FEDERAL REPUBLIC OF GERMANY

Rating Analysis - 7/20/18

*EJR Sen Rating(Curr/Prj) AA/ AA
*EJR CP Rating: A1+
EJR's 3 yr. Default Probability: 1.0%

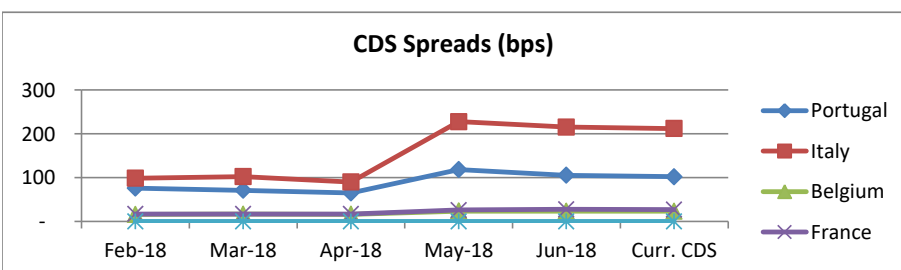First quarter 2018, GDP growth slowed due to weaker export. However, we continue to expect sold economic growth for 2018 driven by higher private consumption.

The major challenges for Germany are possible trade tariffs with the U.S., immigration turmoil, trouble relating to Brexit, and weakness in EU countries, Greece and Italy. The offset is Germany's strong economic performance. Regarding employment, even though the recently arrived refugees increased the size of total labor force, employment growth is expected to continue improving. Core inflation (excluding energy and unprocessed food) in Germany has been increased from just above 1% in 2015 and 2016 to 1.6% in 2017. The figure is expected to grow to ~1.8% by 2019 due to stronger demand and higher purchase capacity caused by higher wage growth. Headline inflation is expected to slow down from 1.7% in 2017 to ~1.6% in energy price. We are affirming.

Annual Ratios (source for past results: IMF)

CREDIT POSITION	2015	2016	2017	P2018	P2019	P2020
Debt/ GDP (%)	71.0	68.2	64.1	62.2	60.3	58.1
Govt. Sur/Def to GDP (%)	0.7	0.9	1.2	1.2	1.3	1.3
Adjusted Debt/GDP (%)	71.0	68.2	64.1	62.3	60.4	58.2
Interest Expense/ Taxes (%)	10.9	8.9	8.1	7.9	7.7	7.5
GDP Growth (%)	3.8	3.3	3.8	3.8	3.8	3.5
Foreign Reserves/Debt (%)	1.2	1.3	1.3	1.3	1.2	1.3
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 % GDP	Govt. Surp. Def to GDP (%)	Adjusted Debt/ GDP	Interest Expense/ Taxes %	GDP Growth (%)	Ratio-Implied Rating*
Kingdom Of Belgium	AA	121.8	-1.0	121.8	14.6	3.4	BBB+
French Republic	AA	96.8	-2.4	96.8	13.7	2.8	A
United Kingdom	AA	117.6	-0.9	117.6	19.0	3.6	BBB+
Portugal Republic	BB+	146.3	-3.9	146.3	37.9	4.1	BB+
Republic Of Italy	BBB-	153.4	-2.9	153.4	26.2	2.1	BB-

CDS Spreads (bps)

Country	CDS
Portugal	102
Italy	212
Belgium	23
France	27
Uk	N/A

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EJR's 3 yr. Default Probability: 1.0%

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Economic Growth

Germany's nominal GDP grew by 4.0% (Dec-17 YoY). The growth rate is expected to be 3.8% and 4.3% for 2018 and 2019, respectively according to the OECD. German economy is expected to continue growing steadily with the help of the robust domestic demand and strong exports (foreign trade). A strong labor market and ECB support should keep boosting private consumption. Even though housing growth has been soft since mid-2017, the situation is likely to improve because the capacity constraints in housing investment are gradually being resolved.

