

## DORNIIN GAN PROJECT

**Investment highlights**

- |   |                              |   |
|---|------------------------------|---|
| 1 | The company overview         | <p>The Dorniin Khuder LLC was founded in 2007</p> <p>Mining operation special license, geological exploration special license</p> <p>Locally unique experience in iron ore mining, exploration, drilling with proven track record built iron ore mine and iron ore concentrating plant</p>  |
| 2 | Sector and Industry overview | <p>World iron ore demand is increasing</p> <p>Neighboring with China 46% importer of world iron ore import</p> <p>One of the fastest growing emerging economy, experienced economic growth with double digit last several years</p> <p>Steel consumption in Mongolia has grown 3 times since 2010</p> <p>Importing more than 60% of steel consumption</p> <p>Steel consumption demand is expected to surge on back of building mega projects such as Oyu-tolgoi, Tavan tolgoi, Cement factories, Industry parks and infrastructures</p> <p>Very few domestic competitors</p> <p>Supported by strategic policy of Mongolian government</p>                 |
| 3 | Project overview             | <p>Located in the Bulgan soum, Dornod province, Mongolia</p> <p>Deposit called Uud iron ore mine has 4.5 million ton reserves with extension of big exploration area</p> <p>Using Wet process technology</p> <p>Producing 3 items including ore concentrate, pig iron and steel ball</p> <p>Capacity: 624K (iron ore) ~ 271.3K (iron ore concentrate) ~ 106K (pig iron) ~ 100K (steel ball) ton/per year</p> <p>Target market: Oyu-Tolgoi LLC, Cement plants and export</p> <p>EPC contractor is Zunhua Xinbaoyida Heavy Machinery Manufacturing Co.,Ltd which received upfront payment of 1,380,000 yuan (US\$222.6K)</p> <p>Supported by Government</p> |
| 4 | Financial overview           | <p>Current approved reserve could be mined until 2026</p>   |

	Annual average (mln USD\$)	Total (mln USD\$)
Total revenue	84	924.2
Total expenses	53.3	586.7
EBT	30.7	337.6
Net income	23.5	258

5	Investment overview	Total investment	48.4 (Mln USD)	
		Equity funding	43.9 (Mln USD)	
		Debt Funding	4.5 (Mln USD)	
			<b>Mining &amp; Ore concentrate plant</b>	<b>Pig iron &amp; steel ball plant</b>
		NPV (Mln USD)	25.8	112.5
		IRR	159.3%	90.7
		Payback Period	1.57 years	3.4 years

**Company overview**

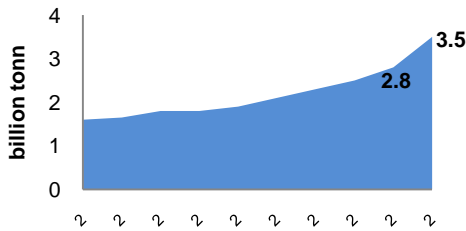
Dorniin Khuder LLC which is operating in the field of mining, geological exploration and drilling, was founded in 2007. The company holds some of special licenses including mining and exploration in Bulgan soum, Dornod province with special license of MV-016962 for mining and 11204X, 14178X, XV016963 for geological exploration.

Moreover, The Dorniin Khuder LLC has a lot of experience for establishing and mining operation iron ore concentrating plant. The following is main works done by management team of Dorniin Khuder LLC

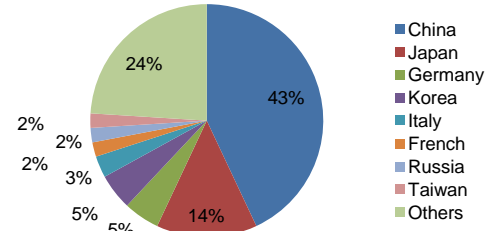
- Iron ore concentrating plant with drying technology, mining operation, Erven Khuder LLC
- Assembly of plant for concentration of gold mine, MGH LLC
- Mining plan, drilling, plant assembly of Special Minz LLC
- Geological exploration, drilling in Sukhbaatar, Uvs, Govisumber and Dornod provinces

