



China Railway Construction Corp. Ltd (CRCC)

BUY: CNY 12.11-12.23

Analysts

Enrico Conforto

enrico.conforto@studbocconi.it

Edoardo Ferri

edoardo.ferri@studbocconi.it

Andrea Brangi

andrea.brangi@studbocconi.it

Luciano Valerio

luciano.valerio@studbocconi.it

Victoria Di Vito

victoria.divito@studbocconi.it

Supervisors

Gianmaria Bartoccioni, Head of Equity Research

gianmaria.bartoccioni@studbocconi.it

Tommaso Beverina, Head of Research

tommaso.beverina@studbocconi.it

(CNY M)	FY18A	FY19A	FY20A	FY21E
Gross Profit	71412	80087	84338	93544
EBITDA	34355	36436	38234	44270
Gr Rate (%)	20.6	6.1	4.9	15.8
EBIT	33627	35757	38233	40835
Margin (%)	5.16	15.42	7.73	7.73
Net Income	19838	22624	25709	26940

Key Executives

Wang Jianping Chairman of the Board
Zhuang Shangbiao President, Executive Director

2020 annual announcement Highlights

- Significant expansion and consolidation on overseas markets.
- Constant revenues growth of more than 9% YoY.
- Extreme resilience to Covid-19: slight increase in new contracts and very low decrease in output.

Basic Information

Last Closed Price	CNY 8.07
12M Target Price	CNY 12.11-12.23
+/- Potential	50%
Bloomberg Ticker	601186.SS
GICS Sector	Industrials
GICS Sub-Industry	Engineering & Construction

12 Month Price Performance (Yahoo Finance)



Company Description

China Railway Construction Corp. Ltd is a construction corporation under the administration of the State-owned Assets Supervision and Administration Commission of the State Council of China. It operates in project contracting, survey and design consulting, equipment manufacturing, material and logistic.

Key Financials

Market Cap	CNY 101.7B
Basic Shares O/S	13579.54M
52-Wk High	CNY 10.25
52-Wk Low	CNY 7.24
Fiscal Year End	31-Dec-2020

Summary

CRCC is a vertically integrated leading construction company in China, operating mainly as a project contractor, covering transportation infrastructures, but also energy-generating plants and real estate. The global and Asian engineering civil construction sector is in great shape. The company mainly operates in emerging markets where the demand of infrastructures is rising sharply, mainly because of increasing population, GDP per capita, and environmental concern, leading to higher demand for railways construction, where the company has a competitive advantage.

The Chinese market is close to an oligopoly with few very big publicly owned companies covering the whole demand. In this environment, CRCC is well positioned, and it covers most of the value chain.

Financially, the company is experiencing a notable and constant increase in revenues (+9% per year). The financial analysis has underlined that there might be some issues in the future regarding liquidity, especially since the debt ratios are well above industry average. Also, profitability ratios are still below average, but recovering.

Investment Thesis

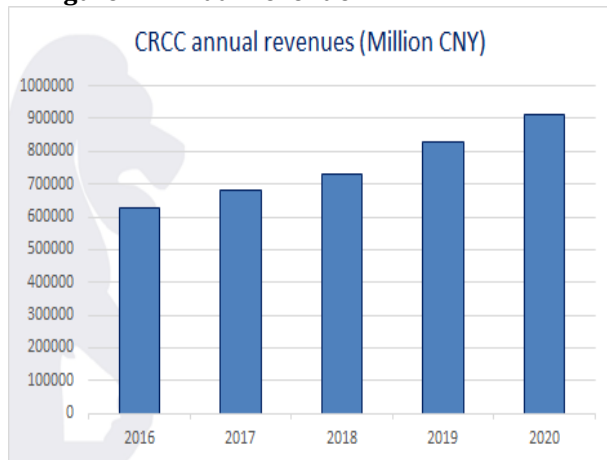
After having performed our valuations, our recommendation is a "BUY", indeed we believe that CRCC's shares are currently underpriced by the market. We performed a DDM analysis, due to constantly increasing dividends compared to very unstable cash flows.

The target price obtained from the model is 12.23¥.

To check for our results, we also performed a market multiples analysis, using both asset-side and equity-side multiples. The average price suggested by the different multiples was 13.38¥, which is slightly higher than the DDM target price due to a slight bias given by extreme values. To control for this, we computed the average price using multiples calculated on median values. In this case the price target is 12.11¥, which is coherent with DDM results. The target price range is then 12.11¥-12.23¥.

