

At the start of the year, the German economy was showing signs of overcoming the problems that had capped growth in 2021. Supply bottlenecks that had hampered manufacturing were easing and services were opening up again as the country emerged from the Delta variant, only to be hit by the Ukraine war.

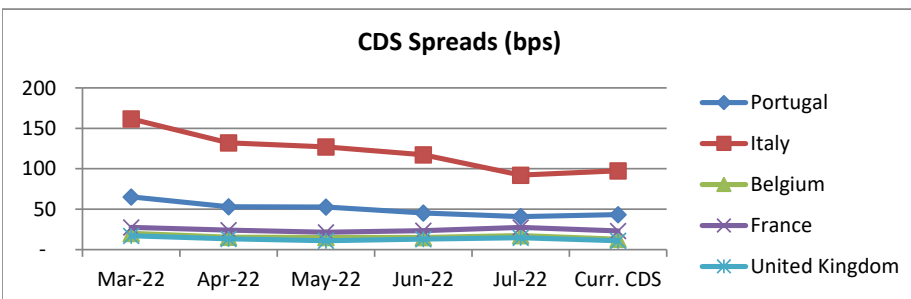
According to OECD, the economy is projected to grow by 1.9% in 2022 and 1.7% in 2023, with the recovery hampered by an embargo on Russian oil. Rising inflation is reducing household purchasing power, damping the rebound of private consumption. The recovery could be further derailed by a sudden stop of gas imports from Russia or more persistent lockdowns in China. Fiscal support programmes to mitigate the effects of rising energy and food prices need to be well targeted to vulnerable households and firms. Boosting infrastructure investment and improving planning and approval procedures and capacity, particularly at the municipal level, would accelerate digitalisation and the energy transition, which is crucial to lower dependency on energy imports. We are affirming.

Annual Ratios (source for past results: IMF)

CREDIT POSITION	2019	2020	2021	P2022	P2023	P2024
Debt/ GDP (%)	67.7	78.9	77.8	80.1	80.1	77.9
Govt. Sur/Def to GDP (%)	1.6	-4.1	-3.6	-1.6	0.7	2.8
Adjusted Debt/GDP (%)	67.7	78.9	77.8	80.2	80.2	78.0
Interest Expense/ Taxes (%)	3.3	2.7	2.4	2.1	1.9	1.7
GDP Growth (%)	3.1	-3.0	6.0	3.0	5.0	5.0
Foreign Reserves/Debt (%)	1.3	1.2	1.2	1.1	1.1	1.1
Implied Sen. Rating	AA	AA-	AA	AA	AA	AA

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

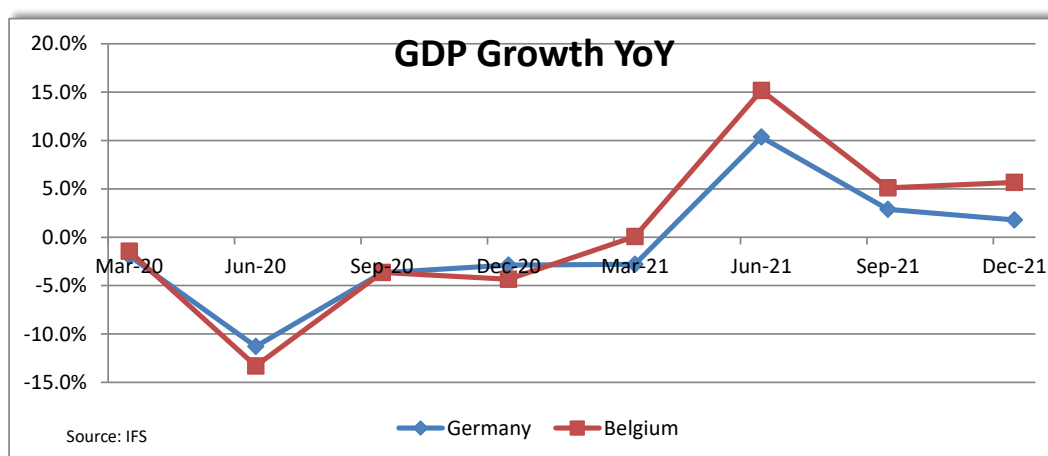
PEER RATIOS	Other NRSRO Sen.	Debt as a % of GDP	Govt. Surp. Def to GDP (%)	Adjusted Debt/ GDP	Interest Expense/ Taxes %	GDP Growth (%)	Ratio-Implied Rating*
Kingdom Of Belgium	AA	128.0	-5.0	128.0	5.6	10.8	A
French Republic	AA	137.3	-6.0	137.3	4.6	8.2	BBB+
Portugal Republic	BB+	145.5	-3.1	145.5	9.8	5.6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



