

## JCR's Financial Indicators by Rating Range 2017

JCR calculated the average financial indicators for each rating category, using financial data of the corporations to which JCR assigns ratings (including 'p' ratings and ratings under Credit Monitor), as a part of objective validation of the adequacy of JCR's ratings. This report is the updated 2017 version of the last "Financial Indicators by Rating Range 2016" released on November 28, 2016. The ratings are determined not only by quantitative but also qualitative assessment, and the consistency in the relationship between the grades of JCR's ratings and the financial indicators has been reaffirmed by these statistical tests, as should be for the base of credit rating. JCR calculates the level of financials as herewith presented for the use to check individual ratings. Since JCR sees other financial indicators, qualitative assessment and prospects for future developments as well in the actual ratings, they do not necessarily match the ratings that are herewith arithmetically assigned, even though the rated corporations may satisfy the level of financial averages given in this report. Nonetheless, JCR releases this report as a part of its efforts to improve its rating transparency.

### Time Period for Data Collection

Two time periods are adopted for data collection: "the most recent FY" (from April 2016 to March 2017) and "the most recent 5 FYs" (from April 2012 to March 2017). (The previous two time periods were from April 2015 to March 2016 for the most recent FY and from April 2011 to March 2016 for the most recent 5 FYs.)

### Data Used

Data for Japanese industrial corporations (excluding financial institutions, electric power and gas companies, air transport, agriculture and forestry, fishery, and mining industries with ratings of BB range and above) subject to JCR's ratings were used. JCR related the financial indicators to the JCR's ratings that were assigned when 5 months have passed since the end of the fiscal year (for example, FY ended March 2017 referenced to JCR's rating as of August 31, 2017). As a result, the number of corporations subject to data collection from April 2012 to March 2017 totaled 960 for manufacturing industry (192 for the most recent FY) and totaled 831 for non-manufacturing industry (161 for the most recent FY).

(Financial Technology Division)

**Table 1: Average Values of Financial Indicators by Rating Range**

		Rating	Manufacturing				Non-Manufacturing			
			Most Recent 5 Fiscal Years		Most Recent FY		Most Recent 5 Fiscal Years		Most Recent FY	
			till FY2016	till FY2015	FY2016	FY2015	till FY2016	till FY2015	FY2016	FY2015
Number of Corporations		AAA	0	0	0	0	22	16	5	4
		AA Range	128	127	27	25	83	86	16	16
		A Range	517	517	105	105	401	378	86	83
		BBB Range	301	309	57	56	302	326	52	54
		BB Range	14	13	3	5	23	29	2	3
Profitability	Operating Income Margin (%)	AAA	-	-	-	-	21.41	20.19	21.98	19.82
		AA Range	9.68	8.99	11.50	10.29	9.64	9.35	10.76	10.43
		A Range	6.38	6.06	7.18	6.89	7.38	7.47	7.49	7.76
		BBB Range	4.54	4.26	5.55	4.74	6.38	6.27	6.24	6.90
		BB Range	3.21	2.96	5.58	3.11	12.88	12.59	14.98	12.26
	Net Income/Total Capital Employed Ratio (%)	AAA	-	-	-	-	4.73	4.50	5.40	5.20
		AA Range	4.29	3.86	5.34	4.47	3.48	3.28	3.70	3.82
		A Range	3.38	3.01	3.99	3.32	2.93	2.89	3.26	3.00
		BBB Range	2.33	2.02	3.33	1.98	2.43	2.23	2.63	2.78
		BB Range	-1.29	-1.41	1.01	-3.48	1.85	1.83	1.31	1.13
	Business Income/Total Capital Employed Ratio (%)	AAA	-	-	-	-	8.38	8.51	8.71	8.74
		AA Range	7.71	7.35	8.91	8.36	6.30	6.15	6.56	6.79
		A Range	5.84	5.62	6.39	6.27	5.21	5.24	5.56	5.37
		BBB Range	4.45	4.24	5.28	4.43	4.62	4.61	4.74	4.84
		BB Range	3.02	2.86	5.03	2.76	4.92	5.20	2.99	3.68
Debt Service Capacity	Interest-bearing Debt/EBITDA Ratio (year)	AAA	-	-	-	-	2.27	1.87	2.19	1.62
		AA Range	1.84	1.87	1.78	1.83	3.50	3.53	3.50	3.12
		A Range	2.87	2.97	2.28	2.67	4.55	4.71	4.05	4.20
		BBB Range	3.66	3.86	3.06	3.22	5.63	5.78	6.85	4.98
		BB Range	3.97	3.99	4.38	3.23	8.82	8.75	13.75	10.25
	Net Interest-bearing Debt/EBITDA Ratio (year)	AAA	-	-	-	-	2.11	1.72	1.97	1.42
		AA Range	1.25	1.26	1.26	1.32	2.76	2.76	2.78	2.42
		A Range	1.99	2.09	1.41	1.79	3.45	3.61	3.05	3.24
		BBB Range	2.17	2.34	1.64	1.79	4.19	4.43	4.71	3.76
		BB Range	2.44	2.36	2.65	2.07	6.83	7.03	10.00	7.42
	Interest-bearing Debt/Operating Cash Flow Ratio (year)	AAA	-	-	-	-	3.00	2.48	2.86	2.06
		AA Range	2.55	2.73	2.71	2.27	6.05	6.15	4.83	8.04
		A Range	4.16	4.68	3.28	3.51	6.98	7.18	6.96	7.48
		BBB Range	6.03	6.55	3.93	5.01	8.06	9.10	8.75	8.27
		BB Range	9.26	11.05	7.03	9.92	12.56	10.64	24.56	7.38
Net Interest-bearing Debt/Operating Cash Flow Ratio (year)	AAA	-	-	-	-	2.79	2.27	2.60	1.81	
	AA Range	1.72	1.84	1.94	1.63	4.94	4.95	3.83	6.75	
	A Range	2.86	3.23	2.13	2.10	5.57	5.86	5.11	5.61	
	BBB Range	3.72	4.08	2.23	2.84	6.33	7.24	7.00	6.30	
	BB Range	5.84	6.59	4.77	6.15	9.96	8.82	18.01	7.01	
Financial Structure	Equity Ratio (%)	AAA	-	-	-	-	44.57	45.63	45.79	47.70
		AA Range	54.85	54.18	55.49	54.42	41.73	41.27	43.02	44.13
		A Range	47.62	46.76	49.35	48.34	39.05	38.59	40.18	39.08
		BBB Range	43.48	42.64	44.98	44.73	36.50	35.52	38.98	37.95
		BB Range	32.21	32.92	24.96	25.58	39.55	38.48	29.92	31.20
	Debt/Equity Ratio (Interest-bearing Debt) (Times)	AAA	-	-	-	-	0.80	0.72	0.74	0.56
		AA Range	0.44	0.46	0.42	0.49	0.80	0.82	0.79	0.69
		A Range	0.62	0.67	0.55	0.59	0.96	1.01	0.89	0.99
		BBB Range	0.87	0.92	0.76	0.85	1.28	1.39	1.07	1.17
		BB Range	1.24	1.10	1.97	1.47	1.56	1.64	2.00	1.75
	Debt/Equity Ratio (Net Interest-bearing Debt) (Times)	AAA	-	-	-	-	0.75	0.66	0.67	0.48
		AA Range	0.30	0.31	0.28	0.34	0.64	0.65	0.62	0.55
		A Range	0.44	0.49	0.36	0.40	0.75	0.80	0.68	0.78
		BBB Range	0.59	0.63	0.48	0.57	1.01	1.11	0.82	0.91
		BB Range	0.78	0.69	1.07	1.09	1.21	1.33	1.45	1.42
Earned Surplus/Equity Capital Ratio (%)	AAA	-	-	-	-	81.67	85.06	81.53	80.87	
	AA Range	74.04	75.24	77.09	74.79	64.62	65.27	66.49	64.02	
	A Range	61.47	60.75	64.87	62.33	59.65	58.80	63.85	57.11	
	BBB Range	46.76	45.91	49.68	48.34	55.44	54.40	58.89	57.37	
	BB Range	-13.46	-0.59	-45.99	-14.34	59.05	55.45	70.71	62.32	
Size	Equity Capital (Y100 mn)	AAA	-	-	-	-	31,624	34,618	41,032	47,236
		AA Range	10,609	9,591	12,094	12,252	8,435	7,795	9,204	8,601
		A Range	2,961	2,817	2,959	2,800	2,583	2,416	2,963	2,715
		BBB Range	695	680	713	638	756	715	771	788
		BB Range	614	363	1,525	483	218	219	186	176
	EBITDA (Y100 mn)	AAA	-	-	-	-	10,038	11,286	12,565	15,565
		AA Range	2,564	2,322	2,976	3,273	1,906	1,767	2,149	1,967
		A Range	724	704	733	719	717	677	817	817
		BBB Range	175	172	182	141	171	166	160	176
		BB Range	212	88	702	130	39	42	28	32

