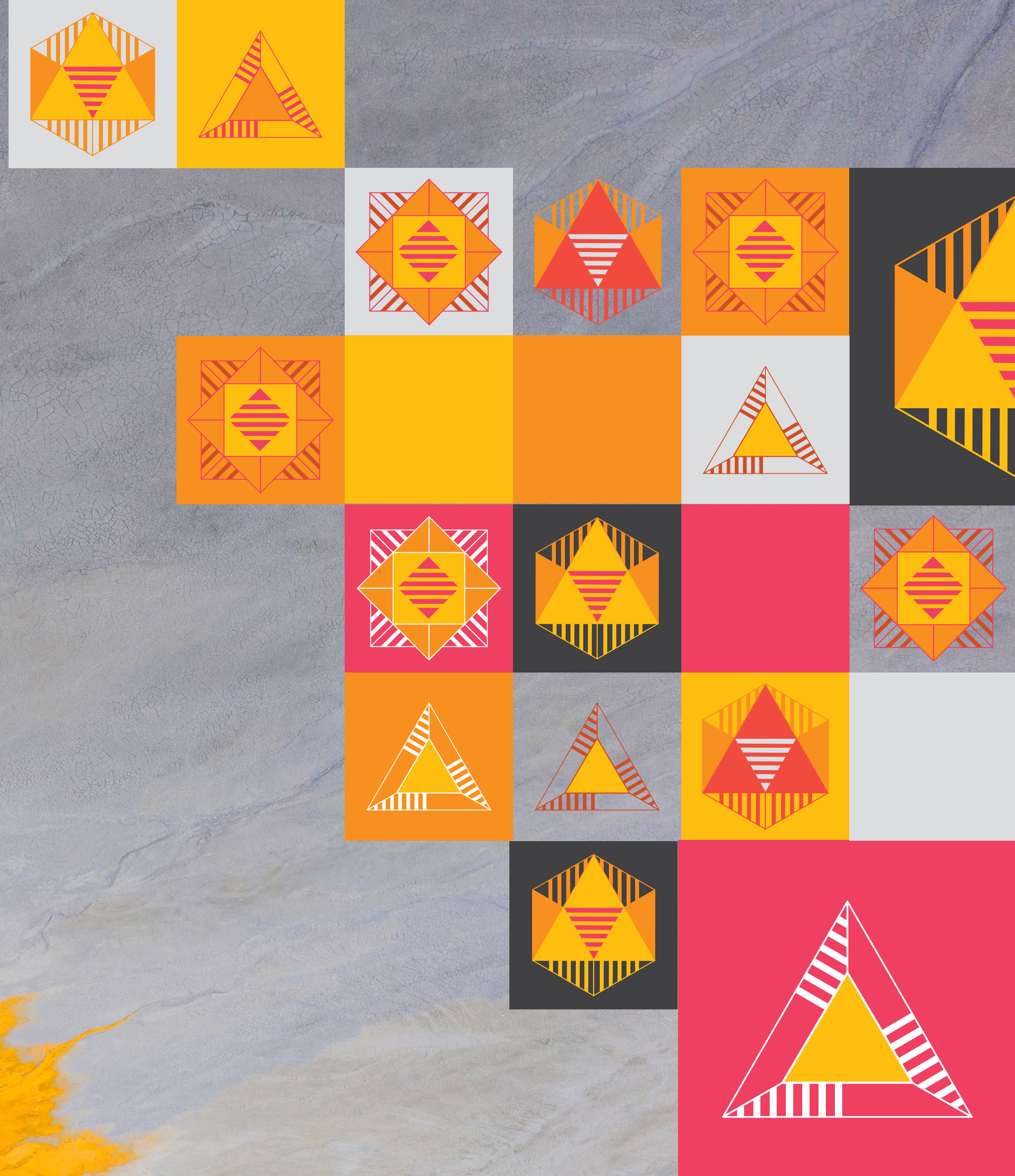


Aussie Mine 2022

Mission

~~impossible~~ critical



## Executive summary

# Welcome to the 17th edition of Aussie Mine, ‘Mission critical’

Aussie Mine provides industry and financial analysis on Australia’s mid-tier 50 mining companies (MT50), highlighting the opportunities and challenges ahead. The list of companies in this year’s MT50 group is on page 30.

## A critical role at a critical moment

The mining industry will play a critical role in the decarbonisation of the global economy, particularly as low emissions technologies are mineral intensive. To meet global decarbonisation goals, there needs to be a very significant increase in exploration, discovery and development of critical minerals. The challenge is **mission critical**.

Right now, Australia has a chance to rethink our supply of critical minerals and it’s difficult to overstate the opportunity this presents. Think: nationwide economic benefits; new downstream industries, jobs and skills; and helping decarbonise the global economy.

Energy transition presents an incredible opportunity for Australian mining companies. But it requires us to think differently and act now.

Australia’s mining industry is in excellent financial shape to support a significant increase in critical minerals projects. Record levels of revenue and earnings were achieved in FY22. A substantially higher net cash position and supportive financing markets will help fund investment in growth.

Lithium producers enjoyed strong revenue and earnings in FY22 resulting from record prices and their investments in recent years. The profitability of other critical minerals companies was also higher this year.

Record coal prices have resulted in substantial increases in revenues (178%), and a 758% increase in EBITDA. In fact, coal represented 50% of the overall MT50 EBITDA in FY22 – up from 13% in FY21.

## Critical minerals now dominant

The composition of the MT50 has changed significantly. Critical minerals companies are now the largest group within the MT50, representing more than half the MT50’s value. This change reflects the significant long-term opportunities in critical minerals.

The market capitalisation of the MT50 increased by 17% to \$124 billion (as at 30 June 2022) and an additional 20% to \$150 billion to 30 September 2022. The market values of coal and lithium companies were the biggest contributors.

**Mission critical: think differently, act now**

## Executive summary

### A clearer outlook beyond the short-term

Strong tailwinds for critical minerals will continue over the decades ahead despite short-term global uncertainties and geopolitical risks. Global growth is slowing due to ongoing supply chain disruption, eurozone energy scarcity, inflation pressures, and a sharp central bank tightening cycle in many countries.

However, demand for critical minerals will continue to surge to meet the requirements of renewable energy generation, energy storage, and transmission investments.