Country	EJR Rtq.	CDS
Portugal	BBB-	43
Italy	BBB-	98
Belgium	BBB	13
France	A+	23
United Kingdom	A+	11

Economic Growth

In Q1'22, real GDP grew by 0.2% (at seasonally adjusted quarterly rates). In January and February, the easing of supply chain bottlenecks and mild weather conditions led to a rebound in manufacturing and construction, private investment and exports. Retail and hospitality spending started to recover due to high excess savings and the lifting of containment measures from March. However, the war has changed this positive outlook. High inflation and plummeting consumer confidence hit private consumption. The German government is preparing for gas rationing this winter and frantically trying to find other sources, encourage energy savings and fill up the country's gas storage. According to the German ZEW Economic Sentiment Index that assesses a six-month economic outlook, sentiments in July fell to a steep -53.8 in July from -20.8 in June.



Fiscal Policy

The broadly neutral fiscal stance in 2022 is appropriate under the baseline forecast. The government's plan to tighten policy and return to the debt brake rule in 2023 should be manageable under the baseline assumptions of waning drags from the pandemic and energy prices. If downside risks materialize, however, the government should allow automatic stabilizers to operate fully and continue to flexibly provide targeted support, and if needed consider activating the escape clause of the debt break rule for another year.

	Surplus-to-GDP (%)	Debt-to-GDP (%)	5 Yr. CDS Spreads
Germany	-3.62	77.80	9.10
Belgium	-4.98	128.02	12.93
France	-5.97	137.28	23.02
United Kingdom	-8.88	190.85	10.93
Portugal	-3.09	145.47	43.34
Italy	-7.19	173.71	97.55

Sources: Thomson Reuters and IFS

Unemployment

As of April 2022, the unemployment rate (3.0 percent based on the ILO/European definition) had fallen below its pre-pandemic lows, and the ratio of vacancies to the unemployed reached 60 percent—10 percentage points higher than in 2019. The seasonally adjusted unemployment rate in Germany increased to a nine-month high of 5.4% in July of 2022, a second consecutive rise, and once again prompted by Ukrainian refugees registering with the labour office in search of work.

	Unemployment (%)	
	2020	2021
Germany	3.83	3.58
Belgium	5.73	6.28
France	8.03	7.88
United Kingdom	0.00	0.00
Portugal	7.12	6.60
Italy	9.30	9.56

Source: Intl. Finance Statistics

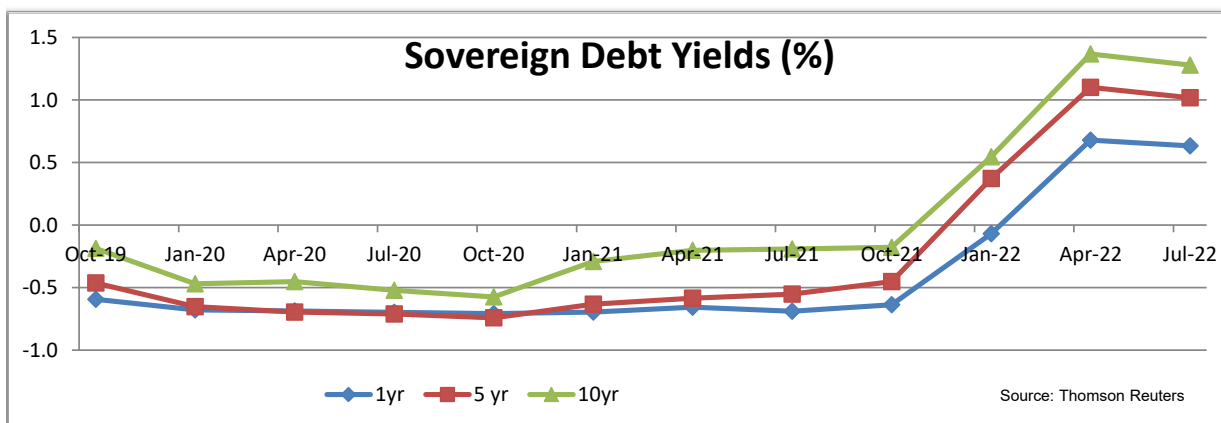
Banking Sector

The German banking sector generally resilient to shocks, but points to pockets of vulnerability and downside risks that require close monitoring and call for some additional buffers for less capitalized banks. Given continued rapid house price gains, the recently activated capital-based measures should be supplemented with borrower-based measures, such as supervisory guidance on a loan-to-value cap.

