

Credit Analysis of China's Toll Road Operators

October 28, 2020

Key Takeaways

- In our opinion, thanks to potential government support, the indicative issuer credit quality of the toll road issuers in our sample is generally strong, ranking at the forefront among corporate sectors.
- In our view the business risk profiles of toll road operators vary due to the differences in economic development of their catchment areas, the market share and irreplaceability of their network in the regions they cover, and the scale and efficiency of their own road networks.
- However, companies in this sector have similar financial risk profiles, most of which are at aggressive or highly leveraged levels, due to heavy capital investment, long payback periods and large ongoing capital expenditure. Notwithstanding that, their refinancing pressures are limited.
- We expect most of the provincial-level state-owned operators in the sample to receive a critical level of local government support, due to toll roads' status as important transport infrastructure that can boost local economic development, and the generally limited number of toll road operators within a region.

ANALYSTS

Dan Li

Beijing
+86-10 6516 6042
dan.li
@ spgchinaratings.cn

Juanzi Zhang

Beijing
+86-10 6516 6030
juanzi.zhang
@ spgchinaratings.cn

Yuze Gao

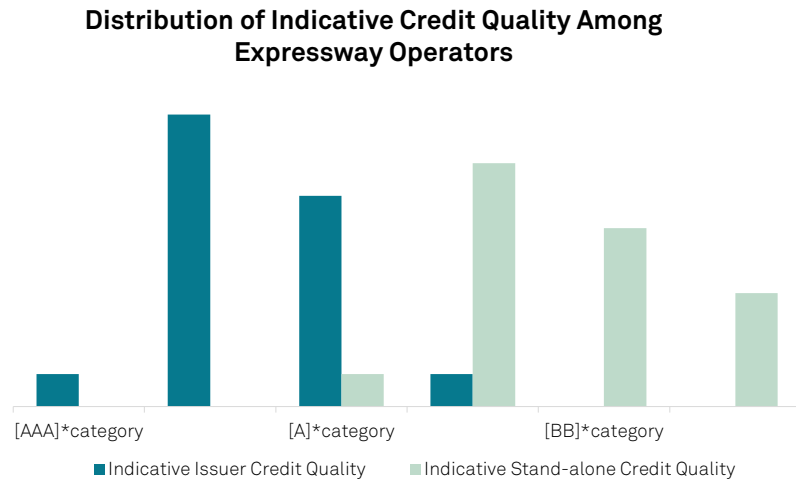
Beijing
+86-10 6516 6028
yuze.gao
@ spgchinaratings.cn

Overview

By applying our corporate methodology, we have carried out a desktop analysis of 35 companies, based on public information. We have formed our views on the relative ranking of each company's "indicative issuer credit quality" (see chart 1 below). These 35 companies cover most provincial administrative regions and a few prefecture-level expressway companies. Please refer to the appendix for the names and abbreviations of the sampled enterprises.

Benefiting from potential support from local governments, the overall indicative issuer credit quality of China's expressway operators is relatively strong,

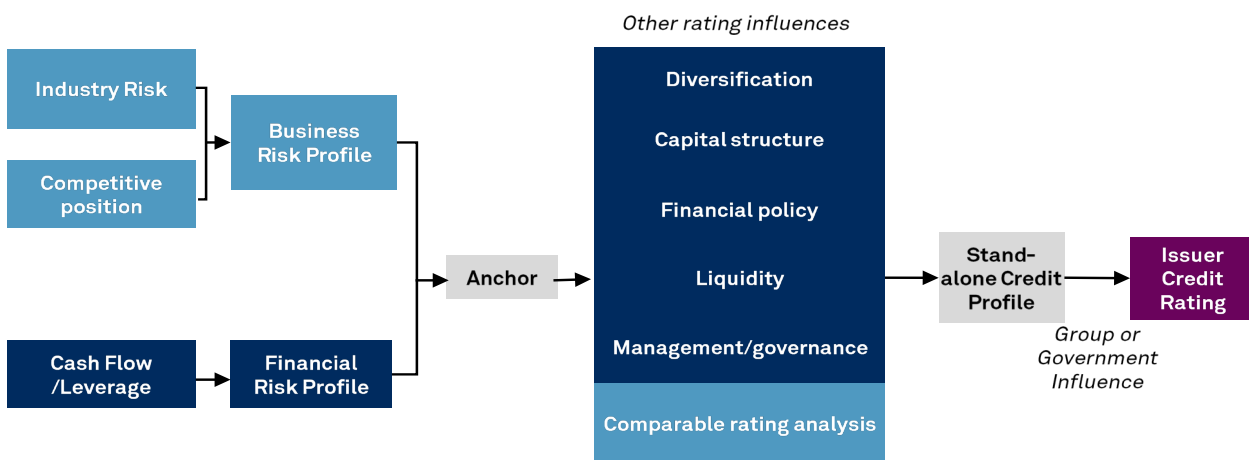
Chart 1



Note: *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 without interactive review with any particular entity or the full credit rating process such as a rating committee. 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.
 Source: S&P Global (China) Ratings.
 Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