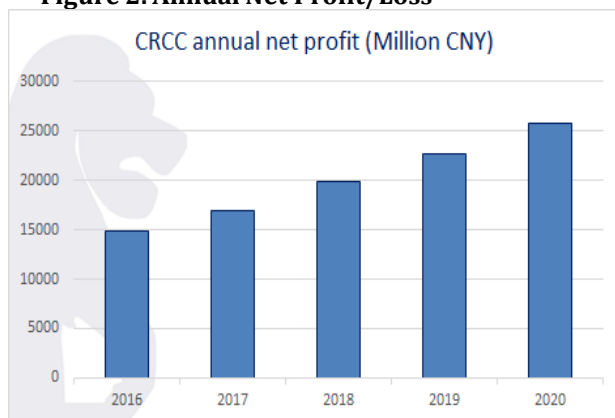
The valuation suggests that stocks are underpriced, and it hints for a "STRONG BUY" (+50%). However, given the many investment risks that we pointed out and the high uncertainty deriving from investing in emerging markets, and in particular in China, we recommend a more cautious "BUY".

Figure 1. Annual Revenue



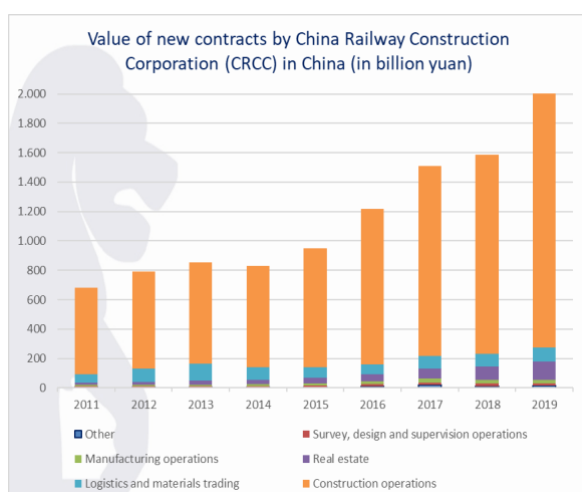
Source: Minerva Investment Management Society

Figure 2. Annual Net Profit/Loss



Source: Minerva Investment Management Society

Figure 3. Value of new contracts by CRCC in China



Source: Statista

Company Overview

China Railway Construction Corporation Limited (CRCC) is one of the world's largest construction corporation. It is headquartered in Beijing and it is under the administration of the State-owned Assets Supervision and Administration Commission of the State Council of China (SASAC). Since 2008 CRCC is listed in Shanghai and Hong Kong stock exchanges, with a registered capital RMB 13.58 billion. The company provides its services in nearly 100 countries all over the world, particularly in Asia and Africa. In the last decade CRCC has signed several contracts with ECOWAS (Economic Community of West African States) countries as the construction of Abuja – Itakpe – Lokoja railway line in Nigeria and a project contract for 50,000 houses at Port Bouët in Côte d'Ivoire.

China Railway Construction Corporation Limited main business areas are project contracting, survey and design consulting, equipment manufacturing, material and logistics.

Project contracting is the core business of the company and it covers different infrastructures as railways, highways, bridges, tunnels, water conservancy, hydropower, and urban track.

Through the Survey and Design section, China Railway Construction Corporation Limited promotes the evolution of traditional design enterprises in more comprehensive engineering companies. CRCC has two subsidiaries, CRCC High-Tech Equipment Corporation Limited and China Railway Construction Heavy Industry Corporation Limited, that operate in the railway maintenance and equipment field.

Another subsidiary of the company is China Railway material Group Co, which is a supplier of railway materials and an engineering logistics system service provider. CRCC is also present in the real estate business by adhering to the regional layout strategy and focusing on the most developed city in the Chinese mainland.

Industry Outlook

The global construction industry value is forecasted to reach 1110 USD billion by 2024, registering a CAGR of 9.2% during the forecast period (2021-2024), as reported by GlobeNewswire.

Key Highlights

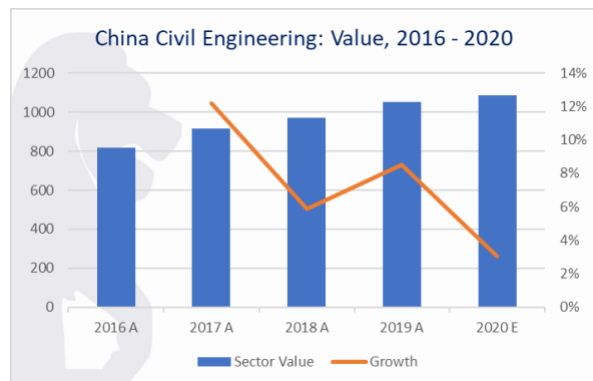
- Numerous developed countries are predicted to experience an infrastructure boom as many of their infrastructure is in need of upgrades and repairs.
- While it is not the largest market yet, the Asia-Pacific region is set to overtake the USA in terms of market size by the forecast date, and it is the fastest growing region today.
- Rail transportation is increasingly seen as a better and cleaner alternative to road transportation or even naval in some cases, due to its increases in efficiency and a global shift towards sustainable alternatives.