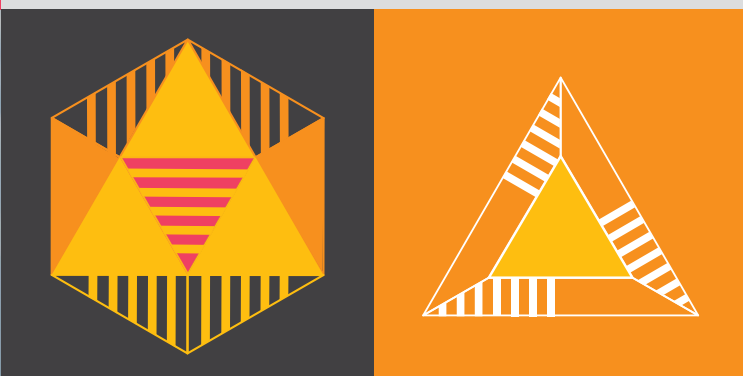
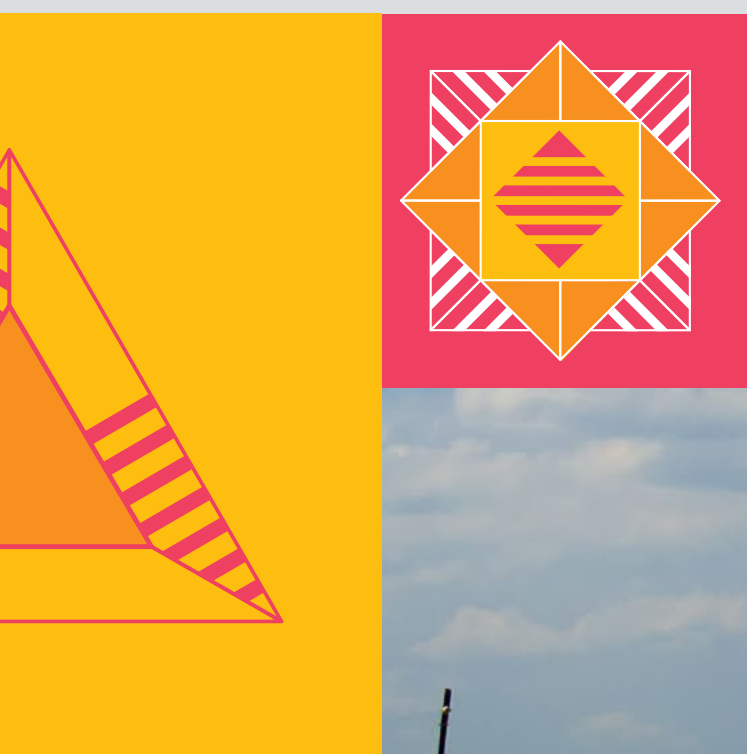
Deals activity has increased sharply to a level we haven't seen for more than 10 years. The dominant theme is critical minerals, and they represent two-thirds of deal value.

### Crucial we do it right

It's not enough to simply do more – it's crucial to do it right.

The mining sector's social licence to operate is more important than ever before. As they seek to expand, miners need to put even greater efforts into meeting community expectations and building trust. This includes forming genuine partnerships that truly respect and benefit communities and the rights of Indigenous Peoples.

Many in the MT50 have taken significant steps forward on the environmental, social, and governance (ESG) front. Several are telling their ESG story better. An increasing number have also set emissions reduction targets. For some, however, this represents an 'add-on' to the overall strategy. The more successful miners will be the ones fully incorporating ESG into their strategy.

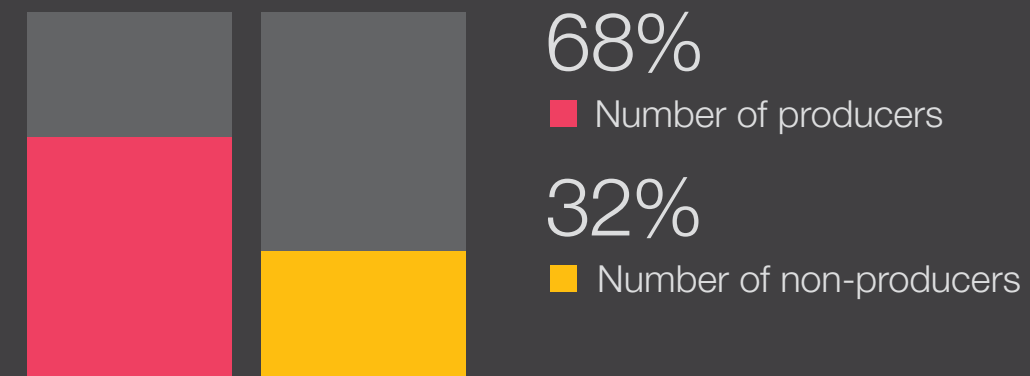


Contents

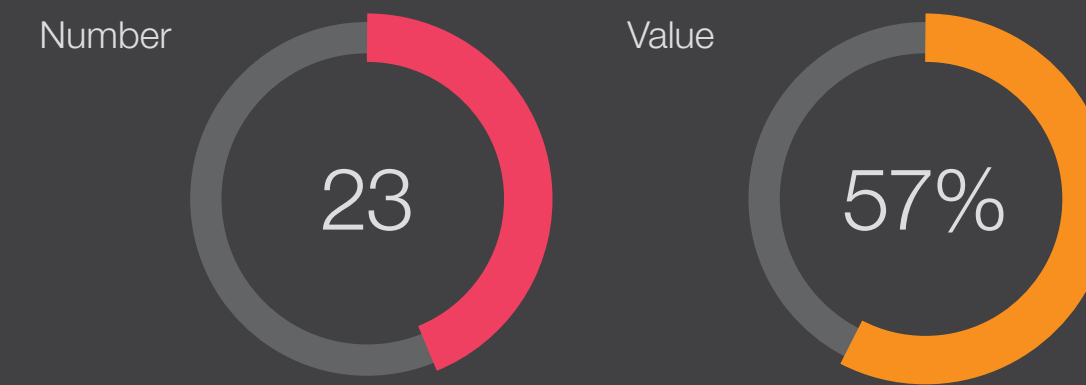
|   |    |
|---|----|
| Highlights  | 4  |
| Critical minerals   | 6  |
| Economic outlook - uncertainty to impact commodity prices | 12 |
| The ESG revolution  | 14 |
| Deals   | 16 |
| Tax   | 18 |
| Financial analysis  | 19 |
| MT50  | 30 |
| 10 year trend   | 32 |
| Glossary  | 32 |