This report on companies' indicative issuer credit quality uses S&P Global (China) Ratings' corporate methodology. When we analyze the credit quality of non-financials, we usually begin with analysis of the entity's business risk profile, before looking at its financial risk profile and other factors to arrive at its Stand-alone Credit Profile (SACP). We then analyze the external support that companies may obtain, including group or government support, to arrive at the Issuer Credit Rating (ICR).

Chart 2



Source: S&P Global (China) Ratings.
 Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

About This Article

S&P Ratings (China) Co., Ltd. (S&P China) has conducted a desktop analysis of a selection of entities, which we have chosen 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.

Business Risk Profile

In general, we assess the business risk profile of a company by considering the industry risk of the sector that the company operates in and the competitive position of the company itself.

Industry Risk Ranking

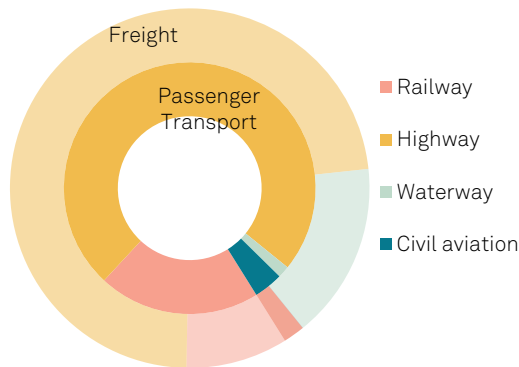
In our view, the industry risk for the transportation infrastructure sector (which toll roads belong to) is at a low level, with a risk score of 2 on a scale from 1-6 (the lower the score, the lower the industry risk). We typically derive the level of industry risk from two dimensions: cyclicalities and competitive landscape. The transportation infrastructure industry in China is characterized by its weak cyclicalities and stable competitive environment.

We view the competitive landscape of China's expressway industry as stable. As an important part of China's transportation infrastructure, highways play an irreplaceable role in serving cargo and passenger transport for short and medium distances. Although the development of high-speed rail has had an impact on highway passenger traffic, highways still occupy a dominant share in China's overall transportation system, in terms of passenger and cargo transport

volume. The rapid development of modernized logistics and express delivery sectors will also support highway freight volume going forward. According to the National Bureau of Statistics, highway transport accounts for 73.9% of China's passenger traffic and 73.0% of China's cargo traffic.

Chart 3

Most Popular Passenger and Freight Modes of Transport, 2019

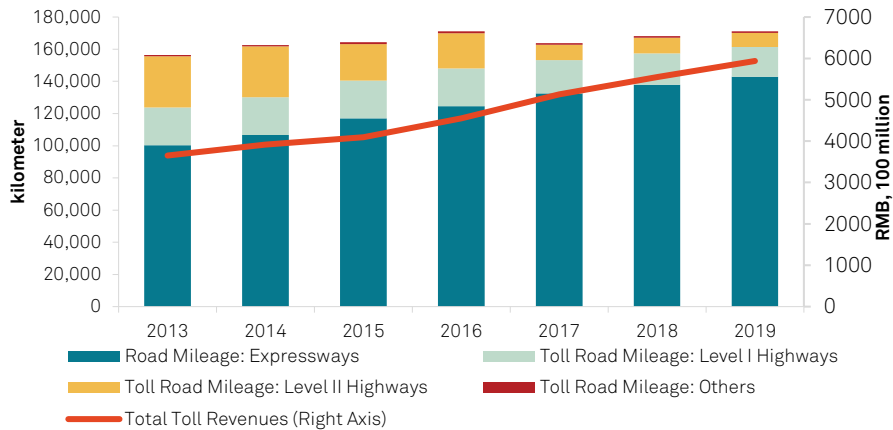


Note: In addition to the above four modes of transport, pipeline transport accounts for 2% of total freight.
 Source: 2019 National Economic and Social Development Statistical Bulletin.
 Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

Compared with railways, waterways and civil aviation, China's highway industry has a broader user base, which underpins its strong resilience through economic cycles with a steady growth trend. In recent years, under policies where only expressways can charge tolls and other normal highways are funded solely by public finance, China has vigorously expanded its expressway network. The road mileage and toll revenue of expressways nationwide have maintained steady growth for consecutive years.

