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S&P Global
China Ratings

Surveillance Credit Rating Report:

China Construction Civil Infrastructure Corp. Ltd

Issuer Credit Rating *: A_{SPC} +; Outlook: Stable

September 27, 2021

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*This rating is an Issuer Credit Rating (ICR). An ICR reflects our view of the senior unsecured credit rating of an issuer and is not specific to an individual issuance that it may issue.

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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.

Tear Sheet

Company Name	Rating Type	Current Rating	Rating Date	Outlook / CreditWatch
China Construction Civil Infrastructure Corp. Ltd	Issuer Credit Rating	A_{spc}+	September 27, 2021	Stable

Industry Classification: Transportation Infrastructure

Company overview: China Construction Civil Infrastructure Corp. Ltd ("CSCEC Civil Infrastructure" or "company") is a wholly owned subsidiary of China State Construction Engineering Corporation Ltd. ("CSCEC" or "parent"). The company facilitates the development of CSCEC's infrastructure construction business through investing in various infrastructure projects. The company earns most of its revenue and profits from management fees, project profits and investment returns. Funding for public-private partnership (PPP) projects comes mainly from project loans, and equity investment in PPP projects is partly sourced from management fees and profits from other projects. Management fees and profits from projects also contribute to principal and interest payments. By the end of June 2021, the company had 21 PPP projects with total investment of around RMB 75 billion. The company also has investments in 25 PPP projects with minority shareholding, and 23 non-PPP projects, with total planned equity investment of RMB 23.5 billion in the latter. 5 of these non-PPP projects are build-and-transfer (BT) projects, with total planned investment of RMB 3 billion. Total cumulative investment in BT projects has reached around RMB 2.9 billion, with repayments of RMB 1.7 billion. Please refer to Appendix 1 for further details of the company's investment projects.

Economy and Industry Trends: China is recovering from the slowdown in economic growth caused by COVID-19, and we expect full-year economic growth of 8% for 2021. Infrastructure investment continues to play an important role in economic growth, and growth of infrastructure fixed asset investment is set to remain stable as before the epidemic. PPP is one of the main methods in infrastructure investment, but its growth may slow. At the same time, most PPP projects underway in the market are still under construction. Given that relatively few PPP projects have entered operations, there is limited track record in the timeliness of payments through government pay or viability gap funding (VGF) mechanisms.

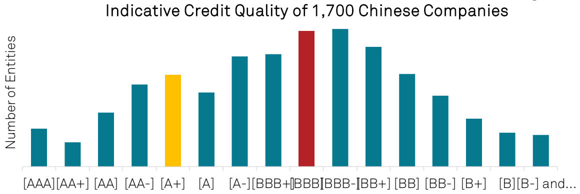
Credit Highlights: In our view, the company's investment projects have relatively high quality, and all investment activity requires the prior approval of CSCEC. All PPP projects are on the Ministry of Finance's China PPP Integrated Information Platform Management Database (PPP Management Database), and project repayments are included in local government fiscal budgets. While we view the company's projects as being well dispersed geographically, some projects are located in areas with average economic and fiscal positions. Our view of the company's business risk profile is also tempered by the small number of projects that have entered stable operations. We expect the company's financing scale to continue increasing to a high level as investment and construction in the company's PPP projects continue. Its leverage ratio is expected to rise to 7-9 times in the near term. Project repayment plus EBITDA to interest coverage ratio is expected to remain stable. Earlier repayment from major projects would better cover principal and interest payments on loans. At the same time, the company's debt is mainly PPP project loans. The loan period aligns with the projects' operation period with some repayment flexibility. Therefore, we view its financial risk profile as significant. The company is a wholly owned subsidiary of CSCEC, and we expect it to be of high importance to its parent.

Key Metrics:

	2019A	2020A	2021F
Total debt/(EBITDA + expected project payment) (x)	4.5	5.9	7.0-9.0
(EBITDA + expected project payment) interest coverage (x)	3.5	4.4	3.0-4.0
Minimum payment to principal and interest of PPP project debt coverage ratio		1.2-3.3	

Note: Data adjusted by S&P Global (China) Ratings. A- actual, F-forecast. The coverage ratio of debt principal and interest of the project is the minimum range of the predicted value of each project in the first three years of the operation period. 2019 data is based on restated financials.

Position of CSCEC Civil Infrastructure's Credit Quality Among Indicative Credit Quality of 1,700 Chinese Companies



Note: The red bar represents the median indicative credit quality of top 1700 entities, and the yellow bar represents the position of CSCEC Civil Infrastructure.
Source: "Turning a Corner: China Corporate Outlook 2021", January 11, 2021.

Rating Snapshot:

Issuer Credit Rating:	**A_{spc}+/Stable**
Business Risk Profile:	**4/Fair**
Industry Risk:	2/Low
Competitive Position:	4/Fair
Financial Risk Profile:	**4/Significant**
Anchor:	**bb+**
Adjustments	
Diversification:	Neutral (no impact)
Capital Structure:	Neutral (no impact)
Financial Policy:	Neutral (no impact)
Liquidity:	Adequate (no impact)
Management & Governance:	Neutral (no impact)
Holistic Adjustment:	Neutral (no impact)
Stand-alone Credit Profile:	**bb_{spc}+**
External influence:	**+6**

Business Risk Profile: We view the company's business risk profile as fair. Its investment activity requires the prior approval of CSCEC and comes under the parent's strict supervision, and in our view this means its projects are of relatively high quality. All PPP projects underway are included in the PPP Management Database and comprise of either government-pay or VGF return mechanisms. Market exposure risk is relatively low for most of its projects. While we view the company's projects as being well dispersed geographically, some are located in areas with average economic and fiscal positions. Half of the projects are still under construction, and projects that have got underway are mostly in the initial stage of operations. There is still a lack of track record of stable operations and project repayments.

Financial Risk Profile: We view the company's financial risk profile as significant. Half of the projects are under construction, and we expect the company's debt scale and leverage ratio to remain at a high level as construction progresses. However, its EBITDA and total project repayment could provide good interest coverage. Thanks to its relatively good financing structure, we expect project repayment to cover both interest and principal payment when major projects enter operation. PPP project financing offers some flexibility, which may mitigate some pressure from the risk of untimely collection of project repayment.

External influence: The company is a wholly owned subsidiary of CSCEC. In our opinion, CSCEC has very strong indicative credit quality. The company plays an important role in carrying out and developing CSCEC's infrastructure business strategy. We expect the company to continue in these roles in the future. In our view, CSCEC's strict management of the company's investment operations and finances will continue for the foreseeable future, strengthening their linkage and allowing CSCEC to be in a position where it can provide timely extraordinary support when needed. At the same time, we do not expect CSCEC to sell or divest the company. Therefore, we view that this company is of high importance to CSCEC.

Peer comparison: (2018-2019 average value, RMB, millions)

	CSCEC Civil Infrastructure	CSCEC Fangcheng	CCCC Investment	CCCC Urban	CRCC Investment
Total Revenue	39,907.4	8,248.4	7,104.2	7,723.5	22,117.8
EBITDA	2,224.6	1,449.8	4,403.7	1,843.4	3,744.2
Debt / EBITDA (x)	3.8	16.7	8.7	6.3	17.3
EBITDA interest coverage (x)	3.6	3.3	3.7	3.4	1.3

Note: Above data adjusted by S&P Global (China) Ratings; Source: CSCEC Civil infrastructure data includes data adjusted to account for off-balance sheet items. Peer company information from public information, adjusted by S&P Global (China) Ratings.

Declaration

No association that may affect the independence, objectivity and unbiasedness of the rating process exists between S&P Global (China) Ratings or its analysts and the rated entity, other than the engagement as a result of this credit rating project.

