

MONGOLIA'S COKING COAL EXPORTER

EXECUTIVE SUMMARY

We initiate our coverage of Tavantolgoi Joint Stock Company ("Tavantolgoi JSC" or the "the Company"), listed on the Mongolian Stock Exchange (MSE), with an OVERWEIGHT rating and a target price of MNT10,158.

Tavantolgoi JSC is one of the largest coal exporters in Mongolia with 200 employees and annual capacity of producing 15 million tons of hard coking coal each year. Its mining license covers 276.9 ha area within the larger Tavantolgoi coal deposit, which is located 250 km north of the Chinese border. Other operators in the Tavantolgoi deposit are Erdenes Tavantolgoi JSC, a state owned company that owns most of the rest of the deposit, and Mongolian Mining Corporation, a Hong Kong listed private company.

We consider the Company is undervalued based on its low P/E multiple and our Discounted Cash Flow valuation result. Trailing 12-month P/E ratio of 6.0x is cheap even after considering investment risks mentioned below. Our DCF valuation is based on conservative assumptions including discount rate of 20%. The relatively high dividend yield of 13.4% is also attractive as a short-term trade idea.

Investment risks: Poor governance practice caused by conflicting interests of some of the major shareholders and senior management team members is the most significant risk for minority shareholders. Next, dependence on a single market, i.e. China, its economic situation, and political tension between Mongolia and China is also a major risk for the Company. Finally, fluctuation in global price of coking coal will directly impact the Company's profit margin.

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Rating	Overweight
Target price	MNT10,158
Closing price	MNT6,475
Upside	56.9%

Stock information

Exchange	MSE
Symbol	TTL
Index	Top-20
Market cap	MNT341 billion
52-week range	Min: MNT6,115 Max: MNT7,800
Free float	12.3%
Average daily turnover	MNT6.96 million
TTM P/E Ratio	6.0x

Relative stock price

(Jan 2009= 100)



Financial ratios	2013A	2014A	2015A	2016A	2017A	2018A
Revenue growth	0%	-81%	-18%	597%	142%	-47%
EBITDA margin	51%	13%	5%	38%	45%	29%
Net margin	38%	14%	2%	31%	33%	23%
Current ratio	6.0	3.1	1.6	2.0	2.4	2.1
Asset turnover	1.4	0.5	0.4	1.2	1.6	1.4
EPS	1,179	84	11	1,026	2,678	1,004
DPS	766	59	-	872	2,410	853
ROE	65%	10%	2%	68%	84%	58%

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COMPANY OVERVIEW

Company information

Tavantolgoi JSC is one of the leading coal producers and exporters in Mongolia with annual capacity of producing 15 million tons (Mt) of coal. It operates within the Tavantolgoi deposit in Tsogttsetsii soum (village) of Southgobi province along with other coal producers.

The Company was partially privatized in 1994 as part of Mongolia's transition to market economy, and was listed on the MSE with majority ownership by Southgobi municipal government. By 2007, the Company had produced and exported its first one million tons of coal.

Tavantolgoi JSC owns a mining license with 185 million tons of coal reserve in an area of 276.9 ha within the larger Tavantolgoi coal deposit area (80 thousand ha; 7.4 billion tons of coal), which is shared by other larger competitors.

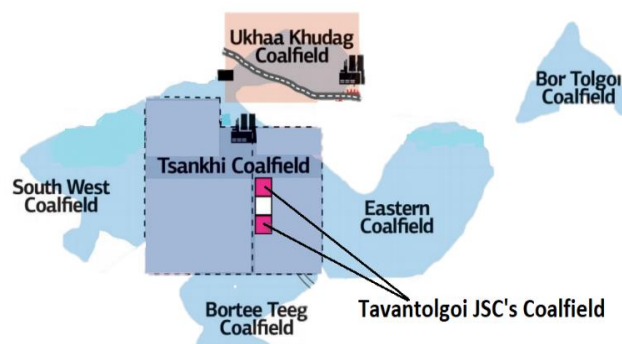
Tavantolgoi deposit: The total depth of the coal ore is 191 meters with 16 layers. It is estimated to have coal reserve of over 7 billion tons, over one third of which is high-quality hard-coking coal. The deposit is divided into five parts: Western Tsankhi, Eastern Tsankhi, Ukhaa Khudag, Bor Tolgoi, and Borteeeg.