Chart 4

Toll Road Mileage and Revenue Trends



Source: Toll road statistics bulletin, Wind, S&P Global (China) Ratings.
Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

Competitive Position

We generally consider the competitive position of entities in this industry from four aspects: competitive advantage, scale, scope and diversity, operating efficiency, and profitability. For toll road operators, policy and regulatory support weaken competitive pressure and provide relatively stable profitability, so we usually pay more attention to firms' competitive advantage and scale, scope and diversity.

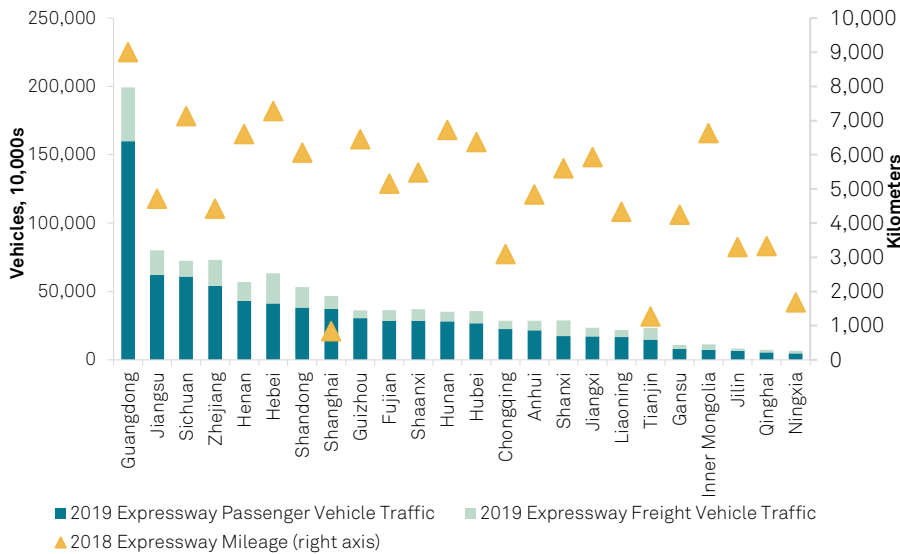
Competitive Advantage

The competitive advantages of toll road operators are, in our opinion, mainly reflected in the levels of economic development in the areas they serve, their market share and their irreplaceability in the areas they serve. Companies with strong competitive advantages typically: play an important role in the development of local economy; operate in a vast area with strong economic activities; have a dominant position in the transportation market within their service area; enjoy limited competition from other transportation routes and operators amid a stable competition environment.

In our view, the scale of expressway networks and traffic volume of each province are key to expressway operators' performance and competitive advantage, given that expressway operators are mostly founded by provincial governments. Among all the provinces, Guangdong ranks first in terms of both expressway mileage and passenger and freight traffic. Although the expressway mileages of Jiangsu and Zhejiang rank in the middle of the country, they have significant advantage in terms of vehicle traffic. Sichuan, Henan and Hebei have satisfactory mileage scales and vehicle traffic, due to continuous heavy investment, geographical advantage and rapid industrial development. We believe that the vehicle traffic in those regions is supported by the economic environment in the hinterlands of those regions. On the other hand, due to limited economic activity, vehicle traffic in Gansu, Inner Mongolia, Jilin, Qinghai, and Ningxia ranks lower compared to the rest of the country.