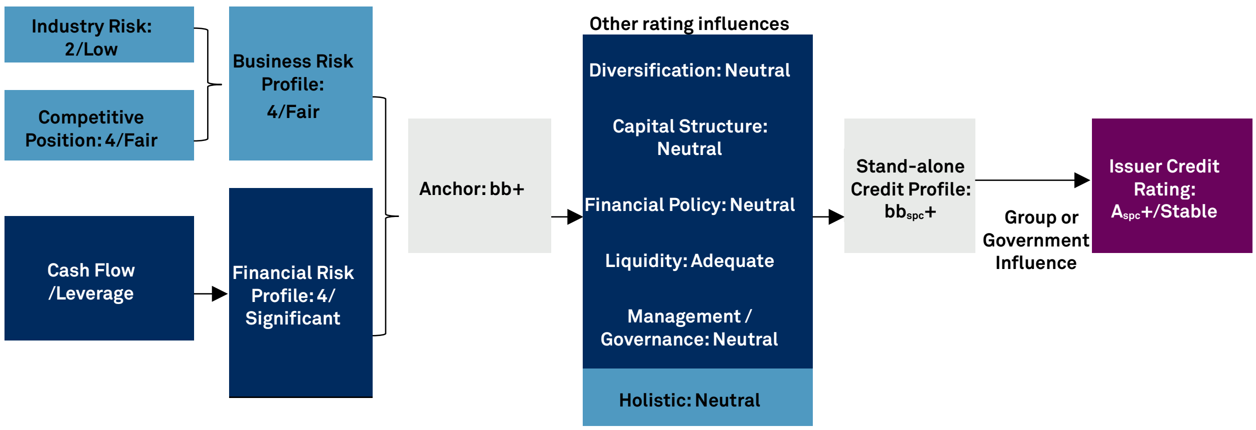
S&P Global (China) Ratings and its analysts have conducted on-site investigations and observed their fiduciary duties, thus have confidence to assure that this rating report adheres to principles of truthfulness, objectivity and unbiasedness.

S&P Global (China) Ratings arrived at analytical conclusions presented in this credit rating report based on its own methodologies and procedures and did not change any of its rating opinions as a result of any inappropriate influence from the rated entity or any other organization(s) or individual(s).

This credit rating report is used to support related decision making, and does not constitute a conclusion or recommendation that any particular decision(s) should be made.

Rating Summary

Company Name	Rating Type	Current Rating	Rating Date	Outlook/CreditWatch
China Construction Civil Infrastructure Corp. Ltd	Issuer Credit Rating	A_{spc}+	September 27, 2021	Stable



Credit Highlights

Strengths	Weaknesses
The company has a strict project investment policy and approval process. Projects can only be implemented upon approval of CSCEC.	Some of the company's projects are in areas with average economic and fiscal positions. A large number of projects lack a track record of stable operations and project repayments.
The company's projects are of relatively high quality. All PPP projects underway are on the PPP Management Database, and project receipts or VGF payments are included in the local government budget.	We view the company's financial leverage to be high, and many of its projects still require ongoing capital investment.
The company's projects have low market exposure risk, as return mechanisms are either government pay or VGF. Most projects have no market exposure risk.	
We consider its importance to CSCEC as high; as a wholly owned subsidiary of CSCEC, the company plays an important strategic role in developing its parent's infrastructure construction business.	

Outlook

The stable outlook on CSCEC Civil Infrastructure reflects our view that the company would gradually complete its current PPP projects and enter operation over the next 24 months. We also expect the company to continue to hold its strict investment approval process and investment standards for new investment projects. The company's debt level is expected to grow as its ongoing investment projects progress. However, as the projects gradually enter operation and gradually deliver returns, the leverage ratio and interest coverage ratio would remain relatively stable. As a wholly owned subsidiary of CSCEC, CSCEC Civil Infrastructure's strategic role of developing infrastructure investment is not expected to change, and it can continue to receive support from its parent CSCEC.

Upside scenario:

We might consider upgrading the rating of CSCEC Civil Infrastructure if:

1) The company's business risk profile improves while maintaining its current financial risk profile. Improvements to its business risk profile may include: i) the company develops a track record in project repayments after they enter operation, reducing the uncertainty in project repayments; or ii) the company's future projects are increasingly located in areas with stronger economic performance. Or

2) As the projects continue to collect repayments, the company gradually uses these proceeds to pay back its PPP project loans, reducing the company's financial risk on a sustainable basis. Or

3) The importance of the company within the CSCEC group increases.

Downside scenario:

We might consider lowering the rating of the company if:

1) The company's business risk profile deteriorates. This scenario could occur if i) there is a significant relaxation of the company's and CSCEC's requirements for management and investment of projects; or ii) the company's future projects have weaker regional exposure, or iii) Completed projects have poor operation of, seriously affecting project payback. Or

2) Group support is weakened. This scenario could occur if the company's importance to CSCEC is lowered, or CSCEC's indicative credit quality deteriorates significantly on a prolonged period, resulting in declining indicative support ability. Or

3) The company's control over the financial management of its projects changes significantly.

In our view, the last two scenarios are unlikely to occur in the foreseeable future.

Assumptions and Forecasts

Assumptions

- China continues to recover from the slowdown in economic growth caused by COVID-19, with full-year economic growth of 8% for 2021. Growth of infrastructure investment remains stable as before the epidemic.
- In 2021, the company's capital expenditure on PPP project construction is about RMB 10 billion to RMB 13 billion. Investment scale will decrease in 2022.
- From 2021 to 2022, PPP projects entering operation and non-PPP investment projects generate about RMB 1.5 billion to RMB 3.6 billion in repayments every year.
- From 2021 to 2022, the annual loan and interest repayments of PPP projects entering operation is around RMB 1.5 billion to RMB 2.5 billion.
- In 2021-2022, the company's EBITDA generated from project management fees and construction profits remains at RMB 2.5 billion to RMB 3.0 billion.

Forecasts

CSCEC Civil Infrastructure —— Key Metrics

	2019A	2020A	2021F
Debt/EBITDA (x)	4.5	8.0	10.0-13.0
EBITDA interest coverage (x)	3.5	3.3	2.0-2.5

EBITDA margin (%)	5.9	5.5	5.5-6.5
Adjustments for expected project receipts from PPP projects to cash flow for repayments:			
Debt/(EBITDA+expected project repayments) (x)	4.5	5.9	7.0-9.0
(EBITDA+expected project repayments) interest coverage ratio (x)	3.5	4.4	3.0-4.0
Minimum payment to principal and interest of PPP project debt coverage ratio (x)		1.2-3.3	

Note: Adjusted by S&P Global (China) Ratings. A—actual. F—Forecast. The minimum payment to principal and interest of PPP project debt coverage ratio is the minimum range of the predicted value for each project in the first three years of the operation period. 2019 data is based on restated financials.

Adjusted Financials and Ratios

Adjusted Financials and Ratios

(RMB, millions)	2018	2019	2020	2021.1-6
Revenue	36,532.8	43,282.0	47,952.0	23,446.5
EBITDA	2,032.0	2,533.9	2,622.5	2,197.2
Operating cash flow	1,500.7	1,665.7	1,625.2	--
Debt	5,853.8	11,323.3	20,862.1	--
EBITDA margin (%)	5.6	5.9	5.5	9.4
EBITDA interest coverage (x)	3.8	3.5	3.3	--
Debt/EBITDA (x)	2.9	4.5	8.0	--

Note: For main adjustments to financial data, please refer to the Appendix; 2. 2018-2019 data are based on restated financials; 3. "--" represents interim data not available.

Related Methodologies and Research

Related methodologies:

- S&P Global (China) Ratings-Corporate Methodology, 28 July 2020
- S&P Global (China) Ratings Supplemental Methodology—Transportation infrastructure Industry, 21 May 2019
- S&P Global (China) Ratings General Considerations on Rating Modifiers and Relative Ranking, 21 May 2019

Related research:

- Understanding S&P Global (China) Rating Corporate Methodology,28 July 2020
- Commentary: Understanding S&P Global (China) Ratings General Considerations On Rating Modifiers and Relative Ranking Methodology,29 June 2020
- Commentary: Understanding S&P Global (China) Ratings Approach To Support,8 May 2019

Historical Credit Rating Information

Issuer Credit Ratings

Rating Type	Ratings	Outlook	Rating Date	Analysts	Related Reports
Initial Rating	$A_{spc}+$	Stable	2021-1-25	Kexin Wang, Huang Wang, Renyuan Zhang, Yingxue Ren	Credit Rating Report: China Construction Civil Infrastructure Corp. Ltd, January 25, 2021
Surveillance	$A_{spc}+$	Stable	2021-9-27	Kexin Wang, Huang Wang, Renyuan Zhang, Yingxue Ren	Current Report

Related Methodologies and Models: Please refer to “Related Methodologies and Research” in the report.

