\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

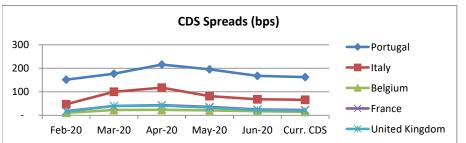
Rating Analysis - 7/30/20

\*EJR's 3 yr. Default Probability: 1.0%

The German economy is already facing a deep recession, and if a second COVID-19 outbreak requires further containment measures or prolongs uncertainty, it could experience a 2020 GDP decrease of approximately 8.8%. In April, industrial output fell at the steepest clip (down 18% MoM) since at least the early 1990s, particularly on the back of weakness in the manufacturing sector amid the global lockdown weighing on foreign demand. For May 2020, industrial output decreased 19.30% over the same month in the previous year. The composite PMI, furthermore, remained in contractionary territory throughout the quarter on broad-based weakness in the private sector.

GDP is expected to contract steeply this year due to the global health crisis and associated containment measures weighing heavily on domestic and foreign demand. A second outbreak would undermine the benefits of an early and well-managed reopening. Increased uncertainty would underpin greater precautionary saving by consumers and weigh on investment at home and abroad, with negative consequences for Germany's capital goods exports. Another weight on credit quality is the recent pan-EU bond issuance. We are affirming our rating.

			Annual Ratios				
			(source for page	ast results	: IMF, Cou	ntryEcono	omy)
CREDIT POSITION		<u>2017</u>	<u>2018</u>	<u>2019</u>	P2020	P2021	P2022
Debt/ GDP (%)		65.3	61.8	59.8	58.4	57.6	57.2
Govt. Sur/Def to GDP (%)		1.2	1.9	1.6	1.1	0.6	0.0
Adjusted Debt/GDP (%)		65.3	61.8	59.8	58.5	57.7	57.3
Interest Expense/ Taxes (%)		4.4	3.9	3.3	3.2	3.2	3.1
GDP Growth (%)		3.6	3.1	2.5	2.3	2.3	2.5
Foreign Reserves/Debt (%)		1.6	1.5	1.5	1.4	1.4	1.3
Implied Sen. Rating		AA+	AA	AA	AA	AA	AA
INDICATIVE CREDIT RATIOS		AA	A	BBB	ВВ	<u>B</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-
	NRSROs	as a %	Def to	Debt/	Expense/	Growth	Implied
PEER RATIOS		GDP	GDP (%)	GDP	Taxes %	<u>(%)</u>	Rating*
Kingdom of Belgium	AA	98.7	-1.5	98.7	6.6	4.8	AA+
French Republic	AA	98.1	-2.5	98.1	4.7	2.9	AA-
Portugal Republic							
Republic of Italy	BBB-	134.8		134.8	11.7	1.6	BBB+
	BB+ BBB-	117.7 134.8		117.7 134.8	12.0 11.7	3.9 1.6	A+ BBB+



Country	EJR Rtg.	<u>CDS</u>
Portugal	BBB-	162
Italy	BBB-	66
Belgium	BBB	14
France	A+	22
United Kinadom	A+	20



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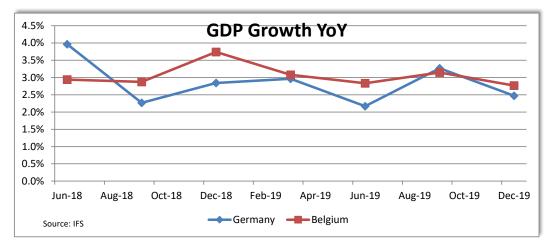
\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

## **Economic Growth**

Indicators of business confidence and activity fell to record lows in April, and Industrial production for April and May are down sharply. Automotive manufacturing has been badly hit with major car producers shutting operations for six weeks or longer and facing weak uncertain demand. Real-time indicators show economic activity recovering but remaining below normal in May as containment measures were eased. The clause for exceptional circumstances in the public debt break was triggered on March 25, to allow debt financing of a supplementary budget of EUR 156 billion (4.5% of GDP) to tackle the health crisis and dampen the initial economic consequences. Private consumption is expected to contract far more than during previous downturns, recovering only gradually as containment measures end. The ZEW Indicator of Economic Sentiment for Germany fell by 4.1 points to 59.3 in July 2020 defying the expectations of further improvement.