Tavantolgoi deposit is currently used by three companies: (i) Erdenes Tavantolgoi JSC (ETT), a state-owned company that owns most of the deposit; (ii) Mongolian Mining Corporation (HK: 975), a Hong Kong listed private company that operates the Ukhaa Khudag coalfield and has built some essential infrastructure such as processing facility, power plant, and paved road; and (iii) the Company.

Revenue breakdown

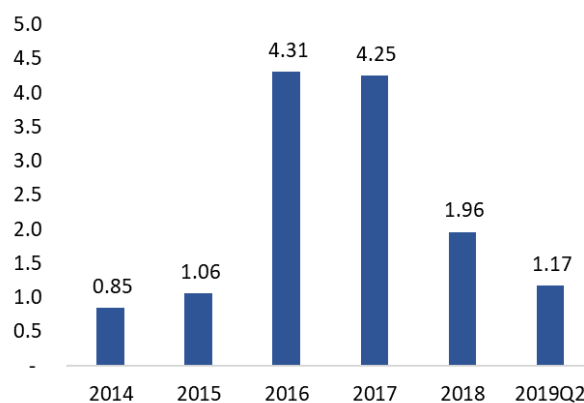
Majority of the revenue is from sales of hard coking coal (HCC), approximately 60% of total revenue. Sales in 2018 was MNT226.4 billion, a significant decrease from 2017 level as the General Agency for Specialized Inspection conducted an inspection at the Company's mining site for several months causing delays in sales.

Figure 1 Tavantolgoi coal deposit



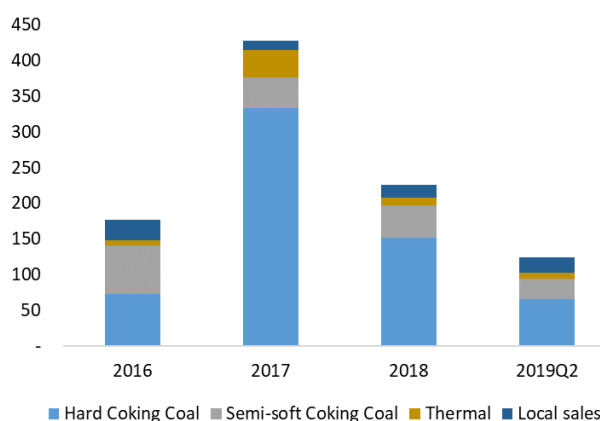
Source: Economic Research Institute

Figure 2 Tavantolgoi JSC coal production (Mt)



Source: Tavantolgoi JSC interim report (2019Q2)

Figure 3 Revenue breakdown: Product (MNT billion)



Source: Tavantolgoi JSC annual reports

Figure 4 Historical performance

MNT billion	2013A	2014A	2015A	2016A	2017A	2018A
Income Statement						
Revenue	161.7	30.9	25.3	176.5	427.9	226.4
EBITDA	81.8	3.9	1.3	66.8	192.3	65.5
Net profit	62.1	4.4	0.6	54.0	141.1	52.9
Balance Sheet						
Cash	50.1	1.8	0.3	99.2	232.0	116.4
Current assets	105.2	55.5	46.6	136.6	258.9	139.4
Accounts receivable	48.2	29.8	21.6	29.5	23.1	19.5
Inventory	1.2	20.2	18.5	1.0	1.4	1.6
Total assets	112.3	63.6	57.0	147.7	272.8	157.6
Total liabilities	17.4	17.7	28.4	68.7	105.9	67.2
Shareholders' equity	94.9	45.9	28.6	79.0	166.9	90.4
Ratios						
Revenue growth		-81%	-18%	597%	142%	-47%
EBITDA margin	51%	13%	5%	38%	45%	29%
Net margin	38%	14%	2%	31%	33%	23%
Current ratio	6.0	3.1	1.6	2.0	2.4	2.1

Source: Tavantolgoi JSC annual reports

Stock information

Tavantolgoi JSC is one of the largest companies on the MSE in terms of market capitalization and it is included in the Top-20 index. In 2018, the Company's shares were traded actively compared to other companies with total turnover of MNT4.4 billion (approximately USD1.65 million).

The share price is quite volatile as can be seen from the graph on Executive Summary page. The share price increased from MNT2,688 in January 2017 to a peak of MNT13,310 in March 2018, before stabilizing at current 52-week range of MNT6,115 and MNT7,800.

