Key Takeaways

— After analyzing the data behind defaults, we have found that in recent years trading, engineering and construction, conglomerates, metals and mining see more defaults than other sectors. At the opposite end, sectors with low default frequency include LGFVs, pharmaceuticals, unregulated power and gas, and media and entertainment.

— We have carried out a desktop analysis of five companies that defaulted, or faced significant debt repayment pressure, highlighting the red flags in the run up to default and charting the changes in business risk and financial risk profiles, as well as the major turning points that affected the company’s indicative credit quality.

— We believe that close attention should be paid to how the risk differentials that exist between industries affect companies’ business risk profiles. We should be aware of different risk characteristics of certain industries and avoid overestimating some companies’ status as leaders in niche markets.

— At the same time, to assess the risk of default, we believe that financial risk should be evaluated with a forward-looking perspective, while greater attention needs to be paid towards the potential impact of a parent company’s credit quality on that of its subsidiaries, particularly any negative influences.

2014 was a turning point for China’s public bonds market, with the year marking the first recorded corporate default. Since then, defaults have steadily become more frequent. By the end of 2019, accumulated bond defaults reached around 330 billion RMB, involving 152 different companies. Against this backdrop, investors have grown increasingly vigilant towards the risk of default.

In this report, we provide a basic overview of corporate bond defaults over the past few years. Using S&P Global (China) Ratings’ methodologies, we have carried out a desktop analysis of five firms that defaulted or faced significant debt repayment pressure. These case studies highlight the events and changes in business risk and financial risk that can typically be seen in the buildup to a default, and show how such changes combine to affect the company’s indicative issuer credit quality.

We have also summarized some of the major red flags that appear before a corporate bond default, and provided insight into how S&P Global (China) Ratings assesses the risk of default.

To clarify, this report only constitutes a desktop analysis. Please refer to “About This Article” for more information.
The Telltale Signs of a Bond Default
March 23, 2020

About This Article

S&P Ratings (China) Co., Ltd. (S&P China) has conducted a desktop analysis of a selection of corporate entities that defaulted or came under significant debt repayment pressure. We have chosen these entities based on their asset sizes, representativeness of most regions and availability of public information. The analysis contained herein has been performed using S&P China Methodologies. S&P China Methodologies and analytical approaches are intended specifically for use in China only, and are distinct from those used by S&P Global Ratings. An S&P China opinion must not be equated with or represented as an opinion by S&P Global Ratings, or relied upon as an S&P Global Ratings opinion.

This desktop analysis has been conducted using publicly available information only, and is based on S&P China's methodologies for corporates. The analysis involves a desktop application of our methodologies to public information to arrive at a potential view of credit quality across sectors. It is important to note that the opinions expressed in this report are based on public information and are not based on any interactive rating exercise with any particular entity. The opinions expressed herein are not and should not be represented as a credit rating, and should not be taken as an indication of a final credit rating on any particular entity, but are initial insights of potential credit quality based on the analysis conducted. This desktop analysis does not involve any surveillance. The opinions expressed herein are not and should not be viewed as recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security.

We have conducted this desktop analysis on individual corporates and present the results contained herein at an aggregate group level. The different sections of this research show the statistics and performance of different groups of entities and the market more broadly against the metrics we generally consider most relevant under our methodologies.

Given the desktop nature of this analysis, and that we have not conducted an interactive review with any particular entity, we may have made certain assumptions in lieu of confirmed information and where relevant we may also have attempted to consider any possibility of parent, group, government or other forms of potential support, to inform our view of potential credit quality. S&P China is not responsible for any losses caused by reliance on the content of this desktop analysis.

Defaults in China's Domestic Bond Market

In the wake of rapid development and gradual structural improvements, China's public bond market no longer follows the “rigid repayment” pattern seen in its infancy. Today, defaults occur at both a higher frequency and volume than ever before.

March 2014 saw the domestic market’s first default. For the following three years, the market saw annual defaults of around 30 billion RMB. However, from 2018 onwards, the frequency and volume of defaults gradually increased. According to data from Wind, 2018 saw 125 bond defaults worth approximately 100 billion RMB. That trend continued in 2019, with 178 defaults with an overall value of around 180 billion RMB.
The latest data show 152 companies have defaulted on bonds, with an accumulated value of 330 billion RMB. State-owned enterprises account for 16.5 percent of accumulated defaults, while listed firms account for 22.8 percent.

