



TIS Investment Group

Ivanhoe Mines (TSX:IVN)

Can't have an electric future without copper



Agenda

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Executive summary



Executive summary

We recommend opening a long position in Ivanhoe Mines for the Natural Resources portfolio

Key takeaways

- Ivanhoe Mines Ltd. Is a Canadian mining company with three projects in the Congo¹ and one in South Africa. The company is mostly exposed to copper, but also has exposure to other metals like zinc, nickel, PGMs, silver and gold.
- Accelerating copper demand for transportation, energy infrastructure, and other uses could create 35 million tonnes of annual demand by 2030.
- Copper supply growth faces several headwinds, like the lack of new major discoveries in recent years despite increased exploration budgets; few investments in emerging economies due to less mining-friendly tax codes and political risks; the long-term nature of planning new mining projects matched with insufficient current planned projects to meet future demand.
- Ivanhoe has world-class mines that will have long lives and feature high grade deposits which provides cost savings.
- We see Ivanhoe's experienced leadership as a strength and its operational track record so far has been very good.

Key information

Current² price (CAD) \$ 10.18

Target price (CAD) \$ 16.0

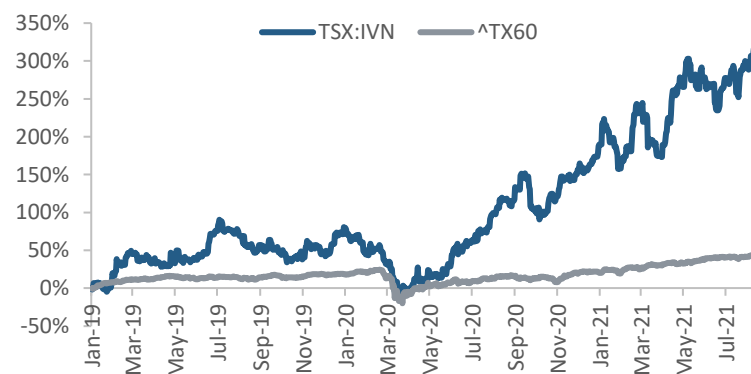
Implied upside (%) ~ 60.0%

Company name Ivanhoe Mines Ltd.

Ticker TSX:IVN

Headquarters Vancouver, BC


Stock performance (2019-present)



Sources: Capital IQ, TFS Investment Group estimates

[1] Democratic Republic of the Congo

[2] As of market close on 2021-08-31

An aerial photograph of a large-scale mining operation. The scene is dominated by massive piles of dark grey material, likely coal or iron ore, which have been processed into a fine, powdery state. Two long, parallel conveyor belts, supported by metal structures, run diagonally across the site, transporting the material. In the lower-left quadrant, a yellow front-end loader and an orange dump truck are positioned near a large pile of the processed material. The ground is marked with numerous tire tracks, indicating heavy vehicle activity. The overall environment is industrial and rugged.

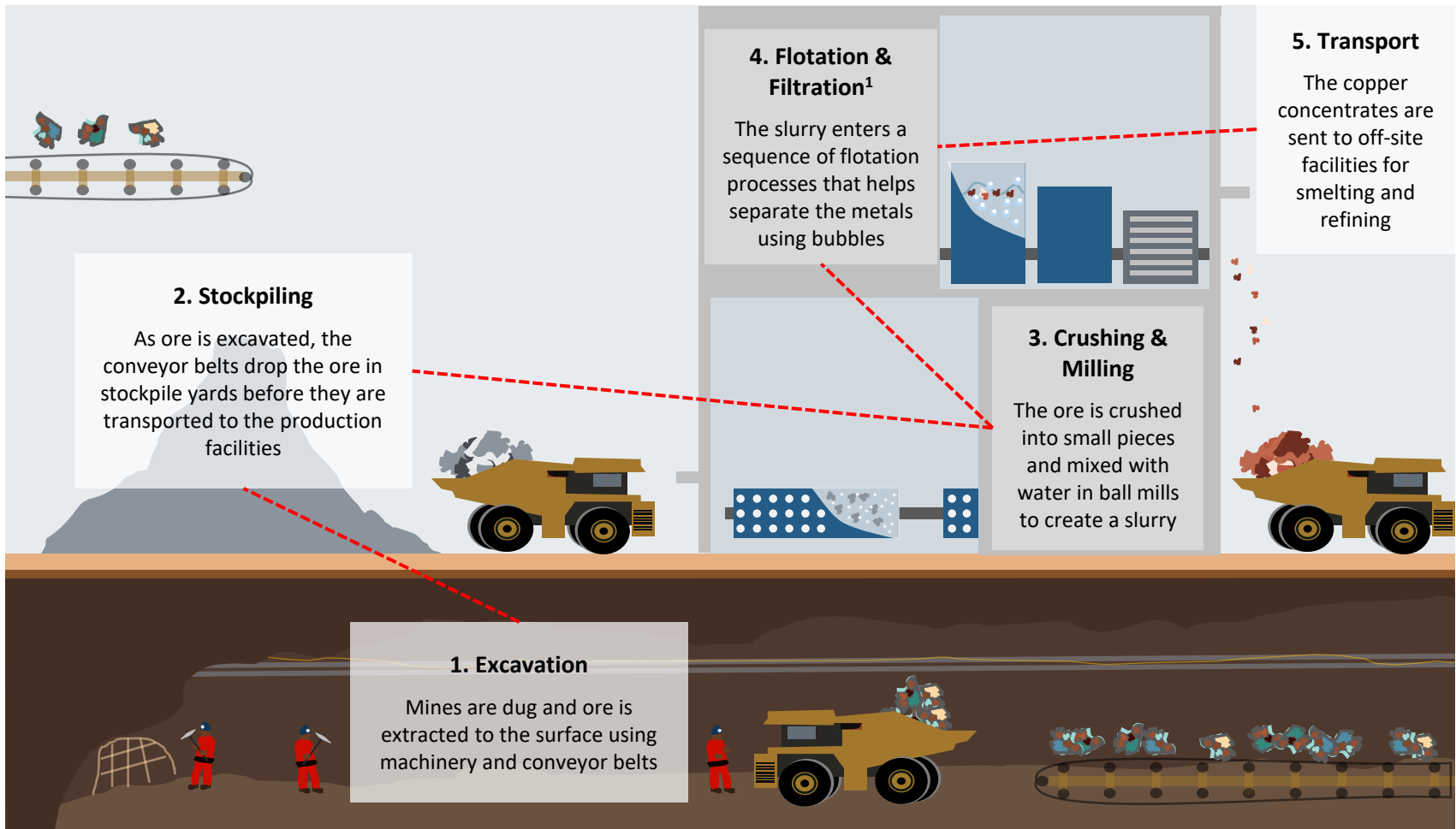
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Business overview

A presentation of Ivanhoe's operations and its four mining projects



Basics of mining copper



Sources: Ivanhoe Mines, Lundin Mining Corporation

[1] Separation by flotation is the most common technique used from producing copper. Alternatively, separation using chemical processes can be performed.



Kamoa-Kakula

Ivanhoe's flagship long-life high-grade copper mine

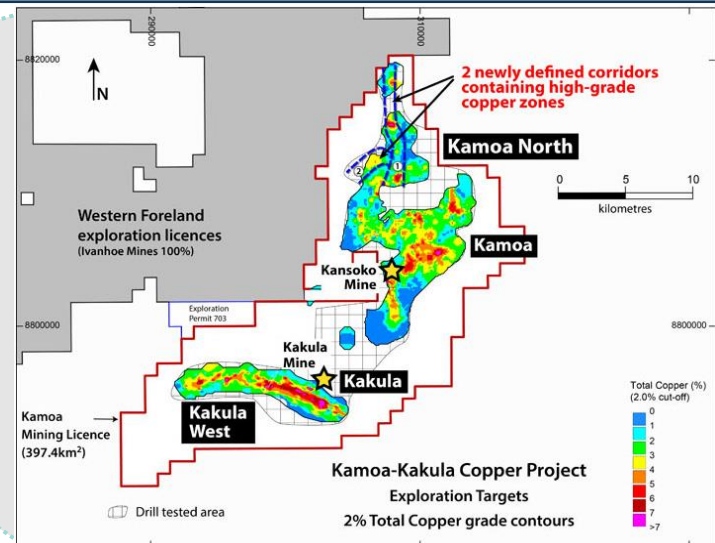
Located in the south of the DRC¹



Reserves & grade highlights

- The Kamoa-Kakula project is expected to become the **world's second largest copper producing mine** once it reaches full processing capacity in ~2028.
- Ivanhoe has an **estimated total cash cost of \$1.23/lb Cu in the first 10 years** of operations, which would represent a 73% gross profit at current spot prices.

