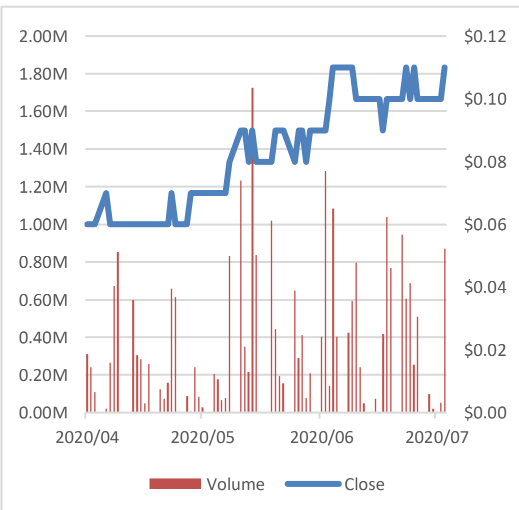
Black Iron Inc

TSX: BKI | OTCL BKIRF | FWB: BIN
Market Cap: $25.9M
Blackiron.com

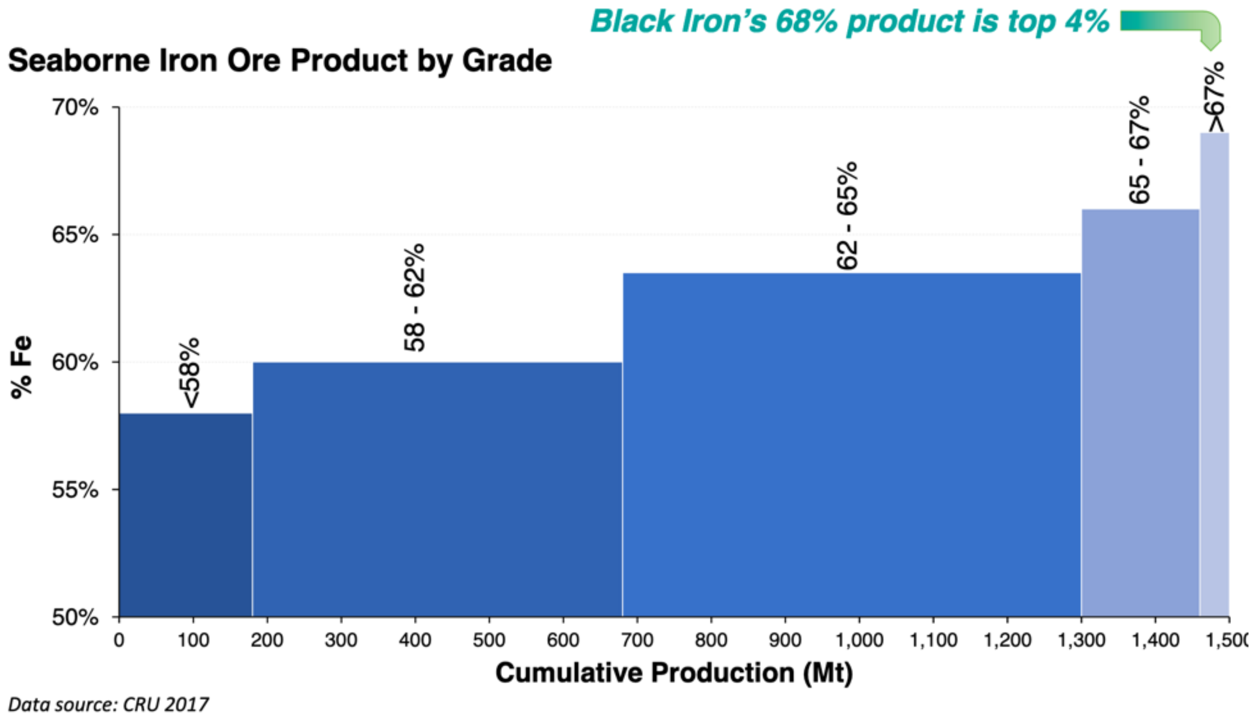


Summary

- Trading at a very steep discount to NAV/Share while having a pre-tax IRR of 41% with $62/tonne long term Iron Ore price vs. current actual of ~$100/tonne
- Company plans to produce high grade Iron Ore (68%), which sells at a premium to spot and substantially reduces Green House Gas (GHG) emissions produced in making steel
- Concerns about political risk in Ukraine is overblown, with sophisticated investors deploying capital, the current Ukrainian President endorsing Black Iron by name, and seven adjacent mines producing for decades without issue

