

**Credit Opinion**

10 April 2018

**GCL Intelligent Energy Co., Ltd.**

Hong Kong

Category: Corporate Rating  
 Rating Type: Solicited Rating  
 Industry: Electric Utilities  
 Long-term Credit Rating: BB<sub>g</sub>+  
 Rating Outlook: Stable

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**Key Indicators**

<b>GCL Intelligent Energy Co., Ltd.</b> <sup>[1]</sup>	<b>2017Q3</b> <sup>[2]</sup>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Total Assets (RMB billion)	15.4	13.8	11.9	12.2
Total Assets (USD billion) <sup>[3]</sup>	2.3	2.0	1.8	2.0
Net Assets (RMB billion)	5.0	5.3	4.5	4.7
Net Assets (USD billion) <sup>[3]</sup>	0.8	0.8	0.7	0.8
Total Revenue (RMB billion)	5.6	7.2	8.2	8.3
Total Revenue (USD billion) <sup>[3]</sup>	0.8	1.0	1.3	1.4
Net Profit (RMB billion)	0.4	0.6	0.8	0.7
Net Profit (USD billion) <sup>[3]</sup>	0.1	0.1	0.1	0.1
EBITDA Margin (%)	20.7	23.9	20.8	18.6
Return on Asset (%)	-	9.5	10.7	9.3
Total Debt / Total Capital (%)	64.2	56.7	56.4	54.2
Total Debt / EBITDA (x)	-	4.0	3.4	3.6
EBITDA / Interest (x)	4.4	5.7	5.3	4.5
RCF / Capex (x)	0.3	0.5	0.6	0.2

[1] Consolidated financial statements in accordance with PRC GAAP audited by Da Hua Certified Public Accountants (Special General Partnership).

[2] 2017Q3 figures denote for the nine months ended 30 September 2017 from audited results.

[3] Exchange rates for 2014 (1 USD = 6.1190 CNY), 2015 (1 USD = 6.4936 CNY), 2016 (1 USD = 6.9370 CNY) and 2017Q3 (1 USD = 6.6369 CNY) announced by PBOC

Source: Company data, CCXAP research

## Rating Drivers

- Key electricity investments supported by the governmental policies
- Strong competitive strength in cogeneration of electricity and heat
- Growing operating scale and improving regional diversification
- Steady revenue growth while profitability in high correlation to fuel prices
- Heightened debt level with moderate liquidity position

## Rating Rationale

The BB<sub>g</sub>+ rating of GCL Intelligent Energy Co., Ltd (“GCL Intelligent Energy” or the “Company”) is underpinned by the Company’s (1) key business development supported by the government preferential policies; (2) strong competitive strength in its cogeneration plants; and (3) growing operating scale and improving regional diversification. However, the rating is also constrained by the Company’s (1) profitability in high correlation to its fuel costs; (2) fast business expansion in new energy with exposure to business and operational risk; and (3) heightened debt level with reliance on short-term debt financing.

## Rating Outlook

The stable outlook on GCL Intelligent Energy’s rating reflects that the Company will adhere to stable business performance in its core business of gas-fired cogeneration which is in consistent with its strategic positioning.

### What could upgrade the rating?

The rating could be upgraded if (1) the business environment further improves as supported by preferential government policies; (2) the Company strengthens business profile in terms of scale and diversification; (3) the Company’s operating profitability continues to improve; and (4) the Company lowers its debt leverage and improves its liquidity position.

### What could downgrade the rating?

The rating could be downgraded if (1) the business environment is adversely changed and the current preferential policies are no longer effective; (2) the Company’s revenue declines and profitability deteriorates significantly; (3) the Company’s liquidity buffer squeezes; or (4) significant increase in capital expenditure which erodes the Company’s credit metrics.

## Corporate Profile

Incorporated in 2009, GCL Intelligent Energy is a fossil fuel cogeneration and new energy operator primarily in Jiangsu, China. The Company is one of the main electricity business platforms of its parent company, namely Golden Concord Group Limited (“GCL Group”). The Company had total installed capacity of 2,103.5 MW and equity installed capacity of 1,463.9 MW as of 30 September 2017, with 22 operating projects across 4 provinces in China. Mr. Zhu Gongshan is the founder and ultimate owner of the Company.

As of 30 September 2017, the Company reported total assets of RMB 15.4 billion and net assets of RMB 5.0 billion. In the first nine months ended 30 September 2017, the Company recorded total revenue of RMB 5.6 billion and net profit of RMB 0.36 billion.