Chart 5

Traffic Flow, Mileage of Highways in Provinces Nationwide

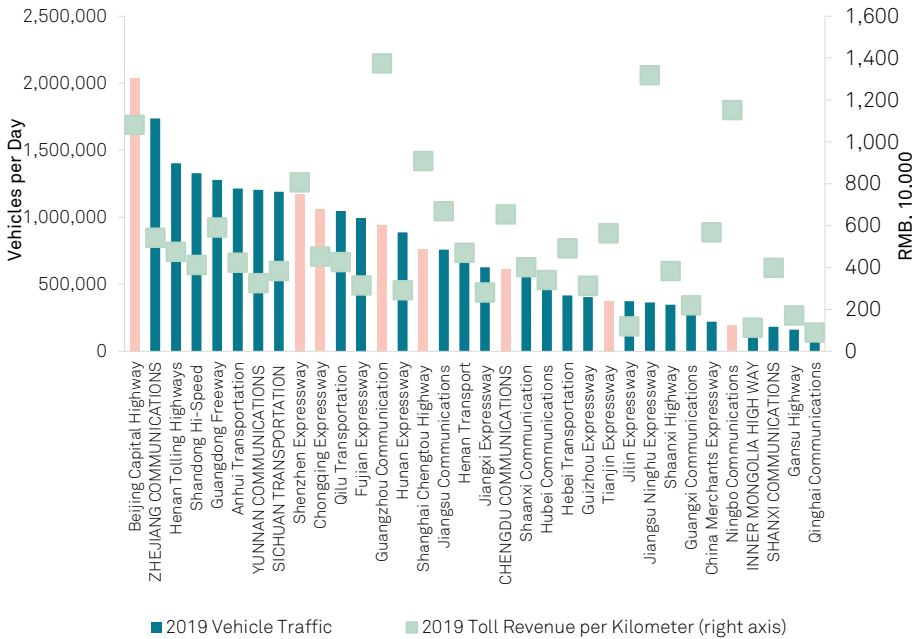


Note: No data disclosed for some provinces.
 Source: Wind, S&P Global (China) Ratings.
 Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

Typically, toll road operators' competitive advantage is reflected by their regional vehicle traffic and toll revenue per kilometer. The operating performance of expressways is closely related to local economic development, which greatly affects return on investment and future growth potential for expressways. Economically developed regions usually enjoy higher traffic activity and therefore vehicle traffic can provide strong toll revenue for local expressway networks. The chart below shows operators where major toll road networks are concentrated in developed regions have larger vehicle traffic and stellar toll revenues per kilometer.

Chart 6

Vehicle Traffic, Toll Revenue per Kilometer in 2019



■ 2019 Vehicle Traffic ■ 2019 Toll Revenue per Kilometer (right axis)
 Note: 1. Guangdong Jiaotong released no traffic data in its latest public announcements.
 2. Pink column represents highway companies under municipalities/prefecture-level cities.
 Source: Company announcements, compiled by S&P Global (China) Ratings.
 Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

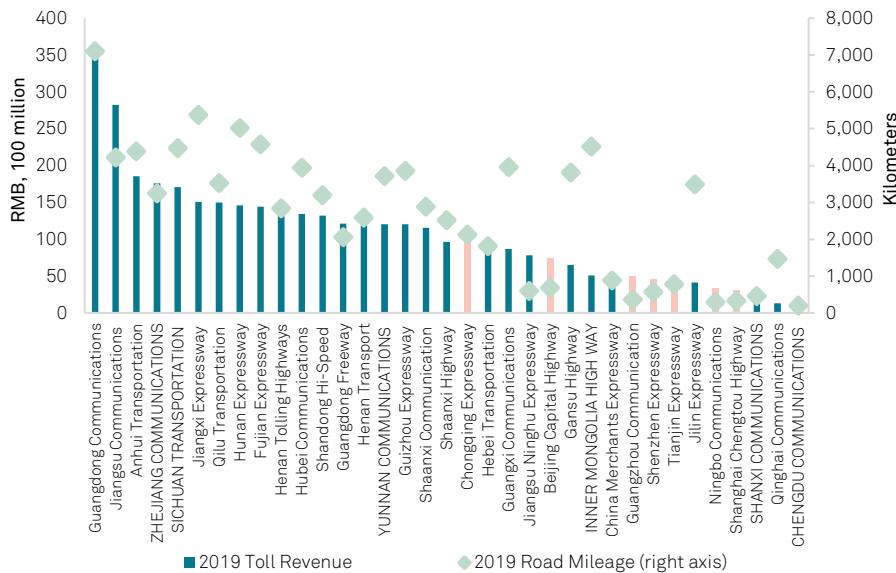
Scale, Scope and Diversity

When considering the scale, scope, and diversity of expressway operators, we typically focus on toll revenue and revenue drivers, including periods when tolls apply and toll collection methods, the geographical coverage of their road network, and the scale, diversity and maturity of the local transportation market.

The operating and asset scale of a toll road operator is typically driven by its toll revenue and operating mileage. As can be seen in the chart below, Guangdong Transportation Group and Jiangsu Transportation Investment Group have the largest toll revenues together with significant road network mileages, but on the other hand in areas with less developed economy, the large scale of network mileages are tempered by lower vehicle traffic, resulting in disproportionately lower toll revenue for expressway operators in Inner Mongolia, Gansu, Guangxi, Jilin, etc.

Chart 7

2019 Toll Revenue and Road Mileage



Note: Pink column represents highway companies under municipalities/prefecture-level cities.
 Source: Company announcements, compiled by S&P Global (China) Ratings.
 Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

Operating Efficiency and Profitability

For the operating efficiency and profitability of expressway operators, we typically consider maintenance costs, operational costs, EBITDA margin and return on capital (ROC).