Major Shareholders

The Company's majority owned by the municipal government of Southgobi province. Ajnai Corporation LLC and Shandas Impex LLC, the next largest shareholders, are owned by Mr. Bat-Erdene Dashdemberel, a member of Mongolian parliament since 2004. He has had significant influence over the Company's affairs in the past. The Company's remaining 6.48 million shares (12.3%) are held by approximately 2,000 shareholders, who are mostly local and foreign retail investors. It is common for retail investors to hold the shares long-term for its high dividend yields.

Figure 5 Major shareholders

Major shareholders	Shares	Ownership (%)
Southgobi province	26,859,252	51.0%
Ajnai Corporation LLC	10,390,844	19.7%
Shandas Impex LLC	8,937,284	17.0%
Free Float	6,477,820	12.3%
Total	52,665,200	100.0%

Source: Mongolian Stock Exchange

Governance

In the past, there have been cases of fraudulent and illegal activities regarding Tavantolgoi JSC's operations, usually involving members of the senior management team and some shareholders. Some

of these are still not resolved and investors should not be surprised if there are poor governance incidents in the future.

However, given the generally low level of governance for companies listed on the MSE, we consider the Company is better than most other companies. Southgobi province, the largest shareholder, has a strong incentive to implement good governance as significant part of the province’s annual revenue comes from Tavantolgoi JSC as dividend. In 2018, it budgeted MNT34 billion, or 20% of the total revenue of the province, from dividends of its shareholdings in various companies and the actual dividend payment it received was MNT65 billion, large part of which is from Tavantolgoi JSC. In addition, Southgobi collects mining royalty taxes from the Company.

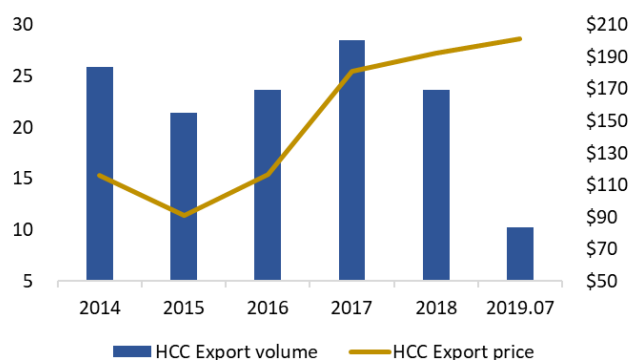
INDUSTRY OVERVIEW

Supply: Australia vs Mongolia

Australia

Australia is the largest HCC exporter in the world. It exported 179 Mt of HCC in 2018 with total sales proceeds of USD41 billion. 17% of the world’s HCC production is in Australia and its proximity and low cost transportation makes it the largest supplier to China. The premium Australian HCC spot price has remained resilient in 2019 due to tight market conditions. The price traded in a very narrow band of between US\$200 and US\$210 a ton between April to early June, before dipping below US\$200.

Figure 6 Australian HCC export volume (Mt) and price to China



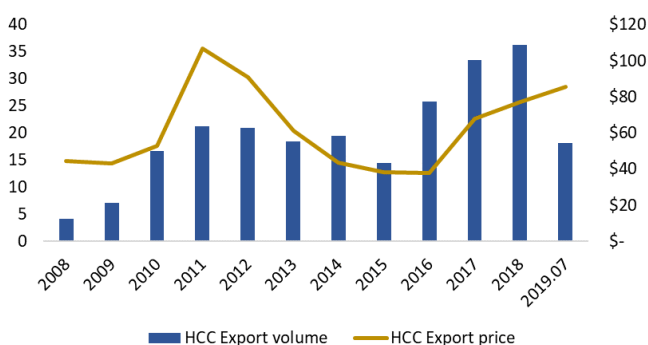
Source: Australian Bureau of Statistics

Recently, coal export to China has faced a challenge due to the growing tensions between governments of Australia and China as number of Chinese ports restricted or delayed coal import from Australia. Although the reason for such actions by China is not clear, it is assumed that the news of Australian government deciding to ban Huawei and ZTE from supplying equipment to Australia’s 5G network in the summer of 2018 has triggered a counteraction by China.

