CZECH REPUBLIC

Rating Analysis - 11/26/19

*EJR Sen Rating(Curr/Prj) AA/ AA *EJR CP Rating: A1+

EJR's 3 yr. Default Probability: 1.0%

The Czech nation's economic growth is likely to decelerate further in 2020 weighed by slowdown in the household income growth, limited job creation opportunities given the record low levels of unemployment and delay in normalization of external demand factors, esp. the auto industry.

The economy has lost some momentum in Q3'19, following healthy and resilient growth in H1 2019 with the industrial sector being the drag on overall activity. Growth is likely to slow moderately below average in 2020, but some normalization of the Eurozone going forward might provide some relief going forward. The drivers of robust household income growth are past their peak, and should drive a gradual deceleration in consumer spending. With unemployment stuck at record lows, job creation is likely to be limited. Concerns of industrial growth remains esp. the auto industry, where demand appears to have probably peaked - reflecting signs of a possible stagnation/ modest decline. We are affirming

Annual Ratios (source for past results: IMF)					
<u>2017</u>	<u>2018</u>	P2019	P2020	P2021	
43.8	40.1	37.2	34.4	32.0	
0.8	0.9	0.9	0.9	0.7	
43.8	40.1	37.3	34.5	32.0	
3.7	3.7	3.6	3.5	3.4	
5.9	5.6	2.3	2.3	2.5	
141.0	148.5	157.0	165.7	174.1	
AA+	AA+	AA	AA	AA	
	2017 43.8 0.8 43.8 3.7 5.9 141.0	2017 2018 43.8 40.1 0.8 0.9 43.8 40.1 3.7 3.7 5.9 5.6 141.0 148.5	2017 2018 P2019 43.8 40.1 37.2 0.8 0.9 0.9 43.8 40.1 37.3 3.7 3.7 3.6 5.9 5.6 2.3 141.0 148.5 157.0	2017 2018 P2019 P2020 43.8 40.1 37.2 34.4 0.8 0.9 0.9 0.9 43.8 40.1 37.3 34.5 3.7 3.7 3.6 3.5 5.9 5.6 2.3 2.3 141.0 148.5 157.0 165.7	

INDICATIVE CREDIT RATIOS	AA	A	BBB	BB	<u> </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-
	NRSRO	as a %	Def to	Debt/	Expense/	Growth	Implied
PEER RATIOS	<u>Sen.</u>	<u>GDP</u>	GDP (%)	<u>GDP</u>	Taxes %	<u>(%)</u>	Rating*
Federal Republic Of Germany	AAA	69.2	1.8	69.2	3.9	3.1	AA+
Kingdom Of The Netherlands	AA+	65.6	1.4	65.6	3.7	4.9	AA+
Republic Of Austria	AA+	91.6	0.6	91.6	6.1	4.2	AA+
French Republic	AA	122.1	-2.4	122.1	5.6	2.5	A-
United Kingdom	AA	113.2	-0.4	113.2	9.0	3.3	A+

	CDS Spreads (bps)	
300 -		→ Austria
200 -	X	
100 -	× × × ×	France
100		→ UK
	1 10 1110 1 10 5 10 0 110 6 60	→ The Netherlands
	Jun-19 Jul-19 Aug-19 Sep-19 Oct-19 Curr. CDS	

Country	<u>CDS</u>
Austria	37
France	18
UK	16
The Netherlands	127
Czech Republic	43



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

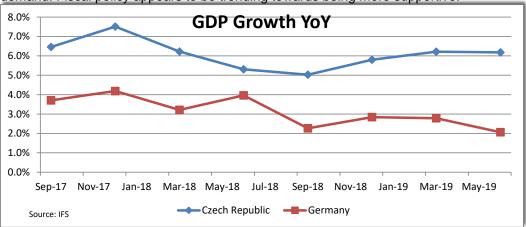
*EJR CP Rating: A1+

EJR's 3 yr. Default Probability: 1.0%

Economic Growth

Growth is projected to ease next year on softening household and government spending. The global trade war, a still-subdued German industrial sector and uncertainty over global growth all weigh on private sentiment and dampen business investment climate. The economy grew 2.5% YOY, seasonally- and price-adjusted terms in Q3'19 - below the 2.8% upturn logged in Q2'19 - and marked the lowest point in the year. On a quarter-on-quarter basis, GDP growth came in at 0.3% in Q3, well below Q2's 0.7% climb.