Black Iron Inc (TSX: BKI; OTC: BKIRF; FWB: BIN), an advanced development iron ore company, currently trades at C$0.11 per share on the TSX, US$0.0826 on the OTC. This price, based on my analysis, is an extremely significant discount to NAV. The flagship project has a pre-tax IRR of 41% using very conservative long-term iron ore price of $62/tonne. At today's iron ore price of ~$100/tonne, the post-tax levered IRR jumps to a remarkable 68%! Market sentiment has been negative in the past primarily due to geographic jurisdiction. An unforeseen event known as the Euromaidan Revolution threw a monkey-wrench into the project at the time. However, this time it is different. Everything the company has planned has been coming together nicely, and macro factors including peace in Ukraine have been very positive. As can be seen below, comparable mines are in production and have not had any issues. Furthermore, Ukraine has a new government, with the current President directly endorsing Black Iron. As well, given the fallout of the COVID-19 pandemic, there is immense pressure worldwide to stimulate economies. Major infrastructure spending is a routine instrument in the toolkit available to policy makers as it helps get people back to work and entails the consumption of a massive amount of steel to the benefit of iron ore prices.

The company recently raised $2.2M, has majority of their necessary permits in place, and is expecting to start construction mid 2021 for production to commence in 2023. The product Black Iron plans to produce is ultra-high grade at 68% iron pellet feed, **which is in the top 4% globally**! This is very significant, because the market standard is 62%, with many producers exporting significant lower quality products. Higher grade Iron Ore fetches a premium, and while pricing will depend on offtake agreements, we can use the difference between the 65% and 62% Iron Ore price as a proxy to estimate the price for 68% Iron Ore. As of July 3rd, 2020, Seaborn Index 65% iron closed at $114.65 and Seaborn Index 62% iron closed at $101.65; therefore, Black Iron would be able to sell its 68% iron product for roughly $127.65 today. For the purposes of this report I have opted to be conservative and hence assumed Black Iron fetches the same price as currently paid for 62% Iron Ore i.e. ~$100/tonne. I do provide some analysis below showing the outcome of premium pricing associated with higher grades.



In any event, even with the assumption of high-grade Iron Ore prices falling to the level of standard 62% iron content, I have also applied a 20% discount to the Discounted Cash Flow (DCF) model (vs the 10% discount rate that is standard). Despite these inordinate penalties, the results still show that BKI is remarkably undervalued .

Based on a long-term Iron Ore selling price of US$100 per tonne for Black Iron's 68% iron product, the pre-tax Net Asset Value is approximately US$720.58M which equates to US$3.08 per share. These are pre-tax figures, and by applying an 18% tax rate, I got a post-tax NPV of US$528.90M.

I highly recommend anyone who wishes to buy this stock do so with the listing on the TSX. Given the TSX is located in Canada, the shares are traded in Canadian dollars, the NAV will need to be converted to Canadian Dollars in order to get the per-share valuation of the TSX listing. Using an exchange rate of 1.3564, and applying an 18% tax rate, we get a post-tax NAV of C$714.54M, which is C$3.06 (U$1.86) per share.

BKI's current share price of C$0.11 (US$0.826) is a staggering 2,681% discount to NAV. The company's Preliminary Economic Analysis on the property shows a US$1.85B pre-tax NPV using a 10% discount and $62/tonne price for 62% Iron Ore that is adjusted to a realized selling price of $97/tonne for Black Iron's premium quality product.

The price of Iron Ore is on a tear!

Catalysts to increase its share price in the next 12 months include completion of offtake agreement with major steel mill or trading house such as Glencore to partially fund construction, debt financing for construction, transfer of government owned land required for location of the processing plant, updated feasibility study, permits for construction being obtained and start of construction.