Surveillance Purpose

In accordance with S&P Global (China) Ratings’ surveillance plan, we shall monitor the credit quality of the rated issuer on a periodic and an ongoing basis. This is periodic surveillance of the rated issuer.

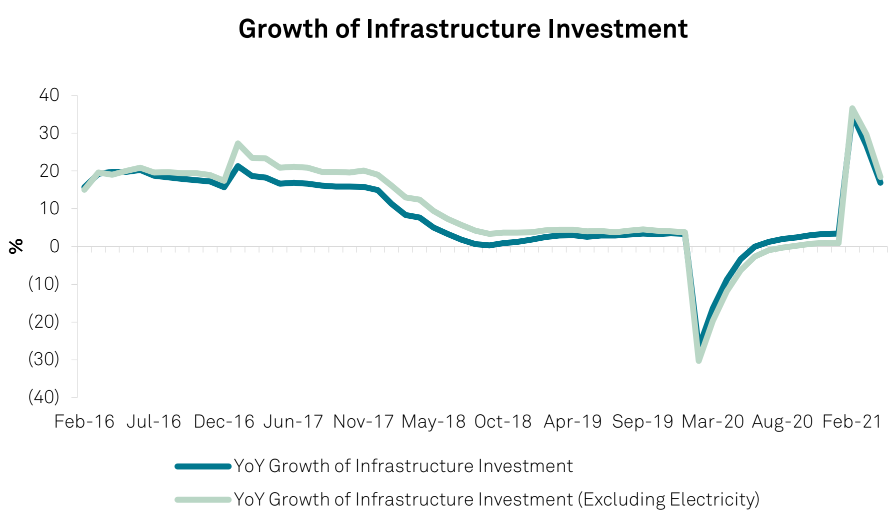
Economic and Industry Trends

As an important driver of economic growth, infrastructure investment is expected to maintain stable growth.

China is recovering from the slowdown in economic growth caused by COVID-19. As consumption growth continues to pick up, there is no sign yet that investment and net exports are flaming out. However, the overall nature of the recovery has been unbalanced. Large parts of the manufacturing sector are operating at or above capacity while other industries such as personal services and tourism are still facing weak demand. Despite potential tailwinds such as a slower-than-expected vaccine rollout and a tightening policy environment, we expect full-year economic growth of 8% for 2021 as the economy continues to gradually rotate towards private consumption, a necessary step if growth is to maintain momentum.

In our view, infrastructure investment has played an important role in driving China's economic growth in recent years and will continue to do so, with growth of infrastructure investment expected to remain stable. Recent years have however seen a decline in infrastructure investment growth. In 2019, total infrastructure investment (excluding electricity) increased 3.8% year-over-year. Amid the COVID-19 outbreak, infrastructure investment fell sharply at the beginning of 2020. However, the economic recovery and issuance of special bonds since then have seen a rapid uptick in infrastructure investment. Proposals announced in November 2020 regarding China's 14th Five-Year Plan and long-term goals for 2035 saw central authorities emphasize the need to promote infrastructure construction as a whole, with plans to speed up completion of infrastructure in under-developed regions, as well as promotion of new infrastructure, new urbanization projects, transportation, water conservation and other major projects. We expect infrastructure construction to remain central to efforts promoting stable economic development in the future. The rapid growth of infrastructure investment in the first quarter of 2021 was mainly due to the low starting base, given the impact of COVID-19 in the first quarter of 2020. Going forward, we expect infrastructure investment to maintain the stable growth patterns seen prior to the pandemic.

Chart 1



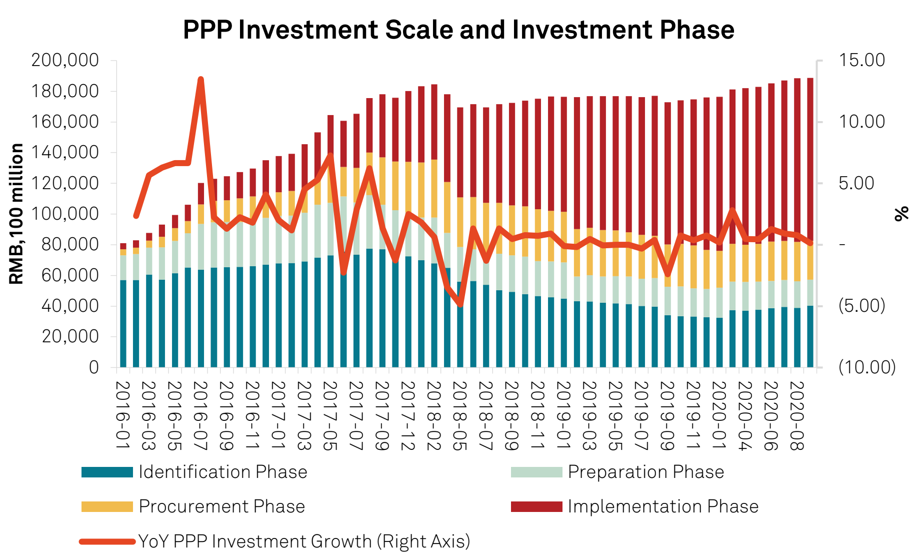
Source: Wind, S&P Global (China) Ratings

Looking ahead, we expect future PPP projects to continue to be of high quality. The state continues to oversee the quality of PPP projects, and the dynamic management mechanism is set to remain in place. Since 2014, PPP projects in China have gone through four phases: popularization and application, rapid development, tightened supervision, and standardized development. In 2014, authorities began to promote PPP. The State Council, the Ministry of Finance and other departments successively launched a series of policies in that year, with the aim of standardizing local government debt financing mechanisms and promoting cooperation between the government and private capital. As these policies and other measures were rolled out, a PPP process was established, leading to rapid development of this mode of investment. In November 2017, in order to prevent and control hidden debt risk brought about by PPP and to standardize operations of projects, the Ministry of Finance issued document [2017] No. 92, requiring strict enforcement of database standards for new projects, and for a review and clean-up of projects currently on the PPP Management Database, thus tightening supervision of PPP. According to the Ministry of Finance, as of April 23, 2018, 1,695 projects were removed from the PPP Management Database, involving RMB 1.8 trillion of investment. 2,005 projects were required to make changes to meet PPP standards, involving RMB 3.1 trillion of investment. The quality of PPP projects improved as a result, with significant improvements to completion rates. Following the November 2017 measures, PPP entered a period of stable development. Since October 2018, the State Council, the Ministry of Finance and other institutions have issued a number of policies to guide the standardized development of PPP, making clear provisions for the compliance of PPP, responsibility over financial expenditure and supportive policies.

In our opinion, the PPP model remains an important channel for infrastructure construction in China, but there is some pressure in terms of its growth rate.

PPP is an effective market-oriented model for promotion of infrastructure construction. It helps avoid increased potential hidden debts among local governments and can also prevent local governments from having to pay significant construction funds in a short period of time, helping authorities better control growth of local government debt. However, we expect that PPP growth may slow down in future, mainly based on two factors. First, the number of projects that can meet PPP standards is decreasing as such standards become stricter. Second, with the ongoing implementation of PPP, the proportion of local government's financial expenditure on PPP in regional fiscal budgets would gradually approach the upper limit of regulatory requirements. At the same time, PPP projects may be crowded out to some extent amid large-scale issuance of local government special bonds.

Chart 2



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

For investors, we view that some challenges exist regarding good management and operation of PPP projects. At present, major construction companies are the main driving force of PPP investment. Such entities have mature and well-established operational procedures and can access technical support for project financing and construction. However, PPP projects are still a relatively new concept for them. On one hand, operating infrastructure assets and carrying out traditional construction business are two very different skillsets. On the other hand, most PPP projects in the market are still under construction – there are relatively few projects that have entered long-term, stable operations. In terms of payment, it remains to be seen whether government-pay or VGF mechanisms can be sufficient and timely.