The Czechs are among the few in Europe still debating whether tighter policy is needed to rein in inflation, which has run at or above the 2% midpoint of the central bank's target range since May 2018. Government spending is seen increasing, esp. towards social benefits, trying to revive domestic consumption demand. Fiscal policy appears to be trending towards being more supportive.



Fiscal Policy

With general government debt of just over 40% of GDP and four consecutive years of fiscal surpluses, the Czech Republic has adequate room to support the economy, if need be. The government's plans for 2020 has plans which are supportive in nature, and includes an extraordinary increase in pensions, public sector wage rises and higher social spending. In 2021, a general election year, EJR expects the budget to become incrementally more supportive.

	Surplus-to-	Debt-to-	5 Yr. CDS		
	GDP (%)	GDP (%)	Spreads		
Czech Republ	0.95	40.09	42.56		
Germany	1.77	69.18	9.61		
The Netherlar	1.44	65.57	18.06		
Austria	0.56	91.58	16.18		
France	-2.35	122.14	127.18		
UK	-0.39	113.24	36.94		
Sources: Thomson Reuters and IFS					

Unemployment

The unemployment rate in the Czech Republic dropped to 2.6% in October 2019 from 2.7% in the previous month - the lowest jobless rate since June'19. A year earlier, the jobless rate was higher at 2.8%. Unemployment Rate in Czech Republic averaged 5.41% from 1990 until 2019, reaching an all-time high of 9.69% in January 2004 and a record low of 0.09% in February 1990. We do not consider the unemployment as a potential risk to Czech's economy.

Unemployment (%)					
	<u>2017</u>	<u>2018</u>			
Czech Repuł	2.93	2.27			
Germany	3.76	3.40			
The Netherla	4.86	3.84			
Austria	5.52	4.86			
France	9.43	9.11			
UK	4.40	4.09			
Source: Intl. Finance Statistics					



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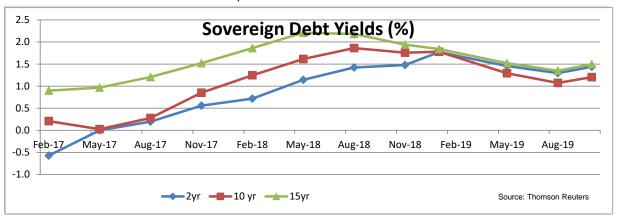
Banking Sector

The Czech banking sector is dominated by three banks: Ceska sporitelna, CSOB, and Komercni banks, which are owned by foreign bank financial groups. Komercni Banka is the only publicly traded top-5 bank in the Czech Republic. By the end of 2018, the number of licensed banks operating in the Czech Republic increased by two to 49 and the total value of the banking sector's assets rose by 3.8% to CZK7,332 billion.

Bank Assets (billions of local cu	rrency)	
		Mkt Cap/
	Assets	Assets %
Komercni Banka	1,059.9	14.1
Total	1,059.9	_
EJR's est. of cap shortfall at	•	
10% of assets less market cap		-43.4
Czech Republic's GDP		5,328.7

Funding Costs

The Czech central bank has been applying a more flexible approach to interest rates than some its central European peers. The Czech National Bank held its benchmark two-week repo rate unchanged at 2 percent on November 7th 2019, as widely expected. The Lombard rate and the discount rate were also kept at 3 percent and 1 percent, respectively. Interest Rate in Czech Republic averaged 4.78 percent from 1995 until 2019, reaching an all-time high of 39 percent in June of 1997 and a record low of 0.05 percent in November of 2012.