There are significant gaps between different sectors and industries when it comes to the volume of defaults. Trading, construction and engineering, conglomerates, mining and metals are among the worst-hit sectors, while local government financing vehicles (LGFVs), pharmaceuticals, unregulated power and gas, media and entertainment see relatively fewer defaults.

In recent years, China’s bond defaults have increased both in size and frequency. Up to now, accumulated defaults have reached 330 billion RMB.
Tracking Changes in Indicative Credit Quality: Case Studies

Our desktop analysis covers four defaulting firms — Fuguiniao Co., Ltd. (Fuguiniao); Kaidi Ecological and Environmental Co., Ltd. (Kaidi Eco); Reward Science and Technology Industry Group Co., Ltd. (Reward Science and Tech) and Neoglory Holding Group Co., Ltd. (Neoglory), as well as Kangmei Pharmaceutical Co., Ltd. (Kangmei Pharmaceutical), which came under huge debt repayment pressure and received wide market attention. Our analysis of each firm starts two to three years before the date of default (or major credit event in the case of Kangmei), and highlights changes in the companies' business and financial risk profiles, as well as various events that combined to impact on indicative issuer credit quality.

Chart 3

Kangmei Pharmaceutical’s Indicative Credit Quality Transition

--- June 2016: The [BBB+]* indicative credit quality reflected Kangmei's niche position in the traditional Chinese medicine market, giving it a fair business risk profile. Despite its low debt, the parent company's high leverage levels limited the extent of Kangmei's indicative credit quality.
--- June 2017: Annual surveillance. No material change found.
--- June 2018: Deteriorated to [BBB-]*, reflecting sharply increased leverage in both the company and its parent. Further concerns were raised by the company's balance sheet. High cash holdings and high debt levels raised our concerns on its debt servicing capability.
--- December 2018: Deteriorated to [BBB-]*, reflecting our concerns over the company's management and governance. The CSRC conducted an investigation into potential financial fraud.
--- April 2019: Deteriorated to [CCC+]*, reflecting our concerns over elevated risks surrounding the company’s refinancing. An audit of the company led to a restatement of financial data for FY2018 with significant changes. The company remains under significant pressure to repay debt maturing in the near future.

Note: If we see indicative credit quality falling below B-, we have typically stated it as being in [CCC] category.
Source: S&P Global (China) Ratings.
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* The indicative credit quality distributions expressed in this report are only S&P China’s indicative views of credit quality derived from a desktop analysis based on public information. Please refer to 'About This Article' for more information.

*If we see indicative credit quality falling below B-, we have typically stated it as being in [CCC] category.
The Telltale Signs of a Bond Default

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Chart 4

Fuguiniao's Indicative Credit Quality Transition

-- April 2015: Initial indicative credit quality of [BBBB]*, reflecting our view of the company's weak business risk profile, due to intense competition in all of its markets. Partly offsetting this weakness was the company's low leverage. However, because the company sought rapid expansion to offset pressure on its main business, we held a negative view of its financial strategy.
-- November 2015: Deteriorated to [BBB**]*. Financial risk increased as the company raised debts significantly. Its aggressive diversification strategy was unsuccessful and costly, negatively affecting the company's working capital.
-- September 2016: Deteriorated to [BBB***]*. Its financial risk increased further, due to rising leverage and a large amount of debt maturing. We also had concerns over the company's management and governance after a large number of illegal guarantees were disclosed.
-- July 2017: Deteriorated to [BBB****]*. Financial risk continued to grow as the company again increased its external financing.
-- April 2018: Default, deteriorated to [D]**.

Note: If we see indicative credit quality falling below B-, we have typically stated it as being in [CCC] category.
Source: S&P Global (China) Ratings
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Chart 5

Kaidi Eco's Indicative Credit Quality Transition

-- March 2014: Initial indicative credit quality of [BBB**]*, reflecting our view of its weak business risk profile and highly leveraged financial risk profile, caused by low coal production and reserves.
-- March 2015: Kaidi announced plans with its parent company to restructure its major assets, putting it on our credit watchlist.
-- September 2016: After restructuring its assets, the company transformed its operation into lower-risk electricity generation, leading to a slight improvement in business risk profile. However, the restructuring process required significant capital, putting pressure on Kaidi's liquidity. As such, we saw no change to the company's indicative issuer credit quality.
-- March 2018: Deteriorated to [CCC**]*, reflecting our concerns over management and governance. Auditing firm indicated significant shortcomings in Kaidi's internal financial controls.
-- May 2018: Company defaulted, deteriorated to [D]**.