Anchor

Company Description

China Construction Civil Infrastructure Corp. Ltd ("CSCEC Civil Infrastructure" or "the company") was founded in 1983 and is a 100% holding first-tier subsidiary of China State Construction Engineering Corporation Ltd. ("CSCEC" or "parent").

The company's main businesses include PPP, financial investment-driven general contracting (FIDGC) and engineering, procurement and construction (EPC). As a major infrastructure investment company under CSCEC, the company is responsible for promoting the development of its parent's infrastructure business.

Prior to 2018, the company, acting as CSCEC's infrastructure business department ("infrastructure business department"), was responsible for the management and operations of its parent's infrastructure investment business. In February 2018, to further promote the development of its infrastructure investment business and add further incentive to such development, CSCEC turned the department into a legal entity and injected equity from each project held by infrastructure business units into CSCEC Civil Infrastructure as share capital.

The company is principally engaged in PPP projects, FIDGC projects and engineering, procurement and construction (EPC) contracting projects. For PPP projects under its control, the company is responsible for financing, investment, construction and subsequent operations. This process sees the company take some subcontracted profits and investment income. FIDGC projects are similar to PPP projects, with the main differences being their shorter payment periods, the company not being responsible for project operations and the main purpose being obtaining a fixed return on investment. For its EPC business, the company uses its market reputation and client resources to undertake general contractor mandates, which are then subcontracted to CSCEC's engineering bureaus. According to the nature and structure of PPP projects, most of the company's PPP projects rely on project repayments to cover principal and interest payments. Such income can also contribute to PPP project loan repayments.

In addition to projects undertaken in its own name, the company also works on investment projects in the name of CSCEC. For projects undertaken under the CSCEC brand, we understand that although these projects are not reflected in its financial statements, it holds investment and management rights, and has debt payment obligations for the project loans. Therefore, we have consolidated the corresponding assets, debts and income for such projects into CSCEC Civil Infrastructure's financial statements, to better reflect the actual operation and financial burden of the company. Unless otherwise specified, the investment status, assets, income, project repayments and financial leverage in this report are in accordance with the above adjustments. By the end of June 2021, the company had 21 PPP projects with total investment of around RMB 75 billion. The company also has investments in 25 PPP projects with minority shareholding, and 23 non-PPP projects, with total planned equity investment of RMB 23.5 billion in the latter. 5 of these non-PPP projects are BT projects, with total planned investment of RMB 3 billion. Total cumulative investment in BT projects has reached around RMB 2.9 billion, with repayments of RMB 1.7 billion.

Business Risk Profile

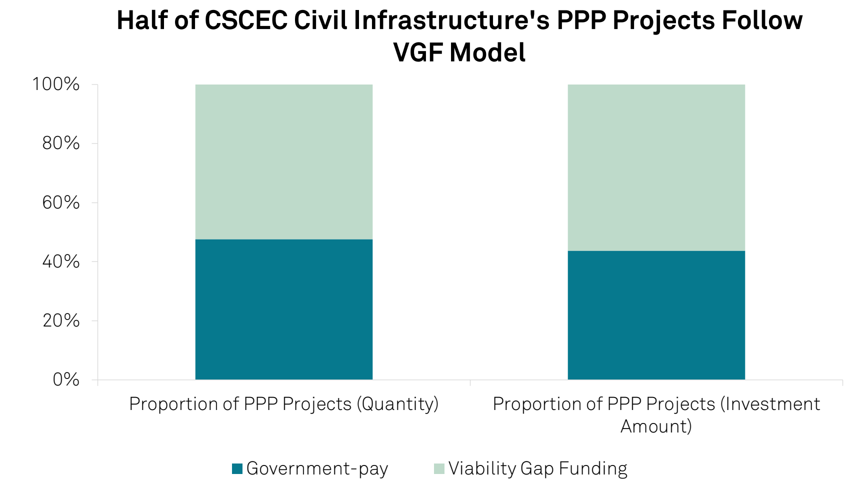
In our view, the company's "fair" business risk profile reflects its strict approach to investment, as well as the company's relatively good investment project return mechanisms, which we consider to have limited market risk exposure. The company's projects are spread across multiple regions, limiting its geographic concentration risk. However, these regions have average economic and fiscal positions. Half of the projects are under construction, and projects that are underway are mostly in the initial stage of operation. Few projects have an established track record of stable operations.

The company requires approval from CSCEC for all of its project investments. All projects are on the PPP Management Database and payments through government-pay and VGF mechanisms are included in the local government's fiscal budget.

In our view, the company has developed a sound investment approval policy and process and has maintained good discipline over its investments. The supervision of CSCEC over all the company's projects ensures their overall quality. CSCEC Civil Infrastructure, as a wholly owned subsidiary, bases its investment policy on that of its parent. According to internal regulations, all investment projects need to be submitted to CSCEC for full approval, and CSCEC has the final say on investment decisions. The parent company not only decides whether to invest in the project, but also controls the investment amount, investment method, financing amount and investment structure. Under this strict approach to investment, all the company's PPP projects are included in the Ministry of Finance's PPP Management Database and China Public Private Partnerships Center (CPPPC), and government-pay and VGF are included in the local government's fiscal budget.

For the projects in which the company has invested, we view their return mechanisms as good, with low market risk exposure. As of the end of June 2021, among the company's 21 PPP projects, ten had government-pay mechanisms, with total investment of around RMB 33 billion. The remaining eleven projects operate through VGF mechanisms, with total investment of around RMB 42 billion. None of them follow a purely user-pay mechanism. For the eleven VGF projects, the majority of project repayments can cover the required investment amount. For one particular project, subsidies account for a relatively low proportion of total investment. Upon entering operation, this project would be reliant on operations of its expressway business to achieve profit, giving it higher market exposure than the company's other PPP projects. However, from our analysis of this project and comparable expressways in other regions, we view its market exposure risk as controllable. The company's return mechanisms determine that its cash flows are more dependent on government payments which have been incorporated into the budget, and are not easily affected by market fluctuations or actual charges on the facilities.

Chart 3

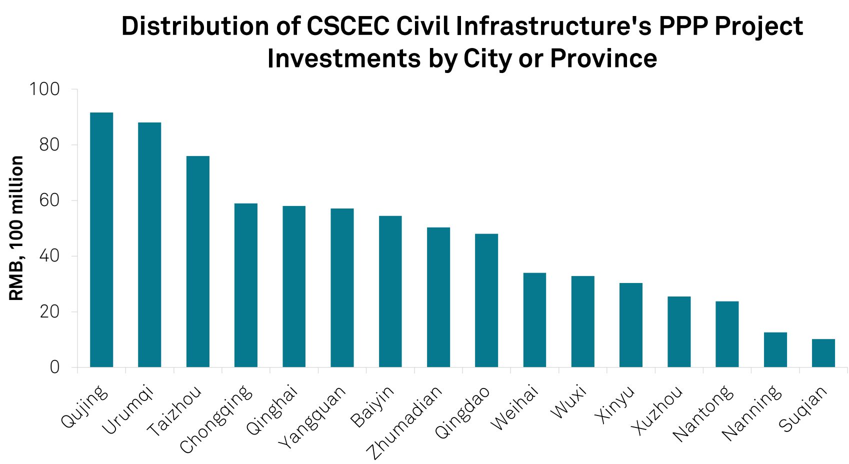


Source: CSCEC Civil Infrastructure, PPP Management Database, S&P Global (China) Ratings.

In our view, the regional exposure for the company's projects is overall slightly better than the national average level. However, certain regions where projects are located have fair economic and fiscal positions. The company's PPP projects are dispersed across different regions, some of which are economically strong while others are weaker or face relatively high debt ratios. The top seven cities in terms of the company's PPP investment are Qujing, Urumqi, Taizhou, Chongqing, Qinghai, Yangquan and Baiyin. Given that the company's projects comply with legal PPP requirements, with relevant PPP contracts signed and payments included in local government budgets, there is a low probability of not receiving payments. However, in our view, the stronger the economic and fiscal condition of a region, the lower the risk of delayed project payment. The regions where the company plans to implement future projects have relatively fair economic and fiscal strength.