Key investment risks include the price of Iron Ore, dilution, capex escalation, opex escalation, permitting and environmental compliance issues, unforeseen changes in political environment, and ability to secure financing. While some of these risks are beyond any individual's control, the risk of cost escalation and maintaining environmental compliance is believed to be reduced with competent management and sufficient checks and balances. Financing of junior mining companies has steadily improved over the years, and while many investors have interest in gold, silver, and precious metal companies, interest in other metals remains active and is usually boosted when there are increases in price as is currently being experienced with Iron Ore. Supply of Iron Ore with low trace contaminants is decreasing at the same time as government economic stimulus packages focused on building infrastructure are kicking in leading to a positive outlook for the Iron Ore sector as the key input to produce steel.

Company Background

Black Iron Inc is focused on exploring and developing its Shymanivske Iron Ore Project located in Ukraine. This project is surrounded by seven operating Iron Ore mines located within 40 kilometers, two of which are directly adjacent: Arcelor Mittal's Kryvyi Rih and the YuGOK mine owned by Metinvest / Evraz. The property has been extensively drilled. It was originally explored by the former Soviet Union and more recently, since acquisition by Black Iron, there has been a total of just under 41,000 meters of drilling spread over 217 drill holes. Black Iron owns 100% of the Shymanivske project.

Summary of Estimated Resources as of March 2, 2020 - Cut-off Grade of 10% Fe_{mag}:

Classification	Tonnage (Mt)	Fe_{tot} (%)	Fe_{mag} (%)
Measured	355.1	32.0	19.5
Indicated	290.7	31.1	17.9
Measured + Indicated	645.8	31.6	18.8
Inferred	188.3	30.1	18.4

The project has two historic feasibility studies and most recently published a Preliminary Economic Study (PEA). The PEA incorporates a phased buildout, thereby reducing initial capex substantially as compared to the former feasibility studies. A summary of the updated results of the study were announced on the company's press release on March 3, 2020. Shymanivske is expected to have a mine life of 16.5 years, producing ultra-high grade of 68% Iron Ore (vs standard of 62%).