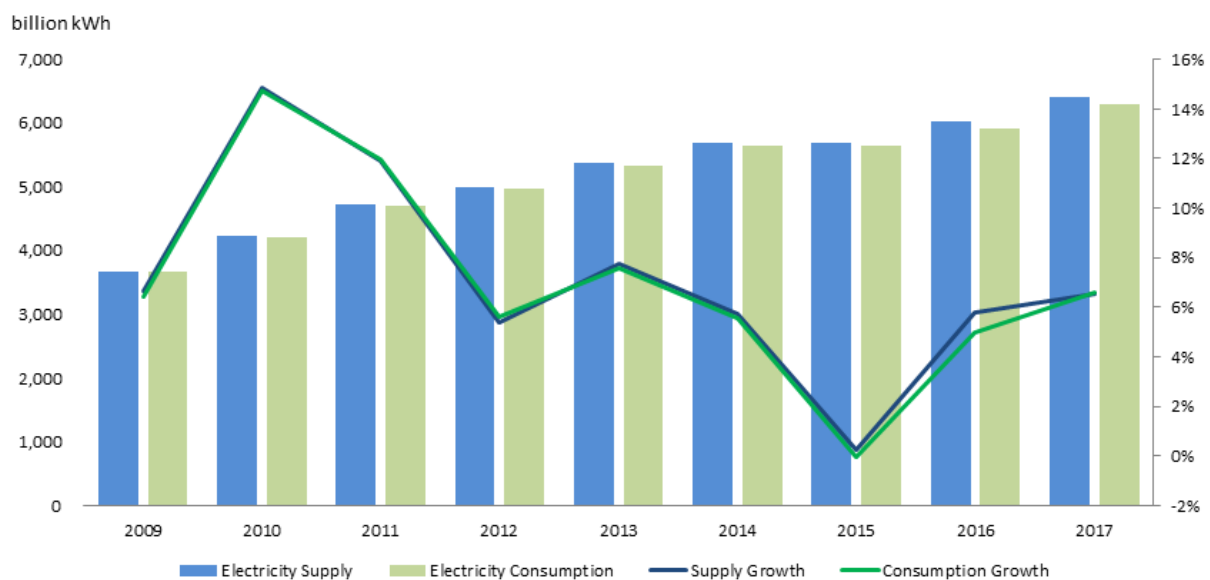
## Detailed Rating Considerations

### 1. Slowdown in electricity consumption with change of energy structure in China

The electricity industry in China has experienced a rapid growth in past years thanks to the strong electricity demand from speedy economic growth. The CAGR of total electricity consumption of was 13.6% in the year of 2000 to 2007. However, the growth has been slowed down due to the recent China's economic reform and encouragement of environmental protection. The total electricity consumption reported 6,307.7 billion kWh in 2017, increased by 6.6% YoY.

The secondary industry accounted for the largest proportion of electricity consumption, but such proportion has been decreasing because of the growing development in the tertiary industry and the accelerating urbanization. Electricity consumption by the secondary industry accounted for 70.4% of total electricity consumption in 2017 in comparison to 75.4% in 2008. Electricity consumption by the tertiary industry and residential users has gradually increased, which accounted for 27.8% of total electricity consumption in 2017 in comparison to 22.0% in 2008. We believe the trend will continue given the capacity cutting in energy intensive industries in China.

#### Exhibit 1. Volume and percentage growth in electricity supply and consumption



Source: China Electricity Council, CCXAP research

The energy structure of China has gradually switched from traditionally coal-fired to more environmental-friendly power as supported by the government policies. In 2017, the percentage of non-fossil fuel power generation accounted for 37.8% of total installed capacity in China, increasing from 24.0% in 2008. According to the Thirteenth Five-Year-Plan ("13th FYP") published by National Development and Reform Commission (NDRC), the installed capacity of fossil fuel power generation is targeted to decrease to 61% by 2020. Especially, the installed capacity of coal-fired fuel power generation is expected to decrease to 55.0% by 2020.

**Exhibit 2. Key targets by fuel types in 12th FYP & 13th FYP**

Targeted installed capacity (GW)	12th FYP	13th FYP	Annual growth
Coal-fired	900	< 1,100	4.1%
Gas-fired	66	110	10.8%
Hydroelectric Power	297	340	2.8%
Pumped Storage Hydroelectric Power	23	40	11.7%
Wind Power	131	210	9.9%
Solar Power	42	110	21.2%
Nuclear Power	27	58	16.5%

Source: National Development and Reform Commission, CCXAP research

With moderate growth in electricity demand and change of energy structure in China, we believe that corporations with diversified generation profile in environmental-friendly energy and located in strong and various economic regions will be more resilient to the change of business environment.