Highlights

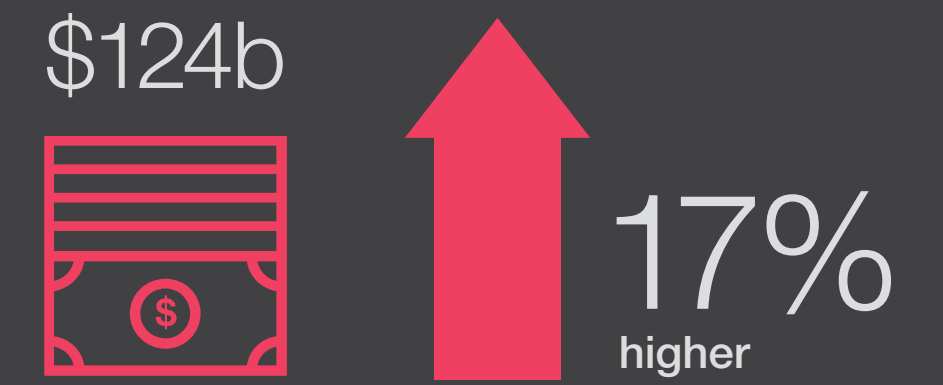
MT50 Overview



Critical minerals companies



Market capitalisation



Earnings



Revenue



Operating cash flows



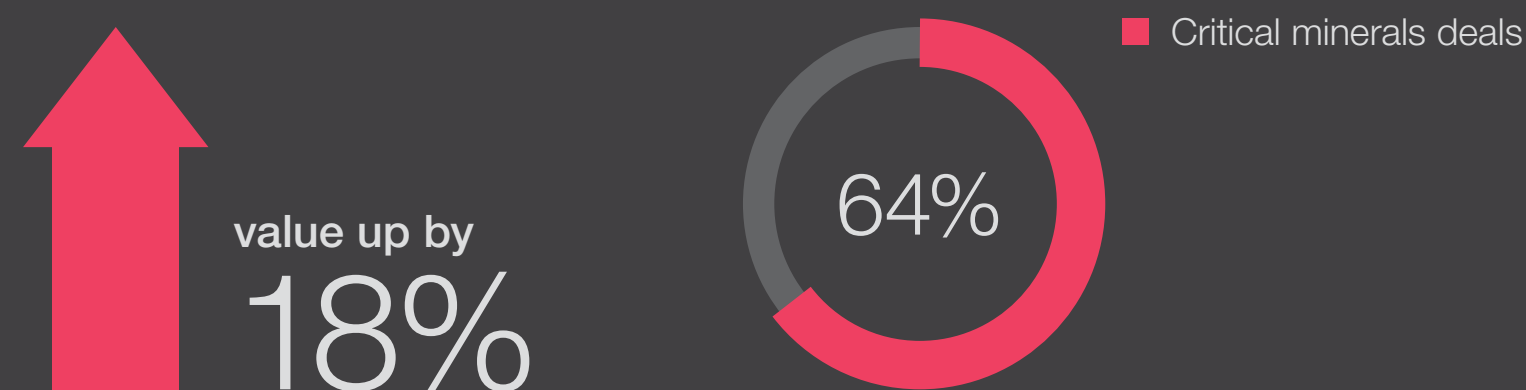
Shareholder cash returns



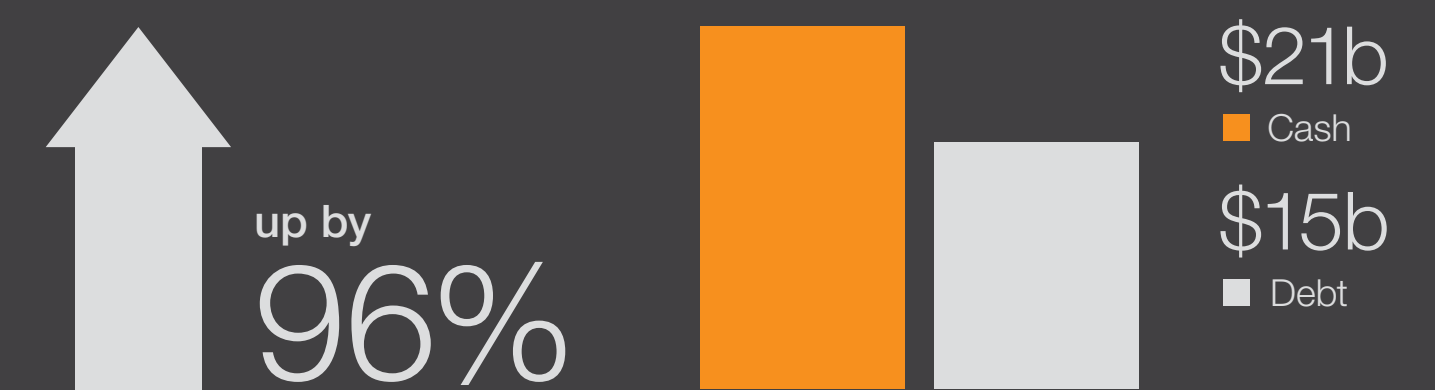
Capex



Deals



Cash



Highlights

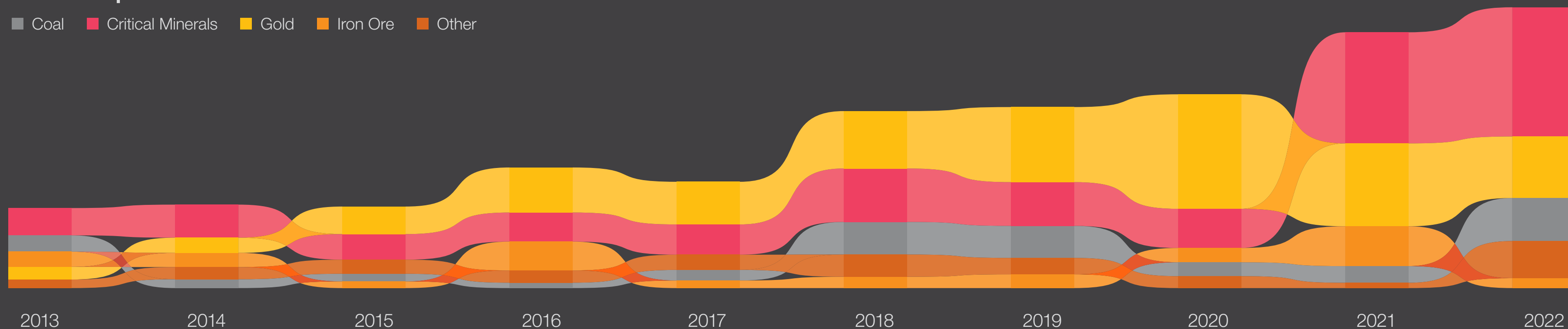
Return on equity

20%

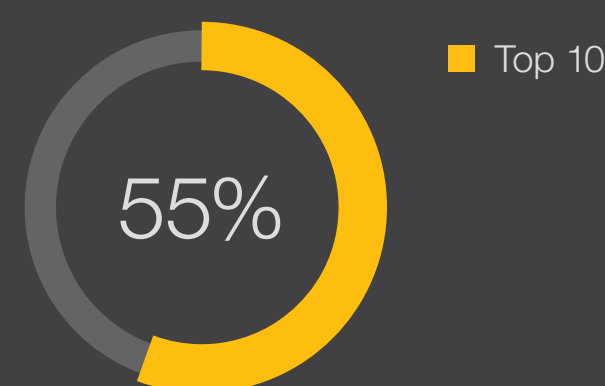
2x 10 year average

Market capitalisation

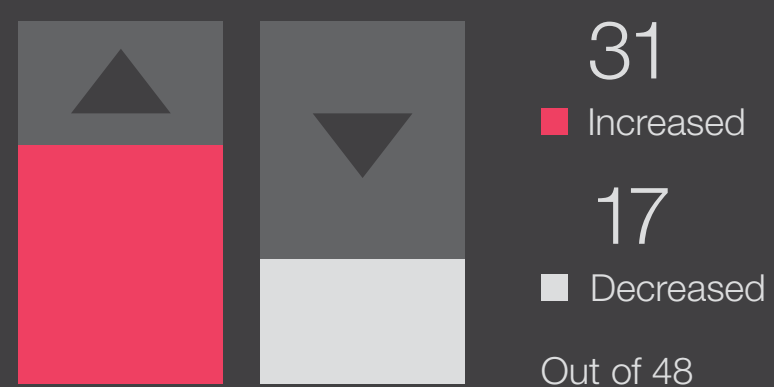
■ Coal ■ Critical Minerals ■ Gold ■ Iron Ore ■ Other