Mongolia

Mongolia’s metallurgical coal export to China surged by 44% year-on-year in the first four months of 2019. Mongolia took the opportunity to fill some of the gap left by the reduction in HCC cargoes from Australia going through China’s ports in February of 2019. The rapid growth in Mongolia’s export reflects that Mongolia’s coal operations near China’s border are relatively flexible, and are able to quickly restart operations and truck coal overland to China.

Figure 7 Mongolian HCC export volume and price to China (Mt)



Source: National Statistical Office of Mongolia

Mongolian metallurgical coal export is not expected to grow significantly over the next few years. With ongoing transportation bottlenecks, substantial investment in road and rail infrastructure will be required for any sustainable growth in export volumes.

Local competition

Tavantolgoi coal deposit, located about 250 km from the Chinese border, is one of the world's largest coking coal deposits, and has a great potential. The deposit boasts over 7.4 billion tons of estimated coal reserve in accordance with JORC standards to become one of the largest coal deposits in the world, of which 1.4 billion tons are coking coal and 4.6 billion are thermal coal.

Currently, three companies operate within the coal deposit: Erdenes Tavantolgoi JSC, Mongolian Mining Corporation, and Tavantolgoi JSC. Mongolian Mining Corporation, listed on the Hong Kong Stock Exchange, owns mining licenses to operate in Ukhaa Khudag field inside Tavantolgoi deposit. The largest coal producer is Erdenes Tavantolgoi JSC and it operates in West Tsankhi and East Tsankhi fields, whereas Tavantolgoi JSC's mining license also lies within the East Tsankhi coal field (refer to Figure 1). Between 2012 and 2018, Erdenes Tavantolgoi JSC made up about 24% of the total coal export of Mongolia on average, while Mongolian Mining Corporation and Tavantolgoi JSC exported 21% and 10% on average, respectively.

Demand: China

China is the world's largest coal importer and strong Chinese steel production has driven substantial growth in metallurgical coal demand in the first half of 2019. Over the next few years, India is expected to emerge as the key source of demand growth and overtake China as the world's largest importer, as its domestic steel sector continues to expand. Demand is projected to be subdued or decline marginally among most other major importers, including China, as economic growth slows down.

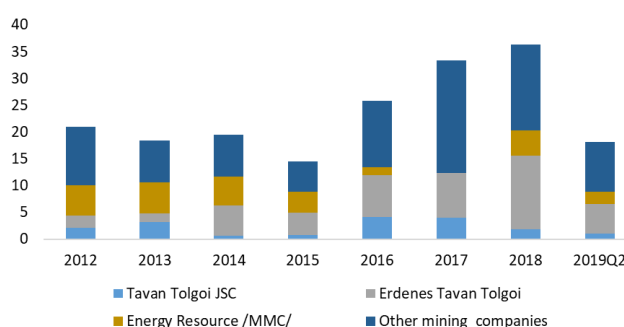
In the first seven months of 2019, Chinese coking coal import increased by 44% year-on-year to 44 Mt, of which import from Mongolia was 19.3 Mt, surpassing import volume of 18.5 Mt from Australia.

Figure 8 Coal fields and reserves in Tavantolgoi coal deposit

Coal fields	Coal reserve (Mt)	Coking coal (%)	Coking coal (Mt)
West Tsankhi	1,200	65%	780
East Tsankhi	1,080	78%	842
Ukhaa khudag	298	53%	158
Onch Kharaat	765	72%	551

Source: Erdenes Tavantolgoi JSC annual report

Figure 9 Top 3 mining companies share in coal exports (Mt)



Source: Annual reports of the companies

Figure 10 China's HCC import by country of origin (Mt)

Coking coal import volume	2015	2016	2017	2018	2019.07
Australia	53%	45%	44%	44%	42%
Mongolia	27%	40%	38%	43%	44%
Canada	12%	9%	6%	3%	4%
Russia	7%	4%	7%	7%	0%
USA	0%	0%	4%	3%	0%
Others	1%	2%	1%	1%	10%
Total	100%	100%	100%	100%	100%

Source: General Administration of Customs, China

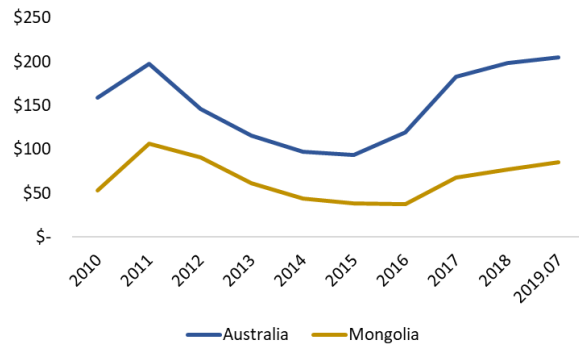
Mongolia and Australia continued to lead as the main source for coking coal import to China with a combined market share of 86%.