Boom in infrastructure construction

The global infrastructure sector is predicted to pick up substantial momentum in the following years; especially in North America, Europe and Asia Pacific; the three key players in this industry. In the USA and Europe, the infrastructure built after the great depression and post WWII do need processes of renovation, and it is time for many countries to refurbish its roads and railways. Moreover, COVID-19 helped accelerate this revamp as the Chinese Government will act against unemployment rate (that is still very low, 4.2%, according to Statista) through massive investments in the sector.

To keep up with the economic growth and climate change in the Asia Pacific region, an estimated \$1.7 trillion in infrastructure investments are needed. Meanwhile, the US and EU are spending an annual \$400 billion and \$800 billion annually on public infrastructure. A good part of this is spend on upkeep, and it is estimated that an additional \$2 trillion in infrastructure investments is necessary by 2025 to meet demand and reduce negative impacts on the economy.

Figure 4. China Civil Engineering: Value, Source: Statista
2016 – 2020



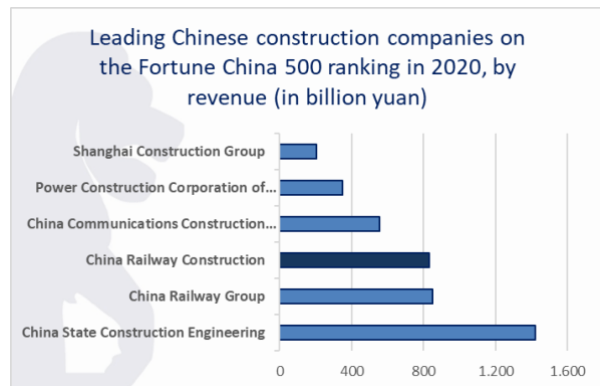
Source: Market line

Figure 5. China Civil Engineering: Value Forecast, 2020 – 2025



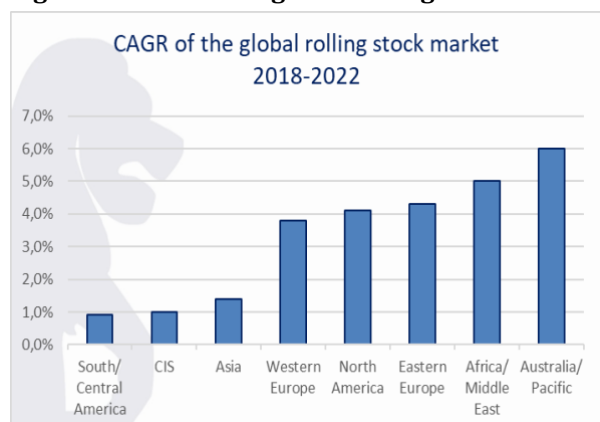
Source: Market line

Figure 6. Leading Chinese construction companies



Source: Statista

Figure 7. CAGR of the global rolling stock market 2018-2022



Concern for the environment helping the railway sector

Pre-pandemic railway sector had been experiencing significant growth, both due to the continuous increase in demand for tourism related travelling and investments from governments looking for a greener mode of transportation. We therefore expect this trend to continue in the medium run, (CAGR of 4.6% for 2021-2027 for railway construction) as the global economy recovers from the pandemic and investments towards green transportation solutions increase. Improvements in efficiency and technology have made this a greener alternative, but a cheaper and safer one as well.

Policies such as the European Green Deal and the US government's investments in green energy and transportation provide a positive and outlook for the industry. The US has committed an investment of \$320 million in railway infrastructure improvements across the country in 2021 alone, after seeing the need to upgrade its network. Meanwhile the EU invested \$540 million as part of its green initiative and to improve connections between member states. Consumers are also becoming more conscious of their choices, and so demand for rail transportation is expected to rise. In recent times, technology has led to an improvement in freight car designs, while more efficient locomotives have reduced energy consumption, pollution and greenhouse gas emissions, allowing for trains to be 75% more efficient on average than trucks for freight transportation – their biggest competitor.

Rivalry

This market is geographically segmented, and usually state owned, or domestic companies are contracted for work in the developed countries. However, in many Third World countries local companies lack the size and technology to engage in substantial infrastructure projects, so foreign companies will often be contracted. Hence why there are numerous Chinese companies being contracted for projects in Sub-Saharan Africa and Central Asia; but this rarely happens in Europe or the USA. These less developed countries are an untapped potential for the infrastructure construction industry, as they will require better highways and railway systems in order to keep growing.

China in particular is a prominent player in infrastructure construction both domestically and abroad. Internally, it is developing the largest high-speed rail network in the world and is looking to complete it in the following years. Moreover, due to China's belt and road initiative many substantial investments in numerous countries in central Asia and Africa have been realized through the development of infrastructure, including highways, ports, airports and railways.

One setback of this industry is that it is very capital intensive, and any project requires a considerable amount of funding, pre-planning and engineering. Hence, it can take a long time for projects to get approved and for funding to be collected; it is not uncommon for projects to be cancelled due to lack of funding. Infrastructure assets are long-term investments characterized by high expenditure and most governments are subject to budget constraints, legislature and bureaucracy.