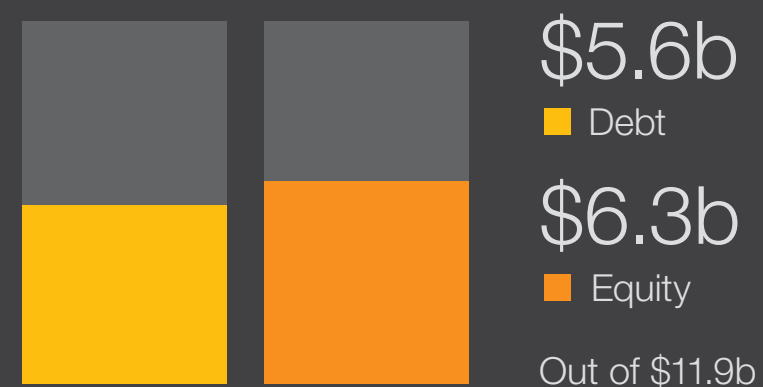
Market value



Changes in market value



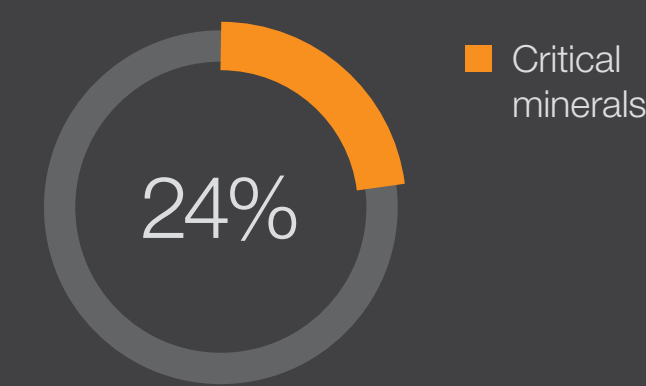
New funding



Lithium revenue

5x  
FY21 level

EBITDA



Coal breaks records in FY22

Record prices



Cash from operations

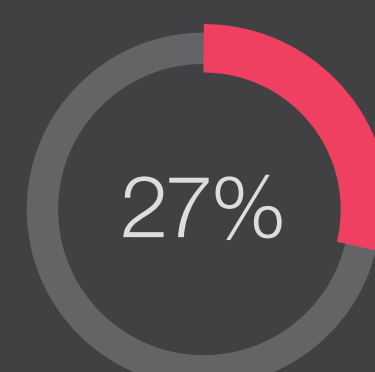
More than 1000% higher

\$10b

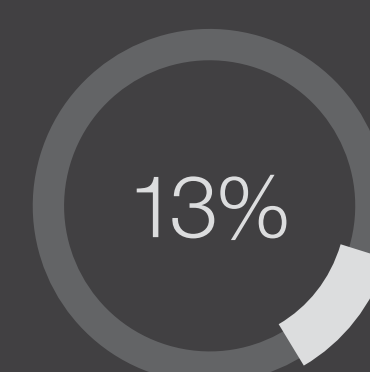


The next 4 pie charts show how the cash from operations has been allocated

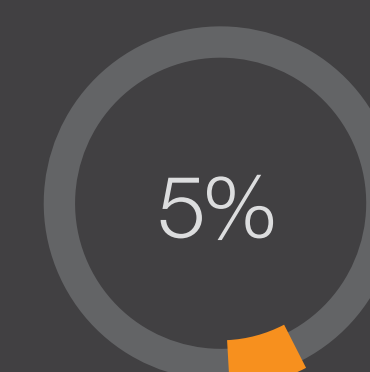
Government  
Tax and royalties



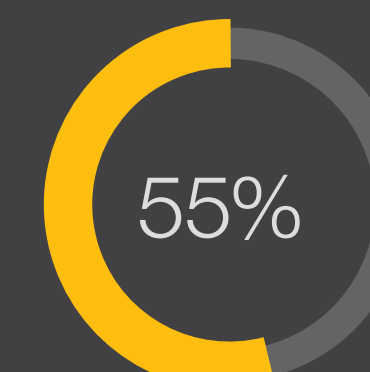
Shareholders  
Dividends and buybacks



Capex



Balance sheet  
Debt and cash



## Critical minerals

# Opportunities and challenges ahead

PwC's Net Zero Economy Index 2022 found that a 15.2% annual decarbonisation rate is now needed globally to limit warming to 1.5 degrees Celsius. Achieving this will be challenging. But we're seeing increased positive action by governments, companies, investors, and financiers towards this goal.

Here, Australia's mining industry will play a substantial role. Low emissions technologies are mineral intensive. And so, we'll see significant surges in demand for critical minerals to meet the need for batteries and electric vehicles, solar panels and wind turbines, hydrogen electrolyzers, and electricity transmission.

The good news is Australia's well endowed with the natural resources needed for decarbonisation. Plus, we have the experience and know-how needed to extract and process these resources. Already, we're witnessing substantial increases in exploration, development, and production of critical minerals. This includes meaningful activity in downstream processes, notably lithium chemicals and rare earths. However, the task ahead is so large that much more is needed.

Despite the increases in activity, our current pipeline of development projects falls short of the expected surge in demand. Factoring in project lead times, we need greater exploration and pre-production activity urgently to match tomorrow's demand growth.

## What's at stake?

Australia's at risk of missing out on the full value potential that the energy transition presents. This is a once-in-a-generation opportunity. We also risk failing to supply our allies with the critical minerals they need for energy independence, and for secure, reliable supply chains.



## Think differently, act now

Meeting the increased demand for critical minerals is not simply about mining **more**. The path to net zero requires:

- Different minerals and downstream processing from the past
- Mining and processing minerals in different geographies
- Considerably more exploration, innovation, and collaboration
- A strong focus on ESG.

## Critical minerals

# Opportunities and challenges ahead

## Three key steps

1

### Act now

If we're serious about maintaining, or potentially growing our market share, we need to be making more early-stage investments and developing our project pipeline. True, exploration is increasing. But Australian company exploration budgets are still not what they should be given we're on the cusp of a critical minerals boom. We need to be making investments now to set us up for the decades to come.

2

### Leverage and extend our strengths

We need to do more of what we do well (namely, mining) and move progressively down the supply chain. There are substantial opportunities to develop value-add downstream processing industries. Offtakers and end-users should provide support and investment, as well as sharing project risk.