## 2. Focus on cogeneration of electricity and heat and other renewable energies as supported by preferential governmental policies

The Company has developed its electricity and heat business focusing on thermal-typed cogeneration. As of 30 September 2017, the Company has controlled 17 cogeneration of electricity and heat projects with equity installed capacity of 1,318.4 MW in aggregate. The equity installed capacity of gas-fired cogeneration recorded 912.2 MW, which accounted for 62.3% of the Company's total equity installed capacity, while coal-fired cogeneration was 406.2 MW or 27.8%. Apart from cogeneration plants, the Company has undertaken 2 waste-to-energy projects, 2 biomass power generation projects and 1 wind power generation projects with equity installed capacity of 145.5 MW in aggregate.

**Exhibit 3. GCL Intelligent Energy's power plants by fuel types as of 30 September 2017**

Type of Plant(s)	No. of Plant(s)	Total Installed Capacity (MW)	% of Total Installed Capacity (%)	Equity Installed Capacity (MW)	% of Equity Installed Capacity (%)
Gas-fired Cogeneration	4	1,472.0	70.0	912.2	62.3
Coal-fired Cogeneration	13	486.0	23.1	406.2	27.8
Biomass Power Generation	2	60.0	2.9	60.0	4.1
Wind Power Generation	1	49.5	2.4	49.5	3.4
Waste-to-Energy	2	36.0	1.7	36.0	2.5
<b>Total</b>	<b>22</b>	<b>2,103.5</b>	<b>100.0</b>	<b>1,463.9</b>	<b>100.0</b>

Source: Company data, CCXAP research

GCL Intelligent Energy's key electricity investments were benefited from the government policies in terms of higher on-grid tariff, on-grid priority and governmental subsidies. According to the Notice of Measures for the Administration of Cogeneration, electricity output from cogeneration plants has a priority to connect with national electricity grid based on its designed volume of heating supply, which helps the Company maintain a higher capacity utilization of its plants. In addition, NDRC has set a uniform benchmark of on-grid tariff of RMB 0.75/kWh for biomass power generation since 2015. The preferential industry policies have provided the Company with more favorable and supportive business environment.

**Exhibit 4. GCL Intelligent Energy's granted governmental subsidies in 2014~2017Q3**

(RMB million)	2017Q3	2016	2015	2014
Tax benefit	37.4	58.9	49.9	40.1
Industry development	-	24.0	-	-
Government compensation	-	-	214.2	-
Others	28.3	37.0	40.7	39.6
<b>Total subsidies</b>	<b>65.8</b>	<b>119.9</b>	<b>304.7</b>	<b>79.7</b>

Source: Company data, CCXAP research

Moreover, the Company has received a notable amount of subsidies in past years including tax benefit, industry development, government compensation and others, which were RMB 119.9 million in 2016, RMB 304.7 million in 2015 and RMB 79.7 million in 2014.

### 3. Strong competitive strength in cogeneration plants as enhanced by high entry barrier in the service area

GCL Intelligent Energy has strong competitive strength in cogeneration business given its rich project experience and effective project management. The Company has two products generated from its cogeneration plants that consisted of steam and electricity, which helped increase production flexibility in face of market fluctuations. In 2016, the Company had total electricity sales of 10.7 billion kWh and total steam sales of 11.4 million tons. The Company reported asset utilization of 5,159 hours, which outperformed the Jiangsu's average fossil fuel utilization of 5,093 hours.

The cogeneration of electricity and heat benefited from a de facto monopoly with high entry barrier in the service region. According to the regulation, once a cogeneration plant has been established in the region, it is not allowed to build another power plant within a radius of 3 km, which helps create industry excludability and protect the core competitiveness of the Company.