Technical report imagery





Western-Foreland

The Democratic Republic of the Congo's next major copper discovery

Overview

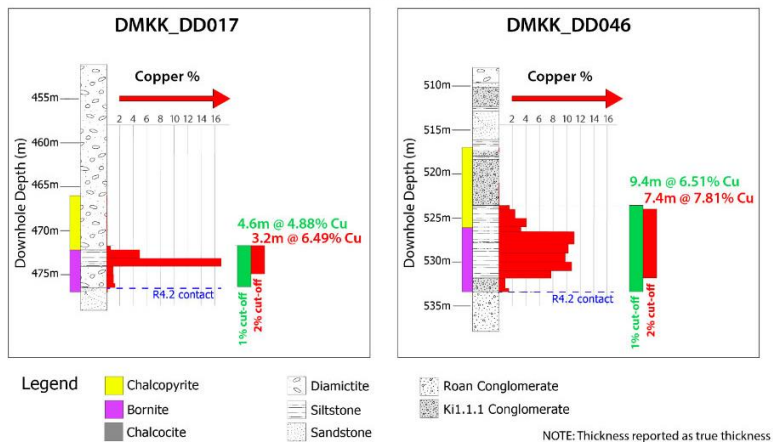
- 90%-100%-owned licences
- Comprised of 17 licences that cover approximately 2,550 square kilometres
- Targeting Komao-Kakula-style copper mineralization on its Western-Foreland exploration licences
- Currently in the exploration phase

Discoveries

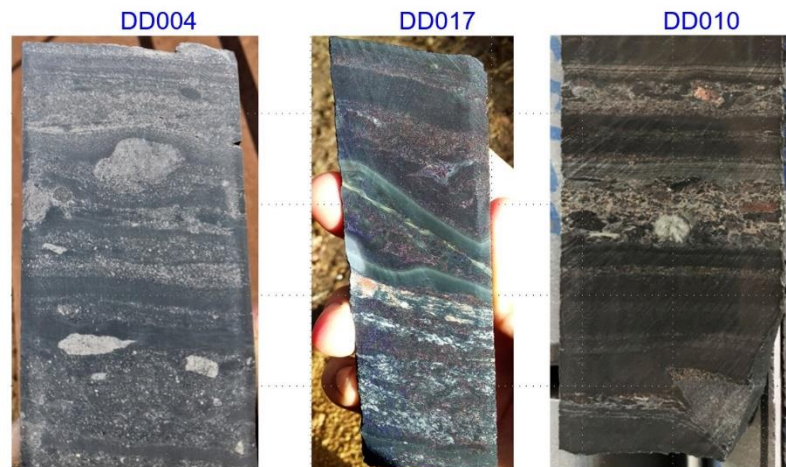
- Announced Makoko Copper Discovery with similar geological characteristics to the copper in the Kamao-Kakula mines in 2018
- Total of 11 new diamond drill holes were completed at the Makoko West area
- Kiala Discovery was delineated from Kamao-Kakula licences to Western-Foreland Licences
- Western-Foreland 2021 budget increased from \$16 million to \$21 million

Makoko Mineralization Profiles

Mineralization Profiles



Copper Ores





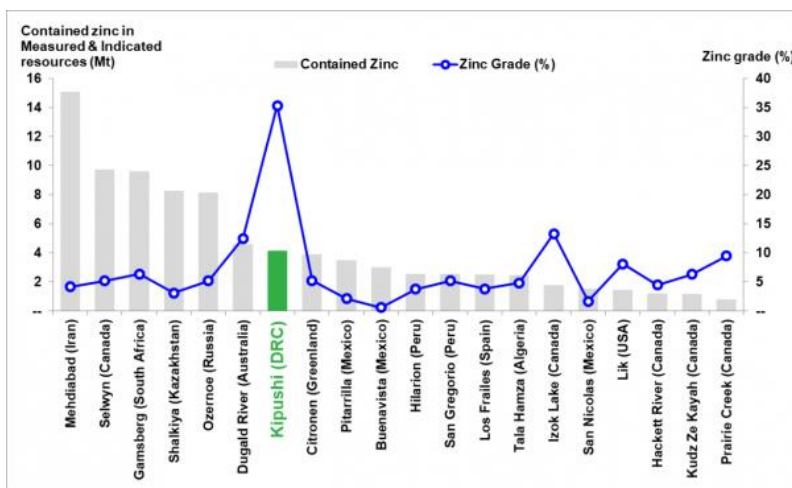
Kipushi

The rebirth of a world-class zinc and copper mine

Overview

- Located in The Democratic Republic of the Congo, the Kipushi project is the **7th largest zinc project in the world** by contained zinc
- Ivanhoe Mines acquired a **68% interest in the Kipushi Project** in November 2011
- Currently, the draft feasibility study for the Kipushi project is under review while the project maintains a small workforce to carry out other activities.

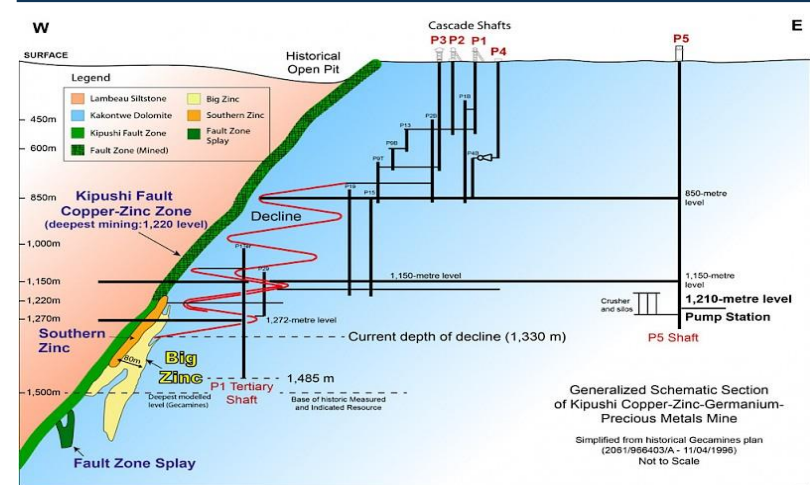
World's top 20 zinc projects, by contained zinc



Discoveries, reserves and operating plan

- In 2017, Ivanhoe completed the pre-feasibility study and announced an annual production of **an average of 381,000 tonnes of zinc concentrate** over an **11-year initial mine life**, at a **total cash cost of \$0.48 per pound (lb) of zinc**
- The operation of the mine was supposed to start in 2021 but it was **delayed due to covid-19**
- Significant progress** has been made in recent years to **modernize the underground infrastructure** of the Kipushi mine and **production will soon resume**

Schematic section of the Kipushi Mine





Platreef

Potentially the world's leading producer of PGMs with some copper and nickel deposits

Located in the north of South Africa

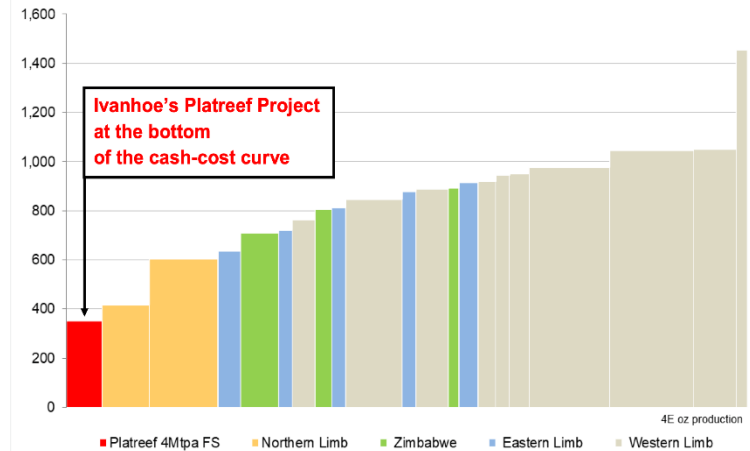


Overview & Prospectus

- Ivanhoe owns 64% of the Platreef project through one of its subsidiary companies
- Phase one of production featuring world-class cash costs per ounce is expected to begin in 2022
- Compared to its peers, Platreef sits at the bottom of the cash cost curve

Cash-cost curve of 3PE+Au mining per Oz

Figure 2.0: Net total cash cost + SIB capital (2017 mines in production and selected projects), US\$/3PE+Au oz.