In our view, the economic and fiscal strength of regions where the company's projects are located is overall slightly higher than the national average level. Certain regions are strong economically, while others are weaker with higher debt ratios.

Chart 4



Note: PPP projects refer to projects for which CSCEC Civil Infrastructure is responsible for financing and repayment.
Source: CSCEC Civil Infrastructure, PPP Management Database, S&P Global (China) Ratings.

We regard the regions in which the company has invested as relatively scattered. Concentration risk for both its PPP and FIDGC projects is relatively low. Investing in multiple regions can mitigate against risk of being exposed to payment delays in a single region.

In our view, some of the PPP projects are in the initial stages of operation or on trial runs, with few establishing a track record of stable operations. There remains some uncertainty over how future operations will affect the business. By the end of June 2021, 10 out of the company's 21 PPP projects had entered operation or partial operation, with the remainder under construction. Of the ten projects in operation (include partial operation), total investment amounted to RMB 30 billion, representing 40% of the total amount invested across all of the company's PPP projects. Although most of the company's PPP projects do not rely on fees generated from the projects for principal and interest repayments, to receive the project repayment from the governments, the company still needs to meet local government requirements through continuous project management and day-to-day operations (such as maintenance of infrastructure). The local government's assessment outcome is directly related to the project repayments. Therefore, in future, the company would still need to maintain high-quality operations to receive timely and full collection of repayments through government-pay or VGF mechanisms as agreed. At present, the company has set up an operations department to take charge of operations of future projects, formulating different operation guidelines for main infrastructure types. However, some uncertainty remains over the effect of future operations, as well as the ability to meet local government requirements and receipt of corresponding repayments. As the company's projects that are underway are mostly in the initial stage of operation or partial operation, the amount of stable repayments that can be generated is relatively small. For 2020 and the first half of 2021, the company's PPP projects received payments of around RMB 900 million and RMB 200 million respectively.

Financial Risk Profile

We view the company's financial risk as significant. Half of its projects are still under construction, and as that work progresses, we expect the company's debt scale to increase further and leverage ratio remain at a high level. However, the company's EBITDA and total project repayments provide relatively good coverage of interest. Thanks to their relatively good financing structure, we expect that once the company's main projects enter operation, they would be able to provide relatively good coverage of principal and interest repayments. PPP project financing provides some flexibility over repayments, allowing the company, to some extent, to handle repayment pressure caused by untimely collection of project repayments.

As construction progresses, we expect the company's funding requirement to keep growing and its leverage level to remain at a high level. As of June 2021, 11 of the company's 21 PPP projects are still under construction and are set to enter operation over 2021-2023. As construction continues, the company will continue to use PPP project construction loans. We estimate that the company's capital expenditure for PPP projects will be around RMB 10-13 billion for 2021. Total debt/(EBITDA and expected project payment) is expected to gradually increase from 5.9 times in 2020 to 7-9 times.

The company's EBITDA and project repayments can, in our view, provide relatively high coverage of the company's interest expense. Having looked at the company's main financing approach, we believe demand for the company to repay principal and interest during project construction is very low, and that repayment pressure usually emerges once a project begins operation. Although the company's leverage ratio is expected to rise during project construction, once more projects enter operation, the coverage ratio of the company's EBITDA and total project repayments to interest expense would gradually improve.

We expect the company's PPP projects to cover their respective principal and interest repayments relatively well upon entering operation. As the company's PPP projects have either government-pay or VGF return mechanisms, relatively few of the projects are highly dependent on operators for user payments. We anticipate that in the first three years of entering operation, the company's main projects will have an (EBITDA + accumulated project repayments)/principal and interest repayment ratio of around 1.2-3.3 times.

At the same time, the company's financing structure can, in our view, help maintain some flexibility over debt servicing. The company's debts are mainly project loans corresponding to PPP projects, and their repayment periods are largely in tandem with the projects' operation cycles. Thanks to its good relationship with financial institutions, the company can cope with some of the repayment pressure caused by the potential for any project's untimely collection of PPP project payments by adjusting its repayment schedule plan. As of March 2021, the company had obtained around RMB 37.6 billion in credit lines from major financial institutions, RMB 31.7 billion of which were undrawn.

Table 1

Adjusted Key Financial Data (RMB, millions)

	2018A	2019A	2020A	2021.1-6	2021F
Revenue	36,532.8	43,282.0	47,952.0	23,446.5	We expect the company's revenue scale to remain stable with a growth rate of 3.0%-8.0%. We estimate capital expenditure for PPP project to be about RMB 10-13 billion.
EBITDA	2,032.0	2,533.9	2,622.5	2,197.2	
FFO	1,500.7	1,665.7	1,625.2	--	
CFO	1,341.2	(3,686.4)	(7,344.4)	(1,992.1)	
Interest expense	528.3	726.6	804.1	445.6	
Debt	5,853.8	11,323.3	20,862.1	--	
Total equity	10,809.4	14,847.3	18,198.4	18,898.7	
Adjusted Financial Ratios					
Debt / EBITDA (x)	2.9	4.5	8.0	--	10.0-13.0
EBITDA interest coverage (x)	3.8	3.5	3.3	--	2.0-2.5
Adjustments for expected project receipts from PPP projects to cash flow for repayments:					
Debt/(EBITDA+expected project payment) (x)	2.9	4.5	5.9	--	7.0-9.0
(EBITDA+expected project payment) interest coverage (x)	3.8	3.5	4.4	--	3.0-4.0
Minimum payment to principal and interest of PPP project debt coverage ratio (x)			1.2-3.3		

Note: adjusted by S&P Global (China) Ratings. A—actual. F—Forecasted. The minimum payment to principal and interest of PPP project debt coverage ratio is the minimum range of the predicted value of each project in the first three years of the operation period. 2018-2019 data are based on restated financials. "--" represents interim data not available.

Source: Information provided by the company, S&P Global (China) Ratings.

Table 2

CSCEC Civil Infrastructure —Reconciliation of 2020 Reported Data with S&P Global (China) Ratings' Adjustments (RMB, millions)

	Total assets	Debt	Shareholders' Equity	EBITDA	Interest expense	EBITDA	CFO
Reported	28,653.3	6,549.4	14,748.3	1,016.8	323.2	1,016.8	(801.6)
S&P Global (China) Ratings' adjustments							
Interest expense						(323.2)	

Interest and dividend income						136.5	
Current taxes						(144.5)	
Accessible cash and liquid investments		(2,980.4)					
Interest and dividend adjustments							(341.4)
Hybrid securities		1,444.7	(1,444.7)				
Adjustment for items not included in the statement	44,054.8	15,848.4	4,894.7	1,605.6	480.9	939.6	(6,201.5)
Total adjustments	44,054.8	14,312.7	3,450.0	1,605.6	480.9	608.3	(6,542.8)
S&P Global (China) Ratings' Adjusted Amounts							
	Total assets	Debt	Shareholders' Equity	EBITDA	Interest expense	FFO	CFO
Adjusted	72,708.2	20,862.1	18,198.4	2,622.5	804.1	1,625.2	(7,344.4)

Source: company audit report, information provided by the company, S&P Global (China)Ratings.

Peer Comparison

We selected CSCEC FangCheng Investment & Development Group Co., Ltd. ("CSCEC FangCheng"), CCCC Investment Company Limited ("CCCC Investment"), CCCC Urban Holding Company Limited ("CCCC Urban") and China Railway Construction Investment Group Co.,Ltd. ("CRCC Investment") as peers to CSCEC Civil Infrastructure. These four companies all act as the main investment platforms for large-scale central government -owned construction enterprises in China. We view them as good peers to this company in terms of business and finance risk profiles.

