the bad news is that the €3B does little to its €326B debt outstanding. Furthermore, the ECB's indication of ending QE may raise the interest expense for Greece again. The recent improvement of Greece's fiscal surplus is not sustainable, due to its high tax rate and potentially higher interest expense over the next couple of years. Although Europe has gradually stabilized, terrorism, the refugee problem, and other public safety concerns will continuously put pressure on the Greek tourism, which is tied up closely to its GDP. The Greek economy has been improving slowly, but still remains vulnerable. Based on Greece's accessing the market, we are upgrading Greece to the rating of "CC" with a developing watch, although Greece's ability to repay its debt remains questionable with the Debt/GDP over 175%. Other raters might take positive actions.

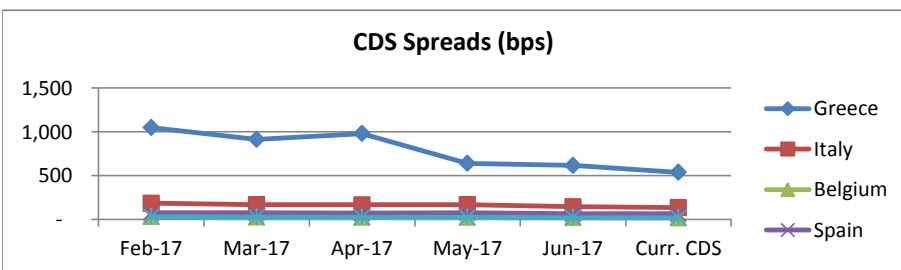
## Annual Ratios (source for past results: IMF)

CREDIT POSITION	2014	2015	2016	P2017	P2018	P2019
Debt/ GDP (%)	179.7	177.4	179.0	177.9	176.8	175.3
Govt. Sur/Def to GDP (%)	-3.4	-4.9	0.7	0.7	0.8	0.9
Adjusted Debt/GDP (%)	179.7	177.4	179.0	177.9	176.8	175.3
Interest Expense/ Taxes (%)	15.7	13.9	11.7	11.9	12.1	12.3
GDP Growth (%)	-1.5	-1.3	0.1	0.2	0.2	0.3
Foreign Reserves/Debt (%)	0.2	0.4	0.5	0.6	0.6	0.6
Implied Sen. Rating	CC	CC	CCC-	CCC-	CCC-	CCC-

## 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 NRSRO Sen.	Debt as a % of GDP	Govt. Surp. Def to GDP (%)	Adjusted Debt/ GDP	Interest Expense/ Taxes %	GDP Growth (%)	Ratio-Implied Rating*
Austria	AA+	105.6	-1.2	105.6	7.6	2.8	AA-
French Republic	AA	123.5	-3.2	123.5	6.5	1.9	BBB-
Kingdom Of Belgium	AA	127.5	-2.5	127.5	9.5	2.8	A-
Kingdom Of Spain	BBB	117.2	-5.0	117.2	12.7	3.6	A-
Republic Of Italy	BBB-	156.4	-2.9	156.4	13.4	1.6	BB-

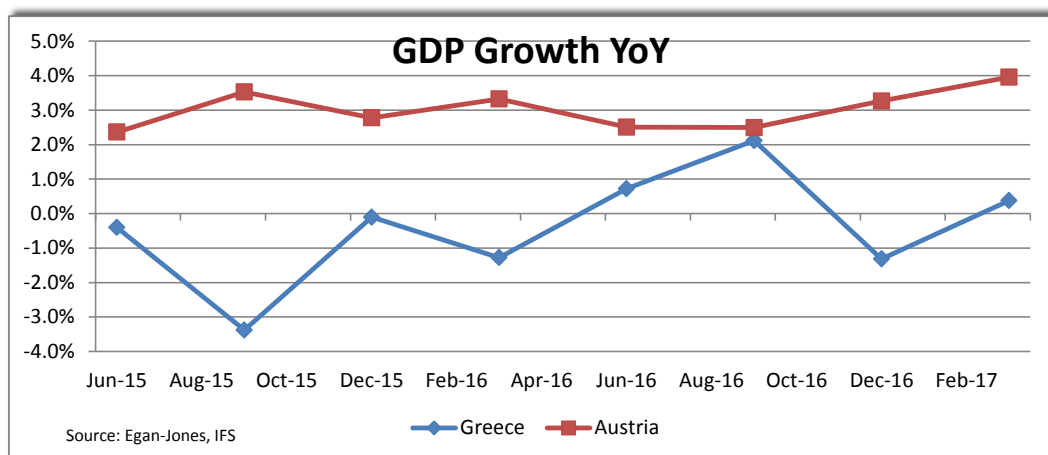


Country	CDS
Greece	538
Italy	134
Belgium	18
Spain	65
Austria	18

**Economic Growth**

Greece has gradually improved from 5 years ago, with a 0.11% annual nominal GDP growth in 2016 compared to the GDP decline over the prior couple of years. As shown below, Greece's growth has been significantly below that of Austria; Greece's GDP growth has fluctuated around 0 while Austria has recorded stable growth near 3% in the last a couple of rolling quarters.