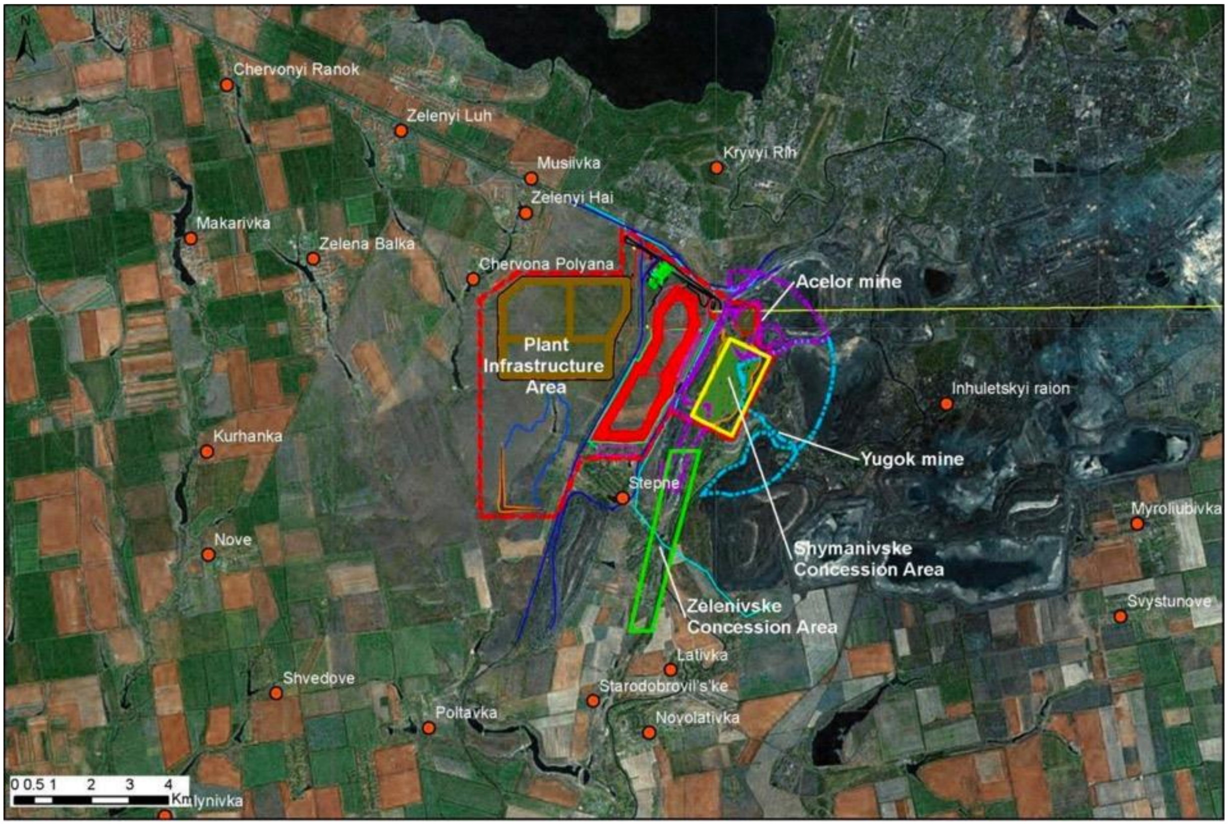
Investment Thesis

Currently, the market sentiment for high grade Iron Ore is very positive, with prices up substantially year to date, to the current range around $100/dmt. This is a greater increase than gold, which is the commodity many investors are currently focused on as iron ore flies somewhat under the radar.

Comparing change in prices between Iron Ore (Blue) and Gold (Orange).

The reason for this is Chinese manufacturing demand for steel has increased recently as their country has reopened, and is further helped by supply being constrained in Australia (world's top producer) due to inclement weather early this year and COVID-19 outbreak running rampant in Brazil (second highest producer). Perplexingly, with this bullish trend on Iron Ore prices, Black Iron has not received the same attraction that a near-production, high grade mine, should be receiving in this environment.

This is partially a result of concern about perceptions of Ukraine, but I believe this is refuted by strong evidence to the counter including Ukraine's ranking by the World Bank of 64 out of 190 countries on their 2020 Ease of Doing business analysis coupled by sophisticated investors globally including notable companies with multi-billon-dollar market capitalization such as Arcelor Mittal and Brookfield Asset Management, both of whom are making massive investments to expand their operations in Ukraine. This coupled with Black Iron's background and outlook still flying under the radar is the cause of such a large discount in the price. The fact that Arcelor Mittal has decided to invest US$1.8 billion to modernize their Ukraine Iron Ore mine and steel mill, which shares a border with Shymanivske (image below), while at the same time is selling down their ownership of an iron ore mine in Canada signals their confidence in Ukraine and indicates that there is substantially more money to be made in this developing country with highly skilled labour at low rates as compared to Canada. The image below shows where Black Iron's Shymanivske property is located in relation to these adjacent operating iron ore mines.



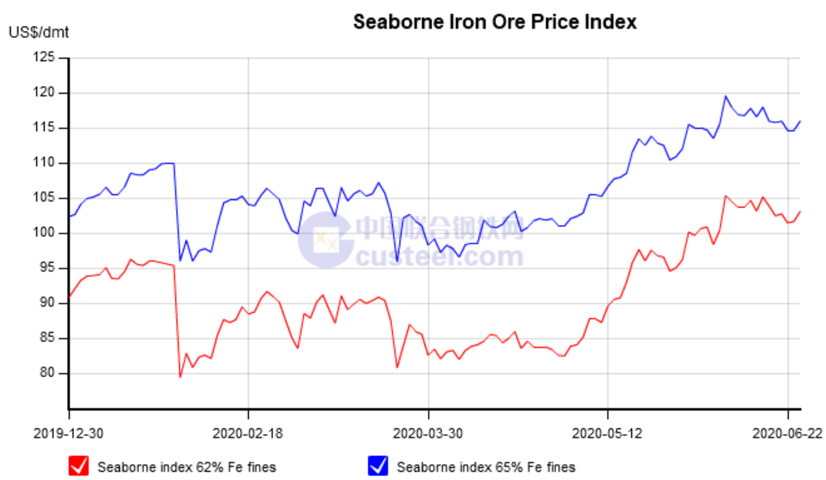
Shymanivske adjacent to Yugok mine and Arcelor's mine – NI 43-101 March 2, 2020