**Exhibit 5. GCL Intelligent Energy's key operating data in 2014~2017Q3**

	2017Q3	2016	2015	2014
Total electricity generated (billion kWh)	8.25	10.74	8.17	5.55
Total electricity on-grid sales (billion kWh)	7.91	10.47	8.20	6.60
Total steam generated (million tons)	9.71	12.62	11.19	9.42
Total steam sales (million tons)	8.93	11.40	10.27	10.22
Utilization hours	3,924	5,159	5,372	4,458
On-grid electricity tariffs (RMB/kWh)	0.61	0.58	0.63	0.59
Steam selling price (RMB/ton)	200.62	178.42	180.80	191.65

Source: Company data, CCXAP research

GCL Intelligent Energy has less collection risk in its long-term business cooperation with notable clients. The electricity revenue of the Company mainly comes from China Southern Power Grid and Jiangsu Electric Power Company, which have shown a timely payment record in the past. The steaming supply revenue mainly comes from the nearby reputable industrial clients in the service regions with sufficient diversification. The cost recovery is also adequate. The electricity tariffs and steaming prices, as decided by the local governments, fairly cover the production cost with reasonable return. In addition, the tariffs and prices are partially reflective to the change of fuel prices based on adjustment mechanism but with some time delays.

#### 4. Growing operating scale and improving regional diversification

GCL Intelligent Energy has a regional business operation mainly in Jiangsu and gradually expanded to Zhejiang, Guangdong and Inner Mongolia. The Company possessed 700km heating supply network, covering approximately 1,300 numbers of industrial clients. In terms of geographical breakdown, the Company's equity installed capacity in Jiangsu, Zhejiang, Guangdong and Inner Mongolia reported 959.1 MW, 360.6 MW, 94.7 MW and 49.5 MW, which accounted for 65.5%, 24.6%, 6.5% and 3.4% of total equity installed capacity respectively.

**Exhibit 6. GCL Intelligent Energy's power plants by regions as of 30 September 2017**

Region	No. of Plant(s)	Total Installed Capacity (MW)	% of Total Installed Capacity (%)	Equity Installed Capacity (MW)	% of Equity Installed Capacity (%)
Jiangsu	16	1,539.0	73.2	959.1	65.5
Guangdong	1	392.0	18.6	360.6	24.6
Zhejiang	4	123.0	5.8	94.7	6.5
Inner Mongolia	1	49.5	2.4	49.5	3.4
<b>Total</b>	<b>22</b>	<b>2,103.5</b>	<b>100.0</b>	<b>1,463.9</b>	<b>100.0</b>

Source: Company data, CCXAP research

The track record of stability and foreseeability regulatory environment provided GCL Intelligent Energy with stable cash flow and steady operating performance in the past. Moreover, the electricity business of the Company has a strong fundamental support in the service regions. The provinces of Jiangsu, Zhejiang and Guangdong are economically important provinces in China in terms of GDP and GDP per capita, which have strong industrial development and steady growth of electricity demand.

Under the development plan of GCL Intelligent Energy, the Company intended to accelerate its expansion in operating scale and improve its regional diversification. As of 30 September 2017, the Company had 10 projects under construction with total installed capacity of 1,322.8 MW. The projects included 4 cogeneration plants, 1 energy storage power station, 1 wind power generation project, 1 biomass power generation plant, 2 waste-to-energy plants and 1 overseas geothermal plant. Apart from that, the Company also planned to establish 7 cogeneration projects with total installed capacity of 849.9 MW and 5 wind power generation projects with total installed capacity of 374.5 MW across 11 provinces in mainland China as well as 1 overseas hydroelectric power generation project.

We expected that the operating scale of the Company will substantially increase in 2018 because there are 4 large cogeneration plants with total installed capacity of 1,228.3 MW that will be in operation. However, we believe that the expansion in operating scale would exert high pressure on the Company's capital expenditure. As of 30 September 2017, the aggregate investment amount of 4 major cogeneration plants under construction was estimated to be approximately RMB 4.1 billion. The projects are expected to be mainly financed by debt and IPO proceeds. Moreover, by entering into other new energy businesses, the Company may be exposed to more challenging business environment including intensive competitions and regulatory uncertainties.

#### 5. Steady revenue growth, but profitability metrics in high correlation to fuel prices

The Company registered a steady growth in the sales of electricity and steam business while a significant decrease in the revenue from coal trading. The Company has discontinued commodity

trading business to avoid internal competition within the group. The aggregate revenue from sales of electricity and steam recorded RMB 6,941.9 million in 2016, RMB 6,055.0 million in 2015 and RMB 5,143.1 million in 2014, with a CAGR of 16.2%.

The Company's cogeneration of electricity and steam was mainly from its gas-fired and coal-fired cogeneration plants, of which gas-fired accounted for 56.0% and coal-fired accounted for 37.5% of aggregate revenue in 2016, respectively. The Company's profitability performed relatively strong because of the relatively higher profit margin from steaming business and the consistently low fuel prices in past years. The Company's gross profit margin was 25.0% in 2016, 22.1% in 2015 and 18.0% in 2014. The ROA was 9.5% in 2016, RMB 10.7% in 2015 and 9.3% in 2014. The Company's gross profit margin recorded 20.1% in the first nine months ended 30 September 2017.