However, in the expressway industry, due to the natural monopoly that the government has over assets and tolls, we don't see obvious differences in the operating efficiency and profitability of most expressway operators, and they generally perform at the industry average level. Only a few companies have above average profitability due to good cost management through industry cycles and limited future capital expenditure needs as their road networks are at a mature stage.

Financial Risk Profile

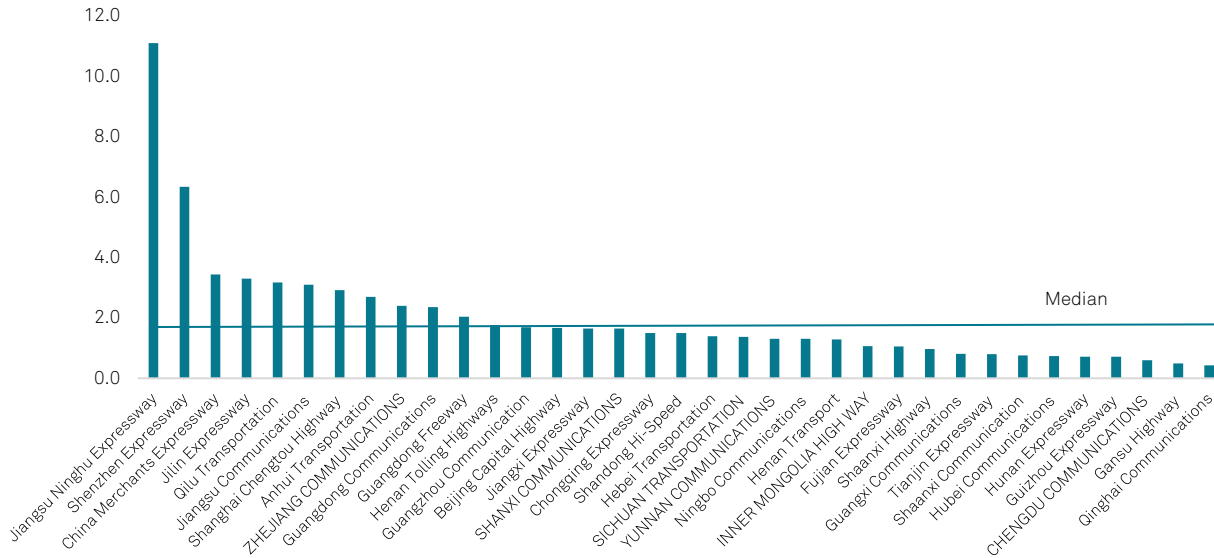
Our analysis of the financial risk profiles of expressway operators typically focuses on cash flow-based credit metrics. We usually focus more on the entities' interest coverage given that they tend to have good access to refinancing. This is because the expressway industry typically enjoys a higher level of government support, and most entities are provincial-level state-owned entities with public welfare attributes.

We observe that the overall financial risk profile of this industry is aggressive, but refinancing pressure is small. As the industry can be characterized by its weak cyclical and instant cash collection, expressway operators usually enjoy strong and stable operating cash flows. On the other hand, the expressway industry requires large initial investment during the development stage and has a long payback period, resulting in a higher debt burden and higher debt/EBITDA ratio. The interest coverage ratios of most entities are however at a modest level. Entities with established road networks, good profitability and limited future capital expenditure such as Ninghu Expressway, China Merchants Road, etc. tend to have better interest coverage. Meanwhile, some enterprises' EBITDA interest coverage ratio may be under pressure due to limited vehicle traffic, low toll revenue and continuously increasing capital expenditure.

Notwithstanding that, we don't expect these operators to face high refinancing risk due to support from banks and refinancing through government special bonds.