Black Iron also does not suffer from the concern that many other development iron ore mines face i.e. lack of major infrastructure (railway, power, ports, etc.). As a result, most investors avoid junior iron ore development mining companies because of the billion dollar plus cost to build the mine largely because rail alone costs $3 million per kilometer to construct, and most development mines are several hundreds of kilometers away from a deep water port. This is why Black Iron is a rare investment opportunity as it is surrounded by all of this major infrastructure to allow for a low cost phased build, but is still trading at a very steep discount to NAV despite direct comparables in production. Access to infrastructure is a massive factor in near production mines. The market has not appreciated this at all.

Furthermore, the stock is priced imperfectly for the following reasons:

1. There is significantly more value to the asset than the market has priced in. I have demonstrated this by discounting their NPV at 20% (higher than industry average of 10%) and applying a lower price on concentrate sales. I felt it to be an appropriate proxy to price in the inherent risk as it will assume a lower NAV by default. Without this adjustment, NAV/share is $6.09, and it is trading at a ~6,000% discount to NAV/share.
2. There is significantly less downside risk in the fact that Ukraine has producing Iron Ore mines a stone's throw away, and the President himself has publicly stated he wants to see Shymanivske move into production.
   "I am from Kryvyi Rih and this is an investment in my hometown. This problem has been 'hanging' for 10 years. The size of the investment is US$1.1 billion," the president said in an interview with the Globe and Mail as posted on his official website. "It will be a very big cooperation. It is very important for Canada, for Black Iron, and it is important for us," said Zelenskyy.

3. There is a premium associated with higher grade Iron Ore, as typical grade (and consequently the standard used to price futures) is 62% a tonne. Higher grades reduce GHG emissions and increase steel mill productivity so it is not unusual to see premiums of $18 to $54 per tonne a ton for the higher grade. The chart below shows some pricing information demonstrating the difference.



4. The company has succeeded in attaining many of its permitting milestones. This is huge, and something the market hasn't appreciated yet.
5. Substantial technical work has been completed to remove risk, and the company will quickly advance over the next year to start construction. This means the most important asset of their business has been identified to a very high degree of confidence per National Instrument 43-101 standards which require all of the technical and financial work to be independently verified by professional engineers that specialize in iron ore mine development.

Catalysts

Catalysts in the next 12 months include:

- Securing construction financing through an offtake agreement, construction company investment and bank debt
- Land transfer from Ukraine's government essential for construction

Catalyst #1 is significant in terms of revenue produced and has a direct correlation to enterprise value. Specifically, the securing of production financing will allow the company to begin operations, as it will take two years of construction before the company starts producing cash. The weak UAH/USD has the potential amplify returns if UAH keeps constant, as it has dropped from 0.043 to 0.037 since late December 2019.

Catalyst #2 is critical to unlock the ability to construct the mine and is highly likely to occur given the Memorandum of Understanding signed with Ukraine's government in November 2019 coupled with recent strong statements of support by Ukraine President Zelenskyy.

Valuation

Because the company is pre-revenue, and is a mining company, I believe the most appropriate valuation of the company will be derived by a DCF analysis to calculate the NAV/share.
The results of this analysis are derived from the data the PEA provides. In my analysis I have utilized a 20% discount rate (vs 10% in the PEA) and used an iron ore selling price of $100/tonne, which is below

spot as of today and does not incorporate the premium associated with the higher grade. I have also applied an 18% tax rate.

The result of my analysis indicates that BKI should be trading around $3.06/share. This is **27 times** the current share price of $0.11 a share!

Below are some excerpts from the analysis:

NAV/Share						
		Discount Rate				
		5%	10%	**20%**	30%	40%
Shares Outstanding	**233.59M**	*$15.85*	*$9.08*	***$3.06***	*$0.80*	*-$0.19*
	243.59M	15.20	8.71	*2.93*	0.76	-0.18
	253.59M	14.60	8.37	*2.82*	0.73	-0.18
	263.59M	14.04	8.05	*2.71*	0.71	-0.17
	273.59M	13.53	7.76	*2.61*	0.68	-0.16
	283.59M	13.05	7.48	*2.52*	0.66	-0.16

Key takeaway: Even with share dilution of an additional 50M shares ($5M raised at $0.10 a share/potentially from warrant exercises), the stock still trades at a significant discount when using a 20% discount rate.