SWOT Analysis

Strengths:

Diversified business portfolio: The company is active in many businesses. The core one is project contracting, but it is also active in equipment manufacturing. CRCC has factories all over China, which allow it to vertically integrate and to supply to third parties. It also operates in the service sector, providing financial services (especially in the form of leasing) and Survey and Design consultation, on top of supply chain services.

Diversified projects portfolio: Also, the core business is by itself diversified: by looking at the past and ongoing projects, it is possible to notice that there is a differentiation both in geographic terms and in terms of kind of facility. In fact, CRCC is active especially in China (about 80% of its business), but also in Africa and Middle East. Furthermore, it is building railways, but also highways, tunnels, bridges, residential houses, business facilities and solar panel fields.

Market position and R&D: CRCC is present in 32 Chinese provinces, in Hong Kong and Macau. The company is dominant in railway construction: it has constructed more than 50% of the Chinese railway system. Furthermore, even though it is not the core business, the firm also covers 80% of domestic demand for large rail track maintenance machinery and 50% of domestic demand for excavating machines.

CRCC maintain its dominant position through the huge focus put on research and development.

Backed by Chinese government: Given the influence of the Chinese Government and the fact that it represents the major shareholder, there are not many uncertainties about the company's future development. Indeed, since the Communist Party's focus right now is on infrastructure, there will be several incentives to develop that sector through its own company.

Weaknesses:

Chinese government influence: As just cited, communist party influence is extremely preponderant. This can also represent an element to consider since Chinese companies have to face more stringent regulations and they are continuously monitored by authorities, elements that could be a constrain to their growth.

Capital expenditure/debt: The company is highly indebted (debt/equity ratio is very high at over 4 and debt/assets ratio is at 71.5%).

Considering that infrastructure projects are extremely expensive in terms of capital expenditure and it takes many years to recover from the investment, it could slow down future growth.

Opportunities:

Positive trend for construction industry: Construction industry has registered an increasing trend in volumes (+0.6% in 2020, +27.5% projected for 2025). The areas with the higher projected growth are the ones where CRCC is operating Asia, Middle East and Africa. These areas are quickly developing in terms of GDP and quality of life: the middle-class is in big expansion and they will need to create new infrastructure to keep up with increasing demand for transportation.

Belt and Road initiative: CRCC is expected to benefit from the Belt and Road Initiative in China. The initiative regards the creation of infrastructure all over the world to support trade through shipping lanes and especially railroads, which represent the company's core business.

Increasing global population: population is expected to increase to 9 billion before 2050. This growth will be driven especially by Africa and Asia, where the company is very well positioned. The increase in population will automatically drive up the need for more investments in infrastructures.

Threats:

Slowing growth in China: China's GDP is still growing rapidly, faster the developed countries. However, over the recent years the growth rate has slightly decreased. The economy is in good shape, but there is still risk of slow growth that has to be considered.

Investments in politically unstable countries: A lot of investments of infrastructure are in politically unstable countries (such as Pakistan, Angola and Afghanistan), where governments are less trustworthy, the law system is precarious, and the risk of war is not negligible.

Covid-19: Many projects have already been disrupted by the pandemic and many other have been postponed, meaning that the company is behind schedule, but recovering. This could be a problem considering the high debt the company has.

Figure 8. Profitability ratios

Profitability Analysis				
	2016	2017	2018	2019
ROE	9.99%	9.47%	9.57%	8.63%
ROA	1.96%	2.06%	2.16%	2.09%
ROCE	10.50%	11.11%	10.91%	9.98%

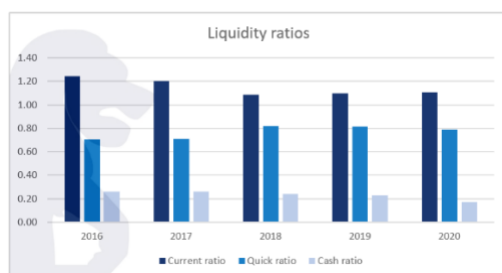
Source: Minerva Investment Management
Society Estimates

Figure 9. DuPont analysis

DuPont Analysis				
	2016	2017	2018	2019
Sales Margin	2.36%	2.48%	2.72%	2.72%
Asset Turnover	0.83	0.83	0.80	0.77
Financial Leverage	5.11	4.60	4.43	4.13

Source: Minerva Investment Management
Society Estimates

Figure 10. Liquidity



Source: Minerva Investment Management
Society Estimates

Figure 11. Liquidity

Liquidity Analysis					
	2016	2017	2018	2019	2020
Current ratio	1.25	1.20	1.09	1.10	1.11
Quick ratio	0.70	0.71	0.82	0.81	0.79
Cash ratio	0.26	0.26	0.24	0.23	0.17