The debt overhang is still a serious concern. With a debt-to-GDP ratio of 179% and ECB's indication of ending QE, Greece's interest burden may become heavier. A large portion of Greece's economy remains geared toward the tourism and vacation industries, which we view as continuing to struggle until the fiscal problems are addressed.



**Fiscal Policy**

Greece improved its fiscal surplus to 0.71% of GDP in 2016. However, the improvement was primarily due to tax revenue increases and interest expense decreases, both of which might not be sustainable with an already raised tax rate and the potential interest rate increases. The debt-to-GDP ratio of 179% has not improved and is still at the highest level compared to its peer countries. We expect Greece's fiscal status to remain depressed in the next couple of years.

	Surplus-to-GDP (%)	Debt-to-GDP (%)	5 Yr. CDS Spreads
Greece	0.71	179.00	538.34
Austria	-1.16	105.59	18.26
France	-3.25	123.55	17.57
Belgium	-2.52	127.52	18.26
Spain	-4.99	117.22	64.76
Italy	-2.94	156.39	133.53

Sources: Thomson Reuters and IFS

**Unemployment**

Greece has suffered from high unemployment for several decades. As can be seen from the chart, Greek unemployment is the highest among all its peers. The high unemployment rate is driving the relatively high and increasing social benefit payments. Austerity measures in Greece and throughout the EU make it difficult to substantially reduce unemployment over the next couple of years.

	Unemployment (%)	
	2015	2016
Greece	24.90	23.50
Austria	5.70	6.00
France	10.40	10.06
Belgium	8.50	7.83
Spain	22.10	19.60
Italy	11.89	11.68

Source: Intl. Finance Statistics

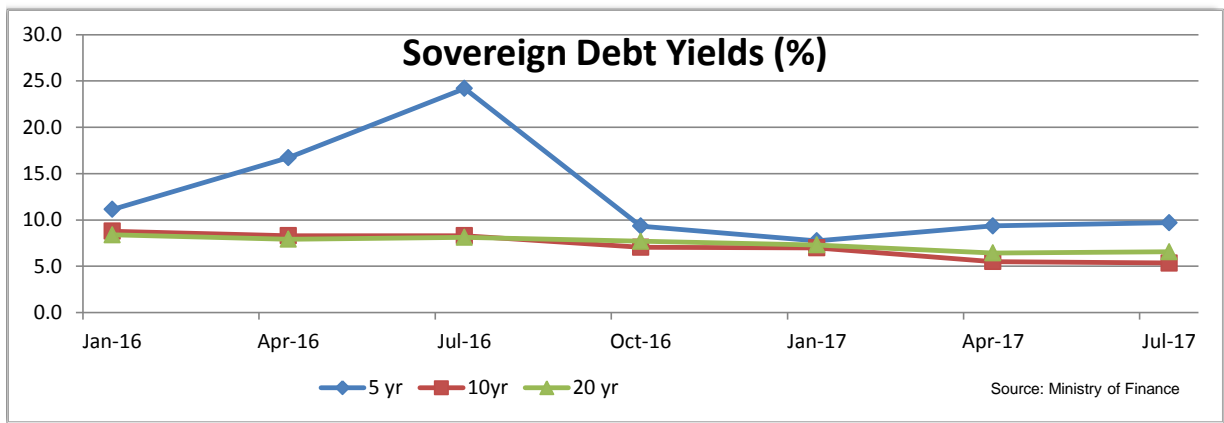
**Banking Sector**

History has shown that sovereign and bank obligations are linked during times of economic distress. Greece has significant exposure to its banking sector because of its banks' aggregate size measured in assets. The top five banks have assets equal to 168% of GDP, while the NPLs weigh 45% of total loans. We expect that Greece will be forced to provide additional financial support to its banks.