## **Fisical Policy**

Germany's current account surplus narrowed to EUR 6.5 billion in May 2020 from EUR 13.3 billion in the same month the previous year. This was the smallest current account surplus since August 2010, as the goods surplus plummeted to EUR 8.5 billion from EUR 19.2 billion a year earlier, and the secondary income posted a EUR 3.5 billion deficit, compared to EUR 0.8 billion surplus. Meantime, the primary income registered a EUR 0.4 billion surplus in May, swinging from a EUR 6.4 billion gap the prior year. The services account also saw a surplus of EUR 1.1 billion, compared to a gap of EUR 0.3 billion last year. Additionally, with new debt planned, the government predicts Germany's debt-to-GDP ratio to jump to more than 75% this year from just below 60% in 2019; a leap in German borrowing not seen since a massive stimulus boost during the global financial crisis more than a decade ago.

## Unemployment

The number of people out of work in Germany rose far less than expected in June, allaying fears that the coronavirus pandemic would erode the labor market. An additional 69,000 people were out of work in seasonally adjusted terms, pushing the unemployment rate to 6.4% from 6.3% the previous month. The use of part-time work, a form of state aid designed to encourage companies to keep employees on the payroll during a downturn, was having a stabilizing effect on the labor market.

	Surplus-to-	Debt-to-	5 Yr. CDS
	GDP (%)	GDP (%)	Spreads
Germany	1.58	59.76	21.92
Belgium	-1.52	98.75	9.61
France	-2.53	98.12	18.06
United Kingdon	n -1.24	88.12	16.18
Portugal	-0.69	117.74	127.18
Italy	-2.09	134.80	36.94
Sources: Thomson	n Reuters, IFS	and CountryEco	onomy

Unemployment (%)					
	<u>2018</u>	<u>2019</u>			
Germany	3.40	3.20			
Belgium	5.98	5.44			
France	9.11	8.43			
United Kingdom	4.09	3.80			
Portugal	7.05	6.33			
Italy	10.62	9.90			
Source: Intl. Finance Statistics					



\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

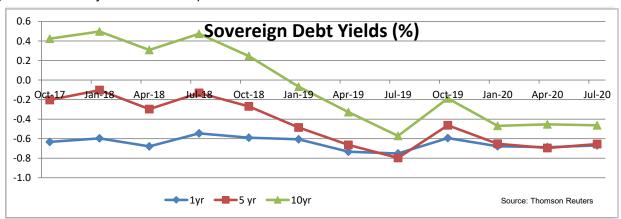
## **Banking Sector**

According to Ifo Institute of Economic Research, around one fifth of German companies (21%) believe their survival is threatened by the coronavirus crisis, with travel agents, hotels and restaurants particularly concerned. This, given the added stress due to weakening asset quality, also affects the profitability and overall creditworthiness of German banks. Profitability of German banks will decline further over the next 12 to 18 months as net interest income falls. The smaller deposit-funded banks in Germany will take the hardest hit, with maturing loans and securities repricing at lower rates, while interest rates paid on retail deposits are in practice at or close to 0%.

Bank Assets (billions of local cur	rency)	
,	• •	Mkt Cap/
	Assets	Assets %
Deutsche Bank	1,348.1	0.15
Commerzbank	462.4	0.27
Total	1,810.5	_
EJR's est. of cap shortfall at		
10% of assets less market cap		177.7
Germany's GDP		3,433.8

## **Funding Costs**

The 5 Years CDS is valued 13, suggesting a 0.22% implied probability of default, on a supposed 40% recovery rate. The government is considering borrowing up to another EUR50 billion to finance its stimulus package. The plan to take on more debt underlines Germany's massive fiscal shift from Europe's former austerity champion to one of the biggest spenders in the euro zone's efforts to counter the economic impact of the coronavirus pandemic. This means the government's overall net new borrowing could balloon beyond EUR 200 billion this year, equivalent of roughly 6% of Germany's economic output.