Source: Minerva Investment Management
Society Estimates

Figure 12. Leverage

Leverage Analysis				
	2016	2017	2018	2019
Debt ratio	80.42%	78.26%	77.41%	75.77%
debt to equity ratio	4.11	3.60	3.43	3.13
interest coverage	3.06	3.20	3.63	3.52

Debt to Equity ratio		2019
China Railway Construction Corp		3.13
Power Construction Company of China		2.11
China State Construction Engineering Corp		3.05
China Communication Construction Corp		2.78

Source: Minerva Investment Management
Society Estimates

Financial Analysis

The financial statement analysis has been conducted computing ratios and other metrics to assess liquidity, solvency and profitability compared with industry average. Also, some ratios have been computed from a selected number of peers in order to better interpret the figures. The comparable companies considered are: Power Construction Company of China, China Communications Construction and China State Construction Engineering Corporation.

Profitability:

To pursue a profitability analysis of CRCC the study focused on return ratios together with profit margins. The ROA shows an increasing trend between 2016 and 2019, going from 1.96% to 2.09% in 2019. Nonetheless, the value is considered very low and below the industry average of 6.54%. On the other hand, the ROE experiences a downward trend in the analyzed period. It decreases from 10% in 2016 to 8.63% in 2019. The main drivers of this movement are investigated through a DuPont Analysis. For what concerns the asset turnover, its value is slightly decreasing during the 2016-2020 period, however its role in the ROE fluctuation is limited since the decline is of low intensity. With respect to the net profit margin, it is possible to see a positive trend. It improves, reaching a value of 2.72% in 2019. Thus, the drop of the ROE value is mainly due to a reduction of financial leverage which decreases from 5.1 to 4.1 in the period. Nevertheless, the ROE value is below the industry median of 9% (Thomson Reuters).

Liquidity:

The cash position of CRCC as of June 2020 is RMB 124,770,685M. With the aim of analyzing the liquidity position of CRCC the current, quick and cash ratios are considered. The current ratio has been computed as current assets on current liabilities. As shown in Figure 10 and 11, this ratio has been declining from 2016 to 2020, going from a value of 1.25 to 1.11. This is a worrying trend because the ratio is deteriorating, and the value is approaching 1. A current ratio over 1 signal that the company's current assets exceed its current liabilities. Thus, the value of this ratio indicates that the company currently has a good liquidity position and in line with the industry average, but if the downward trend continues its liquidity position could weaken. The quick ratio instead is increasing due to a reduction of the value of inventories over time. It takes values smaller than 1, but increasing from 0.7 in 2016 to 0.8 in 2020. This value is considered reasonable and in line with the industry average. The same is true for the cash ratio, which fluctuates around 0.22.

Cash Conversion Cycle:

The Cash Conversion Cycle (CCC) for CRCC is determined by Day Sales Outstanding (DSO), Days of Inventory Outstanding (DIO) and Day Payables Outstanding (DPO). These ratios are called Duration Ratios, and they measure the average number of days it takes for a company to turn its resource inputs into cash. The cash conversion cycle formula is aimed at assessing how efficiently a company is managing its working capital. As with other cash flow calculations, the shorter the cash conversion cycle, the better the company is at selling inventories and recovering cash from these sales while paying suppliers. If CCC ratio is significantly high, the company may have difficulties in managing cash transactions with customers and suppliers. Although, a short cash conversion cycle could strain the relationship with suppliers, it may also create alternative investment opportunities through the usage of cash collected from receivables. CRCC has a high DPO, which is stable at around 190 days, while DIO and DSO decreased during the period, leading the CCC to become negative in 2018.

Leverage:

To assess the Solvency of CRCC Debt-to-Equity, Debt-to-Assets and interest coverage ratios are analyzed. The Debt-to-Equity ratio reported in the 2016-2020 years is very high, exceeding 4 in 2016 but decreasing steadily during the period, reaching 3.06 in 2020. This is of particular concern since companies operating in the same industry as CRCC, like Power Construction Company of China, China Communications Construction and China State Construction Engineering Corporation, reported values of Debt/Equity ratio between 1.9 and 2.9 in the 2018-2019 years, lower than CRCC's one. This is also reflected in the Debt-to-Assets ratio which shows the percentage of Debt with respect to Total Assets. This ratio has experienced a downward trend, as well, in the 2016-2020 period, settling at 71.5% in 2020. CRCC's capital structure is not effectively balanced: in fact, with respect to peer companies, it strongly relies on debt financing. Notwithstanding the high levels of debt, the interest coverage, which is calculated as EBIT on interest expense, assumes very satisfactory levels. An interest coverage ratio indicates how easily a company is able to pay expenses on its outstanding debt. Generally, a value higher than 1.5x is deemed good and considering that CRCC interest coverage currently is at 3.46x, it is possible to affirm that the Company can easily face its financing costs.