Industry outlook

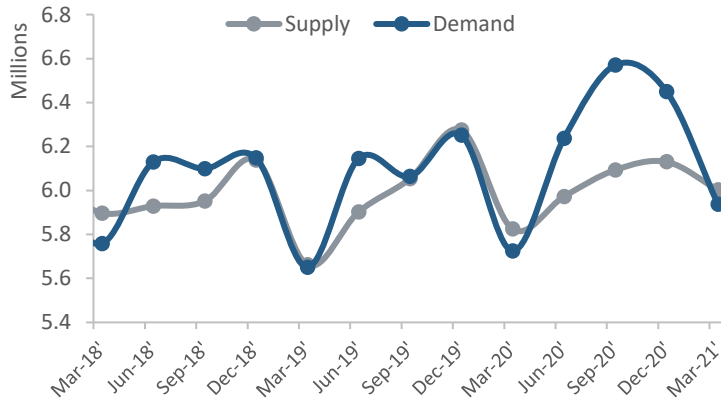
Pricing outlook for Ivanhoe's commodities



Copper outlook

Accelerating copper demand for several use-cases maintains upward pressure on prices

Quarterly global copper¹ supply/demand (mt)



Growth markets for copper usage

- Assuming 67% global electric vehicle adoption in 2030 and a TAM of 100mn vehicles, there could be **new demand for 4.45 million tons of copper**. For perspective, global copper production was estimated to be 20 million tons in 2019.
- In the long term, copper could also benefit from other markets like antimicrobial applications in medicine, aquaculture, and renewable energy generation, transmission & storage.

Copper futures prices in USD/lb (2000-Present)²



Sources: Bloomberg, Capital IQ, FRED Economic Data, International Copper Study Group, Statista, TFS Investment Group estimates

[1] Refined copper

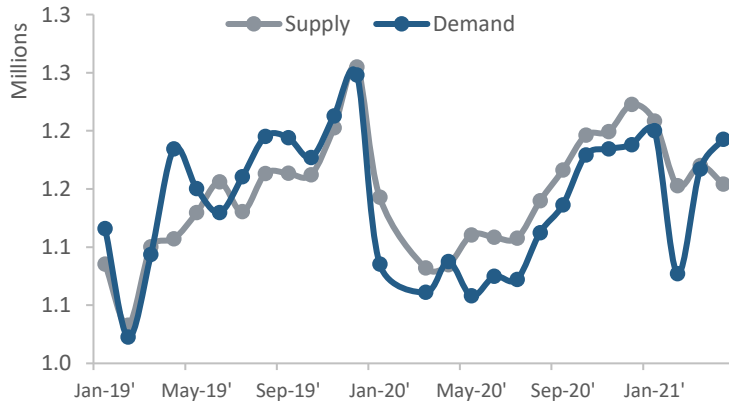
[2] Spot price data is from the New York Mercantile Exchange (COMEX/NYMEX). Copper is traded in lots of 25,000 pounds and quoted in USD/lbs.



Zinc outlook

Pricing is expected to fall in 2022 and find its long-term equilibrium at \$2,400/tonne

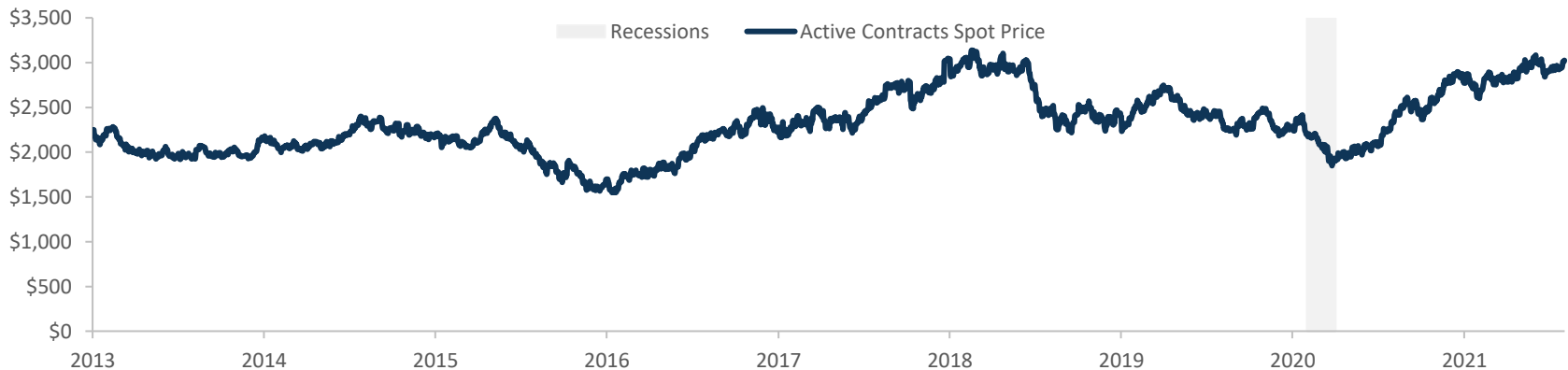
Monthly global zinc¹ supply/demand (mt)



Global market usage

- Most zinc is used to galvanize other metals, like iron, to protect the surfaces from rusting
- Zinc is also used in alloys such as brass, nickel, silver, and aluminum solder
- It is also widely used in paints, rubber, cosmetics, pharmaceuticals, plastics, inks, soaps, and more.

Zinc futures prices in USD/tonne (2013-Present)²



Sources: Bloomberg, Capital IQ, FRED Economic Data, World Bank

[1] Refined zinc

[2] Spot price data is from the London Metal Exchange (LME). Zinc is traded in lots of 5 tonnes and quoted in USD/tonne.



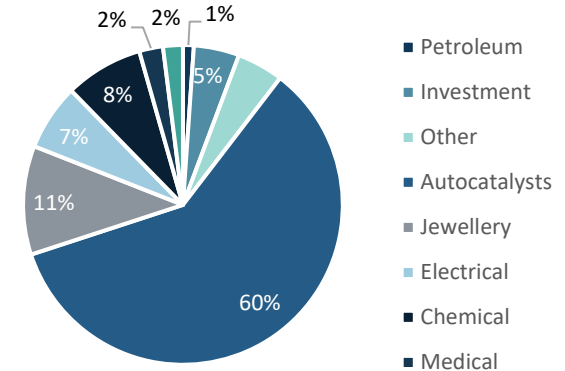
Platinum-group metals¹ outlook

Prices are expected to have steady growth over the long term

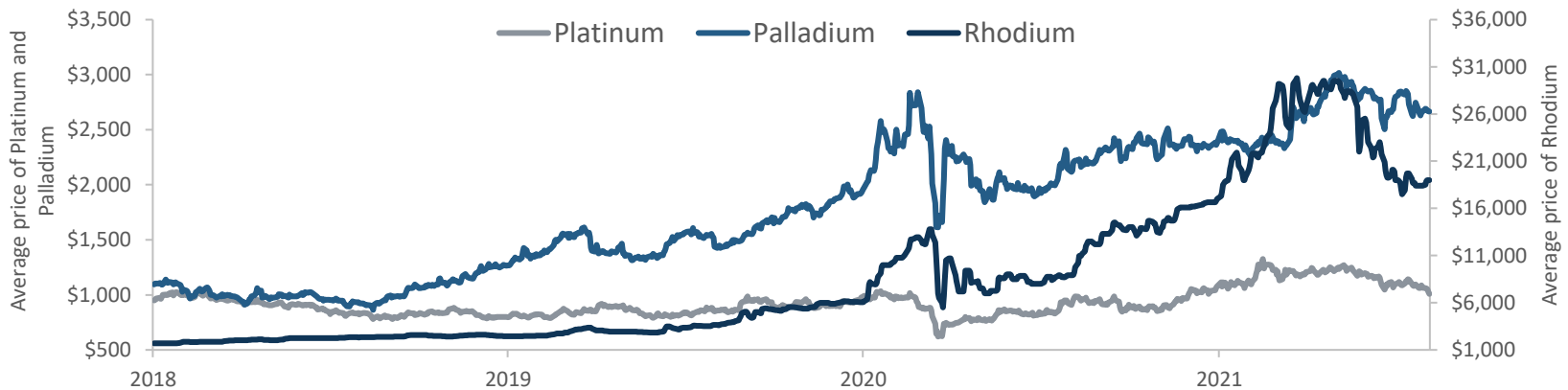
Market Usage

- PGMs are used in a plethora of industries. Although its use is heavily concentrated in autocatalysts, it still holds many other uses
- Widely used in catalytic converters to decrease harmful emissions from automobiles, the automotive industry has been the principal consumer of PGMs since 1979
- Global PGM supply is projected to grow at **6.8% CAGR** for the period spanning 2020-2024

Global PGM End-Market Segmentation (2019)



Platinum, Palladium, and Rhodium prices in USD/t oz (2018-Present)²



Sources: US Geological Survey, FRED Economic Data, Berkshire Hathaway Company

[1] Commonly abbreviated as PGMs, platinum-group metals include ruthenium, rhodium, palladium, osmium, iridium, and platinum. Ivanhoe has exposure to platinum, palladium, and rhodium thanks to its Platreef project in South Africa.