**Exhibit 7. Revenue breakdown and gross profit margin of main operating businesses in 2014~2017Q3**

	2017Q3		2016		2015		2014	
	Revenue (RMB mn)	GP (%)	Revenue (RMB mn)	GP (%)	Revenue (RMB mn)	GP (%)	Revenue (RMB mn)	GP (%)
<b>Electricity</b>								
Coal-fired	760.8	4.0	1,133.6	24.4	1,469.0	34.6	1,380.5	25.2
Gas-fired	2,839.8	18.2	3,628.3	20.8	2,561.7	15.7	1,675.0	15.5
Biomass	147.0	13.2	205.2	15.0	202.8	14.5	180.7	18.4
Wind power	29.7	48.1	40.8	44.5	39.3	40.5	37.1	43.7
Waste-to-energy	100.9	56.4	131.7	50.6	125.5	49.4	118.9	44.6
Others	2.3	22.3	1.7	11.5	0.3	-5.5	-	-
<b>Sub-total</b>	<b>3,880.5</b>	<b>16.4</b>	<b>5,141.3</b>	<b>22.3</b>	<b>4,398.6</b>	<b>23.1</b>	<b>3,392.2</b>	<b>21.0</b>
<b>Steam</b>								
Coal-fired	1,303.5	26.6	1,470.8	32.2	1,367.9	36.9	1,459.0	32.6
Gas-fired	220.7	1.7	257.9	11.7	217.5	23.8	216.0	26.4
Biomass	55.5	26.4	71.9	23.9	70.9	25.4	75.9	26.7
<b>Sub-total</b>	<b>1,579.8</b>	<b>23.1</b>	<b>1,800.6</b>	<b>28.9</b>	<b>1,656.3</b>	<b>34.6</b>	<b>1,750.9</b>	<b>31.6</b>
Coal Trading	5.4	5.0	99.7	0.0	1,937.3	1.8	2,938.6	1.2
Others	96.4	89.8	87.6	87.7	106.9	98.3	107.9	85.5
<b>Total</b>	<b>5,562.1</b>	<b>20.1</b>	<b>7,129.2</b>	<b>25.0</b>	<b>8,099.2</b>	<b>22.1</b>	<b>8,189.6</b>	<b>18.0</b>

Source: Company data, CCXAP research

The profitability of thermal power generation is highly correlated with fuel prices, leading to the Company's exposure to the fluctuations of fuel costs. The fuel cost is a vital component of its operating cost, which accounted for 79.4% of total cost in 2016. The fuel cost mainly consisted of the cost of coal and liquefied natural gas (LNG). The LNG price is relatively stable in the past. However, the coal price has increased sharply since June 2016, which may erode the profitability of the Company in short run, resulting from the delay of tariff adjustment in the regulated tariff mechanism. Thus, we will continue to monitor the change of fuel prices and the potential impact on the Company's profitability and credit metrics.



## 6. Moderate debt leverage with broadened financing channels

The Company has good financing channels with reliance on debt financing, including local bank loans, short-term bonds and medium-term notes. In 2018, the Company is in the progress of IPO listing, if succeeds, which will help diversify funding base and decrease debt leverage.

The Company recorded heightened debt leverage driven by the increase in outstanding debt and the decrease in total equity. As of 30 September 2017, GCL Intelligent Energy reported total debt of RMB 8.9 billion, increased by RMB 2.0 billion comparing with that at end-2016. The average financing cost was 5.1%. The decrease in total equity was mainly due to the recent shareholders restructuring. The Company has introduced a number of fundamental investors to facilitate IPO process. Before the introduction of new shareholders, the Company has distributed a one-time dividend of RMB 536.0 million from its retained earnings to original shareholders. Nevertheless, the debt leverage of the Company is at manageable level. The capitalization ratio reported 56.7% in 2016, 56.4% in 2015 and 54.2% in 2014. As of 30 September 2017, the capitalization ratio reported 64.2%.

The Company has modest liquidity position with reliance on short-term debt, while the situation is expected to be improved as the Company gradually switches to long-term debt financing. The ratio of short-term debt to total debt reported 49.3% in 2016, 61.2% in 2015 and 66.8% in 2014. The ratio of cash to short-term debt was 0.6x in 2016, 0.5x in 2015 and 0.4x in 2014. As of 30 September 2017, these two ratios were 42.2% and 0.6x, respectively.