The financial analysis highlighted some critical aspects. Firstly, the leverage is particularly high with respect to the industry average. However, in the current low interest rate environment, this finding signals a favorable cost of debt achieved by the company on the markets. However, the main concerns regard the profitability. The return ratios are below the industry average for most of the years analyzed and the ROE is on a decreasing trend. Regarding the liquidity position, instead, both the current ratio and the quick ratio are in line with their peers' and show that the company is liquid. Regarding the liquidity position, instead, both the current ratio and the quick ratio are in line with their peers' and show that the company is liquid.

Figure 13. Computed Results

Cost of equity	10.30%
TV growth rate	8.31%

data in CNY millions	
PV explicit forecast	14525
TV	247501
PV TV	151600
Equity Value	166125
N. of shares (in millions)	13579.74
Share price target in CNY	12.23

*Source: Minerva Investment Management
Society Estimates*

Valuation

Valuation Price Target: CNY 12.23

Our analysis followed two main approaches:

- an intrinsic valuation regarding the Dividend Discount Model (DDM)
- a relative valuation with market multiples of comparable companies

Dividend Discount Model Approach

In the set of the different valuation methods, we chose the dividend discount model since it assumes a non-controlling shareholder valuation perspective and also because CRCC is a mature company with an history of stable dividend payments. Moreover, the firm's dividends have a constant relationship with the firm's earnings and other types of cash flows were highly unstable.

Analyzing the various steps, we started by computing the cost of equity, which is based on the following assumptions:

- Risk Free Rate (3.22%): we used the last available 10-year Chinese Government Bond yield (Source: Thomson Reuters Eikon);
- Equity Risk Premium (7.87%): it represents the premium an investor will require investing in the stock rather than in the risk-free security (Source: Thomson Reuters Eikon);
- Beta Levered (0.899): it represents the risk specifically attached to the Company, comparing the performance of the market with the performance of the Company.

Beta Computation: Beta is a coefficient that expresses how much the return of the security is captured by the return of the market portfolio; in brief, we consider the systematic risk of the security. For its computation we used the market model introduced by W. Sharpe, which describes the coefficient as the ratio between the covariance of market index returns and stock returns, and the variance of the market index in a given estimation window. We put in comparison the security's return with those of the Shanghai SE Composite Index, which was considered the Market Index. In doing so, we applied, as required by the model, an OLS regression between the streams of returns of the stock and market index. We considered two different return's frequencies and estimation windows:

- 3 year-weekly
- 5 year-monthly

To assess the most reliable and significant regression we considered the regression line with higher Adjusted R². This factor measures how much of the security returns (dependent variable Y) is explained by movements of the market index (independent variable X), in terms of variance. In other words, for higher values of Adjusted R², more of the stock returns variance is captured by the market variability of stocks' returns. In our case, the higher adjusted R² was associated with a 3 year-weekly estimation window. Additionally, the raw beta so obtained has been adjusted with the Blume Formula in order to have a forward-looking Beta.

Moreover, the dividend growth rate for the terminal value has been estimated with a fundamentals' analysis as the product of the marginal return on equity and the retention rate.

Figure 14. Comparables' Multiples

Market Multiples Approach

Comparables	EV/EBITDA	EV/EBIT	EV/REVENUES	P/E
China Railway Group	7.16	9.67	0.31	5.47
China Communication Construction Company	12.03	17.01	0.83	8.03
China State Construction Engineering Power Construction Corporation of China	7.69	7.19	0.49	5.80
Shanghai Construction Group	13.16	19.29	1.17	9.22
China State Construction International Holding	6.18	5.98	0.2	7.95
China Gezhouba Group	6.50	6.52	0.87	4.02
China Railway Construction Company	8.95	11.51	0.97	9.06
	5.51	8.46	0.30	5.27

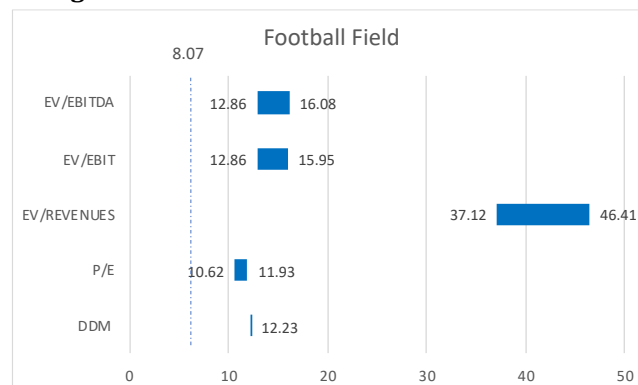
Source: Minerva Investment Management Society Estimates

Figure 15. Equity side multiples

	EV/EBITDA	EV/EBIT	EV/REVENUES	P/E
MIN	8.53	4.43	4.18	6.0
Q1	10.39	6.43	17.59	8.5
MEAN	16.08	15.95	37.12	10.6
MEDIAN	12.86	12.86	46.41	11.9
Q3	20.91	23.35	52.44	12.8
MAX	28.58	34.84	69.20	13.8

Source: Minerva Investment Management Society Estimates

Figure.16 Football Field



Source: Minerva Investment Management Society Estimates

After the first approach, in order to have a different valuation perspective to compare with the forecasts obtained through the DDM analysis, we have performed a multiple analysis. The purpose of the method is to double check the target price we identified with the other approach. Hence, we collected data for market multiples of a set of seven comparable companies.