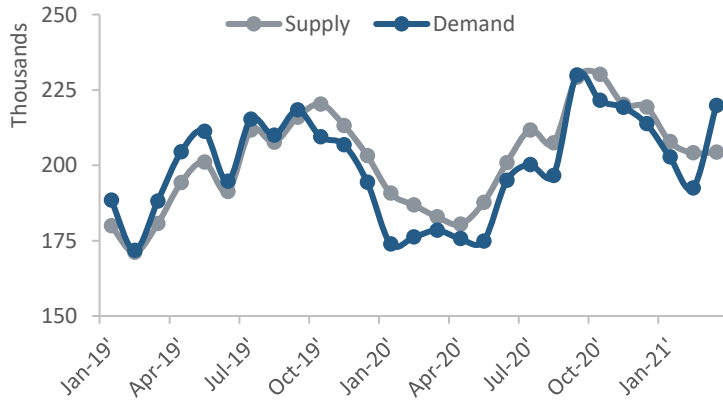
[2] Spot price data is from the New York Mercantile Exchange (COMEX/NYMEX). Platinum is traded in lots of 50 troy ounces and quoted in USD/t oz. Palladium is traded in lots of 100 troy ounces and quoted in USD/t oz. Rhodium has no futures market but there are a few exchanges which trade it. Rhodium is quoted in USD/t oz.



Nickel outlook

Prices are expected to remain on gradual uptrend as the global market remains in deficit

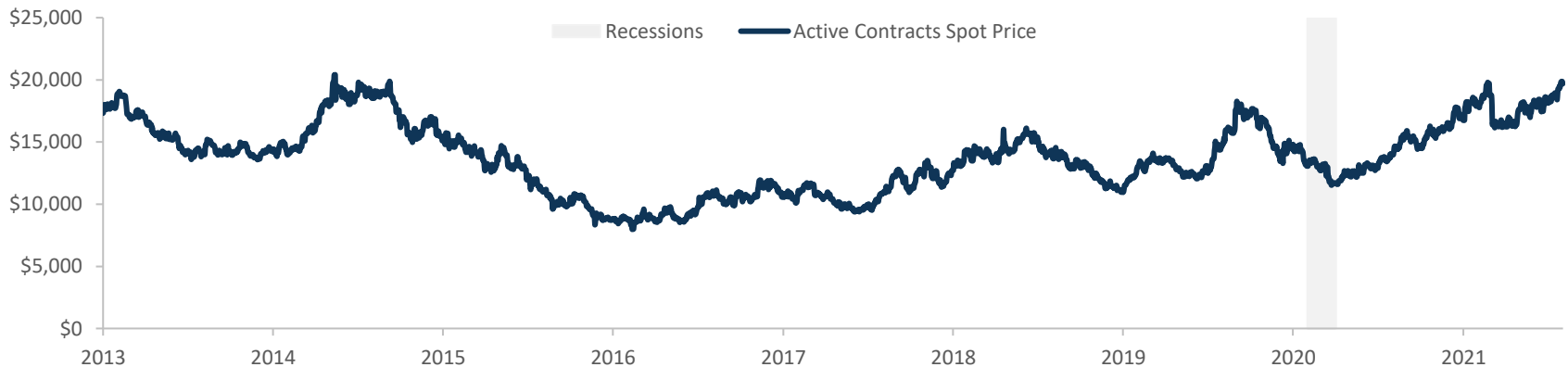
Monthly global nickel¹ supply/demand (mt)



Global market usage

- Nickel use is widespread because of its corrosion resistant properties for coating surfaces
- Nickel is used in everyday items such as cell phones, stainless steel parts of cars and jewelry and bodily accessories such as watches and belts
- Therefore, Nickel plays an important part in the supply chain of a diversified set of large global industries

Nickel futures prices in USD/mt (2013-Present)²



Sources: Bloomberg, Capital IQ, FRED Economic Data, World Bank

[1] Refined nickel

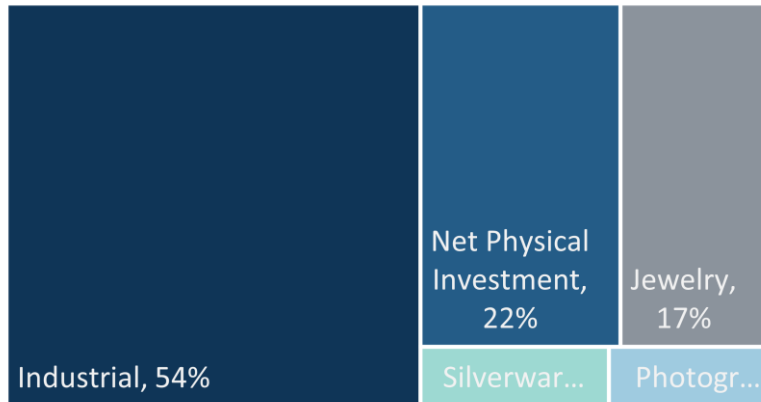
[2] Spot price data is from the London Metal Exchange (LME). Nickel is traded in lots of 6mt and quoted in USD/mt.



Silver outlook

Prices are expected to face the same challenges as gold with rising interest rates

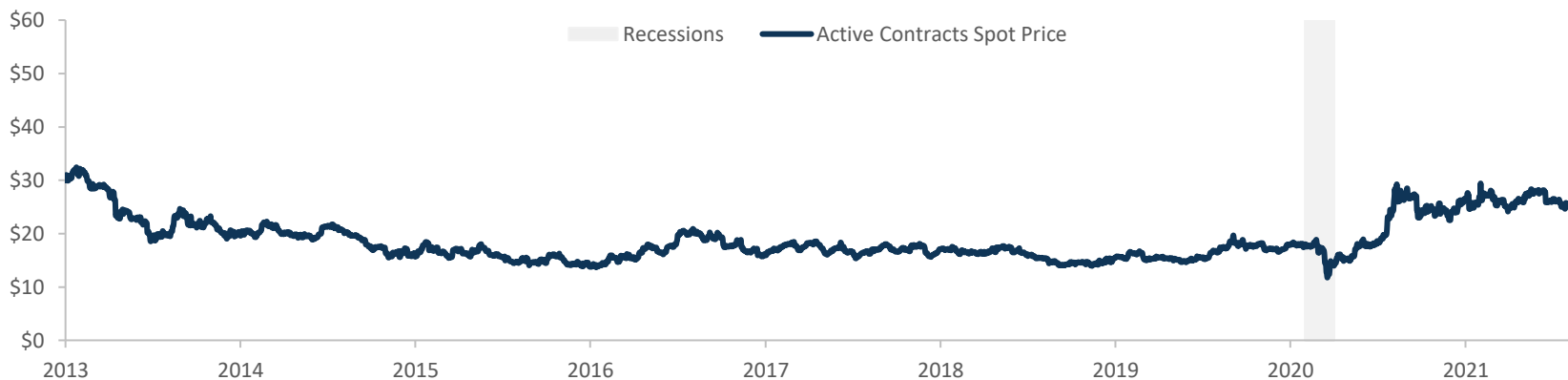
Silver demand by market usage



Global market usage

- Silver is a popular material for jewelry because it is lustrous and workable
- Silver is also used in various technologies like electronics, solar cells, catalysts, medicine and more
- Lastly, silver is also used in the same way investors purchase gold as a strategic hedge against inflation and market crises

Silver futures prices in USD/oz (2013-Present)¹



Sources: Capital IQ, FRED Economic Data, World Bank, Silver Institute

[1] Spot price data is from the New York Mercantile Exchange (COMEX/NYMEX). Silver is traded in lots of 5,000 ounces and quoted in USD/oz

An aerial photograph of a large-scale mining or construction site. The terrain is rugged and heavily excavated, showing various shades of grey, brown, and yellow. A network of dirt roads and tracks crisscrosses the site. In the center, there is a large piece of heavy machinery, possibly a conveyor system or a large excavator. To the right, there are several buildings, including a large, multi-story structure, and a few smaller vehicles. The overall scene depicts a complex industrial operation in a mountainous or hilly region.