GDP Growth YoY

Source: IFS
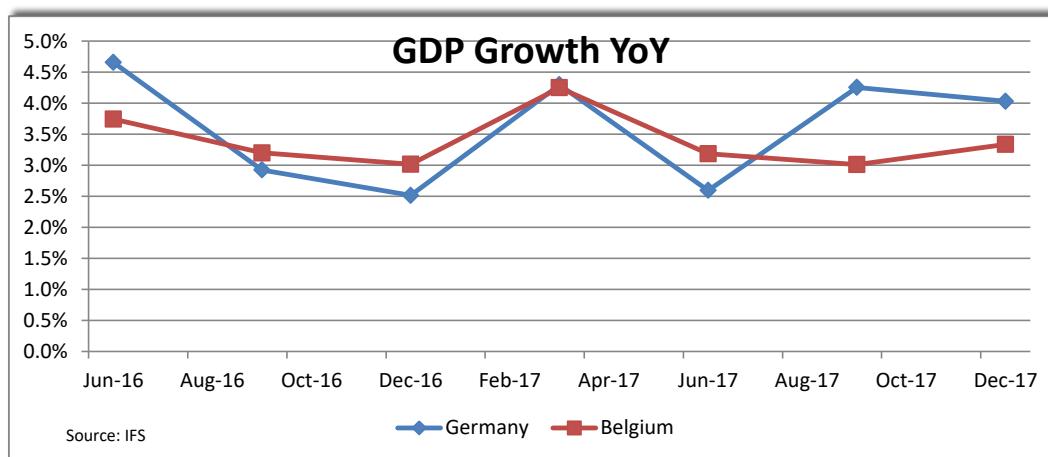
Fiscal Policy

Germany's surplus to GDP grew from 0.17% in 2013 to 1.2% in 2017, which is relatively strong compared with other peers in Europe. Strong domestic demand is going to increase imports. On the other hand, export growth recovered in the second half of 2017 and the foreign trade outlook remains strong. However, the recent 'trade war' might have impact on Germany's exports, especially cars (12% of total) and vehicle parts (4.6% of total). Although we have concerns about a trade war, we expect Germany to make adjustment to maintain access to market.

	Surplus-to-GDP (%)	Debt-to-GDP (%)	5 Yr. CDS Spreads
Germany	1.20	64.13	11.86
Belgium	-0.97	121.83	23.37
France	-2.39	96.80	27.22
Uk	-0.89	117.57	24.28
Portugal	-3.95	146.30	102.02
Italy	-2.90	153.41	212.01
Sources: Thomson Reuters and IFS			

Unemployment

Germany's unemployment rate of 3.4% in May of 2018 is the lowest since the fall of the Berlin wall. The increasing hours per worker, which boost the labor market participation of not only older workers and women but also foreign workers from abroad, will sustain the lower unemployment rate. Nevertheless, we are concerned about the impact of the trade war.

Unemployment (%)		
	2016	2017
Germany	4.14	3.77
Belgium	7.86	7.16
France	10.07	9.43
Uk	4.91	4.40
Portugal	11.18	8.97
Italy	11.68	11.23
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

Germany has moderate exposure to its banking sector regarding the banks' aggregate size of assets. The largest bank, Deutsche Bank, is having a hard time due to its disappointing performance (€2.4B loss in Q4 2017). Its investment bank is performing poorly compared to its American competitors, and its retail bank is struggling to make headway against the powerful Sparkassen in Germany's retail market.

Bank Assets (billions of local currency)

	Assets	Mkt Cap/ Assets %
Deutsche Bank	1474.73	1.37
Commerzbank	452.51	2.37
HypoVereinsbank	302.09	0.00
Bayerische Landesbank	214.52	0.00
Total	2,443.9	
EJR's est. of cap shortfall at		
10% of assets less market cap		213.4
Germany's GDP		3,263.4

Funding Costs

As can be seen in the below graph, the bond yields have been increased since late 2016. Current 5-year CDS and 1-year CDS are still negative while 10-year CDS is approximately 0.3%. However, the level of debt yield is relatively low compared with the yield in 2013 and is among the lowest in Europe.

Sovereign Debt Yields (%)