Description of selected comparable companies

All these companies are active in the civil engineering sector and are all taking advantage of the big investments on infrastructures that the Chinese government is pursuing.

China Railway Group:

CREC takes a leading position in infrastructure construction, industrial equipment manufacturing, scientific research and consulting, real estate development, resources development, financial trust, trade and other fields. The company experienced a 15% revenue growth from 2019 (416.303 M CNY), EPS doubled since 2016 and cash increased 50% in 1 year (+298 M CNY).

China Communication Construction Company:

The company is engaged in the design and construction of transportation infrastructure and heavy machinery manufacturing business.

It covers transportation infrastructures (ports, road, railways), heavy marine machinery, road machinery manufacturing, and international project contracting, import and export trading services. The company shows increasing revenues but also presents stagnant net income.

China State Construction Engineering Corporation:

China State Construction is present all over the world. It covers investments and development, construction engineering as well as survey and design. In China, China State Construction has built skyscrapers, key airports, satellite launch bases, urban utility tunnels and of nuclear power plants. CSCEC operating revenues have been increasing tenfold every twelve years on average.

China State Construction International Holding:

CSCI is mainly engaged in infrastructure investment, construction projects, housing project, civil engineering works, foundation works, site investigation, mechanical and electrical engineering, concrete production, prefabricated construction and project supervision services.

Power construction corporation of China:

The Company's principal businesses include the construction contracting, electric investment and operations, real estate development, equipment manufacturing and leasing. The Company is also engaged in the commodity trading, sales of materials and the construction of highways and bridges. The company's growth is in line with construction trend and its revenues have been almost tripled in the last 7 years.

China Gezhouba Group:

The group is divided into many segments: project investments, real estate, construction, environmental protection, cement, civil explosives and financials. This company is the one having more problems, indeed its revenues are growing slower than the market and the current dividend is a third of 4-year-ago level (DPS from 0.21 to 0.7).

Shanghai Construction Group:

The Company's main businesses include the general contracting of housing construction businesses, landscaping, real estate development and management, stone mining, concrete processing and manufacturing, municipal engineering construction and management, urban infrastructure investment. The company has doubled revenues over the last 6 years, taking advantage of the good industry momentum, indeed, apart from those related to this sector, all other metrics have not increased.

Methodology and results

We decided to consider equity and asset side multiples as both are relevant to assess the relative value of the company. To derive the share price from the asset side multiples, we first obtained the EV, then subtracted total debt and added back cash and equivalents to arrive at the equity value. We divided by the number of outstanding shares to get the intrinsic share price. For the equity side multiple, we simply multiplied the ratio by the EPS of CRCC. To get a range of values for the football field chart we used the mean and median of the multiples as upper and lower bound, except for the DDM value from which we obtained a single value.

The asset side multiples we considered are EV/Revenue, EV/EBITDA and EV/EBIT. The first factor shows investors how much it costs to purchase a company's sales. The second and third ratio show the market appreciation of different capital and revenues-costs structure and is useful to compare companies with different levels of debt.

On the one hand, as for the equity side multiple we chose to consider the P/E ratio since it is one of the most diffused tools in relative valuation. It depicts the number of years the company would takes to repay investors with their profit.

As can be seen from the football field chart and the data, the EV/Revenues ratio is an outlier and gives unrealistic values for share price. This could be due to capital intensive nature of CRCC's business, where a relatively large amount of assets and leverage is needed in order to produce revenues. All the other ranges are above the current share price, indicated by the blue line, and are fairly consistent with each other.

Investment Risks

Many risks can be identified when investing in a Chinese company
Exchange risk: the company operates mainly in China; however, it has many ongoing projects in Asia, Africa and the middle east. Those countries have high political uncertainty, which reflects in high fluctuations in the currency value. A drop in currencies in those countries may be detrimental for the company's revenues, especially since CNY has been appreciating during the last year. There is also an exchange risk from the point of view of the investor, especially since that now CNY is relatively expensive, but it is forecasted to drop in price in the next months as the Chinese Central Bank is perusing a massive purchase of foreign assets in order to depreciate the currency to keep exports up. We assessed the exposure towards shift in currency and interest rate as moderate in the short term. We further investigate on the topic in two other report: Minerva IMS credit opportunities (interest rate risk) and emerging markets outlook (currency risk), respectively written by the markets and alternatives and macro research team of Minerva IMS.

Chinese Communist party: the party has almost full control over the company. The Chinese government puts the interests of the party and the country over the interests for its shareholders. This is reflected in the annual reports: all state-owned companies are very vague in the balance sheet and keep some vital information private. This creates uncertainty, and investors dislike uncertainty.