Chart 8

2017-2019 Average EBITDA Interest Coverage

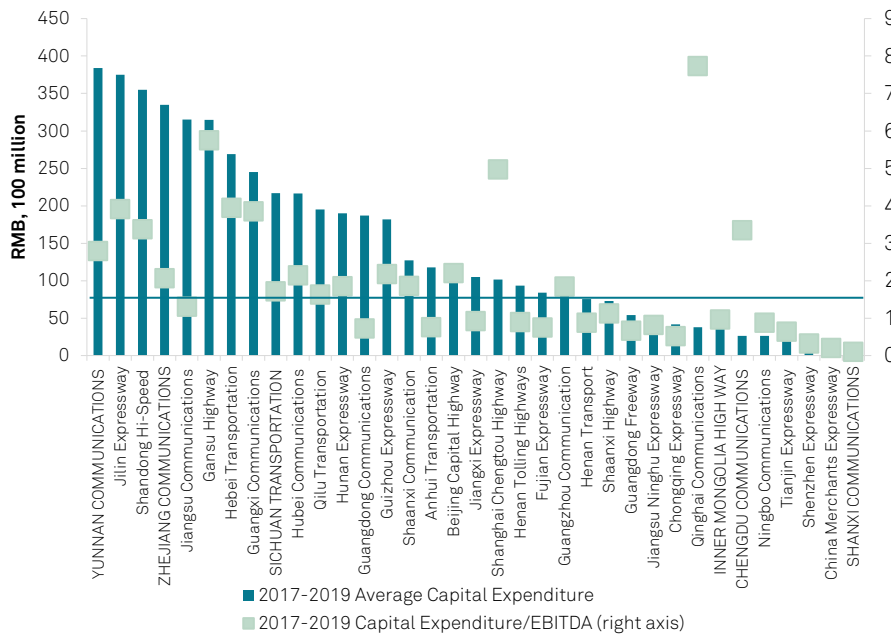


Note:1. Interest coverage multiple = EBITDA/total interest expense; 2. The data of Jiangsu Transportation Control, Zhejiang Trading and Shandong Expressway are adjusted after excluding financial business related income and expenses.
 Source:Company annual reports, compiled by S&P Global (China) Ratings
 Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

The capital expenditure percentage proportion ratio (measured by capex divided by EBITDA) is typically weak for this industry, resulting in higher funding requirements. This is generally because of the large capital expenditure from several toll roads being built at the same time. On the other hand, some companies may have stronger capital expenditure coverage ratios if there are no large-scale toll roads under construction in the short term, and therefore relatively small capital expenditure demands. Therefore, their EBITDA can comfortably cover maintenance costs, resulting in more stable free operating cash flows.

Chart 9

Overview of Sampled Companies' Capital Expenditure and EBITDA, 2017-19



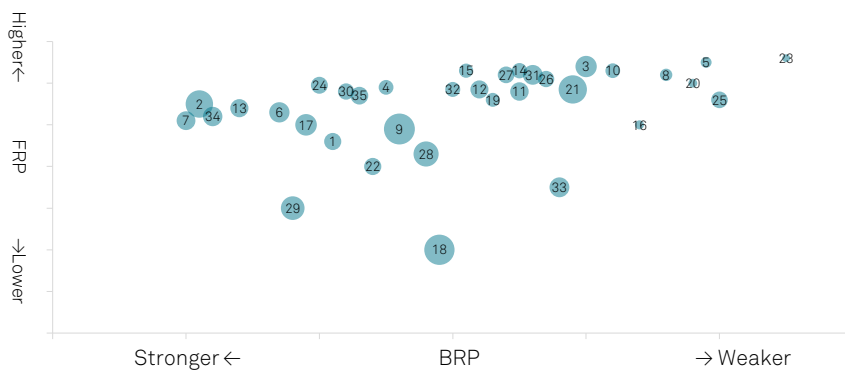
Note: Horizontal line denotes median capital expenditure/EBITDA.
 Source: Public information, compiled by S&P Global (China) Ratings.
 Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

Distribution of Indicative Business and Financial Risk Profiles

Based on the above analysis, we have obtained the indicative business risk profiles and financial risk profiles of the 35 sampled companies, as shown in the chart below. Through combining the business and financial risk profiles, we can generally form a benchmark to assess the indicative credit quality of an entity. Beyond that, we typically also consider industry diversification, capital structure, financial policy, management and governance, liquidity, and other holistic factors to arrive at our evaluation of the firm's SACP. In the chart below, we can see that Guangdong Communications Investment, Zhejiang Communications Investment and Capital Expressway have the best indicative business risk profiles in the industry, thanks to their above-average road networks and economically advanced catchment areas. Entities like Ninghu Expressway and Shenzhen Expressway have relatively mature road networks with limited capital expenditure needs in the future, resulting in a stronger financial risk profile for the industry. Entities such as Qinghai Communications Investment, Gansu Communications Investment Co and Inner Mongolia Expressway suffer from lower vehicle traffic, lower toll revenues and larger pressure to expand, which lead to them having weaker indicative business and financial risk profiles compared to other operators, despite their relatively large road networks.

Chart 10

Business Risk and Financial Risk Profiles of Sampled Companies



Note: Bubble size represents toll revenue per kilometer. Refer to Appendix for entity names.