NAV/Share						
		Iron Ore Price (62%)				
		$85.00	$90.00	**$100.00**	$110.00	$120.00
Discount Rate	5.00%	$10.80	$12.48	*$15.85*	$19.21	$22.58
	10.00%	5.82	6.91	*9.08*	11.26	13.44
	15.00%	3.06	3.80	*5.29*	6.78	8.28
	20.00%	*1.45*	*1.99*	***3.06***	*4.13*	*5.20*
	25.00%	0.48	0.88	*1.68*	2.48	3.29
	30.00%	-0.14	0.17	*0.80*	1.42	2.04

Key takeaway: Even with Iron Ore prices dropping to $85/tonne, and pretending no premium exists for having higher grade ore, the stock still trades at a significant discount.

NAV/Share						
		USD/CAD				
		1.2500	1.3000	**1.3564**	1.4000	1.4500
High Grade Premium	5.00%	$14.60	$15.19	*$15.85*	$16.36	$16.94
	10.00%	8.37	8.71	*9.08*	9.38	9.71
	15.00%	4.88	5.07	*5.29*	5.46	5.66
	20.00%	*2.82*	*2.93*	***3.06***	*3.16*	*3.27*
	25.00%	1.55	1.61	*1.68*	1.73	1.80
	30.00%	0.73	0.76	*0.80*	0.82	0.85

Key takeaway: The project is valued in USD. The stock on the TSX is traded in CAD. This value will fluctuate based on the exchange rate over time. USD/CAD was around 1.40-1.45 for a prolonged period until very recently.

USD/CAD exchange rate

The project remains economically viable regardless of exchange rate fluctuations and is still extremely undervalued.

NAV/Share						
		Iron Ore Price (62%)				
		$85.00	$90.00	**$100.00**	$110.00	$115.00
High Grade Premium	**$0.00**	*$1.45*	*$1.99*	***$3.06***	*$4.13*	*$4.67*
	$10.00	2.52	3.06	*4.13*	5.20	5.74
	$15.00	3.06	3.59	*4.67*	5.74	6.27
	$20.00	3.59	4.13	*5.20*	6.27	6.81
	$25.00	4.13	4.67	*5.74*	6.81	7.35
	$50.00	6.81	7.35	*8.42*	9.49	10.02

Key takeaway: This is a more realistic view while maintaining a high 20% discount rate. If you apply the premium that exists for higher grade, valuation increases substantially. A premium of $15/dmt, which many would view as conservative, will yield a NAV/share of $4.52 – an incredible 45x increase over current price!

Investment Risks

The top risk factors include:

1) Unexpected political instability/renewed conflict;

2) Delays in production financing; and,

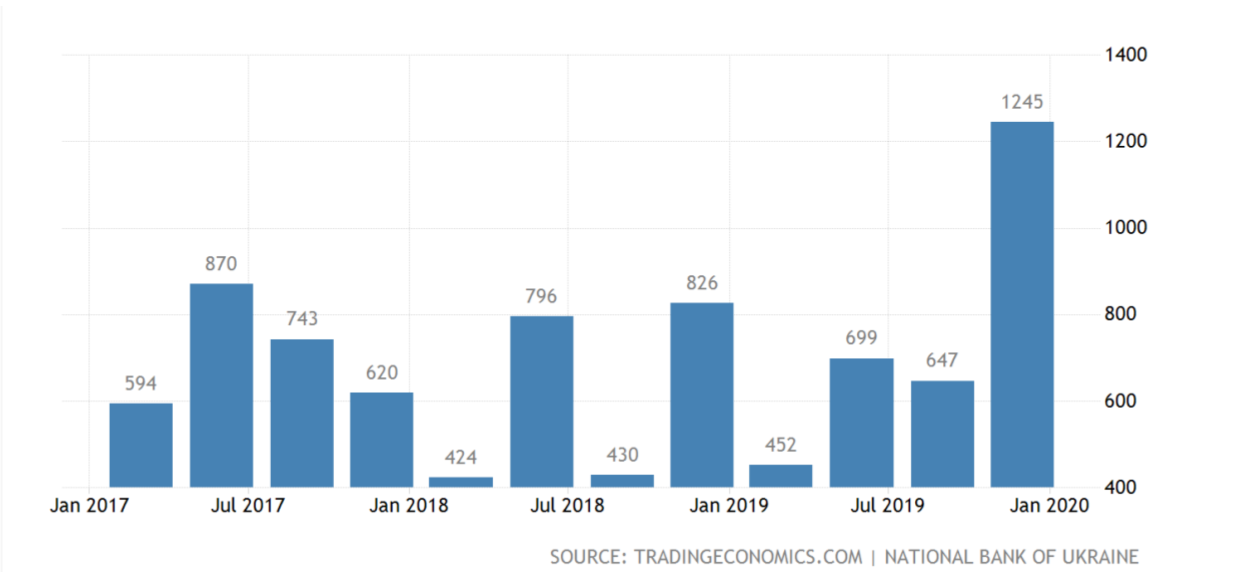
3) Unexpected drop in USD.