Source: Thomson Reuters
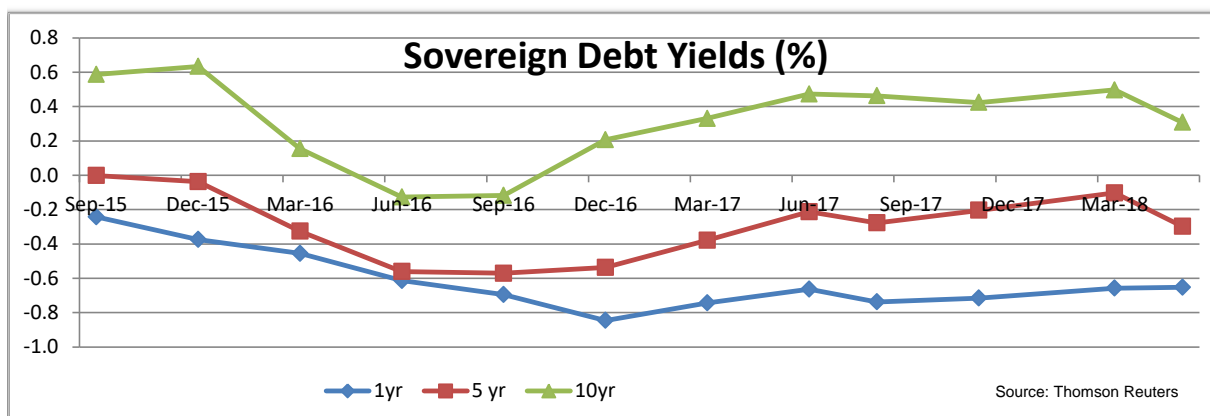
Ease of Doing Business

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 20 (1 is best, 189 worst) is strong.

The World Bank's Doing Business Survey*

	2018 Rank	2017 Rank	Change in Rank
Overall Country Rank:	**20**	**17**	**-3**
Scores:			
Starting a Business	113	114	1
Construction Permits	24	12	-12
Getting Electricity	5	5	0
Registering Property	77	79	2
Getting Credit	42	32	-10
Protecting Investors	62	53	-9
Paying Taxes	41	48	7
Trading Across Borders	39	38	-1
Enforcing Contracts	22	17	-5
Resolving Insolvency	4	3	-1

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

FEDERAL REPUBLIC OF GERMANY

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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 74.2 for Economic Freedom with 100 being best.

Heritage Foundation 2018 Index of Economic Freedom World Rank 74.2*				
	2018 Rank**	**2017 Rank**	**Change in Rank**	**World Avg.**
Property Rights	81.0	82.9	-1.9	51.5
Government Integrity	78.0	77.7	0.3	46.9
Judical Effectiveness	75.3	79.5	-4.2	42.1
Tax Burden	61.3	61.9	-0.6	76.7
Gov't Spending	41.3	41.4	-0.1	63.5
Fiscal Health	90.8	89.9	0.9	66.3
Business Freedom	86.1	86.6	-0.5	64.8
Labor Freedom	53.3	42.8	10.5	58.9
Monetary Freedom	86.2	85.9	0.3	76.0
Trade Freedom	86.9	87.0	-0.1	75.9
*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				

FEDERAL REPUBLIC OF GERMANY

Rating Analysis - 7/20/18

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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 6.4% per annum in the last fiscal year which is more than the average for its peers. We expect tax revenues will grow approximately 4.0% per annum over the next couple of years and 4.0% 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 4.0% 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%	5.2	6.4	4.0	4.0
Social Contributions Growth %	3.2	4.6	3.9	3.9
Grant Revenue Growth %	0.0	NMF		
Other Revenue Growth %	0.0	NMF		
Other Operating Income Growth%	0.0	2.2	2.2	2.2
Total Revenue Growth%	4.0	4.3	4.0	4.0
Compensation of Employees Growth%	0.0	0.0		
Use of Goods & Services Growth%	2.3	3.6	3.6	3.6
Social Benefits Growth%	1.7	3.8	3.8	3.8
Subsidies Growth%	3.1	(0.7)		
Other Expenses Growth%	0.0			
Interest Expense	1.8	1.6	1.5	
Currency and Deposits (asset) Growth%	0.0	0.0		
Securities other than Shares LT (asset) Growth%	(3.7)	0.0		
Loans (asset) Growth%	2.5	4.7	4.0	4.0
Shares and Other Equity (asset) Growth%	0.0	0.0		
Insurance Technical Reserves (asset) Growth%	0.0	0.0		
Financial Derivatives (asset) Growth%	0.0	0.0		
Other Accounts Receivable LT Growth%	2.5	(1.5)	(1.5)	(1.5)
Monetary Gold and SDR's Growth %	0.0	0.0	4.0	4.0
Other Assets Growth%	0.0	0.0		
Other Accounts Payable Growth%	0.0			
Currency & Deposits (liability) Growth%	0.0	0.0		
Securities Other than Shares (liability) Growth%	1.3	(2.8)	3.0	2.0
Loans (liability) Growth%	(2.0)	(5.4)	0.5	0.5
Insurance Technical Reserves (liability) Growth%	0.0	0.0		
Financial Derivatives (liability) Growth%	0.0	0.0		
Additional ST debt (1st year)(billions EUR)	0.0	0.0		

