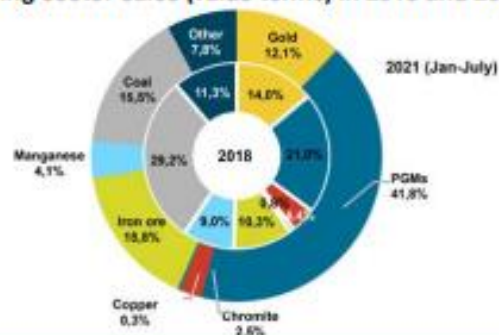


## MINING



Mining growth - resilience in future oriented sub-sectors

### Mining sector sales (value terms) in 2018 and 2021



### Sectoral outline

#### Economic importance

- The mining sector contributed 7.1% to South Africa's GDP in 2020 and 41.8% of total export earnings, dominated by platinum exports. The sector employs 452,000 people.

#### Structure

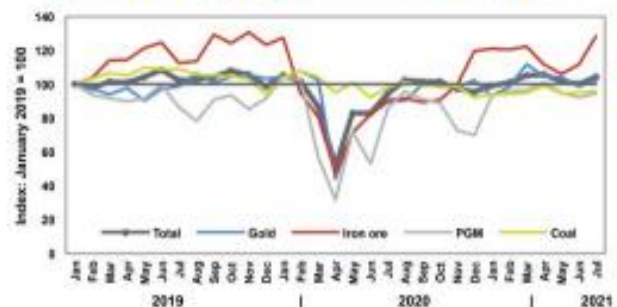
- The mining sector is highly developed and hosts numerous conglomerates responsible for primary production. Emerging miners dominate exploration activity in the sector.

#### Extensive sectoral linkages

- The sector has extensive backward and lateral linkages with the manufacturing and services sectors, as well as forward linkages to manufacturing through the supply of raw materials into metal fabrication industries.

Mining sector on a sustained demand-driven recovery

### Trends in mining output for select sub-sectors



Mining sector exports	Value in 2020 (ZAR billion)	% of total	Mineral beneficiation exports	Value in 2020 (ZAR billion)	% of total
<b>Total mining sector exports:</b>	<b>583.4</b>	<b>100%</b>	<b>Total basic iron and steel exports:</b>	<b>65.9</b>	<b>100%</b>
- Platinum Group Metals (PGMs)	175.2	30%	- Ferro-alloys	43.7	66.4%
- Gold and uranium	108.3	19%	- Rolled stainless steel sheet, width > 600mm	6.6	10.0%
- Iron ore	107.2	18%	- Flat-rolled iron/steel, >600mm, clad, plated/ coated	2.7	4.0%
- Coal	60.3	10%	- Pig iron and spiegeleisen in primary forms	2.1	3.2%
- Other mining exports	132.4	23%	- Semi-finished products of iron or non-alloy steel	1.3	2.0%
• Manganese ores, iron ores >20% manganese	40.3		- Hot-rolled products, iron/steel, width>600mm, etc.	1.3	1.9%
• Chromium ores and concentrates	24.7		- Iron/steel bar, forged hot-rolled drawn, extruded	1.2	1.8%
• Diamonds, not mounted or set	22.4		- Others	7.1	10.7%
• Precious metal ores and concentrates	15.6		<b>Total basic non-ferrous metal product exports:</b>	<b>39.6</b>	<b>100%</b>
• Titanium ores and concentrates	7.5		- Unwrought aluminium	16.6	42.0%
• Niobium tantalum vanadium zirconium ores	6.1		- Aluminium plates, sheets & strip, thickness> 0.2 mm	5.1	12.9%
• Copper ores and concentrates	4.7		- Unwrought nickel	4.6	11.7%
• Zinc ores and concentrates	3.2		- Unrefined copper, copper anodes, etc	4.6	11.6%
• Natural fluorine minerals	1.8		- Refined copper and copper alloys, unwrought	2.7	6.9%
• Petroleum oils, oils from bituminous minerals, crude	1.3		- Manganese, articles thereof, waste or scrap	1.0	2.6%
• Rest of other mining exports	5.0		- Aluminium tubes and pipes	1.0	2.5%
			- Others	3.9	9.9%

### Why invest in South Africa's mining sector

- Highly developed and diversified mining sector with mineral resource base ranked as one of the most valuable in the world.
- Very high level of technical and production expertise to support returns on invested capital.
- Leader in global supply chains of PGMs, manganese, chrome.
- Competitive positioning in global production cost curve of several major commodity groups.
- Strong backward and forward linkages with other sectors
- Global leader in deep-level mining, mineral recovery and technology.
- Supportive industrial export infrastructure and policy environment.
- Structural commodities bull market globally has had a beneficial impact on the sector's investment proposition.
- Subsequently, various private equity, hedge and investment funds, and global resources companies have invested in SA's mining assets.
- South Africa hosts the most developed downstream metals fabrication sector in Africa, positioned to leverage domestic and regional growth.

# MINING

## Strategic focus areas to drive long-term growth

- South Africa is endowed with one of the most valuable mineral resources portfolio in the world.
- Expansion of economic activity across mining value chains forms an integral part of South Africa's reindustrialisation strategy.
- Strong policy emphasis on support for investment in exploration activity, expansion of production capacity, competitiveness enhancements in mining value chains, and minerals beneficiation.
- Enhanced policy certainty and adequate investment protection mechanisms aimed at reducing risks for prospective investors and existing industry players.
- The diversified structure of South Africa's mining sector, an established minerals processing ecosystem and attractive development prospects for green minerals / metals value chains constitute a strong case for value-creating long-term investment in the sector.



## Enhanced value proposition of investment opportunities

### Developed mining sector with strong backward and forward economic linkages

### Policy certainty supports investment across diverse mineral resource portfolio

### Strong technical mining expertise reduces project development risk

### Dominant supply-side position across various mineral value chains

- Diverse mineral resource portfolio presents attractive investment opportunities across precious metals, energy minerals, ferrous and non-ferrous metals as well as other industrial minerals, particularly those utilised in the green and digital economies.
- The accelerating energy transition globally including the development of renewable energy infrastructure is expected to increase the demand for copper, nickel and aluminium, among others.
- The large infrastructure development programme planned for the coming years will raise demand for locally-produced downstream metal products.
- Industrial policy support mechanisms reduce private equity capital financing risks for exploration and new resource development in the mining sector.
- Substantially reduced timeframes for prospecting, environmental and water use licenses will stimulate new mining investment.
- South Africa has developed commercial and technical development leadership in the application of new generation digital technologies in mining operations.
- As a leader in the world's platinum supply chain, South Africa is ideally positioned to leverage PGM business opportunities as the development of the global green hydrogen economy progresses.

## Some of the investment opportunities

- PGMs beneficiation, development of fuel cell industry
- Increased iron ore beneficiation through revitalisation of downstream manufacturing capacity.
- Manganese value chain development.
- Vanadium as a strategic input for energy storage solutions.
- Titanium value chain development, especially titanium dioxide.
- Ferrochrome production, revitalising chrome value chain.
- Green steel investment (decarbonisation of South Africa's steel industry, which is the largest in Africa).
- Revitalisation of metals downstream capacity leveraging on government incentives.
- Coal ash beneficiation (e.g. production of cementitious materials for construction industry; to address acid mine drainage).
- Carbon capture and storage.
- Oil and gas development opportunities.
- Uranium resource development and beneficiation to support global nuclear fuel fabrication.
- Export-oriented jewellery fabrication, including diamonds, gold and platinum.
- Sustainable mining technology including digitisation, enhanced data analytics and new generation mining equipment.