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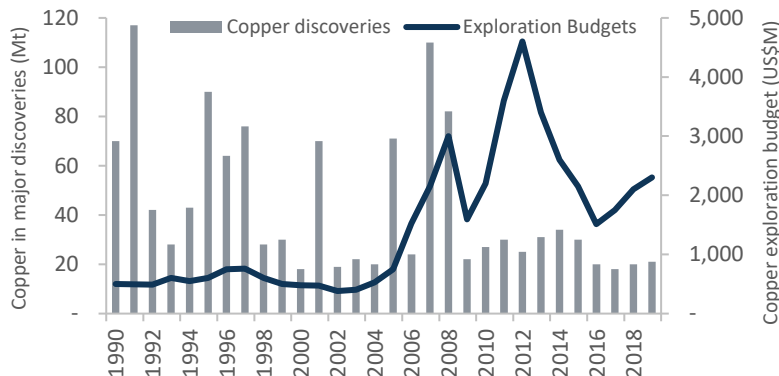
Investment theses



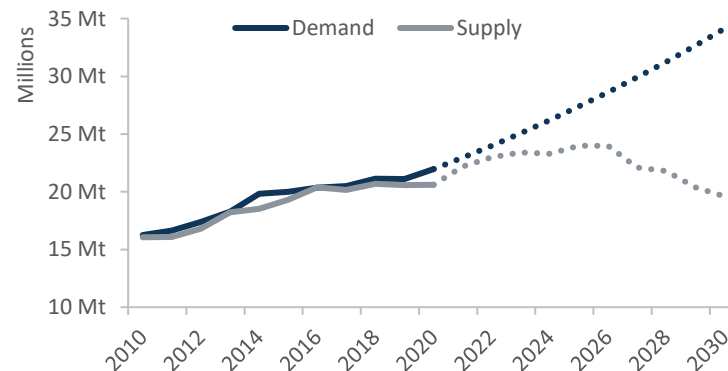
Copper supercycle¹

Supply headwinds and accelerating demand provide support for strong pricing

Decreasing discoveries despite higher budgets



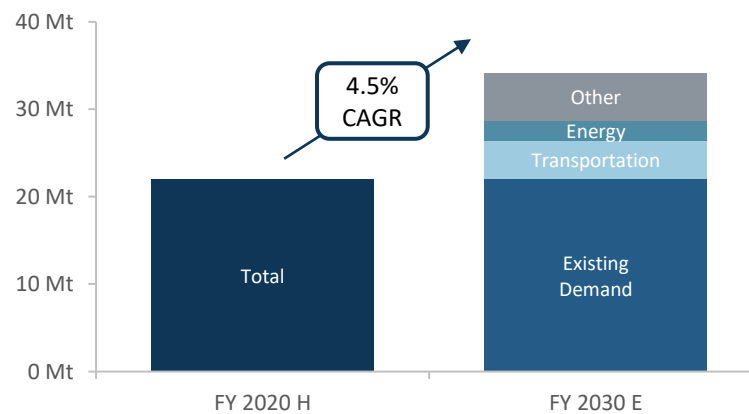
Forecast supply/demand until 2030²



Factors increasing time to begin new projects

- As the world's highest-grade deposits are depleted, new mining projects become less economical
- A lack of new large discoveries lead miners to higher risk areas like Peru, Zambia, and the Congo (which have less favorable tax codes and higher political risks)
- Companies face increasingly high ESG constraints which impedes on their ability to 'cut corners' to accelerate new projects
- "[...] it can take twice as long to build mines now than in the past, meaning the market wouldn't see that new supply for 8–10 years"
— R. Jacob, CFO of Southern Copper Corp.

Copper demand 2020 Vs. 2030



Sources: TFS Investment Group estimates, Bloomberg, IEA, S&P Global Market Intelligence, BNN Bloomberg

[1] A 'commodity supercycle' is a sustained period of abnormally strong demand growth that producers struggle to match, sparking an increase in prices.

[2] Supply forecast based on current operating projects and planned projects currently under construction



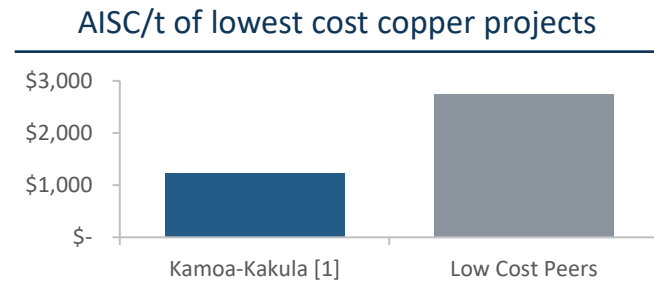
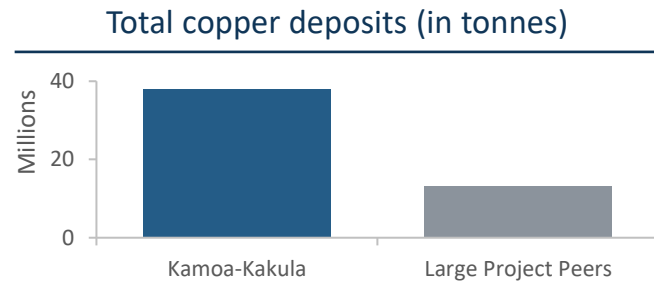
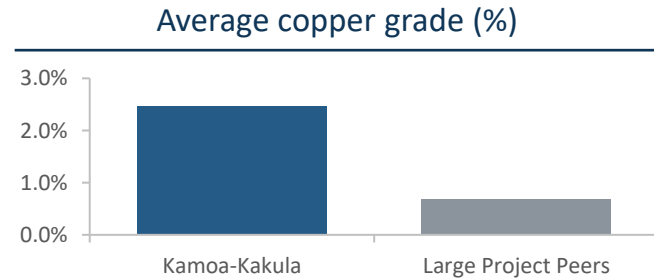
World-class mines

Ivanhoe's high-grade & long-life projects offer superior economics to its peers

High-grade deposits require less costs per lb of production

Long-life projects spread capital investment costs over more volume

The overall result is better economics





Strong leadership

Excellent operations
management track record so far

- Phase 1 construction at the Kamo-a-Kakula plant was recently completed ahead of schedule and under-budget
- Phase 2 expansion plan is now accelerated
- These achievements speak to the management expertise and great team of workers at Ivanhoe Mines