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

*EJR CP Rating: A1+

EJR's 3 yr. Default Probability: 1.0%

ANNUAL INCOME 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)

	2014	2015	2016	2017	P2018	P2019
Taxes	354	372	397	423	439	457
Social Contributions	482	501	524	548	569	592
Grant Revenue						
Other Revenue						
Other Operating Income	473	481	493	504	504	504
Total Revenue	1,308	1,354	1,414	1,475	1,513	1,553
Compensation of Employees						
Use of Goods & Services	137	142	150	155	161	167
Social Benefits	691	722	755	783	813	844
Subsidies	26	27	28	28	28	28
Other Expenses				364	364	364
Grant Expense						
Depreciation	65	67	68	71	71	71
Total Expenses excluding interest	1,254	1,292	1,350	1,401	1,436	1,473
Operating Surplus/Shortfall	54	62	64	73	76	80
Interest Expense	45	40	35	34	35	35
Net Operating Balance	9	22	29	39	42	44

FEDERAL REPUBLIC OF GERMANY

Rating Analysis - 7/20/18

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

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EJR's 3 yr. Default Probability: 1.0%

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ANNUAL BALANCE SHEETS

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

			ANNUAL BALANCE SHEETS			
Base Case			**(BILLIONS EUR)**			
ASSETS	2014	2015	2016	2017	P2018	P2019
Currency and Deposits (asset)					88	88
Securities other than Shares LT (asset)	132	137	140	125	125	125
Loans (asset)	168	152	150	157	163	170
Shares and Other Equity (asset)						
Insurance Technical Reserves (asset)					0	0
Financial Derivatives (asset)						
Other Accounts Receivable LT	96	86	85	83	82	81
Monetary Gold and SDR's						
Other Assets					784	784
Additional Assets	693	723	737	784		
Total Financial Assets	1,088	1,099	1,112	1,149	1,242	1,248
LIABILITIES						
Other Accounts Payable						
Currency & Deposits (liability)					0	0
Securities Other than Shares (liability)	1,792	1,768	1,768	1,719	1,771	1,824
Loans (liability)	606	583	576	544	503	459
Insurance Technical Reserves (liability)						
Financial Derivatives (liability)						
Other Liabilities	-206	-190	-199	-171	-171	-171
Liabilities	2,192	2,162	2,145	2,093	2,395	2,356
Net Financial Worth	-1,361	-1,309	-1,290	-1,195	-1,153	-1,109
Total Liabilities & Equity	1,088	1,099	1,112	1,149	1,242	1,248

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 "AA" whereas the ratio-implied rating for the most recent period is "AA+"; we expect results to decline slightly.

Changes in Indicative Ratios

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

FEDERAL REPUBLIC OF GERMANY

Rating Analysis - 7/20/18

*EJR Sen Rating(Curr/Prj) AA/ AA
*EJR CP Rating: A1+
EJR's 3 yr. Default Probability: 1.0%

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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 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+) 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 Oct 06, 2017 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 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 used 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.

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

*EJR CP Rating: A1+

EJR's 3 yr. Default Probability: 1.0%

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	8.0	-	AA	AA	AA
Social Contributions Growth %	3.9	6.9	0.9	AA	AA	AA
Other Revenue Growth %		3.0	(3.0)	AA	AA	AA
Total Revenue Growth%	4.0	6.0	2.0	AA	AA	AA
Monetary Gold and SDR's Growth %	4.0	6.0	2.0	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:

Chris Liao

……………………………………………..
Chris Liao
Rating Analyst

Today's Date

July 20, 2018

……………………………………….

Reviewer Signature:

Steve Zhang

……………………………………………..
Steve Zhang
Senior Rating Analyst

Today's Date

July 20, 2018

……………………………………….

FEDERAL REPUBLIC OF GERMANY   *EJR Sen Rating(Curr/Prj) AA/ AA

Rating Analysis - 7/20/18   *EJR CP Rating: A1+

EJR's 3 yr. Default Probability: 1.0%

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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 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.