Bank Assets (billions of local currency)		
	Assets	Mkt Cap/ Assets %
Deutsche Bank	1,324.0	1.30
Commerzbank	473.0	1.74
Total	1,797.0	
EJR's est. of cap shortfall at 10% of assets less market cap		154.2
Germany's GDP		3,570.6

Funding Costs

The yield on the German 10-year Bund rose to above 0.8%, recovering from a four-month low below 0.7% hit earlier in July amid concerns about rising interest rates and flight to the safety of debt in light of the escalating US-China conflict. The Germany Government Bond 10Y is expected to trade at 1.06 percent by the end of this quarter, according to Trading Economics global macro models and market consensus estimates it to trade at 1.41 per cent 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 22 (1 is best, 189 worst) is strong.

The World Bank's Doing Business Survey*			
	2021	2020	Change in
	Rank	Rank	Rank
Overall Country Rank:	22	22	0
Scores:			
Starting a Business	125	125	0
Construction Permits	30	30	0
Getting Electricity	5	5	0
Registering Property	76	76	0
Getting Credit	48	48	0
Protecting Investors	61	61	0
Paying Taxes	46	46	0
Trading Across Borders	42	42	0
Enforcing Contracts	13	13	0
Resolving Insolvency	4	4	0

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

Economic Freedom

As can be seen below, Germany is above average in its overall rank of 72.5 for Economic Freedom with 100 being best.

Heritage Foundation 2021 Index of Economic Freedom				
World Rank 72.5*				
	2021	2020	Change in	World
	Rank**	Rank	Rank	Avg.
Property Rights	78.8	80.5	-1.7	53.6
Government Integrity	69.8	82.8	-13.0	45.9
Judicial Effectiveness	81.5	74.3	7.2	45.4
Tax Burden	60.4	60.9	-0.5	77.7
Gov't Spending	40.3	42.2	-1.9	67.1
Fiscal Health	92.8	92.9	-0.1	72.1
Business Freedom	82.4	82.8	-0.4	63.2
Labor Freedom	53.0	53.0	0.0	59.5
Monetary Freedom	77.2	76.7	0.5	74.7
Trade Freedom	84.0	86.4	-2.4	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:

FEDERAL REPUBLIC OF GERMANY has grown its taxes of 12.9% per annum in the last fiscal year which is more than the average for its peers. We expect tax revenues will grow approximately 12.9% per annum over the next couple of years and 11.6% per annum for the next couple of years thereafter.

Credit Quality Driver: Total Revenue Growth:

FEDERAL REPUBLIC OF GERMANY's total revenue growth has been less than its peers and we assumed no 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%	10.1	12.9	12.9	11.6
Social Contributions Growth %	6.7	4.1	4.0	4.0
Grant Revenue Growth %	0.0	NMF		
Other Revenue Growth %	0.0	NMF		
Other Operating Income Growth%	0.0	7.6	7.6	7.6
Total Revenue Growth%	9.2	8.9	8.9	8.0
Compensation of Employees Growth%	3.1	3.5	3.5	3.5
Use of Goods & Services Growth%	6.6	10.8	10.8	10.8
Social Benefits Growth%	1.2	3.5	3.5	3.5
Subsidies Growth%	9.0	47.3		
Other Expenses Growth%	0.0			
Interest Expense	1.8	0.8	0.8	
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)	(20.0)	(20.0)	(20.0)
Shares and Other Equity (asset) Growth%	(4.5)	(9.9)	2.0	2.0
Insurance Technical Reserves (asset) Growth%	3.3	0.0		
Financial Derivatives (asset) Growth%	0.0	(7.4)	(7.4)	(7.4)
Other Accounts Receivable LT Growth%	4.2	(1.8)	(1.8)	(1.8)
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	2.2	3.0	3.0
Currency & Deposits (liability) Growth%	1.8	22.5	12.9	12.9
Securities Other than Shares (liability) Growth%	(0.1)	5.8	4.1	4.1
Loans (liability) Growth%	2.8	0.1	0.1	0.1
Insurance Technical Reserves (liability) Growth%	6.1	0.0		
Financial Derivatives (liability) Growth%	(22.1)	0.0		
Additional ST debt (1st year)(billions EUR)	0.0	0.0		