**Sector and industry overview**

**World demand of iron ore**

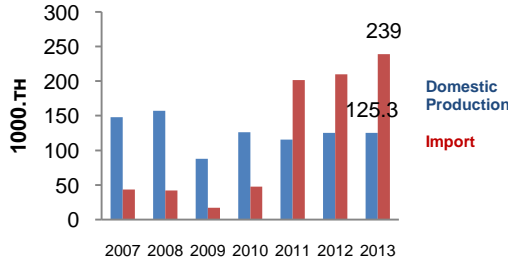


**World iron ore import**

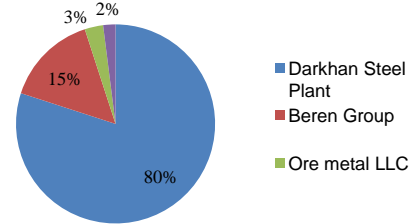


Source: World iron ore forum, 2012

**Steel consumption of Mongolia**



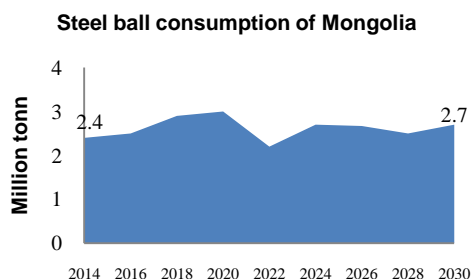
**Market share of domestic factories**



Source: NSO

Last few years, Mongolia has imported more than 60% of total steel consumption.

Darkhan steel plants is only main steel producer and Beren group is building the factory producing 100,000 ton/year in Erdenet city, Mongolia



*Source: Glogex LLC*

**Historic economic data and projections by IMF**

	2011	2012	2013	2014	2015	2016	2017
GDP growth rate, constant prices	17.3%	17.2%	11.8%	12.2%	4.5%	14.0%	9.1%
Gross domestic product at current prices - in bn. USD	8.51	10.92	14.63	18.03	20.86	25.47	29.55
Gross domestic product per capita at current prices in USD	3,042	3,848	5,080	6,165	7,028	8,456	9,667
Total investment - Share of GDP	70%	64%	48%	42%	37%	35%	35%
Inflation, average consumer prices	9.5%	13.6%	12.5%	9.7%	8.2%	7.6%	7.0%

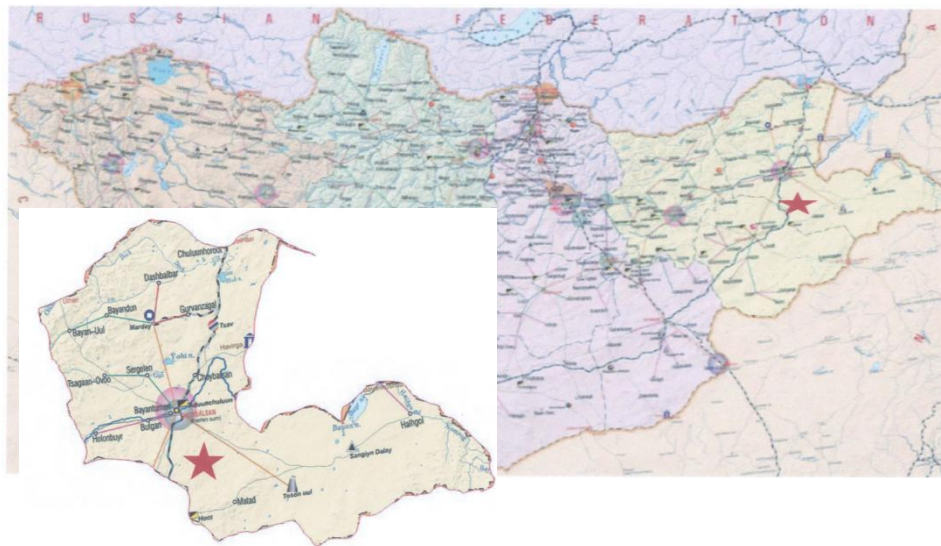
**Projected demand scenarios for Mongolian steel consumption by IMF**

	2013	2014	2015	2016	2017
Projection based on minimum specific consumption - K ton	216	266	307	375	435
Projection based on maximum specific consumption - K ton	488	601	695	849	985
<b>Projection based on average specific consumption - K ton</b>	<b>364</b>	<b>448</b>	<b>519</b>	<b>633</b>	<b>735</b>

**Project introduction**

Project owner	Dorniin Khuder LLC
Location	Bulgan soum, Dornod Province, Mongolia
Production	Ore concentrate, Pig iron, Steel ball,
Capacity	271.3k (iron ore concentrate) ~ 106k (pig iron) ~ 100k (steel ball) ton/per year
Technology	Wet process technology, there is only one standard of this technology worldwide
Total employees	480 employees
Local employees	144 employees
Target market	Mining companies especially Oyu-tolgoi LLC, construction companies, cement plants and export
Raw material	Their own deposit called Uud iron ore mine in Bulgan soum, Dornod province