Mitigation of political risks
thanks to demonstration of CSR

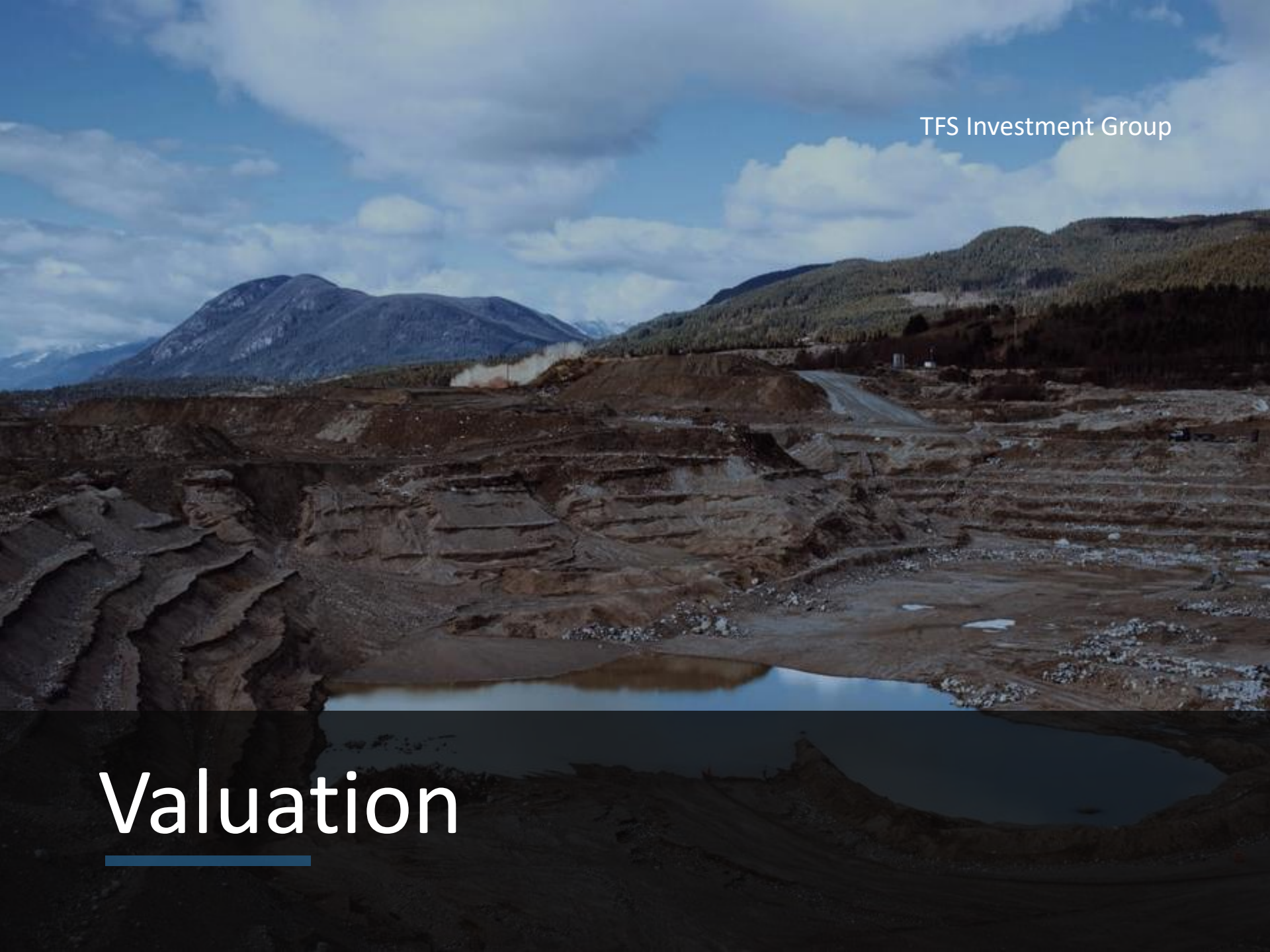
- Partnership with the DRC government to upgrade a hydro-electricity plant
- Commitment to net-zero carbon emissions
- 91% local employment
- Integration of local businesses in supply-chain
- Several community development initiatives

Experienced board and
management team

- Board members have participated in some of the world's most important discoveries
- Co-Chairmen, Robert Friedland and Yufeng Sun, both have over 25 years of experience directing quality assets
- Management team with extensive knowledge in the mining industry

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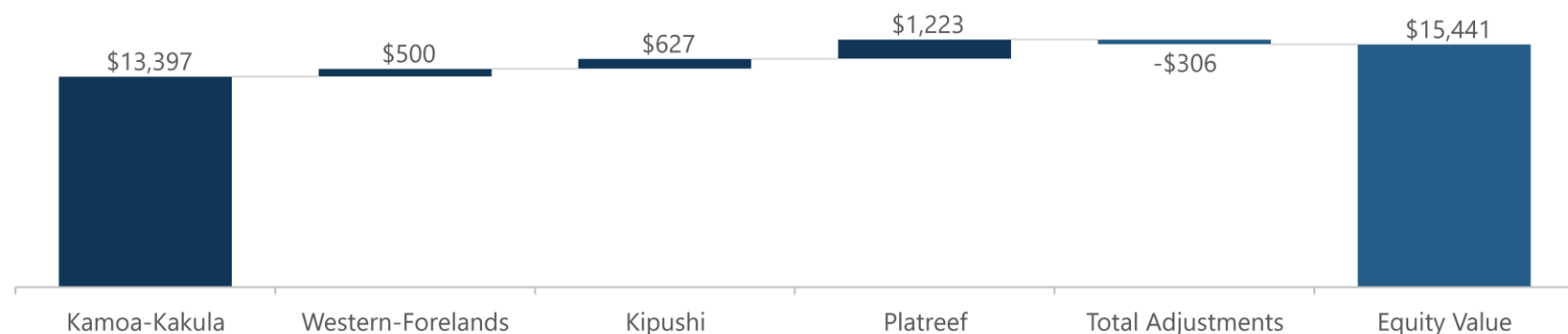
Valuation





Sum-of-the-parts valuation

Valuation breakdown by project (millions USD)¹



Methodology summary

- Our approach for valuing Ivanhoe Mines consists of the summation of NAV estimates for its different projects, resource credit value estimates, and other adjustments for net debt, SG&A expenses
- The NAV models discount annual cash flows over the life of the mine at 8.52% and the cash flows are equal to estimated refined production multiplied by the average spot price estimate for the same period

Kamo-Kakula NAV key assumptions

| | |
|---------------------------------------|----------------|
| Average copper spot price | \$5.34 / lb Cu |
| Average AISC | \$1.50 / lb Cu |
| Implied profit | \$3.84 / lb Cu |
| Copper ore reserves | 700 Mt |
| Average annual concentrate production | 6.6 Mtpa |
| Project life | 2021-2060 |

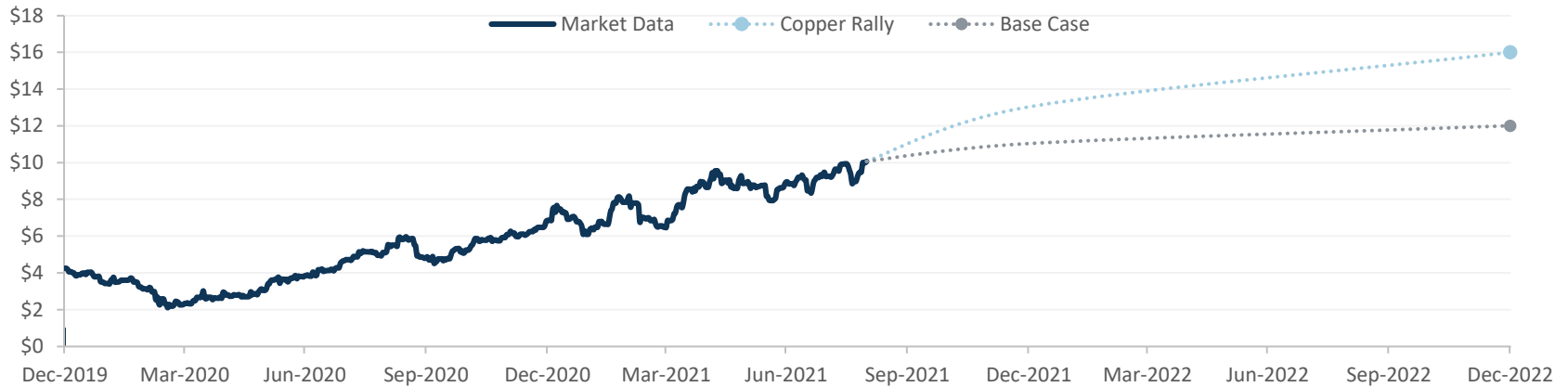
Sources: TFS Investment Group estimates, TD Securities, Company filings

[1] Asset valuations adjusted for ownership interest (%)



Price target & recommendation

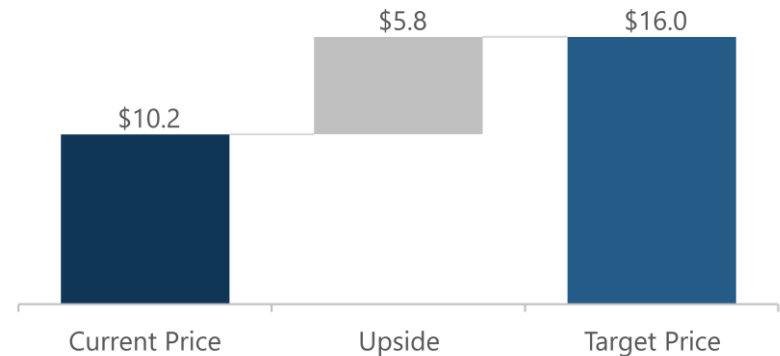
Market data & estimates (TSX:IVN)



Valuation summary

- Our \$16 'copper rally' target price is based on a net-asset-value (NAV) valuation approach using a 8.52% discount rate
- Our \$12 'base case' estimate ignores the potential for a copper price rally and assumes spot prices will remain flat over the long term
- The 'copper rally' and 'base case' estimates imply 60% and 19% potential upside respectively
- We recommend opening a long position in Ivanhoe Mines for the Natural Resources portfolio