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 41 (1 is best, 189 worst) is above average.

The World Bank's Doing Business Survey*					
	2019	2018	Change in		
	<u>Rank</u>	<u>Rank</u>	<u>Rank</u>		
Overall Country Rank:	41	30	-11		
Scores:					
Starting a Business	134	81	-53		
Construction Permits	157	127	-30		
Getting Electricity	11	15	4		
Registering Property	32	32	0		
Getting Credit	48	42	-6		
Protecting Investors	61	62	1		
Paying Taxes	53	53	0		
Trading Across Borders	1	1	0		
Enforcing Contracts	103	91	-12		
Resolving Insolvency	16	25	9		
* Based on a scale of 1 to 189 with 1 being the highest ranking.					



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Economic Freedom

As can be seen below, Czech Republic is above average in its overall rank of 73.7 for Economic Freedom with 100 being best.

	2019	2018	Change in	World
	Rank**	Rank	Rank	Avg.
Property Rights	74.8	73.0	1.8	52.3
Government Integrity	47.6	51.1	-3.5	44.9
Judical Effectiveness	52.1	57.9	-5.8	41.5
Tax Burden	82.6	82.9	-0.3	77.2
Gov't Spending	52.1	48.6	3.5	64.2
Fiscal Health	97.6	96.2	1.4	66.0
Business Freedom	72.4	72.5	-0.1	63.5
Labor Freedom	78.1	76.8	1.3	59.4
Monetary Freedom	81.5	85.2	-3.7	75.1
Trade Freedom	86.0	86.9	-0.9	74.3
*Based on a scale of 1-100 with 100 being the highest	ranking.			

Credit Quality Driver: Taxes Growth:

Czech Republic has grown its taxes of 5.6% per annum in the last fiscal year which is more than the average for its peers. We expect tax revenues will grow approximately 5.6% per annum over the next couple of years and 5.0% per annum for the next couple of years thereafter.

Credit Quality Driver: Total Revenue Growth:

CZECH REPUBLIC's total revenue growth has been more than its peers and we assumed a 6.6% growth in total revenue over the next two years.

Income Statement	Peer Median	Issuer Avg.	Assumption Yr 1&2 Y	
Taxes Growth%	4.6	5.6	5.6	5.0
Social Contributions Growth %	4.2	9.8	10.0	10.0
Grant Revenue Growth %	0.0	NMF		
Other Revenue Growth %	0.0	NMF		
Other Operating Income Growth%	0.0	13.0	11.2	11.2
Total Revenue Growth%	4.5	8.1	6.6	5.9
Compensation of Employees Growth%	3.0	12.7	12.7	12.7
Use of Goods & Services Growth%	4.1	9.7	9.7	9.7
Social Benefits Growth%	2.5	5.5	5.5	5.5
Subsidies Growth%	10.3	10.0		
Other Expenses Growth%	0.0			
Interest Expense	1.5	1.9	1.9	1.9
Currency and Deposits (asset) Growth%	2.2	0.0		
Securities other than Shares LT (asset) Growth%	(2.4)	0.0		
Loans (asset) Growth%	(1.3)	(7.5)	(7.5)	(7.5)
Shares and Other Equity (asset) Growth%	0.0	3.2	3.2	3.2
Insurance Technical Reserves (asset) Growth%	0.0	18.6	18.6	16.8
Financial Derivatives (asset) Growth%	(8.7)	(43.1)	(10.0)	(10.0)
Other Accounts Receivable LT Growth%	0.8	(0.9)	(0.9)	(0.9)
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%	1.1	(3.7)	3.0	3.0
Currency & Deposits (liability) Growth%	1.2	46.9	5.6	5.6
Securities Other than Shares (liability) Growth%	(1.7)	(5.5)	(3.8)	(3.8)
Loans (liability) Growth%	(3.5)	21.6	21.6	19.5
Insurance Technical Reserves (liability) Growth%	0.0	(26.8)	3.0	3.0
Financial Derivatives (liability) Growth%	0.0	(17.0)	(17.0)	(17.0)
Additional ST debt (1st year)(billions CZK)	0.0	0.0		

Operating Surplus/Shortfall

Interest Expense

Net Operating Balance

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EJR's 3 yr. Default Probability: 1.0%

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ANNUAL INCOME STATEMENTS

Below are Czech Republic's annual income statements with the projected years based on the assumptions listed on page 5.