3

### Better storytelling

Ramping up the scale and pace of projects can't happen without attracting investment from a range of capital providers. Companies that clearly communicate the merits of a project – including plans for high ESG performance and outcomes – are more likely to raise capital. We need to educate the investment and finance markets (particularly new and alternative sources of capital) on the importance of critical minerals for the energy transition. For example, lithium's role as a battery metal for electric vehicles (EVs) is now well understood. However, markets need help to understand the potential of emerging flow/redox batteries and lesser-known parts of the periodic table.

**The tailwinds for critical minerals companies will be significant for decades to come. But there are also challenges ahead. Specifically, a downturn in global growth and lengthy project development timelines.**

### Doing it right

The need to substantially boost supply is increasingly urgent, however, project development must be met in a responsible manner. The mining industry's key role in energy transition does not override its ESG responsibilities. It's vital to earn and maintain trust and to secure a robust social licence to operate.

### Premiums for responsibly sourced minerals

Opportunities are increasing for mining companies to position themselves as preferred suppliers of sustainable, reliable and ethically sourced minerals. Watch this space to see the premiums these minerals attract.

**The path to developing the mineral resources for decarbonisation must be met responsibly despite temptations to accelerate project timing. The role of the industry in energy transition is not an ESG 'free kick'. Trust must be genuinely earned and maintained.**

## Critical minerals

# Opportunities and challenges ahead



## Think differently and act now: reimagining the way we do critical minerals

The new energy transition could see demand for critical minerals soar sixfold by 2040, according to the International Energy Agency. This represents an unprecedented opportunity for Australia and yet our existing supply of critical minerals could fall short as soon as 2025.

We need to act now and ramp up investment in exploration and preproduction of critical minerals on a national scale. But closing a supply/demand gap of this magnitude isn't just a matter of money. It requires a conversation between mining companies and governments to fundamentally reimagine the way we do critical minerals.

‘Battery and minerals supply chains will have to expand ten-fold to meet government EV ambitions.’

‘Demand for EV batteries will increase from around 340 GWh today, to over 3,500 GWh by 2030.’

Source: International Energy Agency (IEA) (2022) Global Supply Chains of EV Batteries, all rights reserved.

Together, it's time to question our traditional methods. For instance:

### What if we improve the Junior Minerals Exploration Incentive (JMEI)?

We could invest more and boost the number of credits allocated under the scheme. And we could improve the allocation process too, removing the first-come, first-served system.

### What if we create a critical minerals ESG pricing premium?

This would recognise Australia's strong ESG credentials and leverage our strong market position to command a premium for our products.

### What if we rethink the way we do free trade?

For instance, introducing European-style onshore processing facilities to secure our supply chains. Or extending domestic supply obligations to minerals beyond oil and gas. Let's also think about strategic mineral reserves

### What if we had exemptions from competition laws?

There could be a conflict between competition and sustainability goals. Can we support stronger collaboration to help build new markets, shared mineral processing plants, or allow exemptions for early-stage exploration projects.

### What if we rethink infrastructure?

Such as shared-use infrastructure (including digital infrastructure) or more critical mineral hubs.



## Critical minerals

# Sustainable use of resources

## The biggest mines in the future will be above ground

Recycling will quickly become a vital source of minerals. For example, consider the scale of EV battery production over the next decade. These batteries will be important sources of minerals for the next generation of batteries. It's a critical piece of the supply chain puzzle, which currently receives insufficient attention.

## Engineering for recycling

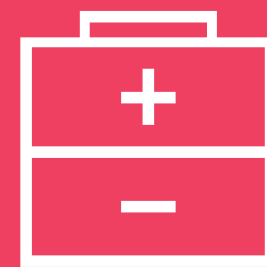
Most products are designed, built and sold for a single consumption life. The engineering goal is focused on this initial product life. The significant increase in our mineral resource needs in the future means that we need to think differently. Sustainable use of resources means planning for their reuse. Products should be engineered to also maximise the capture and reuse of resources. A little regulatory 'nudge' may be needed initially to kick start different thinking and early action.

## Redefining waste

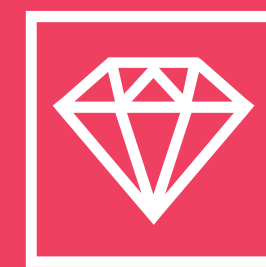
There's plenty of useful waste rock extracted from mining activity. Plus, the mineral content of ores is often a very low portion, leaving large amounts of tailings. Is it time to re-examine potential uses for these 'waste products'? Can we apply different thinking to the definition of waste to make it easier to better utilise our total resources?



Think differently, act now about how we:



Use resources



Recycle minerals



Define waste

## Critical minerals

# Lithium is fast charging the MT50

“Demand for lithium – the commodity with the largest projected demand-supply gap – is projected to increase sixfold to 500 kilotonnes by 2030 in the APS, requiring the equivalent of 50 new average-sized mines”

Source: IEA (2022) Global Supply Chains of EV Batteries, all rights reserved

## EVs driving strong lithium growth

When it comes to growth potential and outlook, lithium is a stand-out among critical minerals. Massive additional production is needed to meet forecast EV battery requirements alone. Global EV sales were around 36% higher in FY22 (and mainly in China, North America, and Europe).

## Prices soar to new records

Increased demand, combined with a lag in new supply, has resulted in record prices for spodumene concentrates and lithium chemicals. Average spot prices traded significantly above the average prices for 2021. Supply challenges have also driven spodumene prices well over historic proportions of lithium hydroxide prices. There's been a lag in the impact of these higher prices due to the contracting positions of some MT50 companies.

## High prices to continue

Most forecasters expect lithium prices to remain relatively high in the next few years, with additional supply continuing to fall short of additional demand. There are many new projects for primary (spodumene and lithium carbonate) and secondary (lithium hydroxide) production in Australia, as well as globally. However, short- and long-term supply shortage risk remains. Long lead times and potential delays in bringing such large volumes of lithium into production will impact the short-term demand-supply balance and prices.

## Growing lithium focus in the MT50

Almost a quarter (22%) of the MT50 are responding to the opportunities in lithium. Of these, four are existing producers, and seven have advanced lithium projects.

The four existing lithium producers in the MT50 have earned substantial revenues and profits in FY22.

The market value of lithium players in the MT50 increased by 136% to \$39 billion at June 2022, and by a further 46% to a record \$56 billion at September 2022.

## Significant downstream investment has commenced

Australian companies (including MT50 companies) are taking advantage of the tremendous opportunities to move further down the battery supply chain – a big shift from the ‘dig and ship’ mentality historically prevalent in Australia’s mining sector.

**Mineral Resources, Allkem, IGO, Pilbara Minerals** and Wesfarmers are, together with international joint venture partners, investing in downstream chemical activities to produce battery-grade lithium hydroxide. Other MT50 companies are also considering the downstream potential for their spodumene projects.