Rating: BUY & ~60% target upside

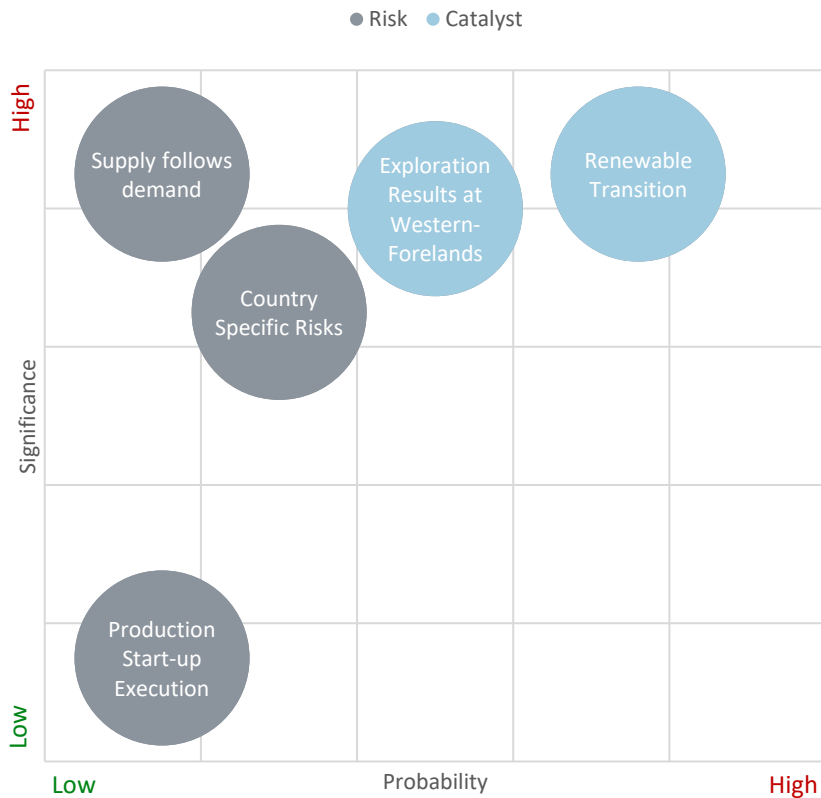


Risks & catalysts



Risks & catalysts

Risks & Catalysts Matrix



Renewable transition: A faster than expected renewable energy transition could offer even more support for a copper price rally



Exploration results: Further exploration results in the Western-Forelands could prompt higher NAV estimates if Kamoakakula like deposits are discovered



Supply follows demand: Somehow enough new copper projects are started to keep up with demand



Country specific risks: Ivanhoe operates in the DRC and in South Africa, where corruption and political instability present various risks



Production start-up execution: Kamoakakula has yet to construct its 2nd and 3rd phases of production capacity

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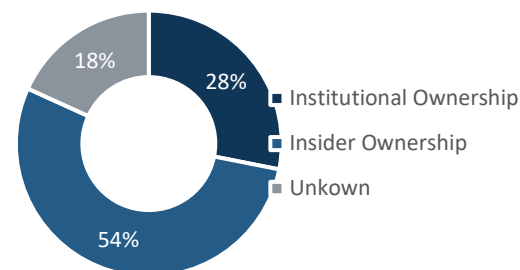


Ownership¹

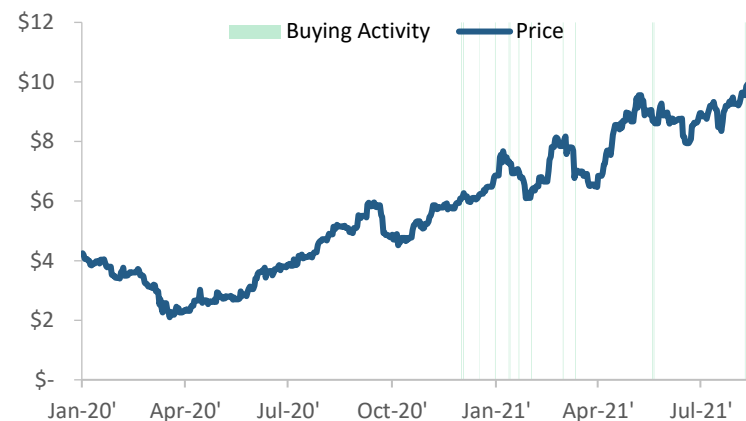
Top 15 institutional & top 5 insider holders

| Rank | Institutions | %OS | Pos (000) |
|------|---|--------------|----------------|
| - | Total | 76.08 | 919,063 |
| - | Institutions | 22.64 | 273,516 |
| 1 | Fidelity Management & Research Co. LLC | 10.19 | 123,133 |
| 2 | BlackRock Investment Management (UK) Ltd. | 2.49 | 30,111 |
| 3 | Rothschild Asset Management SCS | 1.95 | 23,510 |
| 4 | The Vanguard Group, Inc. | 1.18 | 14,217 |
| 5 | Fidelity Investments Canada ULC | 0.99 | 11,953 |
| 6 | Skagen AS (Investment Management) | 0.70 | 8,412 |
| 7 | FIL Investment Management (Singapore) Ltd. | 0.68 | 8,230 |
| 8 | Global X Management Co. LLC | 0.65 | 7,893 |
| 9 | Kopernik Global Investors LLC | 0.65 | 7,809 |
| 10 | Franklin Advisers, Inc. | 0.64 | 7,681 |
| 11 | Grantham, Mayo, Van Otterloo & Co. LLC | 0.60 | 7,299 |
| 12 | Invesco Advisers, Inc. | 0.56 | 6,755 |
| 13 | Dimensional Fund Advisors LP | 0.52 | 6,268 |
| 14 | BlackRock Fund Advisors | 0.48 | 5,752 |
| 15 | Norges Bank Investment Management | 0.37 | 4,494 |
| - | Insiders / Stakeholders | 53.44 | 645,547 |
| 1 | China Citic Bank Corp. Ltd. | 26.05 | 314,672 |
| 2 | Zijin Mining Group Co., Ltd. | 13.69 | 165,413 |
| 3 | Friedland Robert Martin | 13.46 | 162,560 |
| 4 | Bianchini Egizio | 0.15 | 1,846 |
| 5 | De Selliers De Moranville Guy Jacques Marie | 0.09 | 1,056 |

Ownership summary



Insider buying activity





Management

EXPERIENCED BOARD AND MANAGEMENT TEAM

BOARD OF DIRECTORS



Mr. Robert Friedland, Founder and Executive Co-Chairman

- Recognized as an entrepreneurial explorer, technology innovator, and company builder
- Led some of the world's largest mineral discoveries including Voisey's Bay, Fort Knox, Oyu Tolgoi and Kamoa-Kakula



Mr. Manfu Ma, Non-Independent Director

- As CITIC Metal Group's Vice President, played an important role in CITIC Metal's two strategic investments in Ivanhoe Mines in 2018 and 2019
- More than 30 years' experience in the mining industry



Mr. Tadeu Carneiro, Lead Independent Director

- CEO of Boston Electrometallurgical Corporation, and an invited lecturer in the Department of Materials Science & Engineering at the Massachusetts Institute of Technology



Mr. Chen Jinghe, Non-Independent Director

- Founder and core leader of Zijin Mining
- The key discoverer, researcher and development organizer of the Zijinshan Gold and Copper Mine



Mr. William Hayden, Independent Director

- Served as first President of the corporate predecessor, African Minerals, from 1998 to 2001 – and as a Director from 1998 to 2002. (African Minerals, now Ivanhoe Mines.)