Source: S&P Global (China) Ratings
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The Telltale Signs of a Bond Default

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Chart 6

**Reward Science and Tech's Indicative Credit Quality Transition**

--- April 2015: Initial indicative credit quality of [BBB]*, reflecting our view of its weak business risk profile, due to its narrow focus in a very competitive niche market. Partly offsetting this was its low leverage.
--- April 2016: Deteriorated to [BBB]-*. We viewed the company's financial policy as negative, with significant amount of overseas M&As failing to improve business risk profile and profitability.
--- April 2017: Deteriorated to [BBB]+*. Debt levels and financial risk both increased. At the same time, many disclosures in its financial statements were not in compliance, leading to our negative view on the company's management and governance.
--- December 2018: Default, deteriorated to [D]*.

Note: If we see indicative credit quality falling below B-, we have typically stated it as being in [CCC] category.

Source: S&P Global (China) Ratings.
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Chart 7

**Neoglory's Indicative Credit Quality Transition**

--- June 2015: Initial indicative credit quality of [BBB]*. We viewed the company's jewelry business as strong at this time, while its real estate arm was weak. At the same time, Neoglory's leverage ratio and financial risk profile were both high.
--- June 2016: Deteriorated to [BBB]-*. The company put heavy emphasis on its trade business, worsening its business risk profile.
--- June 2017: Deteriorated to [CCC]*, reflecting our negative view on the company's liquidity. The company at this time faced significant maturing debts over a concentrated period.
--- September 2018: Defaulted, company deteriorated to [D]*.

Note: If we see indicative credit quality falling below B-, we have typically stated it as being in [CCC] category.

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*If we see indicative credit quality falling below B-, we have typically stated it as being in [CCC] category.
Red Flags and Warning Signs

In most cases, irregularities and warning signs typically appear before most debt defaults. These red flags include but are not limited to:

Table 1

Default Warning Signs

**Internal Controls and Corporate Governance:**
- Operating objectives and assessments set by shareholders are too aggressive, putting management under high pressure to reach profit targets;
- Overly ambitious agreements made with investors;
- Listed companies face being delisted after two years of losses, putting pressure on turning a profit in the third year to maintain listed status;
- Defective corporate governance systems;
- Conflicts between shareholders grow so serious that they take precedence over effective management;
- Ineffective Internal control system, and is assessed as ineffective by auditors. An ineffective internal control system carries much greater risk than financial fraud and abnormal operations, as it represents systemic risk within the company;
- A large amount of trades or assets yet to go through legal procedures;
- Frequently switching accounting firms;
- Frequent turnover of senior management within a short period;
- Newly issued regulations have a significant negative impact on finances and operations.

**Production and Operations:**
- Overly complex business model and production or capital flow;
- Sales rely heavily on related party transactions;
- Sales exceed the industry average, despite the company having no apparent competitive advantage;
- High growth rates when compared with industry competitors, despite having no clear technical edge or higher market position;
- Company enters the market based on attractive production subsidies, however technical capability is insufficient to support continued operations after removal of subsidies.

**Financial:**
- Auditor issues qualified, adverse or disclaimer of opinion in the audit report.
- Artificially inflated increase in revenue, with a large transaction volume without any real substance; extremely ambitious sales strategy; large quantity of sales on credit; fictitious customers; fraudulent contracts and sales;
- Signs of inflated revenue can include: above industry average profitability that does not match the competitiveness of the company's products; high loans and high cash deposits; severe inventory fluctuations; high revenue as well as high stock inventory of finished products; cut-off problem of revenue and cost recognition.
- Significant use of capital by major shareholders, which may include: large amounts of other accounts receivable/payable and frequent capital inflow and outflow to related parties throughout the year; unreasonable turnover days caused by related party transactions with major shareholders; related party transactions with major shareholders with no commercial benefit; purchases of invalid shareholder assets to be injected into listed companies, etc;
- Stocks of listed companies are pledged in large quantities, major shareholders heavily rely on external financing, and defaults among major shareholders can lead to major slowdowns to the company's production and operations.