Bank Assets (billions of local currency)		
	Assets	Mkt Cap/ Assets %
NATL BANK GREECE	78.53	4.18
EUROBANK ERGASIA	66.39	3.14
ALPHA BANK A.E.	64.87	5.19
PIRAEUS BANK	81.50	2.62
ATTICA BANK SA	3.61	6.87
Total	294.9	
EJR's est. of cap shortfall at 10% of assets less market cap		18.4
Greece's GDP		175.9

**Funding Costs**

Although Greece has seen a decrease in its sovereign debt yields since 2016, the short term yields remain higher than longer term yields, showing the lack of market confidence in Greece in the short run. The ECB indicated that the QE might come to the end later in this year, which might raise the funding cost for Greece again, putting more pressure on its fiscal budget.



**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 61 (1 is best, 189 worst) is above average.

The World Bank's Doing Business Survey*			
	2017	2016	Change in
	Rank	Rank	Rank
<b>Overall Country Rank:</b>	<b>61</b>	<b>60</b>	<b>-1</b>
<b>Scores:</b>			
Starting a Business	56	54	-2
Construction Permits	58	60	2
Getting Electricity	52	47	-5
Registering Property	141	144	3
Getting Credit	82	79	-3
Protecting Investors	42	47	5
Paying Taxes	64	66	2
Trading Across Borders	29	27	-2
Enforcing Contracts	133	132	-1
Resolving Insolvency	52	54	2

\* 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 55.0 for Economic Freedom with 100 being best.

<b>Heritage Foundation 2017 Index of Economic Freedom</b>				
<b>World Rank 55.0*</b>				
	<b>2017</b>	<b>2016</b>	<b>Change in</b>	<b>World</b>
	<b>Rank**</b>	<b>Rank</b>	<b>Rank</b>	<b>Avg.</b>
<b>Property Rights</b>	<b>52.5</b>	<b>40.0</b>	<b>12.5</b>	<b>52.2</b>
<b>Government Integrity</b>	<b>41.3</b>	<b>43.0</b>	<b>-1.7</b>	<b>42.4</b>
<b>Judicial Effectiveness</b>	<b>56.1</b>	<b>N/A</b>	<b>N/A</b>	<b>44.4</b>
<b>Tax Burden</b>	<b>61.1</b>	<b>64.4</b>	<b>-3.3</b>	<b>77.3</b>
<b>Gov't Spending</b>	<b>5.4</b>	<b>0.0</b>	<b>5.4</b>	<b>63.0</b>
<b>Fiscal Health</b>	<b>58.1</b>	<b>N/A</b>	<b>N/A</b>	<b>66.3</b>
<b>Business Freedom</b>	<b>74.3</b>	<b>73.8</b>	<b>0.5</b>	<b>64.8</b>
<b>Labor Freedom</b>	<b>51.0</b>	<b>50.2</b>	<b>0.8</b>	<b>59.4</b>
<b>Monetary Freedom</b>	<b>78.2</b>	<b>77.7</b>	<b>0.5</b>	<b>76.3</b>
<b>Trade Freedom</b>	<b>82.0</b>	<b>83.0</b>	<b>-1.0</b>	<b>75.9</b>

\*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 grown its taxes of 6.1% per annum in the last fiscal year which is more than the average for its peers. We expect tax revenues will grow approximately 0.0% 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 more than its peers and we assumed a 1.5% 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%	1.6	6.1		<b>0.5</b>
Social Contributions Growth %	1.4	2.1	<b>1.0</b>	<b>1.0</b>
Grant Revenue Growth %	0.0	NMF		
Other Revenue Growth %	0.0	(4.3)		
Other Operating Income Growth%	0.0	0.0		
Total Revenue Growth%	1.4	3.1	<b>1.5</b>	<b>1.5</b>
Compensation of Employees Growth%	1.9	0.0	<b>0.0</b>	<b>0.0</b>
Use of Goods & Services Growth%	0.4	(3.7)	<b>(1.5)</b>	<b>(1.5)</b>
Social Benefits Growth%	2.0	0.5	<b>0.5</b>	<b>0.5</b>
Subsidies Growth%	2.6	1.6		
Other Expenses Growth%	0.0			
Interest Expense	1.8	1.8	<b>1.8</b>	
Currency and Deposits (asset) Growth%	0.0	0.0		
Securities other than Shares LT (asset) Growth%	0.0	0.0		
Loans (asset) Growth%	(1.9)	0.0	<b>0.1</b>	<b>0.1</b>
Shares and Other Equity (asset) Growth%	3.9	0.0		
Insurance Technical Reserves (asset) Growth%	0.0	0.0	<b>0.3</b>	<b>0.3</b>
Financial Derivatives (asset) Growth%	(7.2)	0.0		
Other Accounts Receivable LT Growth%	(1.7)	0.0		
Monetary Gold and SDR's Growth %	0.0	0.0	<b>1.0</b>	<b>1.0</b>
Other Assets Growth%	0.0	0.0		
Other Accounts Payable Growth%	0.0			
Currency & Deposits (liability) Growth%	1.2	0.0		
Securities Other than Shares (liability) Growth%	4.8	4.0	<b>2.8</b>	<b>2.8</b>
Loans (liability) Growth%	(1.6)	0.0		
Insurance Technical Reserves (liability) Growth%	0.0	0.0		
Financial Derivatives (liability) Growth%	0.0	0.0		
Additional ST debt (1st year)(millions EUR)	0.0	0.0		