Price analysis

Global coal price has increased since 2017 due to strong demand from India and China. But the growth has slowed down in 2019 as Chinese steel production weakened and domestic coal production recovered.

In terms of average selling price (ASP), Mongolian coal is more than USD100 cheaper than Australian coal per ton, although there is a strong correlation. This is mainly due to the fact that most coal exported from Mongolia is not washed (the only washing facility in Tavantolgoi is owned by MMC with capacity to process 15 Mt each year). The second reason for low price is transportation inefficiency.

Figure 11 Average selling prices of coal in Australia and Mongolia (USD/ton)



Source: Australian Bureau of Statistics, National Statistical Office of Mongolia

Infrastructure

Currently all coal from Tavantolgoi deposit is transported through 245 km long paved road connecting Tavantolgoi to the Chinese border. Each truck carries about 100 tons of coal to the border, from which point the Chinese buyers transport the goods on railway to their various processing plants in China. Transportation by truck costs about USD32 per ton between Tavantolgoi and the border, which could be reduced to USD8 if a railway was used.

Although a railway connecting Tavantolgoi and the Chinese border has been in plan for over 10 years, there is no hope it will be constructed within the foreseeable future – mostly due to political reasons.

Erdenes Mongol, a state-owned asset management company that owns the current paved road, is planning to build a parallel road, which will increase the transportation capacity from current 30 million tons to 60 million tons per year. Railway, if built, will add another 30 million tons of annual capacity.

FINANCIAL OUTLOOK

MNT Million

PROFIT AND LOSS	2018A	2019E	2020E	2021E	2022E	2023E
Revenue	226,361	248,997	273,896	301,286	331,415	364,556
Revenue growth %	-47%	10%	10%	10%	10%	10%
Cost of goods	159,581	175,539	193,093	212,403	233,643	257,007
Gross Profit	66,779	73,457	80,803	88,883	97,772	107,549
Gross margin	30%	30%	30%	30%	30%	30%
EBITDA	65,518	71,753	79,709	87,692	96,452	105,988
EBITDA Margin	29%	29%	29%	29%	29%	29%
EBIT	64,406	70,846	78,778	86,656	95,322	104,854
Net income	52,858	57,269	63,733	70,176	77,247	85,022
Net margin	23%	23%	23%	23%	23%	0%

BALANCE SHEET	2018A	2019E	2020E	2021E	2022E	2023E
Cash	116,445	129,871	143,961	158,943	176,511	195,769
Receivables	19,538	21,492	23,641	26,005	28,606	31,466
Inventories	1,562	1,718	1,890	2,079	2,287	2,515
Current Assets	139,371	154,943	171,392	188,970	209,394	231,792
Fixed asset	15,999	16,239	17,456	18,570	18,586	18,598
Non-current Assets	18,224	17,867	18,686	19,534	19,374	19,268
TOTAL ASSETS	157,595	172,809	190,078	208,504	228,767	251,060
Payables	12,941	14,233	15,656	17,221	18,944	20,838
Short term loans	37,355	37,355	37,355	37,355	37,355	37,355
Short-term liabilities	66,704	69,573	72,732	76,206	80,029	84,233
Long term loans	-	-	-	-	-	-
Total liabilities	67,157	70,026	73,185	76,660	80,482	84,687
Equity	90,438	102,783	116,893	131,844	148,285	166,373
TOTAL EQUITY AND LIABILITIES	157,595	172,809	190,078	208,504	228,767	251,060

CASH FLOW STATEMENT	2018A	2019E	2020E	2021E	2022E	2023E
Cash Flow from Operations	18,751	59,496	65,861	72,355	79,521	87,338
Cash Flow from Investing	(6,580)	(1,147)	(2,149)	(2,149)	(1,147)	(1,147)
Cash Flow Financing	(126,923)	(44,923)	(49,623)	(55,224)	(60,807)	(66,934)
Net cash flow	(115,604)	13,426	14,090	14,982	17,568	19,258