Risks in specific areas of accounting: certain accounting subjects may contain greater risks, including 1) biological assets: determining such assets is complex, compiling inventories is difficult, and counterfeiting is relatively easy and difficult to verify; 2) mineral resources: reserves are highly dependent on calculation and evaluation, and overestimation can artificially inflate assets; 3) impairment risk: including a high accounts receivable balance caused by radical sales on credit, goodwill, wide purchases of specialist equipment; 4) the SG&A to revenue ratio is abnormal considering the industry characteristics.
How can we better determine the risk of default?

The following three areas are useful to our analysis in gauging default risks.

1. Industry risk assessment forms an integral part of our analysis

We don't view industry risk as being the same among all industries. In fact, various risk characteristics could lead to different levels of health and stability in markets in which a company operates. With this in mind, we use “industry risk” as a starting point and key basis for analyzing a company's business risk profile, before combining that with the company's competitive position to obtain an overview of the business.

Table 2

<table>
<thead>
<tr>
<th>Industry</th>
<th>Industry Risk Rating</th>
<th>Industry</th>
<th>Industry Risk Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trading</td>
<td>High</td>
<td>Capital Goods</td>
<td>Intermediate</td>
</tr>
<tr>
<td>PV Manufacturing</td>
<td>High</td>
<td>Consumer Durables</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Metal &amp; Mining Downstream</td>
<td>Moderately High</td>
<td>Business and Consumer Services</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Metal &amp; Mining Upstream</td>
<td>Moderately High</td>
<td>Technology Software and Services</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Commodity Chemicals</td>
<td>Moderately High</td>
<td>Containers and Packaging</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Technology Hardware and Semiconductors</td>
<td>Moderately High</td>
<td>Media and Entertainment</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Oil and Gas Refining and Marketing</td>
<td>Moderately High</td>
<td>Retail and Restaurants</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Engineering and Construction</td>
<td>Moderately High</td>
<td>Transportation Leasing</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Forest and Paper Products</td>
<td>Moderately High</td>
<td>Railroads and Package Express</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Oil and Gas Drilling and Oilfield Services</td>
<td>Moderately High</td>
<td>Healthcare Services</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Transportation Cyclical</td>
<td>Moderately High</td>
<td>Healthcare Equipment</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Auto Suppliers</td>
<td>Moderately High</td>
<td>Branded Nondurables</td>
<td>Intermediate</td>
</tr>
<tr>
<td>Homebuilders and Developers</td>
<td>Moderately High</td>
<td>Telecommunications and Cable</td>
<td>Low</td>
</tr>
<tr>
<td>Auto OEM</td>
<td>Intermediate</td>
<td>Transportation Infrastructure</td>
<td>Low</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>Intermediate</td>
<td>Midstream Energy</td>
<td>Low</td>
</tr>
<tr>
<td>Unregulated Power and Gas</td>
<td>Intermediate</td>
<td>Real Estate Investment Trusts (REITs)</td>
<td>Low</td>
</tr>
<tr>
<td>Agribusiness and commodity foods</td>
<td>Intermediate</td>
<td>Specialty Chemicals</td>
<td>Low</td>
</tr>
<tr>
<td>Building Materials</td>
<td>Intermediate</td>
<td>Environmental Services</td>
<td>Low</td>
</tr>
<tr>
<td>Oil and gas integrated, exploration and production</td>
<td>Intermediate</td>
<td>Aerospace and Defense</td>
<td>Low</td>
</tr>
<tr>
<td>Leisure and Sports</td>
<td>Intermediate</td>
<td>Regulated Utilities</td>
<td>Very Low</td>
</tr>
</tbody>
</table>

Note: 1 represents lowest industry risk rating, 6 represents highest industry risk rating.
We focus on how differentials in risk between different industries influence a company’s business risk profile. In our view, being a leader in one industry is no guarantee that that company has similar attributes to leaders in other sectors. Two different companies with similar competitive position rankings in their own respective sectors may have a different business risk profile assessment due to the different industries that they operate in.