Table 2: Calculating Formulas for Financial Indicators

Financial Indicator	Formula
Operating Income Margin	Operating Income/Net Sales x 100
Net Income/Total Capital Employed Ratio	Y (Net Income)/A (Total Capital Employed) x 100
Business Income/Total Capital Employed Ratio	Y (Operating Income + Total Amount of Interest and Dividend Income)/A (Total Capital Employed) x 100
Interest-bearing Debt/EBITDA Ratio	A (Interest-bearing Debt)/EBITDA
Net Interest-bearing Debt/EBITDA Ratio	A (Net Interest-bearing Debt)/EBITDA
Interest-bearing Debt/Operating Cash Flow Ratio	A (Interest-bearing Debt)/Operating Cash Flow
Net Interest-bearing Debt/Operating Cash Flow Ratio	A (Net Interest-bearing Debt)/Operating Cash Flow
Equity Ratio	Equity Capital/(Total Assets - New Stock Subscription) x 100
Debt/Equity Ratio (Interest-bearing Debt)	Interest-bearing debt/Equity Capital
Debt/Equity Ratio (Net Interest-bearing Debt)	Net Interest-bearing debt/Equity Capital
Eamed Surplus/Equity Capital Ratio	Eamed Surplus/Equity Capital x 100
Equity Capital	(Net Assets - Share Warrants - Minority Interests)/100
EBITDA	(Operating Income + Total Amount of Interest and Dividend Income + Depreciation Expense)/100
Total Capital Employed	Total Assets - New Stock Subscription - Treasury Stock + Notes Receivable Discounted + Notes Receivable Endorsed
Net Interest-bearing Debt	Larger of (Interest-bearing Debt – Cash and Deposits) or Zero

Notes:

- \*1: Y...: In cases where the number of months of a fiscal year is less than 1 year, indicators are annualized.
- \*2: A...: Average of the beginning value and ending value.
- \*3: In the calculation of the averages, excluded are outliers in the ratios for Interest-bearing Debt / Operating Cash Flow, Net Interest-bearing Debt / Operating Cash Flow, Interest-bearing Debt / EBITDA, and Net Interest-bearing Debt / EBITDA.
- \*4: Excluded also are below -3000% figures for Eamed Surplus / Equity Capital Ratio in the average calculation.

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