Ms. Martie Janse van Rensburg, Independent Director

- Over 25 years' experience in executive roles & as a director with various South African companies, with a focus on capital markets & infrastructure development



Mr. Yufeng "Miles" Sun, Non-Executive Co-Chairman

- Chairman of CITIC Resources Holdings Limited, and President of CITIC Metal Group Limited
- More than 32 years working experience in metals and mining industry



Mr. Peter Meredith, Independent Director

- Has served as a Director of the current Ivanhoe Mines and its corporate predecessors since 1998, while also serving as CFO of the original Ivanhoe Mines from 2004 to 2006
- Previously spent 31 years with Deloitte LLP



Mr. Kgalema Motlanthe, Independent Director

- Previously President of South Africa for a period between 2008 and 2009, and subsequently served as the nation's Deputy President from 2009 to 2014
- Currently Head of the Nelson Mandela Foundation



Ms. Nunu Ntshingila, Independent Director

- Currently Regional Director, Facebook Africa
- Previously spent almost 16 years with Ogilvy & Mather South Africa in senior positions; becoming company Chair in 2012



Mr. Guy de Selliery, Non-Independent Director

- Currently President of HCF International Advisers, a London-based, corporate finance advisory firm focused on the mining and metals industry, which he co-founded in 2003

EXECUTIVE MANAGEMENT TEAM



Ms. Marna Cloete
President & Chief Financial Officer

- Joined Ivanhoe Mines in 2006, and in 2009, was promoted to Chief Financial Officer and to President in 2020
- 15 years of executive management experience after commencing her career at PwC in the Metals and Mining division. Also currently Chair of the Audit and Risk committee of Centamin plc.



Dr. Patricia Makheshu
Executive Vice President, Sustainability & Special Projects

- Has served on the boards of GlaxoSmithKline, Rand Water Board, Trans Caledon Tunnel Authority, Construction Industry Development Board, South African Broadcasting Corporation & Co-operative Bank Development Agency



Mr. Peter Zhou
Executive Vice President, China

- Joined Ivanhoe Mines after a career at BMO Capital Markets, where Mr. Zhou participated and executed more than 10 Chinese cross-border M&A and financing projects, with a total transaction size of ~US\$30 billion



Mr. Pierre Joubert
Executive Vice President, Technical Services

- 37 years of experience building and managing mines in Southern Africa; progressively senior responsibilities in the Anglo American Gold Division, Grinaker LTA Mining Contracting (Part of Aveng), Anglo American Platinum (AAP) and African Rainbow Minerals (ARM)



Mr. Alex Pickard
Vice President, Corporate Development

- VP of Corporate Development since 2017
- Joined Ivanhoe Mines after a career at Morgan Stanley and BMO Capital Markets in London



Transport routes

Durban, Dar es Salaam, and Walvis Bay are the main export routes in the near term





DRC risks

Risks

Turbulent legislation

2018 mining code

Infrastructure

Increased Chinese influence

Risk details

- In 2009, DRC shut down a Canadian mine (First Quantum), and withdrew the company's rights the following year
- Congolese legislation allows for expropriation "in public interest" and fair compensation is not guaranteed due to corruption
- ROIC is reduced because of increased non-dilutable equity that must be given to the DRC government and tax hikes
- Ivanhoe mitigates these risks by having high local employment, low environmental impact, and leading community development initiatives
- Infrastructure in the DRC is weak, even among developing countries and new projects are rare, due to civil conflict
- Mining companies bear higher freight costs and should expect to invest in infrastructure projects to secure electricity and water
- There has been a massive growth in the DRC's exports in mining and raw materials to China, giving the country leverage over the DRC
- Ivanhoe has partnered with Chinese firms (Zjin & CITC), which may allow them to benefit from concessions received by Chinese companies



South Africa risks

Risks

Social unrest

Energy & water supply

Risk details

- Current social unrest increases property damage and theft risks as firms can become targets of rioters even if they have little ties with the corrupt government
- Thankfully, Ivanhoe's Platreef project is distant from urban population centers

- Deteriorating infrastructure pose risks to energy generation, transmission, and distribution security in South Africa
- A widespread risk in South Africa is water shortages caused in part by aged infrastructure, regardless of water levels



Environmental impact

Renewable energy

- Ivanhoe seeks to primarily power its mines using renewable energy sources, but the state of existing energy infrastructure in the DRC and South Africa has made this goal challenging
- Ivanhoe has taken initiatives like upgrading hydro-power facilities in the DRC, making energy efficient designs, and beginning arrangements with a solar power provider in South Africa

Carbon emissions

- A study found that the GHG emissions from the Phase 1 at Kamoakakula mine were the lowest in comparison to comparable international mines
- Ivanhoe Mines has a commitment to eventually having a net neutral carbon emissions impact

Waste & land use

- The mineral deposits at the Kamoakakula project have extremely low arsenic levels, which means that Ivanhoe's operations won't create very large amounts of waste
- Ivanhoe's mines are underground and mostly leave surface environments and biodiversity undisturbed



Social impact

Community development initiatives

- Ivanhoe's *Livelihood Program* began in 2010 as a response to food security issues near the Kamo-Kakula project
- In 2020, this initiative served 22 communities in cultivating maize, vegetables & fruit, poultry, fish, and honey
- Also in 2020, \$473,933 was earned for these communities in selling produce

Worker safety

- Ivanhoe recorded a total of 5 fatalities in 2020 that occurred at Kamo-Kakula (2) and Platreef (3)
- There were also a total of 4 lost-time injuries in 2020 at Kamo-Kakula (2) and Platreef (2)

Local employment and partnership with local businesses

- 91% of Ivanhoe's employees are hired locally
- Percentage of local procurement spend in 2020 was 52.15%, 63.72%, 51.71%, and 96.59% respectively at Kamo-Kakula, Kipushi, Western-Foreland, and Platreef.



Governance

Governance

- Ivanhoe's board of directors' and executives' interests appear to be inline with those of shareholders
- 55% of the directors are independent and 18% are female
- 33% of executives are female and 11% of senior management employees are female

Corporate behaviour

- Ivanhoe supports the United Nations' Universal Declaration of Human Rights
- The company informs all employees, contractors and suppliers of this commitment and claims to have conducted a thorough human rights risk assessment at its mining projects



WACC

Cost of Equity

| | |
|-----------------------|---------------|
| Risk-free rate | 1.26% |
| Equity return | 7.00% |
| Market risk premium | 5.74% |
| Industry beta | 1.55 |
| Cost of Equity | 10.15% |

Cost of Debt After Tax

| | |
|-------------------------------|--------------|
| Cost of borrowing | 1.13% |
| Tax Rate | 30.0% |
| Cost of debt after tax | 0.79% |

WACC

| Component | Value | Weight | Cost | Contribution |
|------------------|--------------|-------------|--------|--------------|
| Equity | 2266.326 | 82.6% | 10.15% | 8.38% |
| Debt (after tax) | 477.559 | 17.4% | 0.79% | 0.14% |
| Preferred equity | - | - | - | - |
| Total | 2,744 | 100% | | 8.52% |



Industry beta

| Industry Beta | | | | | | |
|------------------------------|----------------|--------------|--------------|-------------|----------------|---------------|
| Company name | Ticker | Levered Beta | Tax Rate | Debt/Equity | Unlevered Beta | Industry Beta |
| Ivanhoe Mines Ltd. | TSX:IVN | 1.9 | 30.0% | 21% | 1.7 | 1.5 |
| Hudbay Minerals Inc. | TSX:HBM | 1.9 | 25.0% | 75% | 1.2 | |
| Trevali Mining Corporation | TSX:TV | 1.9 | 25.0% | 60% | 1.3 | |
| Capstone Mining Corp. | TSX:CS | 1.6 | 22.9% | 2% | 1.5 | |
| Teck Resources Limited | TSX:TECK.B | 1.7 | 77.6% | 42% | 1.6 | |
| Lundin Mining Corporation | TSX:LUN | 1.5 | 21.1% | 3% | 1.5 | |
| First Quantum Minerals Ltd. | TSX:FM | 2.2 | 54.2% | 94% | 1.5 | |
| Giga Metals Corporation | TSXV:GIGA | 1.8 | 25.0% | 3% | 1.7 | |
| Glencore plc | LSE:GLEN | 1.0 | 25.0% | 101% | 0.6 | |
| Vale S.A. | BOVESPA:VALE3 | 1.8 | 22.7% | 46% | 1.3 | |
| Anglo American plc | LSE:AAL | 1.6 | 33.7% | 35% | 1.3 | |
| Freeport-McMoRan Inc. | NYSE:FCX | 1.4 | 35.3% | 46% | 1.0 | |
| Rio Tinto Group | LSE:RIO | 1.7 | 28.9% | 23% | 1.5 | |
| Grupo México, S.A.B. de C.V. | BMV:GMEXICO B | 1.5 | 30.9% | 53% | 1.1 | |
| BHP Group | ASX:BHP | 2.1 | 45.3% | 40% | 1.8 | |
| Mean | | 1.7 | 33.8% | 44.5% | 1.3 | |
| Median | | 1.7 | 27.0% | 43.8% | 1.4 | |



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