For example, for two different companies with strong competitive positions in their own respective industries, we may expect companies engaged in regulated utilities (industry risk level 1) to have a stronger business risk profile than those in the photovoltaic manufacturing sector (industry risk level 5). In other words, we believe enterprises in high-risk industries need to have a better competitive position in order to compete with enterprises in low-risk industries when it comes to their business risk profile assessment.

A look at the distribution of bond defaults across various sectors confirms our assessment of industry risk. The higher the industry risk score, the higher the amount of defaults in that industry. Defaults among companies with an industry risk of 5 are relatively low, mainly because there are only two industries with such a high-risk level: trading and photovoltaic manufacturing.

For companies that are top firms in niche industries, we believe it is important to avoid overestimating their business risk profile and ability to combat risk. When it comes to assessing the business risk profile of such a company, we choose to compare it against the overall makeup of its wider industry, rather than against other individual firms belonging to that niche sub-sector.

For example, when looking at the competitive position of a company mainly engaged in wind power, we will not only compare it with other players in the wind power sector, but also with companies engaged in hydropower, solar energy, waste power generation, water and gas supply and other related businesses. We classify these sub-sectors as being part of a wider "regulated utilities" industry.

There are two reasons for this. Firstly, China has a sound industrial structure with many subsectors. It is usually possible to identify many “leading” companies within niche markets. But if the products of these firms are too specialized and demand is too narrow, any changes in downstream industries can have significant impact on these companies. When these companies are looked at alongside firms that are leaders covering a wider range of markets, we view the latter to be more resilient.
Secondly, excessively niche businesses may face greater refinancing pressure, because the field of competition for financial resources typically covers a broader domain, rather than solely within that narrow sub-sector. When financial institutions allocate assets, they may set caps on investing in large industries. In such circumstances, there is intense competition between firms in niche industries to access financial resources.

2. Gauging financial risk through prospective financial forecasting

S&P Global (China) Ratings typically combines financial results of the past two years with estimates for the following three years to evaluate companies’ overall financial risk profiles. We typically add greater weighting to the forecast in our analysis.

We typically rate “through the cycle”. For example, when we estimate the price of an upstream industry company’s main product and use it as a basis for evaluating its future financial performance, we should not overestimate the profitability of the company when the price peaks. We should also avoid exaggerating financial risk when that product’s price is at a low point.

3. Weighing up the impact of parent companies on credit quality

When evaluating the issuer credit quality of a company, we also look beyond its own situation and, if applicable, focus on the potential impact of its parent company's credit status. If the parent company's credit quality is strong, it may improve the subsidiary company's credit quality. But in cases where a parent company's credit quality is weaker than its subsidiary, then the parent may be more of a burden, acting as a cap on the subsidiary's credit quality.

This drag occurs because the parent company may use the resources of its subsidiary to ease its own debt repayment pressure. There are many ways for parent companies to co-opt the resources of their subsidiaries, such as intercompany loans, divesting subsidiaries’ assets into other companies, or forcing the subsidiary to acquire assets belonging to the parent company at unreasonable prices. At the same time, significant financial problems facing the wider group may seriously affect the normal production and operations of its subsidiaries, negatively affecting their credit quality.

The "strong subsidiary, weak parent" situation is widespread, especially among listed companies. China has strict requirements for the listing of companies, so most groups will package their best assets together in order to list. Within the parent group, listed companies usually have the strongest profitability, the best asset quality and the lowest debt burden.

For the listed companies mentioned above, if the parent has a heavy debt burden or its business situation is much worse than that of its subsidiaries, we may expect the parent’s credit situation to have a negative impact on the listed companies. However, if the listed company is completely isolated from the influence of the parent, and the parent company is unable to exert significant influence on the operations or finances of the listed company, then we may expect the credit quality of the parent company to have no influence on the subsidiary in question.

This report does not constitute a rating action.

In cases of “strong subsidiary, weak parent,” the parent firm can be a drag on the subsidiary's credit quality, unless the subsidiary's operations and finances are completely independent of the parent.
This document is prepared in both English and Chinese. The English translation is for reference only, and the Chinese version will prevail in the event of any inconsistency between the English version and the Chinese version.