#### **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*					
	2019	2018	Change in		
	<u>Rank</u>	<u>Rank</u>	<u>Rank</u>		
Overall Country Rank:	22	20	-2		
Scores:					
Starting a Business	125	113	-12		
Construction Permits	30	24	-6		
Getting Electricity	5	5	0		
Registering Property	76	77	1		
Getting Credit	48	42	-6		
Protecting Investors	61	62	1		
Paying Taxes	46	41	-5		
Trading Across Borders	42	39	-3		
Enforcing Contracts	13	22	9		
Resolving Insolvency	4	4	0		
* Based on a scale of 1 to 189 with 1	being the highes	t ranking.			



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\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

# **Economic Freedom**

As can be seen below, Germany is above average in its overall rank of 73.5 for Economic Freedom with 100 being best.

	2020	2019	Change in	World
	Rank**	Rank	Rank	Avg.
Property Rights	80.5	79.9	0.6	56.6
Government Integrity	82.8	75.4	7.4	43.8
Judicial Effectiveness	74.3	81.3	-7.0	45.1
Tax Burden	60.9	60.8	0.1	77.3
Gov't Spending	42.2	42.3	-0.1	66.0
Fiscal Health	92.9	91.8	1.1	69.1
Business Freedom	82.8	83.3	-0.5	63.3
Labor Freedom	53.0	52.8	0.2	59.4
Monetary Freedom	76.7	77.9	-1.2	74.6
Trade Freedom	86.4	86.0	0.4	73.8
*Based on a scale of 1-100 with 100 being the highest **The ten economic freedoms are based on a scale of	•			
Source: The Heritage Foundation				



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\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

## **Credit Quality Driver: Taxes Growth:**

FEDERAL REPUBLIC OF GERMANY has grown its taxes of 3.1% per annum in the last fiscal year which is more than the average for its peers. We expect tax revenues will grow approximately 3.1% per annum over the next couple of years and 3.1% 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 more than its peers and we assumed a 4.1% growth in total revenue over the next two years.

	Peer	Issuer	Assumptions
Income Statement	Median	Avg.	Yr. 1&2 Yr. 3,4,5
Taxes Growth%	2.7	3.1	3.1 3.1
Social Contributions Growth %	3.2	4.4	4.0 4.0
Grant Revenue Growth %	0.0	NMF	
Other Revenue Growth %	0.0	NMF	0.0
Other Operating Income Growth%	0.0	3.0	3.0 3.0
Total Revenue Growth%	2.8	3.6	4.1 3.7
Compensation of Employees Growth%	3.1	4.8	4.8 4.8
Use of Goods & Services Growth%	2.3	6.1	6.1 6.1
Social Benefits Growth%	3.2	4.9	4.9 4.9
Subsidies Growth%	8.7	7.3	
Other Expenses Growth%	0.0		
Interest Expense	1.8	1.3	1.3 1.3
Currency and Deposits (asset) Growth%	(2.3)	0.0	
Securities other than Shares LT (asset) Growth%	7.3	0.0	
Loans (asset) Growth%	2.1	8.0	0.8 0.8
Shares and Other Equity (asset) Growth%	7.9	12.7	12.7 12.7
Insurance Technical Reserves (asset) Growth%	1.6	0.0	
Financial Derivatives (asset) Growth%	7.6	11.4	3.1 3.1
Other Accounts Receivable LT Growth%	(0.3)	8.2	3.1 3.1
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%	0.7	(1.4)	3.0 3.0
Currency & Deposits (liability) Growth%	3.0	(1.6)	0.5 0.5
Securities Other than Shares (liability) Growth%	7.1	2.7	1.9 1.9
Coodinate Carlor than Charles (hability) Crowaria	7	2	110 110
Loans (liability) Growth%	(3.7)	(2.4)	0.5 0.5
Insurance Technical Reserves (liability) Growth%	0.0	0.0	
Financial Derivatives (liability) Growth%	5.9	0.0	
Additional ST debt (1st year)(billions EUR)	0.0	0.0	

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\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