Source: S&P Global (China) Ratings

Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

External Support

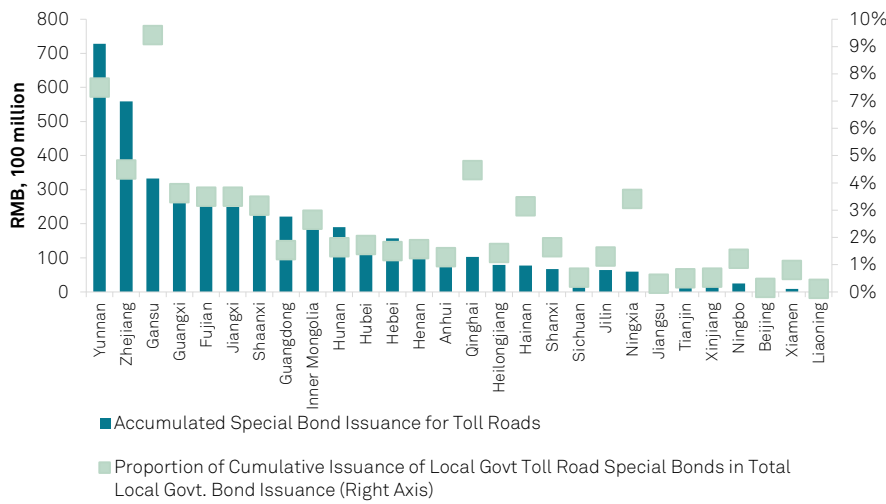
After arriving at the indicative stand-alone credit quality of an entity, we then consider the impact of government or group support on the credit quality of the enterprise. China's expressway operators are all state-owned. We believe that they are typically of critical importance to local governments, as the expressway industry is often regarded as important transportation infrastructure that can support local economic development. Importance is further elevated by there typically being only one or a limited number of expressway operators in the same region.

For the majority of local SOEs in our sample, we usually expect that they can obtain a critical level of local government support. In our analysis, we typically consider the government's ability and willingness to support. In our opinion, due to differentiated economic and fiscal performance as well as different debt levels, the indicative support capacity of local governments can diverge to some degree, which can have a significant effect on the indicative issuer credit quality of our sampled companies. On the other hand, due to the important role played by local expressway SOEs in the field of transportation infrastructure, we believe that the willingness of local governments to support their respective expressway enterprises is typically strong.

As mentioned above, high debt leverage in the sector is generally caused by large capital expenditure in the initial development stage of constructing an expressway and long payback period. At present, local governments have issued toll road special bonds for road construction to alleviate the debt pressure of expressway operators. It can be seen in the chart below that in provinces where expressway firms need large capital expenditure, like Yunnan, Zhejiang and Gansu, issuances of toll road special bonds are significant.

Chart 11

Issuance of Special Bonds for Toll Roads in Various Provinces/Cities



Note: Data as of September 2020.

Source: Wind, S&P Global (China) Ratings.

Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

Appendix

List of Sampled Entities

	Full Name	Abbreviated Name	Entity Type
1	Anhui Transportation Holding Group Co., Ltd.	Anhui Transportation	Regional SOE
2	Beijing Capital Highway Development Group Co., Ltd.	Beijing Capital Highway	Regional SOE
3	CHENGDU COMMUNICATIONS INVESTMENT GROUP CO.,LTD	CHENGDU COMMUNICATIONS	Regional SOE
4	Fujian Expressway Group Co., Ltd.	Fujian Expressway	Regional SOE
5	Gansu Provincial highway Aviation Tourism Investment Group Co., Ltd	Gansu Highway	Regional SOE
6	Guangdong Provincial Freeway Co., Ltd.	Guangdong Freeway	Regional SOE
7	Guangdong Provincial Communications Group Co., Ltd	Guangdong Communications	Regional SOE
8	Guangxi Communications Investment Group Co., Ltd	Guangxi Communications	Regional SOE
9	Guangzhou Communication Investment Group Co., Ltd	Guangzhou Communication	Regional SOE
10	Guizhou Expressway Group Co., Ltd.	Guizhou Expressway	Regional SOE
11	Hebei Transportation Investment Group Corporation	Hebei Transportation	Regional SOE
12	Henan Transport Investment Group Co., Ltd	Henan Transport	Regional SOE
13	Henan Province Tolling Highways Management Company Limited	Henan Tolling Highways	Regional SOE
14	Hubei Provincial Communications Investment Co., Ltd.	Hubei Communications	Regional SOE
15	Hunan Provincial Expressway Group Co., Ltd	Hunan Expressway	Regional SOE
16	Jilin Provincial Expressway Group Co.Ltd	Jilin Expressway	Regional SOE
17	Jiangsu Communications Holding Co., Ltd	Jiangsu Communications	Regional SOE
18	Jiangsu Ninghu Expressway Company Limited	Jiangsu Ninghu Expressway	Regional SOE
19	Jiangxi Provincial Expressway Investment Group Co., Ltd	Jiangxi Expressway	Regional SOE
20	INNER MONGOLIA HIGH-GRADE HIGH WAY CONSTRUCTION AND DEVELOPMENT COMPANY LTD.	INNER MONGOLIA HIGH WAY	Regional SOE
21	Ningbo Communications Investment Holdings Co., Ltd	Ningbo Communications	Regional SOE
22	Qilu Transportation Development Group Co., Ltd.	Qilu Transportation	Regional SOE
23	Qinghai Communications Investment Co., Ltd.	Qinghai Communications	Regional SOE
24	Shandong Hi-Speed Group Co., Ltd	Shandong Hi-Speed	Regional SOE
25	SHANXI COMMUNICATIONS DEVELOPMENT AND INVESTMENT GROUP Co.Ltd	SHANXI COMMUNICATIONS	Regional SOE