ANNUAL OPERATING STATEMENTS

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

	ANNUAL REVENUE AND EXPENSE STATEMENT (BILLIONS EUR)					
	2018	2019	2020	2021	P2022	P2023
Taxes	808	834	782	883	997	1,125
Social Contributions	573	598	608	633	658	684
Grant Revenue						
Other Revenue						
Other Operating Income	<u>176</u>	<u>181</u>	<u>177</u>	<u>190</u>	<u>190</u>	<u>190</u>
Total Revenue	1,557	1,614	1,567	1,706	1,845	2,000
Compensation of Employees	260	273	284	294	304	315
Use of Goods & Services	176	184	210	232	258	285
Social Benefits	806	847	905	937	969	1,002
Subsidies	28	31	71	105	105	105
Other Expenses				159	159	159
Grant Expense						
Depreciation	75	79	82	87	87	87
Total Expenses excluding interest	<u>1,460</u>	<u>1,532</u>	<u>1,683</u>	<u>1,814</u>	<u>1,882</u>	<u>1,954</u>
Operating Surplus/Shortfall	97	82	-116	-108	-37	46
Interest Expense	<u>31</u>	<u>27</u>	<u>21</u>	<u>21</u>	<u>21</u>	<u>21</u>
Net Operating Balance	66	54	-137	-129	-58	24

ANNUAL BALANCE SHEETS

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

Base Case	ANNUAL BALANCE SHEETS (BILLIONS EUR)					
	2018	2019	2020	2021	P2022	P2023
ASSETS						
Currency and Deposits (asset)	366	374	457	472	502	502
Securities other than Shares LT (asset)	122	140	140	136	136	136
Loans (asset)	-6	-1	35	10	8	6
Shares and Other Equity (asset)	10	11	12	11	11	12
Insurance Technical Reserves (asset)	1	1	1	1	1	1
Financial Derivatives (asset)	-38	-52	-65	-60	-55	-51
Other Accounts Receivable LT	108	115	118	116	114	112
Monetary Gold and SDR's						
Other Assets					935	935
Additional Assets	<u>732</u>	<u>804</u>	<u>859</u>	<u>935</u>		
Total Financial Assets	1,294	1,393	1,557	1,621	1,651	1,652
LIABILITIES						
Other Accounts Payable	107	112	113	116	119	123
Currency & Deposits (liability)	15	14	14	18	18	18
Securities Other than Shares (liability)	1,663	1,694	1,982	2,097	2,183	2,272
Loans (liability)	544	529	546	547	605	581
Insurance Technical Reserves (liability)						
Financial Derivatives (liability)						
Other Liabilities						
Liabilities	2,329	2,350	2,656	2,778	2,867	2,843
Net Financial Worth	<u>-1,035</u>	<u>-957</u>	<u>-1,099</u>	<u>-1,157</u>	<u>-1,215</u>	<u>-1,191</u>
Total Liabilities & Equity	1,294	1,393	1,557	1,621	1,651	1,652

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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 adjustmer which are reflected in the results for the projected ratings. We have assigned a rating of "AA" whereas the ratio-implied rating for th recent period is "AA"; we expect results to remain approximately the same.

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 FEDERAL REPUBLIC OF GERMANY with the ticker of 3413Z GR we have assigned the senior unsecured rating of AA. 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 upon 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 available.**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%	6.0	10.0	2.0	AA	AA	AA-
Social Contributions Growth %	7.0	10.0	4.0	AA	AA	AA
Other Revenue Growth %		3.0	(3.0)	AA	AA	AA
Total Revenue Growth%	7.0	9.0	5.0	AA	AA	AA
Monetary Gold and SDR's Growth %	5.0	7.0	3.0			
				AA	AA	AA

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

.....
 Subramanian NG
 Senior Rating Analyst

August 29, 2022

Reviewer Signature:

Today's Date

Steve Zhang

 Steve Zhang
 Senior Rating Analyst

August 29, 2022

(Note, see our senior report for additional disclosures.)

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.