This is a significant development. While 50% of global lithium production is Australian-source, China dominates the EV battery supply chain producing over 50% of lithium chemicals, 70/85% of cathode/anode and 75% of lithium-ion batteries<sup>1</sup>. The current pipeline should see Australia become a meaningful producer of lithium hydroxide with around 10% of global capacity in the next few years, and 20% by the end of the decade.

4 # of lithium producers in the MT50

7 # of lithium project companies in the MT50

<sup>1</sup> Source: International Energy Agency (IEA) (2022) Global Supply Chains of EV Batteries

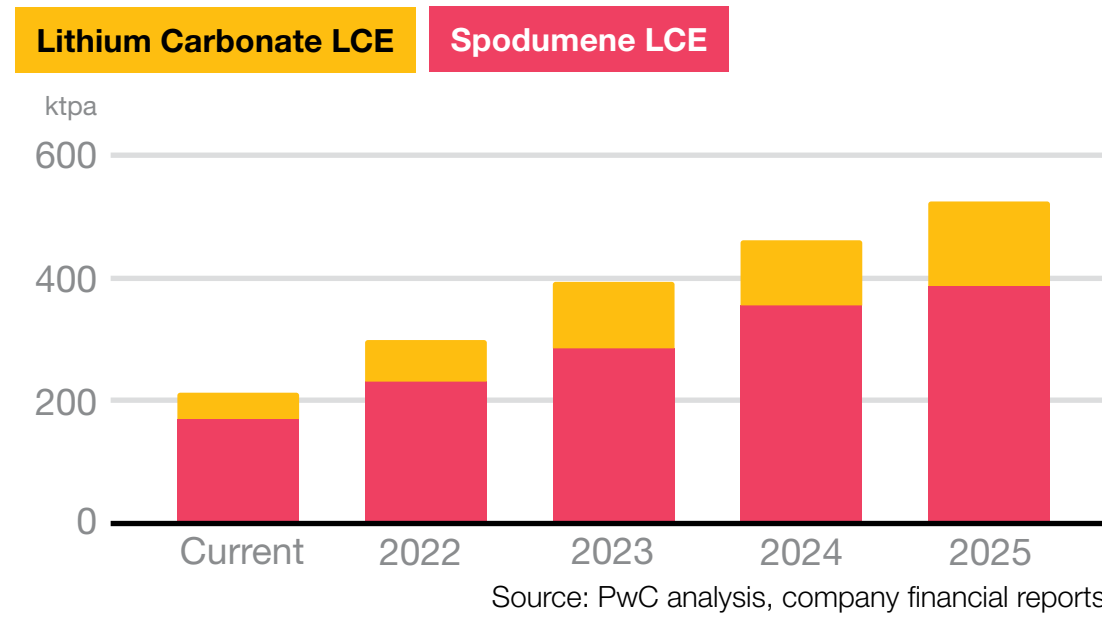
Critical minerals

# Lithium is fast charging the MT50

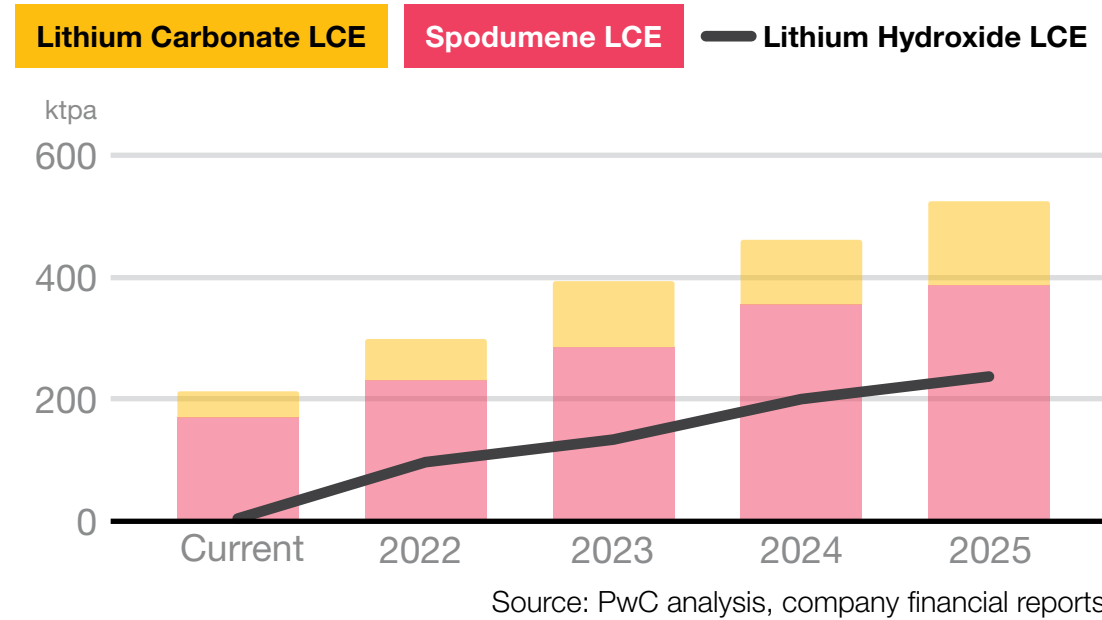
## Stronger prices driving investment

The stronger lithium market has attracted large capital allocations to build supply. The MT50 have announced a number new projects and expansions to meet the increased demand. The timeline on the right provides an overview of the key projects currently in the pipeline.

Spodumene and Lithium Carbonate Production Capacity (LCE)



Lithium Hydroxide Production Capacity



### Chemicals

(Lithium hydroxide and Lithium Carbonate)

**LiOH**

- Mineral Resources**: Kemerton Plant - Train 1 and 2 (40%) Capacity 25ktpa
- Allkem**: Naraha Lithium Hydroxide Plant (75%) Capacity 25ktpa
- IGO**: Kwinana Refinery - Train 1 (49%) Capacity 24ktpa
- Pilbara Minerals**: POSCO JV (185) (18%) Capacity 43ktpa
- IGO**: Kwinana Refinery - Train 2 (49%) Capacity 24ktpa

**Li<sub>2</sub>CO<sub>3</sub>**

- Allkem**: Olaroz Stage 2 (66.5%) Capacity 10ktpa
- Allkem**: Sal de Visa Stage 1 Capacity 15ktpa
- ioneer**: Rhyolite Ridge Project Capacity 24ktpa
- Allkem**: Sal de Visa Stage 2 Capacity 30ktpa