## **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.

ΑN	NNUAL REVI	ENUE AND	EXPENSE	STATEM	ENT
		(BILLION	S EUR)		
^	0047	0040	0040	DOGGO	

	(BILLIONS EUR)					
	2016	2017	2018	2019	P2020	P2021
Taxes	739	773	808	833	859	885
Social Contributions	524	549	573	598	622	647
Grant Revenue						
Other Revenue						
Other Operating Income	<u>163</u>	<u>160</u>	<u>173</u>	<u>178</u>	<u>178</u>	<u>178</u>
Total Revenue	1,426	1,482	1,553	1,609	1,658	1,710
Compensation of Employees	241	250	259	272	285	298
Use of Goods & Services	159	163	169	180	191	202
Social Benefits	754	785	806	846	888	932
Subsidies	27	28	30	32	32	32
Other Expenses				118	118	118
Grant Expense						
Depreciation	69	72	75	79	79	79
Total Expenses excluding interest	<u>1,353</u>	<u>1,408</u>	<u>1,457</u>	<u>1,527</u>	<u>1,592</u>	<u>1,662</u>
Operating Surplus/Shortfall	73	73	96	82	66	48
Interest Expense	<u>38</u>	<u>34</u>	<u>32</u>	<u>28</u>	<u>28</u>	<u>28</u>
Net Operating Balance	35	39	64	54	38	20

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\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

## **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		AN	NUAL BALA (BILLION		S				
ASSETS	2016	2017	2018	2019	P2020	P2021			
Currency and Deposits (asset)	324	353	364	370	370	370			
Securities other than Shares LT (asset)	141	127	121	132	132	132			
Loans (asset)	157	155	149	150	151	153			
Shares and Other Equity (asset)	558	574	595	671	756	852			
Insurance Technical Reserves (asset)	1	1	1	1	1	1			
Financial Derivatives (asset)	-46	-42	-38	-43	-44	-45			
Other Accounts Receivable LT Monetary Gold and SDR's	101	97	96	104	107	111			
Other Assets					0	0			
Additional Assets	<u>0</u>			<u>0</u>					
Total Financial Assets	1,236	1,265	1,289	1,386	1,474	1,573			
LIABILITIES									
Other Accounts Payable	75	102	103	102	105	108			
Currency & Deposits (liability)	16	15	15	15	15	15			
Securities Other than Shares (liability)	1,768	1,718	1,688	1,733	1,766	1,800			
Loans (liability) Insurance Technical Reserves (liability) Financial Derivatives (liability) Other Liabilities	601	573	548	534	496	476			
Liabilities	2,460	2,408	2,353	2,384	2,434	2,513			
Net Financial Worth	-1,225	-1,143	-1,065	-998	-960	-940			
Total Liabilities & Equity	1,236	1,265	1,289	1,386	1,474	1,573			

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\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

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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 adjustment are reflected in the results for the projected ratings. We have assigned a rating of "AA" whereas the ratio-implied rating for the most 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.



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\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

# 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 #15 available via eganjones.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.



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\*E ID OD D - tim -- A4 -

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

\*EJR Sen Rating(Curr/Prj) AA/ AA

# 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)(l) of Rule 17g-7:

The information is generally adequate and acceptable.

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 Ratin		
	Base	Optimistic	Pessimistic	Base	Optimistic	Pessimistic
Taxes Growth%	3.1	7.1	(0.9)	AA	AA	AA
Social Contributions Growth %	4.0	7.0	1.0	AA	AA	AA
Other Revenue Growth %	0.0	3.0	(3.0)	AA	AA	AA
Total Revenue Growth%	4.1	6.1	2.1	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.



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\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

#### ATTESTATION FORM

Senior Rating Analyst

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,
- 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	
	July 30, 2020	
Subramanian NG		
Senior Rating Analyst		
Reviewer Signature:	Today's Date	
Steve Zhang	July 30, 2020	
Steve Zhang		

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

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\*EJR Sen Rating(Curr/Prj) AA/ AA

\*EJR CP Rating: A1+

\*EJR's 3 yr. Default Probability: 1.0%

# **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.