In our opinion, the total assets and newly signed orders of CSCEC Civil Infrastructure are basically on a par with those of its peers. Given the company's role as an internal infrastructure investment platform for CSCEC with the mandate of increasing its parent's infrastructure orders, CSCEC Civil Infrastructure generally handles investment in very large-scale projects. CSCEC FangCheng is more focused on urban redevelopment and land reclamation. Such projects typically involve significant sums of money, with long development periods. CSCEC FangCheng signed many new orders over 2017 and 2018, which it is expected to continue working on for some time. Therefore, in 2019, the company limited the scale of its newly signed orders to better control its overall leverage ratio. CRCC Investment is an important investment platform for China Railway Construction Co., Ltd., and its investment business includes infrastructure investment, urban redevelopment and land development, so it has larger scale. Compared with its peers, CCCC Investment has fewer projects in its inventory, so its business scale is slightly lower than that of its peers.

In our view, the regions where CSCEC's investment projects are located have slightly weaker economic and fiscal positions than those of its peers. Thanks to their significant investment in areas with strong economic and fiscal positions like Beijing and Zhuhai, the regional exposures of CSCEC FangCheng and CCCC Urban's projects are relatively strong among the peer group. This may also be linked to the two companies being principally engaged in urban development. The regional exposure of CCCC Investment and CRCC Investment is in the middle of the peer group.

For most of the peer group, most PPP projects are under construction and few have entered operation. In this respect, there is relatively little differentiation between the companies. This is chiefly because PPP projects are generally under construction for 3-5 years. At present, most PPP projects in China are still in the construction phase, after the large-scale adoption of PPP in 2017. Over the next 1-2 years, each company may see a large number of their projects enter operation. We anticipate some challenges for CSCEC Civil Infrastructure and its peers in terms of operations for its infrastructure projects. Some uncertainty remains over whether the PPP projects and other investment and financing initiatives for these companies can meet government requirements after entering operation. The companies can obtain stable and sufficient project repayments if meeting these operational requirements.

In terms of financing, CSCEC Civil Infrastructure's average leverage ratio over 2018-2019 was the lowest among its peers. This is mainly because most of the company's PPP projects were in the initial development stages during that period, and the company had therefore drawn fewer project construction loans. As work on various projects for the period 2020-22 progresses, we expect adjusted total debt/EBITDA to gradually increase. We believe the investment and financing projects of CSCEC Civil Infrastructure and its peers can be characterized by their large investment amount and relatively long payback period, so their leverage levels are all relatively high, and their financial risks are basically similar.

Table 3

Business Profile

	CSCEC Civil Infrastructure	CSCEC FangCheng	CCCC Investment	CCCC Urban	CRCC Investment
Number of cities covered by investment and financing projects	25	9	14	11	10
Main business	Infrastructure investment	Urban development	Infrastructure investment + urban development + real estate	Urban development	Infrastructure investment + urban development
Top three cities for investment and financing projects	Qujing, Urumqi, Taizhou	Beijing, Tianjin, Xi'an	Zhangjiakou, Chengdu, Wenzhou	Zhuhai, Ningbo, Linyi	Chengdu, Beijing, Zhangjiajie
Regional exposure	Slightly better than average	Very Good	Relatively Good	Very Good	Relatively Good
2019 Operation data (RMB, 100 million)					
New contracts	448.6	19.4	N.A.	N.A.	831.6
Revenue	432.8	79.8	77.0	108.9	276.3
Cash and cash equivalent	124.9	78.1	65.0	60.5	41.6
Long-term receivables	203.5	304.8	352.2	101.2	183.4
Long-term equity investment	78.6	30.6	45.3	28.5	100.9
Inventory	0.0	21.8	171.7	77.2	56.2
Intangible assets	10.3	0.0	160.7	0.1	517.0
Total assets	641.0	628.4	966.9	325.9	1,205.8

Table 4

Financial situation (average in 2018-2019, RMB, millions)

	CSCEC Civil Infrastructure	CSCEC FangCheng	CCCC investment	CCCC Urban	CRCC investment
Revenue	39,907.4	8,248.4	7,104.2	7,723.5	22,117.8
EBITDA (adjusted)	2,224.6	1,449.8	4,403.7	1,843.4	3,744.2
Interest expense(adjusted)	631.2	488.3	1,224.3	566.2	2,836.5
CFO	(1,229.3)	(4,448.9)	(6,596.1)	2,206.1	(793.9)
FOCF	(1,815.4)	(4,461.0)	(8,603.2)	2,083.0	(11,683.7)
Debt (adjusted)	8,588.5	21,923.7	38,719.4	10,508.4	64,916.5
Shareholders' equity	12,828.3	13,680.8	26,373.3	8,058.8	18,682.8
Financial ratio					
Debt / EBITDA (x)	3.8	16.7	8.7	6.3	17.3
EBITDA interest coverage (x)	3.6	3.3	3.7	3.4	1.3
CFO / Debt (%)	(5.3)	(20.2)	(17.2)	21.0	(2.1)
FOCF / Debt (%)	(11.4)	(20.3)	(23.4)	19.8	(18.9)

Source: CSCEC Civil Infrastructure data include off-balance sheet items. The long-term receivables of CSCEC Civil Infrastructure include long-term receivables from its investments in other non-current assets. Due to limited available data, long-term receivables data for peers are taken from companies' statements. Operations data for four peer companies (CSCEC FangCheng, CCCC investment, CCCC Urban and CRCC investment) all from public information. Due to the limited disclosure of public information, operation data for CSCEC FangCheng is as of end of 2019, data for other peers is as of June 2020. S&P Global (China) Ratings.

Stand-alone Credit Profile

Liquidity

We view the company's liquidity as adequate and expect liquidity sources to cover more than 1.2 times of liquidity uses in the next year. The company's main liquidity uses over the next year will be ongoing investment in PPP projects. At present, all loans for PPP projects under construction have been received and can basically meet the company's capital expenditure requirements. Projects entering operation would gradually face increased capital demand for scheduled principal and interest repayments, which can be met through returns from PPP projects repayments and retained income associated with project construction.

Table 5

Principal Liquidity Sources	Principal Liquidity Uses
Adjusted cash and cash equivalents of around RMB 9.7 billion;	About RMB 1.5-2.0 billion of debt and interest maturing in the next 12 months;
Total undrawn existing project loans of around RMB 15 billion;	About RMB 10.0-13.0 billion of capital expenditure on PPP project construction over the next 12 months;
In the next 12 months, project management fees of around RMB 2.5-3.0 billion;	About RMB 400 million to RMB 500 million of dividends to be paid to the parent company over the next 12 months.
In the next 12 months, about RMB 1.5-3.6 billion in repayments to be collected from PPP and non-PPP investment projects.	

Note: Data as of end of June 2021.

Source: Data provided by the company, S&P Global (China) Ratings.

Table 6

Debt and Interest Maturity Overview

Year	Amount (RMB, millions)
2021	763.1
2022	2,157.9
2023	2,502.6
2024	2,449.1
2025	2,525.2
Total	10,397.9

Note: Data as of the end of June 2021.

Source: Data provided by the company, S&P Global (China) Ratings.

Other Considerations

During the surveillance period, the chairman, directors and other senior management personnel of CSCEC Civil Infrastructure changed, mainly due to internal transfer of personnel within CSCEC. We expect the abovementioned changes to the company's senior leadership to have no significant impact on daily operations and management, and do not believe they affect the credit quality of CSCEC Civil Infrastructure.

Past Debt Performance

According to the "Company Credit Report" and other relevant materials provided by client, as of August 31, 2021, the company's debt obligations had been repaid on time, with no delay in payment of principal and interest. According to public information, as of the date of this report the company has no record of credit default in the open market.

Issuer Credit Rating

As a wholly owned subsidiary of CSCEC, we consider the company as being of high importance to its parent CSCEC. As one of China's largest construction company and among the largest in the world, CSCEC is also among the country's largest real estate developers. Under the indirect control of the State-owned Assets Supervision and Administration Commission (SASAC) under the State Council (through a 56.3% stake), CSCEC has strong technical prowess and performance on difficult and complex projects, as well as outstanding scale advantages, excellent operating efficiency and cost control ability. Its financial risk is relatively low. Meanwhile, as the leader in the construction industry, CSCEC can receive a high level of support from the government. In our view, CSCEC has very strong indicative credit quality.