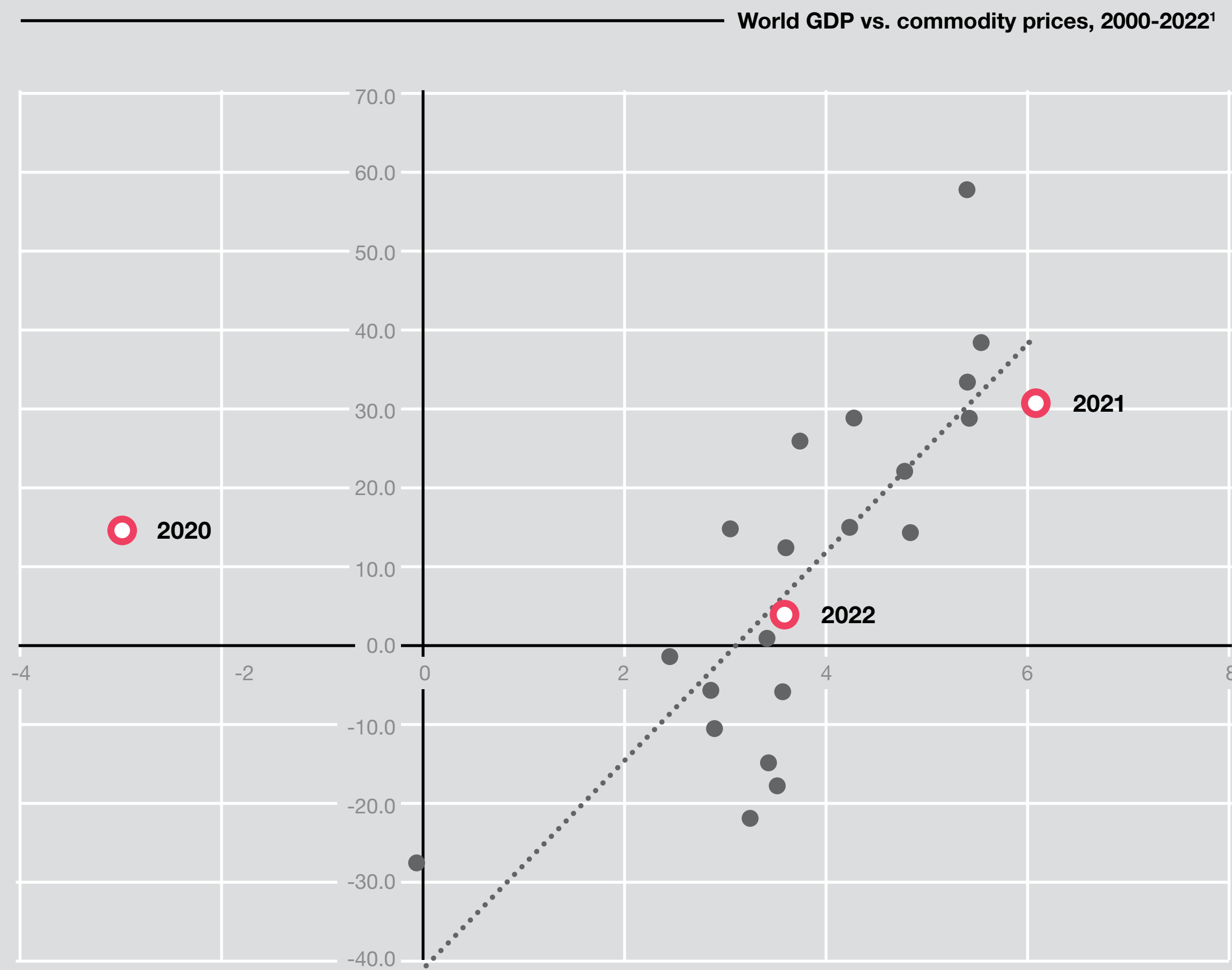
**Spodumene**

- Mineral Resources**: Wodgina Mine-Train 1, 2, 3 (restart) (40%) Capacity 750ktpa (250ktpa each)
- Mineral Resources**: Mt Marion Mine expansion (50%) Capacity 300ktpa expansion to 900ktpa
- Liontown**: Kathleen Valley mine Capacity 500ktpa
- Pilbara Minerals**: Pilgan Plant - expansion Capacity 100ktpa
- Allkem**: James Bay Capacity 750ktpa
- IGO**: Greenbushes (24.99%) Capacity 520ktpa
- Sayona**: North American Lithium (75%) Capacity 220ktpa
- Core Lithium**: Finnis Lithium Project Capacity 197ktpa
- Leo Lithium**: Goulamina Lithium Project - Stage 1 + 2 (50%) Capacity 831ktpa

Source: PwC analysis, company financial reports

## Economic outlook

# Uncertainty to impact commodity prices



<sup>1</sup> Simple regression analysis undertaken using annual % change in IMF Metals Price Index vs. global real GDP growth rate 2020 observations excluded as outliers. Source: IMF.

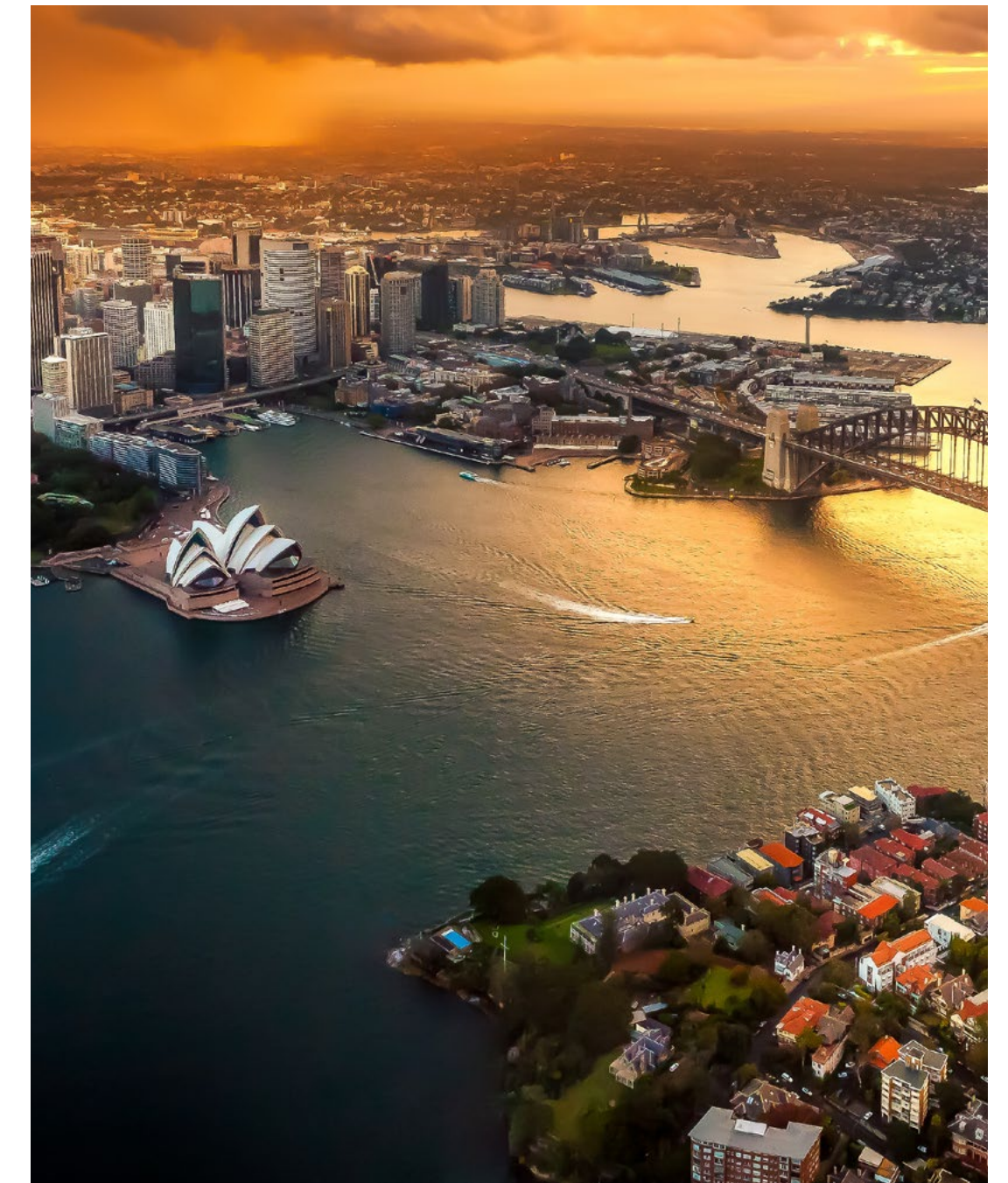
## The economic outlook and commodity markets are inextricably linked