Human rights: Chinese government is well known for not respecting human rights. CRCC operates in a sector that has a strong past record of violations and if more information about a company's involvement were released, western-countries investors might pull out their money.

Reversion in globalization trend: CRCC is benefiting from the "Belt and Road" initiative, which it is going to be successful only if high level of trade and hence globalization will be registered. If tensions between the Western countries and China were to escalate, the trend might reverse.

Negative pricing momentum (not related to Chinese financial environment): at the moment, the market is very bearish on the whole civil engineering sector in China. We deem important to point out this element to deliver a complete vision on this stock that represents a "BUY" because of the risks we have here depicted.

Appendix:

Income statement

Income Statement										
<i>Millions of CNY</i>	2016	2017	2018	2019	2020	2021E	2022E	2023E	2024E	2025E
Operating revenue	629327.09	680981.13	730123.05	830452.16	910324.76	983150.7408	1061802.8	1146747.024	1238486.786	1337565.729
Operating cost of sale	571377.53	618059.39	658711.27	750365.07	825987.27	890464.8464	961702.0341	1038638.197	1121729.253	1211467.593
Gross profit	57949.56	62921.74	71411.78	80087.09	84337.5	92685.89437	100100.7659	108108.8272	116757.5334	126098.136
Operating costs	27530.61	34446.27	37057.09	43651.32	46103.29	48821.72874	52727.46704	56945.6644	61501.31755	66421.42296
EBITDA	30418.95	28475.47	34354.69	36435.77	38234.21	43864.16563	47373.29888	51163.16279	55256.21582	59676.71308
Depreciation, amortisation, impairments and write-downs	1013.73	940.93	727.39	679.01	781	1113.786692	1202.889627	1299.120798	1403.050461	1515.294498
EBIT	21538.06	27534.55	33627.29	35756.76	38233.43	42750.37894	46170.40925	49864.04199	53853.16535	58161.41858
Net finance cost	-2160	-2645.08	-3532.87	-2710.83	-7850	-3505.11247	-3898.91538	-4314.84231	-4754.16053	-5218.21096
Gross Income From Continuing Operations	19378.06	24889.47	30094.42	33045.93	30383.43	39245.26647	42271.49387	45549.19969	49099.00482	52943.20763
Net Extraordinary items	-408.49	-3633.71	-4989.16	-5019.28	1107.12	-5818.14128	-6170.19867	-6559.80087	-6990.4541	-7465.97284
EBT	18969.58	21255.76	25105.26	28026.65	31490.55	33427.12519	36101.2952	38989.39882	42108.55072	45477.23478
Taxation on profit/(loss)	4118.74	4336.57	5266.85	5402.96	5781.88	6734.354959	7273.103356	7854.951624	8483.347754	9162.015574
Net Income	14850.83	16919.19	19838.41	22623.69	25708.67	26692.77023	28828.19185	31134.44719	33625.20297	36315.21921

Valuation

Millions of CNY	2021	2022	2023	2024	2025
Net income	26692.77	28828.19	31134.45	33625.2	36315.22
Dividend	3340.664	3607.917	3896.55	4208.274	4544.936
<i>Discount factor</i>	0.906618	0.821957	0.745201	0.675613	0.612523
PV (DIV)	3028.707	2965.551	2903.713	2843.164	2783.878

data in CNY millions	
PV explicit forecast	14525
TV	247501
PV TV	151600
Equity Value	166125
N. of shares (in millions)	13579.74
Share price target in CNY	12.23

Disclaimer

This research material has been prepared by Minerva Invest. Minerva Invest specifically prohibits the redistribution of this material in whole or in part without the written permission of Minerva Invest. The research officer(s) primarily responsible for the content of this research material, in whole or in part, certifies that their views are accurately expressed and they will not receive direct or indirect compensation in exchange for expressing specific recommendations or views in this research material. Whilst we have taken all reasonable care to ensure that the information contained in this publication is not untrue or misleading at the time of publication, we cannot guarantee its accuracy or completeness, and you should not act on it without first independently verifying its contents. Any opinion or estimate contained in this report is subject to change without notice. We have not given any consideration to and we have not made any investigation of the investment objectives, financial situation or particular needs of the recipient or any class of persons, and accordingly, no warranty whatsoever is given and no liability whatsoever is accepted for any loss arising whether directly or indirectly as a result of the recipient or any class of persons acting on such information or opinion or estimate. You may wish to seek advice from a financial adviser regarding the suitability of the securities mentioned herein, taking into consideration your investment objectives, financial situation or particular needs, before making a commitment to invest in the securities. This report is published solely for information purposes, it does not constitute an advertisement and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. No representation or warranty, either expressed or implied, is provided in relation to the accuracy, completeness or reliability of the information contained herein. The research material should not be regarded by recipients as a substitute for the exercise of their own judgement. Any opinions expressed in this research material are subject to change without notice.