26	Shaanxi Province Highway Construction Group Company	Shaanxi Highway	Regional SOE
27	Shaanxi Provincial Communication Construction Group	Shaanxi Communication	Regional SOE
28	Shanghai Chengtou Highway Group Co., Ltd.	Shanghai Chengtou Highway	Regional SOE
29	Shenzhen Expressway Company Limited	Shenzhen Expressway	Regional SOE
30	SICHUAN TRANSPORTATION INVESTMENT GROUP	SICHUAN TRANSPORTATION	Regional SOE
31	Tianjin Expressway Group Company Limited.	Tianjin Expressway	Regional SOE
32	YUNNAN COMMUNICATIONS INVESTMENT & CONSTRUCTION GROUP CO.,LTD.	YUNNAN COMMUNICATIONS	Regional SOE
33	China Merchants Expressway Network Technology Holdings Co., Ltd.	China Merchants Expressway	Central SOE
34	ZHEJIANG COMMUNICATIONS INVESTMENT GROUP CO., LTD.	ZHEJIANG COMMUNICATIONS	Regional SOE
35	Chongqing Expressway Group Co., Ltd.	Chongqing Expressway	Regional SOE

Note: the above enterprises are sorted by pinyin

This report does not constitute a rating action.

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.

Copyright © 2020 by S&P Ratings (China) Co., Ltd. All rights reserved.

S&P Ratings (China) Co., Ltd. ("S&P Ratings") owns the copyright and/or other related intellectual property rights of the abovementioned content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content). No Content may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of S&P Ratings. The Content shall not be used for any unlawful or unauthorized purposes. S&P Ratings and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively "S&P Parties") do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P Ratings' opinions, analyses, forecasts and rating acknowledgment decisions (described below) 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. S&P Ratings assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and / or clients when making investment and other business decisions. S&P Ratings does not act as a fiduciary or an investment advisor except where registered as such. While S&P Ratings has obtained information from sources it believes to be reliable, S&P Ratings does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

S&P RATINGS IS NOT PART OF THE NRSRO. A RATING ISSUED BY S&P RATINGS IS ASSIGNED ON A RATING SCALE SPECIFICALLY FOR USE IN CHINA, AND IS S&P RATINGS' OPINION OF AN OBLIGOR'S OVERALL CREDITWORTHINESS OR CAPACITY TO MEET SPECIFIC FINANCIAL OBLIGATIONS, RELATIVE TO THAT OF OTHER ISSUERS AND ISSUES WITHIN CHINA ONLY AND PROVIDES A RANK ORDERING OF CREDIT RISK WITHIN CHINA. AN S&P RATINGS' RATING IS NOT A GLOBAL SCALE RATING, AND IS NOT AND SHOULD NOT BE VIEWED, RELIED UPON, OR REPRESENTED AS SUCH. S&P PARTIES ARE NOT RESPONSIBLE FOR ANY LOSSES CAUSED BY USES OF S&P RATINGS' RATINGS IN MANNERS CONTRARY TO THIS PARAGRAPH.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P Ratings reserves the right to assign, withdraw or suspend such acknowledgement at any time and in its sole discretion. S&P Ratings disclaims any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P Ratings keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P Ratings may have information that is not available to other S&P Ratings business units. S&P Ratings has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P Ratings may receive compensation for its ratings and certain analyses, normally from issuers or underwriters of securities or from obligors. S&P Ratings reserves the right to disseminate its opinions and analyses. S&P Ratings' public ratings and analyses are made available on its Web site www.spgchinaratings.cn, and may be distributed through other means, including via S&P Ratings' publications and third-party redistributors.