We'll address each of those risk factors in turn and explain how to mitigate them:

1) Political instability associated with Ukraine

This is the highest risk in the list. Some of this has been addressed already, and while this does remain the least predictable factor, and the past does not predict the future, the evidence has been very positive to the contrary. Ukraine is continually attaining an improved Fitch Sovereign Risk rating, has numerous mines in production and is continuing to attract sophisticated foreign investors.

Some examples that come to mind are ArcelorMittal's investing a further $1.8B in their Ukrainian operations. Concurrently Arcelor is also considering the prospect of sale of its Canadian Iron Ore operations. Brookfield Asset Management is putting $160M in a new IT park in Ukraine. In Q1 2020 Foreign Direct Investment in Ukraine was $1.245B



FDI in Ukraine

Furthermore, with the current pandemic spread throughout the world, it appears as if nations worldwide will be adjusting to this new normal, with many countries using all tools available to stimulate the economy such as greater spending on major infrastructure projects such as new roads, powerlines and railway lines which will all entail massive consumption of steel over several years to the benefit of iron ore prices.

2) Delays in production financing

If Black Iron is unable to secure production financing, the mine will not be operational, and the value of the asset will drop significantly. Given that this is a qualitative risk, if we assume the financing can be attained as long as they have approved permits (Ukraine's President has personally stated his support of this Black Iron), it implies no delayed production start date. If we assume that no financing is attainable despite stable political environment and approved permits, then the asset is worthless.

While this is a theoretical risk, it is unlikely for the reasons already stated i.e. the sitting President has publicly supported this project, a mine adjacent to this is continuing production with no stoppage implying that this is tried and proven. The company is ranked by market intelligence firms CRU and Wood Mackenzie as having the highest economic return and lowest cost of any undeveloped iron ore project known globally and will be producing a product, high iron content magnetite pellet feed, expected by CRU to have a significant shortfall in the supply available as compared to strong demand. Black Iron has many existing permits and the political situation is stable enough to have at least 7 peers mining the exact same mineral within 40 kilometers.

3) Unexpected drop in USD

While currency speculation is a difficult art to master, calls for the drop in the USD have been heard for over a decade for various reasons. The primary reason is the virtually endless supply of quantitative easing the US government has employed as the main course of remedy for any negative events in their economy. The recent outbreak of COVID-19 has meant stay-at-home orders throughout the US, and has had a staggering impact on the economy, resulting in the Federal Reserve to categorically say they will deliver unlimited QE if necessary.

Conversely, this risk is also mitigated by the fact that Iron Ore is priced in USD, and as the value of the USD drops, the per $ price of Iron Ore will rise. For this reason, I believe it to be low risk.

Conclusion

This property has all the makings of a phenomenal long-term investment for those being willing to take on a little bit of risk that comes with a developer in return for a massively outsized return on investment. As far as near-term producers go, this one should rank highly. It is in an environment of rising Iron Ore prices, has the lowest cost position, will be producing a high-grade product expected to be in short supply and has existing infrastructure in place to allow for a low-cost phased build. Black Iron is on the precipice of being an investment that can pay off in spades.

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