FREE CASH FLOW	2018A	2019E	2020E	2021E	2022E	2023E
EBITDA	65,518	71,753	79,709	87,692	96,452	105,988
Depreciation	1,112	907	931	1,035	1,131	1,134
Effective tax rate	24%	24%	25%	25%	25%	0%
Capital expenditures	5,429	1,147	2,149	2,149	1,147	1,147
Working capital investment	(35,258)	724	799	879	967	1,064
Free cash flow to firm	9,994	54,040	59,085	65,177	72,861	80,110

VALUATION

Discounted Cash Flow

Equity value was derived using a weighted average cost of capital rate of 20% and perpetual growth rate of 3%. Since there are no reliable long-term market rates or long-term government bonds denominated in MNT in Mongolia, it is impossible to estimate long-term discount rates accurately. However, we consider 20% to be a reasonable estimation as: (i) current inflation rate is 9.0%; (ii) nature of Tavantolgoi JSC's operation implies greater uncertainty.

Figure 12 Sensitivity Analysis

		Perpetual Growth Rate				
		1%	2%	3%	4%	5%
WACC	10%	18,165	19,752	21,793	24,514	28,324
	15%	12,350	12,899	13,540	14,298	15,207
	20%	9,613	9,870	10,158	10,481	10,848
	25%	8,028	8,169	8,323	8,491	8,677
	30%	6,997	7,082	7,174	7,273	7,379

Source: Analyst's estimation

Multiples

P/E ratio using twelve months between July 2018 and June 2019 is 6.0x. The main reasons behind this low valuation multiple are poor governance, political risks, and heavy reliance on coal price and Chinese demand.

The relatively high P/B ratio of 5.0x reflects the decrease in book value of MNT45 billion due to dividend payout in May 2019, which is equal to approximately 40% of book value as of end-2018.

Dividend

Tavantolgoi JSC had one of the highest dividend payout ratio in the last nine years with average payout of 64%. In that period, the Company has distributed a total of MNT402 billion as dividend, compared to its current market capitalization of MNT342 billion.

A short-term strategy targeting each year's dividend payment has worked quite well in the past. For a detailed analysis on this, please refer to our newsletter titled "Tavantolgoi JSC to distribute dividend" on May 3, 2019.

Withholding tax of 10% is applied to dividend incomes for local and foreign investors.

Figure 13 Key ratio analysis

Company Name	TTL
Closing Price (USD)	2.4
Market Cap (USD million)	127
Outstanding Number of Shares (million)	53
Free Float by %	12%
EPS	0.4
TTM P/E Ratio	6.0x
P/B Ratio	5.0x

Source: Analyst's estimation

Figure 14 Dividend Payout

Year	Dividend per share	Total payout	Dividend payout
Unit	MNT	MNT billion	%
2010	130,000	68	89%
2011	1,368	72	90%
2012	-	-	0%
2013	766	40	65%
2014	59	3	70%
2015	-	-	0%
2016	872	46	85%
2017	2,410	127	90%
2018	853	45	85%

Source: Tavantolgoi JSC annual report (2018)

INVESTMENT RISKS

Governance

The Company is frequently embroiled in various scandals, latest of which has been regarding some 300 thousand tons of coal stolen from its licensed territory in 2018. The key management, including the Chief Accountant, has been interrogated by the police, but it is not clear whether the issue has been settled or not.

Issues like this undermine the Company's responsibility to all investors in the Company, including minority shareholders. However, compared to other listed companies with single majority shareholders, Tavantolgoi JSC is considered to have better governance given its relatively diversified shareholder base.

One-buyer, multiple suppliers

Although some politicians propose that Mongolia can export Tavantolgoi coal via Russia to other steel making countries such as Korea and Japan, these are not backed by numbers. Currently, the only buyer of Tavantolgoi coal remains to be China. As happened in the past, political moves that are considered provocative by Chinese government, such as inviting Dalai Lama to visit Mongolia, cause partial or full shutdown of the border.

On the supply side, there are multiple players. In addition to ETT, TTL and MMC, there are multiple smaller coal deposits in Southgobi region, all of which aim to export to China. Not having significant differentiation among themselves, these companies tend to compete on price, bringing profit margin down.

Coal price

Global economic situation, China demand and coal price directly affect sales volume and profit margin of Tavantolgoi JSC. Currently, both selling price and demand volume are at healthy levels, but the situation can change fast as it did in the past.

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