Approved reserve	4.5 /million ton/
Operation term	11 years
Strategic Supporters	Government of Mongolia
EPC contractor	Zunhua Xinbaoyida Heavy Machinery Manufacturing Co.,Ltd which received upfront payment of 1,380,000 yuan (US\$222.6K) from the Dorniiin Khuder. Beijing DSCD Technology and Service Co.,Ltd


**Financial snapshot**

<b>INVESTMENT</b>	<b>₮ bln</b>	<b>US\$ mln</b>
<b>Mining and Concentrating plant</b>	<b>21.2</b>	<b>12.8</b>
Initial investment	11.1	6.7
Equity funding	3.7	2.2
Debt financing	7.4	4.5
Investment during operation	10.1	6.1
<b>Pig Iron &amp; Steel ball plant</b>	<b>58.7</b>	<b>35.5</b>
(during operation)		
<b>Total Investment</b>	<b>79.8</b>	<b>48.4</b>
Equity financing	72.4	43.9
Debt financing	7.4	4.5

<b>Mining &amp; Concentration Plant /million US\$/</b>	<b>2016</b>	<b>2019</b>	<b>2023</b>	<b>2026</b>	<b>Total</b>
Total Revenue	7.2	11	18.7	5.2	166.3
Total Cost	(3.7)	(7.9)	(12)	(5.5)	(108.1)
EBT	3.5	3.1	6.7	(0.3)	58.2
Net income	2.5	2.6	5.3	(0.3)	46.3

<b>Pig Iron &amp; Steel Ball Plant</b>	-	<b>2019</b>	<b>2023</b>	<b>2026</b>	<b>Total</b>
<b>/ million US\$/</b>					
Total Revenue	-	25.4	116.3	116.3	757.9
Total Cost	-	(22.1)	(70.3)	(70.3)	(478.5)
EBT	-	3.3	46	46	279.3
Net income	-	2.8	34.8	34.8	211.7

**DCF Valuation**

	<b>Mining &amp; Concentration plant</b>	<b>Pig Iron &amp; Steel Plant</b>
WACC	10%	10%
NPV (billion ₮)	25.8	112.5
IRR	159.3%	90.7%
Payback Period	1.57 year	3.4 year

<b>Management team</b>	<b>№</b>	<b>Name</b>	<b>Education</b>	<b>Experience</b>
	1	Enkhbaatar, Gombo	1.1.1 Metallurgical engineer, Urals Polytechnic Institute, Russia, 198	Director, Dun khorshoo CEO, Erven Khuder LLC General Director, Dorniin Khuder
	2	Altangerel, Mishigdorj	Metallurgical engineer, Urals Polytechnic Institute, Russia, 1985	General engineer, ZGZU master engineer Debuty director, Mungun Bambai LLC CEO, Dorniin Khuder LLC
	3	Baatarsukh, Bandi	Metallurgical engineer, Urals Polytechnic Institute, Russia, 1987	Engineer, Auto repair factory Engineer, Erdenet Mining Corporation Director, Erdenet steel ball plant Board director, Dorniin Khuder LLC
	4	Enkhtaiwan, Dashpuntsag	Economist, Khan-Uul institute, Mongolia, 2000	Economist, Erven Khuder LLC Economist, Dorniin Khuder LLC
	5	Soyol-erdene, Uchral	Master of Mining concentration engineer, Mongolian University of Science and Technology, 2005	Plant technologist, MGH LLC General engineer, Special Minz LLC Project director, Glogex LLC General director, PSST LLC Shareholder, Dorniin Khuder LLC
	6	Zorigtsaihan, Enkhbaatar	Environment ecologist, Euroasia institute, Mongolia, 2000, German-English translator, NUM, 2007	Forest engineer, Exploration, Research center of Forest and Water Forest engineer, OXCT LLC Specialist of environment, Dorniin Khuder LLC

- Project management**
- ✓ Project leader – Dorniin Khuder LLC
  - ✓ Project management advisor – Glogex LLC
  - ✓ Project EPC contractor – Zunhua Xinbaoyida Heavy Machinery Manufacturing Co.,Ltd,  
Beijing DSCD Technology and Service Co.,Ltd
  - ✓ Project mining operator – JNSC LLC
  - ✓ Other participants – Ministry of Industry, Ministry of Mining

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**2 June 2015**