In our view, the high level of importance of CSCEC Civil Infrastructure to CSCEC is mainly reflected in the following aspects:

- CSCEC has full control over CSCEC Civil Infrastructure, its 100% wholly owned subsidiary.
- As an important entity under CSCEC in promoting its infrastructure construction business, CSCEC Civil Infrastructure plays an important strategic role in the implementation and rapid development of CSCEC's infrastructure business and has made major contributions to its parent's strategic development in the infrastructure sector. In the next 3-5 years, we do not expect CSCEC to change direction on treating its infrastructure construction and operation business as an important area of development.
- CSCEC has very strict control over its investment business. All investment and financing plans for the company's projects require full approval from CSCEC, and CSCEC closely tracks the implementation of each project. Its strict investment approval procedures and oversight of the company enable CSCEC to provide timely support in the extreme situation where the company may face a significant number of serious delays in collecting project payments.
- CSCEC Civil Infrastructure relies on CSCEC and benefits from various resources and advantages brought by the group's reputation. Meanwhile, CSCEC Civil Infrastructure has carried out many PPP investment activities in the name of CSCEC. Its performance in the credit market has had a significant impact on the reputation of the CSCEC group.
- CSCEC is unlikely to divest or sell the company. Since 2018, CSCEC has injected capital into the company for three consecutive years.
- The two pillar businesses of CSCEC remain engineering and construction and real estate development. Infrastructure is an important segment for the future development of CSCEC. In our opinion, investment business is of lower importance to CSCEC than the abovementioned businesses. Therefore, the importance of investment business to CSCEC has not yet reached a critical level.

We view CSCEC Civil Infrastructure as being of high importance to CSCEC. Their synergy is strengthened by the strict management of CSCEC over its subsidiary. CSCEC is unlikely to sell or divest the company in the future.

Rating Score Snapshot

Issuer Credit Rating

A_{spc}+/Stable

Business Risk Profile：4/Fair

Industry Risk Ranking：2/Low

Competitive Position：4/Fair

Financial Risk Profile：4/Significant

Anchor：bb+

Adjustments

Diversification: Neutral (no impact)

Capital Structure: Neutral (no impact)

Financial Policy: Neutral (no impact)

Liquidity: Adequate (no impact)

Management and Governance: Neutral (no impact)

Holistic：Neutral (no impact)

Stand-alone Credit Profile：bb_{spc}+

External Influence：+6

Appendix

Appendix 1： Rated Entity's Main Investment Projects

PPP Projects Underway as of end of June, 2021

Project	Included in PPP Management Database (Y/N)	Has project entered operation? (includes partial operation)	City	Province	Total Investment (RMB, 100 millions)	Return Mechanism
Zhumadian Provincial Roads (241, 330, 331) Reconstruction Project	Yes	Yes	Zhumadian	Henan	28.6	Government-pay
Zhumadian National and Provincial Trunk Road Upgrade Project	Yes	No	Zhumadian	Henan	21.7	Government-pay
Taizhou Bay Luqiao-Tongyu-Jiaojiang-Binhai Highway Project	Yes	No	Taizhou	Zhejiang	45.6	Government-pay
Taizhou Linhai-Huixi-Yanjiang Section of Yuyao-Wenling Highway Reconstruction Project	Yes	No	Taizhou	Zhejiang	30.4	Government-pay
Gansu-Baiyin-Zhongchuan-Yongdeng Highway Phase II Project (route G341)	Yes	No	Baiyin	Gansu	54.5	Viability Gap Funding
Xuzhou Underground Project	Yes	No	Xuzhou	Jiangsu	2.8	Viability Gap Funding
Nanning Wuxiang New District Underground Project	Yes	Yes	Nanning	Guangxi	12.6	Viability Gap Funding
Jiangyin 1310 (phase I) Urban and Rural Construction Project	Yes	Yes	Wuxi	Jiangsu	32.9	Government-pay
Chongqing Guojiatuo Bridge and South Extension Project	Yes	No	Chongqing	Chongqing	59.0	Government-pay
Qingdao West Coast New Area Gongbei-Haikou Road Underground Project	Yes	Yes	Qingdao	Shandong	15.3	Viability Gap Funding
Qingdao West Passenger Station Municipal Road and Pipe Project	Yes	Yes	Qingdao	Shandong	4.8	Viability Gap Funding
Qingdao Fitness Center Project	Yes	Yes	Qingdao	Shandong	27.9	Viability Gap Funding
Yangquan National Highway Routes 307 and 207 Project	Yes	No	Yangquan	Shanxi	57.1	Viability Gap Funding
Rutong Urban Expressway Project	Yes	Yes	Nantong	Jiangsu	23.8	Government-pay
Weihai International Economic and Trade Exchange Center Project	Yes	Yes	Weihai	Shandong	34.0	Government-pay
Suqian Urban Road Project	Yes	No	Suqian	Jiangsu	10.1	Viability Gap Funding
Qujing-Sanbao-Kunming-Qingshui Expressway Qujing Section Project	Yes	Yes	Qujing	Yunnan	91.6	Viability Gap Funding
National Highway Route 206 Xuzhou Section Project Jingtai Interchange Project	Yes	No	Xuzhou	Jiangsu	22.7	Government-pay
Xinjiang Urumqi International Airport North Area Reconstruction and Expansion Project	Yes	No	Urumqi	Xinjiang	88.0	Viability Gap Funding
Qinghai Jiading Xihai Highway Project - JX-2	Yes	No	Qinghai	Qinghai	58.0	Viability Gap Funding
Jiangxi Xinyu First-Class National and Provincial Highway Reconstruction Project	Yes	Yes	Xinyu	Jiangxi	30.3	Government-pay

Note: The total investment of project is from the disclosure in PPP management database of China Public Private Partnerships Center.

Data source: provided by the company, PPP management database of China Public Private Partnerships Center, and S&P Global (China) Ratings.

Other major investment projects as of September 2020 (RMB, 100 millions)

Project	Project Type	Total Investment (RMB, 100 millions)

Qingdao Metro Line 8 FIDGC Project	FIDGC	1.1
Taiyuan-Zhongwei (Yinchuan) Railway Equity Investment Project	FIDGC	10.0
Taizhou Coastal Expressway FCP + PPP Project	FIDGC	12.7
Weifang-Rizhao National Expressway Section FIDGC Project	FIDGC	7.7
Tangshan-Caofeidian Railway FIDGC Project	FIDGC	4.0
Jinan-Qingdao High Speed Railway Investment Project	FIDGC	3.0
West Zibo-Laiwu Binlai Expressway FIDGC Project	FIDGC	4.8
Beijing-Shanghai Jinan Section FIDGC Project	FIDGC	9.3
Linyi-Rizhao Section of Lunan Express Railway Project	FIDGC	0.1
Wuhan Fourth Ring Road West Section Project	FIDGC	3.1
Inner Mongolia Expressway Project	FIDGC	20.0
Guangdong Foshan Rail Transit Line 3 PProject	FIDGC	8.0
Hebei Taihang Mountain Expressway Project (I)	FIDGC	20.7
Shijiazhuang Expressway (Xifu, Jinshi, pingzan, Shiheng) Project	FIDGC	35.2
Cangzhou Beijing Hyundai Motor Industrial Park Project	FIDGC	1.0
Zhengzhou Rail Transit Line 3	FIDGC	30.3
Xuzhou Urban Rail Transit Line 3 phase I Project	FIDGC	20.9
Tangshan-Zuncao Highway Project	BT	8.6
Baotou Xindu District Construction Project	BT	5.9
Wuzhou National Highway Route 207, Tenglong Avenue Construction Project	BT	2.3
Xuzhou Guanyin Airport Phase II Expansion Project	BT	7.2
Nanchang Zhongnan Avenue Extension Project	BT	6.4
Jiangxi Province 13th Five Year Plan Water Transport Project	Other	12.5

Note: FIDGC – Financial investment-driven general contracting. BT – Build-transfer. Data source: provided by the company, PPP management database of China Public Private Partnerships Center, and S&P Global (China) Ratings.