ANNUAL REVENUE AND EXPENSE STATEMENT (BILLIONS CZK) 2015 2016 2017 2018 P2019 P2020 **Taxes** 894 1,018 1,076 1,136 1,199 948 **Social Contributions** 663 703 760 834 917 1,009 **Grant Revenue** Other Revenue Other Operating Income 331 266 267 301 301 301 2,211 **Total Revenue** 1,888 1,917 2,044 2,354 2,510 **Compensation of Employees** 398 419 462 521 587 662 **Use of Goods & Services** 283 291 296 325 357 391 **Social Benefits** 710 729 750 791 835 882 **Subsidies** 105 108 110 121 121 121 Other Expenses 143 143 143 **Grant Expense** 206 209 212 220 220 220 Depreciation 1,965 **Total Expenses excluding interest** 1,840 1,893 2,120 2,262 2,418

49

49

0

24

44

-20

80

38

42

91

40

51

92

41

52

92

42

50

*EJR Sen Rating(Curr/Prj) AA/ AA *EJR CP Rating: A1+

EJR's 3 yr. Default Probability: 1.0%

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ANNUAL BALANCE SHEETS

Below are Czech Republic's balance sheets with the projected years based on the assumptions listed on page 5.

		AN	NUAL BALA	NCE SHEET	ΤS	
Base Case		(BII	LLIONS CZK	.)		
ASSETS	2015	2016	2017	2018	P2019	P2020
Currency and Deposits (asset)	403	433	549	578	578	578
Securities other than Shares LT (asset)	15	14	14	14	14	14
Loans (asset)	119	110	90	83	77	71
Shares and Other Equity (asset)	525	563	546	563	581	600
Insurance Technical Reserves (asset)	3	3	3	4	5	6
Financial Derivatives (asset)	1	2	1	1	1	1
Other Accounts Receivable LT Monetary Gold and SDR's	396	321	340	337	335	332
Other Assets Additional Assets Total Financial Assets	<u>0</u> 1,462	<u>0</u> 1,446	1,544	1,581	1,591	1,602
LIABILITIES Other Accounts Payable	308	301	333	321	331	341
Currency & Deposits (liability)	5	8	6	9	9	9
Securities Other than Shares (liability)	1,882	1,802	1,724	1,630	1,568	1,508
Loans (liability)	184	154	141	171	120	70
Insurance Technical Reserves (liability)	11	8	7	5	5	5
Financial Derivatives (liability) Other Liabilities	2	1	0	0	0	0
Liabilities	2,392	2,275	2,212	2,137	2,095	2,056
Net Financial Worth Total Liabilities & Equity	<u>-931</u> 1,462	<u>-829</u> 1,446	<u>-668</u> 1,544	<u>-556</u> 1,581	<u>-504</u> 1,591	<u>-454</u> 1,602

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

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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 "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.



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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 CZECH REPUBLIC with the ticker of 1040Z CP 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 17q-7:

We are using the methodology version #13 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, governmental filings 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)(l) 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.



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*EJR Sen Rating(Curr/Prj) AA/ AA
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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%	5.6	9.6	1.6	AA	AA+	AA
Social Contributions Growth %	10.0	13.0	7.0	AA	AA+	AA
Other Revenue Growth %		3.0	(3.0)	AA	AA	AA
Total Revenue Growth%	6.6	8.6	4.6	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			
Sdovamanian NG Senior Rating Analyst	November 26, 2019			
Reviewer Signature:	Today's Date			
Steve Zhang	November 26, 2019			
Steve Zhang Senior Rating Analyst				