Moreover, there were some penalty charges from the local authorities. In the year of 2014 and 2015, the Company has been fined an aggregated amount of RMB 0.3 million by the local environment protection bureau in violation of related environmental regulation. In addition, the Company's subsidiaries have been fined an aggregated amount of RMB 0.05 million by the taxation department for overdue declaration of tax. We believed such adverse impact on the Company's financial capability was minimal, but we will monitor the Company's management capability in compliance with the local environmental protection ordinances and taxation regulations.



## Appendix. CCXAP's Credit Rating Symbols and their Meaning

China Chengxin (Asia Pacific) Credit Ratings Company Limited uses simple, consistent, and comparable rating symbols expressed in letters to represent the credit worthiness of rated entities and rated debt issues.

### A. Long-Term Credit Ratings

A long-term credit rating refers to a rating for a period of more than 12 months.

Rating Symbol	Definition
<b>AAAg</b>	Capacity to meet commitments on short-term and long-term debts is extremely strong. Business is operated in a virtuous circle. The foreseeable uncertainty on business operations is minimal.
<b>AAg+</b> <b>AAg</b> <b>AAg-</b>	Capacity to meet short-term and long-term financial commitments is very strong. Business is operated in a virtuous circle. Foreseeable uncertainty in business operations is relatively low.
<b>Ag+</b> <b>Ag</b> <b>Ag-</b>	Capacity to meet short-term and long-term commitments is strong. Business is operated in a virtuous circle. Business operation and development may be affected by internal uncertain factors, which may create fluctuations in profitability and solvency of the issuer.
<b>BBBg+</b> <b>BBBg</b> <b>BBBg-</b>	Capacity to meet financial commitment is considered adequate and capacity to meet short-term and long-term commitments is satisfactory. Business is operated in a virtuous circle. Business is affected by internal and external uncertainties. Profitability and solvency may experience significant fluctuation. Principal and interest may not be sufficiently protected by the terms of agreement.
<b>BBg+</b> <b>BBg</b> <b>BBg-</b>	Capacity to meet short-term and long-term financial commitment is relatively weak. Financial commitment towards short-term and long-term debts is below average. Status of business operations and development is not good. Solvency is unstable and subject to sustainable risk.
<b>Bg+</b> <b>Bg</b> <b>Bg-</b>	Financial commitment towards short-term and long-term debts is bad. Business is affected by internal and external uncertain factors. There are difficulties in business operations. Solvency is uncertain and subject to high credit risk.
<b>CCCG</b>	Financial commitment towards short-term and long-term debts is very bad. Business is affected by internal and external uncertain factors. There are difficulties in business operations. Poor solvency with very high credit risk.
<b>CCg</b>	Financial commitment towards short-term and long-term debts is extremely bad. Business operations are poor. There are very limited positive internal and external factors to support business operation and development. Extremely high credit risk is found.
<b>Cg</b>	Financial commitment towards short-term and long-term debts is insolvent. Business falls into a vicious circle. Very limited positive internal and external factors are found to support business operations and development in positive cycle. Extremely high credit risk is seen and is near default.
<b>Dg</b>	Unable to meet financial commitments. Default is confirmed.

### B. Long-term Credit Rating Outlook

A rating outlook is the medium- and long-term trend of the credit rating of a rated entity. In formulating a rating outlook, CCXAP considers the potential change in economic and commercial factors from a medium- and long-term perspective for a period of 12 to 18 months.

<b>Positive</b>	Indicates a rating with an ascending trend
<b>Negative</b>	Indicates a rating with a descending trend
<b>Stable</b>	Indicates the rating is likely to be stable

### C. Short-term Credit Ratings

A short-term credit rating refers to a rating for a period of less than 12 months.

Rating Symbol	Definition
<b>Ag-1</b>	Capacity to meet short-term financial commitments is extremely strong with a high level of safety.
<b>Ag-2</b>	Capacity to meet short-term financial commitments is strong with a high level of safety.
<b>Ag-3</b>	Capacity to meet short-term financial commitments is average but the safety may be easily affected by adverse business, financial, or economic conditions.
<b>Bg</b>	Capacity to meet short-term financial commitments is weak with a high probability of default.
<b>Cg</b>	Capacity to meet short-term financial commitments is very weak and the probability of default is very high.
<b>Dg</b>	Unable to meet financial commitments. Default is confirmed.

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