Appendix 2： Key Financial Data

CSCEC Civil Infrastructure: Key Financial Data (RMB, in millions)

	2018	2019	2020	2021.1-3
Cash and cash equivalent	4,286.9	5,222.2	5,960.7	5,936.4
Fixed assets	19.5	14.3	256.6	254.2
Total assets	19,122.9	23,400.3	28,653.3	30,286.8
Short term borrowings	0.0	0.0	950.0	500.0
Notes payable and accounts payable	1,404.3	2,518.4	3,185.1	3,449.4
Non-current liabilities due within one year	370.3	1,274.1	29.7	95.7
Long term borrowings	5,277.7	4,596.6	5,593.2	5,808.9
Bonds payable	0.0	0.0	0.0	0.0
Shareholders' equity	9,114.5	11,680.9	14,748.3	15,410.0
Revenue	1,140.2	4,359.0	10,465.4	3,399.4
COGS	747.0	3,282.6	8,740.2	2,610.4
Selling expenses	0.1	0.0	0.0	0.0
Administrative expenses	140.6	258.7	304.2	78.0
Financial expenses	241.9	228.7	276.3	39.4
Total profit	234.3	574.6	720.0	682.0
Net profit	144.4	416.9	564.2	658.4
Cash inflow from operating activities	3,878.3	8,983.2	17,031.6	4,658.3
Cash outflow from operating activities	(4,241.8)	(8,943.3)	(17,833.2)	(4,803.3)
Net cash flow from operating activities	(363.4)	39.9	(801.6)	(144.9)

Cash inflow from investment activities	2,724.0	400.0	2,118.2	829.8
Cash outflow from investment activities	(2,361.3)	(506.0)	(3,429.4)	(436.9)
Net cash flow from investing activities	362.7	(106.0)	(1,311.2)	392.9
Cash inflow from financing activities	1,201.0	1,768.2	6,623.2	248.3
Cash outflow from financing activities	(726.9)	(797.6)	(3,772.0)	(524.7)
Net cash flow from financing activities	474.1	970.6	2,851.2	(276.4)

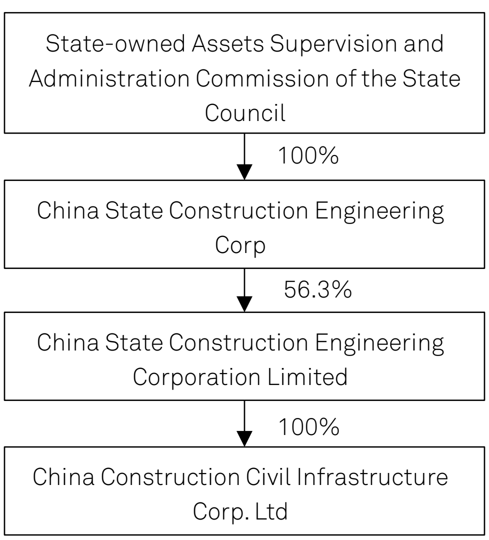
Adjusted financial data and indicators

	2018	2019	2020	2021.1-6
Debt	5,853.8	11,323.3	20,862.1	--
EBITDA	2,032.0	2,533.9	2,622.5	2,197.2
FFO	1,500.7	1,665.7	1,625.2	--
CFO	1,341.2	(3,686.4)	(7,344.4)	(1,992.1)
FOCF	1,122.0	(4,291.4)	(8,014.9)	(2,037.8)
DCF	552.7	(4,800.7)	(8,606.8)	(2,037.8)
EBITDA margin (%)	5.6	5.9	5.5	9.4
ROC（%）	17.3	11.9	8.1	--
EBITDA interest coverage (x)	3.8	3.5	3.3	--
FFO interest coverage (x)	4.4	3.3	2.9	--
Debt / EBITDA (x)	2.9	4.5	8.0	--
FFO / Debt (%)	25.6	14.7	7.8	--
CFO / Debt (%)	22.9	(32.6)	(35.2)	--
FOCF / Debt (%)	19.2	(37.9)	(38.4)	--
DCF / Debt (%)	9.4	(42.4)	(41.3)	--

Note: 1. The financial data in the above table are based on the standard unqualified opinions audit reports by PwC Zhongtian (2018) and Tianzhi International (2019-2020), restated numbers are used for 2018-2019; 2. The adjusted financial data and indicators are those adjusted by S&P Global (China) Ratings; 3. "--" represents interim data not available.

Source: company audit report, S&P Global (China) Ratings.

Appendix 3: Ownership Structure of the Rated Entity as of end of June 2021



Appendix 4: Organizational Structure of the Rated Entity as of end of June 2021

For organizational chart, please refer to the Chinese report.

Appendix 5: Key Terms

Key Terms
EBITDA (reported) = Revenue - COGS - SG&A - R&D + D&A(reported) - Taxes and surcharges - Other operating expenses(income)
EBITDA = EBITDA (reported) + OLA rent - Capitalized development cost + Capitalized interest in COGS + Dividend received from equity investments + Other adjustments
D&A = D&A (reported)+ OLA depreciation + Other adjustments
EBIT = EBITDA (reported) + OLA rent - Capitalized development cost + Capitalized interest in COGS - D&A + Non-operating income (expense) + Other adjustments
Interest expense = Interest expense (reported) + Capitalized interest + OLA interest expense + Hybrid dividend accrual + Other adjustments
Cash interest paid = Cash Interest expense + Hybrid dividend cash payment + Other adjustments
FFO = EBITDA - Interest expense + Interest and dividend income - Current tax + Other adjustments
CFO = CFO (reported) + OLA depreciation - Capitalized development cost - Hybrid dividend cash payment - Cash interest expense + Dividends received + Other adjustments
Capital expenditure = Capital expenditure (reported)- Capitalized development cost + Other adjustments
FOCF = CFO - Capital expenditure
Dividends = Cash dividends + Dividends to minority interest - Hybrid dividend cash payments
DCF = FOCF - Dividends
Short-term debt = Shot-term loan + Financial liabilities held for trading + (Account payable - margin for payables) + Current portion of non-current liabilities (interest-bearing) + Interest payable + Other interest-bearing short-term debt
Long-term debt = Long-term loan + Bond + Financial lease payable + Lease obligation + Provisions - Guarantees & litigations + Other interest-bearing long-term debt
Debt = Short-term debt + Long-term debt + OLA debt - Surplus cash + Asset retirement obligation debt adjustment + Hybrid securities + External guarantees & litigations + Other adjustments
Capital = Total equity - Hybrid securities + Debt + Deferred taxes + Other adjustments
EBITDA interest coverage = EBITDA/Interest expense
FFO interest coverage = (FFO + Interest expense)/ Cash interest paid
ROC = EBIT/Two-year average capital
EBITDA Margin = EBITDA/Revenue

Appendix 6: Ratings Definitions

Category	Definition
AAA_{spc}	The repayment ability is extremely strong, generally not impacted by any adverse economic environment, and the default risk is extremely low.
AA_{spc}	The repayment ability is very strong, not considerably impacted by any adverse economic environment, and the default risk is very low.
A_{spc}	The repayment ability is comparatively strong, comparatively vulnerable to the impact of adverse economic environment, and the default risk is comparatively low.
BBB_{spc}	The repayment ability is average, comparatively impacted by adverse economic environment, and the default risk is average.
BB_{spc}	The repayment ability is comparatively weak, materially impacted by adverse economic environment, and the default risk is comparatively high.
B_{spc}	The repayment ability relies comparatively on fair economic environment and the default risk is very high.
CCC_{spc}	The repayment ability relies extremely on fair economic environment and the default risk is extremely high.

CC_{spc}	Lower protection in situation of bankruptcy or reorganization and the repayment of debt may not be generally guaranteed.
C_{spc}	Unable to repay the debt.

*Ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the rating categories.

Appendix 7： Surveillance Plan

S&P Ratings (China) Co., Ltd. shall monitor the credit quality of the rated issuer on a periodic and an ongoing basis. If any material credit events are likely to change the credit quality of the issuer, we will conduct ad-hoc surveillance, and determine whether the outstanding ratings need to be adjusted.