**ANNUAL INCOME STATEMENTS**

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

	ANNUAL REVENUE AND EXPENSE STATEMENT					
	(MILLIONS EUR)					
	2013	2014	2015	2016	P2017	P2018
Taxes	44,549	45,116	45,504	48,287	48,287	48,287
Social Contributions	24,455	24,088	24,422	24,932	25,181	25,433
Grant Revenue						
Other Revenue	19,720	14,328	14,894	14,254	14,254	14,254
Other Operating Income						
Total Revenue	88,724	83,532	84,820	87,473	87,722	87,974
Compensation of Employees	22,056	21,908	21,607	21,613	21,619	21,625
Use of Goods & Services	8,554	8,696	8,642	8,321	8,196	8,073
Social Benefits	38,660	38,876	39,035	39,245	39,456	39,668
Subsidies	1,937	1,644	1,674	1,700	1,700	1,700
Other Expenses				3,491	3,491	3,491
Grant Expense						
Depreciation	6,967	6,687	6,440	6,209	6,209	6,209
Total Expenses excluding interest	103,547	82,529	87,088	80,579	80,671	80,767
Operating Surplus/Shortfall	-14,823	1,003	-2,268	6,894	7,051	7,207
Interest Expense	<u>7,276</u>	<u>7,097</u>	<u>6,322</u>	<u>5,649</u>	<u>5,750</u>	<u>5,854</u>
Net Operating Balance	-22,099	-6,094	-8,590	1,245	1,300	1,354

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**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 "CC" whereas the ratio-implied rating for the most recent period is "CCC-"; the median rating for the peers is significantly higher than the issuer's rating.

**Changes in Indicative Ratios**

The industry has recovered over the past couple of years and we have adjusted the ratios to reflect the improvement. Nonetheless, we prefer to smooth the results so if the business conditions deteriorate, the industry ratios can be adjusted at a more measured pace.

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**SEC Rule 17g-7(a) Disclosure**

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 CC. There are three notches in our rating categories (e.g., A-, A, and A+) other than those deep into speculative grade; for CC, C, and D there are no 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 methodology available in our Form NRSRO Exhibit #2 dated May 10, 2015 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 page 3 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 dependant on numerous factors including the reliability, accuracy, and quality of the data relied upon in determining the credit rating. The data is sourced from publicly-available 10Q and 10K statements, quarterly reports, 8K filings, earnings reports, and other similar sources. In some cases, the information is limited because of issues such as short operating histories, the lack of reported data, a delay in reporting data, restatements, inaccurate accounting, and other issues. Such shortcomings 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 10Q and 10K statements, quarterly reports, 8K filings, earnings reports, and other similar sources for ratings on publicly-traded issuers. In the case of private issuers, EJR relies on information provided mainly by 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		
	Base	Optimistic	Pessimistic	Base	Optimistic	Pessimistic
Taxes Growth%	-	4.0	(4.0)	CC	CC	CC
Social Contributions Growth %	1.0	4.0	(2.0)	CC	CC	CC
Other Revenue Growth %	-	3.0	(3.0)	CC	CC	CC
Total Revenue Growth%	1.5	3.5	(0.5)	CC	CC	CC
Monetary Gold and SDR's Growth %	1.0	3.0	(1.0)	CC	CC	CC

**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**

*Chris Liao*

July 27, 2017

Chris Liao  
Rating Analyst

**Reviewer Signature:**

**Today's Date**

*Caroline Ding*

July 27, 2017

Caroline Ding  
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.*