Global economic recovery has proved increasingly tentative during 2022. We now face a negative outlook into 2023.

The Organisation for Economic Co-operation and Development's (OECD) 2023 growth projections have been revised downwards to 2.2% for the world economy (down from 2.8% in its June estimate), 0.5% for the US, 0% for the UK and 0.3% for Europe (including negative 0.7% in Germany).<sup>1</sup> A high level of uncertainty remains and there are credible scenarios resulting in a recession in these larger advanced economies.

This is important because GDP growth and global commodity markets are inextricably linked. Since the turn of the century, each one percentage point increase in real GDP growth globally correlates with a ~13% increase in commodity prices.

In the next two years, growth in Australia's major trading partners is expected to be notably below its pre-pandemic average. Strong COVID-19 stimulus packages, which saw strong growth and employment in 2021, are now being unwound and their positive effects are receding to growing economic headwinds.



<sup>1</sup> OECD (2022), OECD Economic Outlook, Interim Report September 2022: Paying the Price of War, OECD Publishing, Paris

## Economic outlook

# Uncertainty to impact commodity prices

## Economic headwinds into 2023

1

### Broad-based, persistent inflation

Globally, we've seen broad-based price rises in many economies thanks to supply constraints, limited spare capacity and inventory, and higher commodity prices. In response, several central banks have tightened monetary policy to reduce the risk of entrenching above-target inflation in the long term. This includes increasing interest rates and reducing or unwinding unconventional monetary policies.

Markets are pricing a peak in tightening in the first half of 2023. This environment will weigh on household incomes, dragging consumption and gross domestic product (GDP) down. Risks appear weighted to the downside (including the risk of wage-price spirals, and tighter than anticipated monetary policy to reign in price growth).

2

### Tight labour markets

The policy responses to COVID-19 have resulted in high employment rates relatively consistently across the globe. Strong employment may go some way to supporting consumption and offsetting cost of living pressures. Households have also built-up large savings buffers during the pandemic and may be able to run down some of this accumulation.

However, it's not yet clear how further rate rises, and other economic headwinds, will impact employment in the medium term. Record debt levels, a faster tightening cycle, and geopolitical uncertainty all present challenges to sustained, robust employment outcomes.

3

### Geopolitical developments

Russia's invasion of Ukraine has impacted the global economy by elevating energy and, to a lesser degree, food prices. Further disruptions to gas supply chains, plus trade sanctions in support of Ukraine, are expected, and Europe is particularly exposed to the risk of cuts to Russian gas supply.

Closer to home, the Indo-Pacific is undergoing a transition. Strategic competition between superpowers is escalating, changing the region's economic and security environment. It's not clear how the balance of power will settle in the long term.

## Critical supply chains

Rising geopolitical tensions have coincided with a decoupling of world trade and economic growth. This began shortly after the global financial crisis.

Cost is slipping into second place behind the desire for economic security right now. This is significant for energy and critical minerals.

Currently, the processing and production of many energy transition minerals is concentrated into only a few geographies. Given our reputation as a secure supplier of resources, Australia is increasingly becoming the critical minerals 'supplier of choice' for our allies and trading partners.

## Mining and energy to help protect the broader economy

When it comes to downside risks, Australia's mineral and energy resources will provide some protection. It will also support a stronger growth outlook.

Australian governments at all levels are increasingly aware of the tremendous opportunities in critical minerals and progressing further down the supply chain. They're also aware of the role they can play in providing and attracting the investment needed.

Despite significant uncertainty in the global economy, and the risk of recession, Australia remains well-positioned. The global energy transition presents tremendous whole-of-nation economic benefits.

The ESG revolution

# Reporting more important than ever

## Increased focus on ESG performance and reporting

Make no mistake, an ESG shift is underway. Miners are now recognising ESG as a value creation opportunity, rather than simply a compliance issue.

Mining companies and their stakeholders increasingly view ESG as a strategic imperative and many more MT50 companies are publishing ESG reports. What's more, these reports are significant. Investors are already relying on ESG metrics to inform investment decisions, and this trend is set to continue, meaning ESG performance will soon receive equal prominence with financial performance.

As a result, the governance over ESG reporting needs the same focus as is already in place for key financial information. While miners have historically been at the forefront of dealing with, and reporting on some ESG topics, such as safety, expectations are increasing.

Regulators and standards boards are responding to the growing calls from stakeholders for standardisation and transparency of ESG disclosures. The result? Reporting is likely to be required soon from the International Sustainability Standards Board (ISSB).

In March 2022, the ISSB released its first two Exposure Drafts relating to general and climate-related sustainability information. The format mirrors the existing Task Force on Climate-Related Financial Disclosures' (TCFD's) 4 pillars approach of reporting on: governance, strategy, risk management, and targets and metrics.

## How to prepare for the changing ESG Landscape?

To report on their ESG performance, miners need well-established governance over ESG metrics. This includes setting ESG targets to align with strategic priorities and disclosing the results. So, what does this mean for the mining industry?

It's expected the IFRS Sustainability Disclosure Standard (to be issued following feedback to the ISSB Exposure Drafts) will require mining companies to clearly identify the risks and opportunities that are material to their value.

To be prepared, miners need to consider the controls and governance processes over the extended reporting requirements. Is the data available? Do you have confidence in what you will be reporting?

### Aligning strategy, stakeholder needs and reporting

|  |  |
|--|--|
|  | Assessing whether the company has necessary ESG skills to respond  |
|  | Uplifting the governance, data, processes and controls relating to non-financial information                     |
|  | Setting and disclosing ESG targets that align with strategic priorities and considering linkages to remuneration |
|  | Adapting risk management practices to account for ESG risks  |

### Mining industry ESG disclosure topics

We've benchmarked MT50 sustainability reports on relevant mining topics



**Key:**  
(the determined percentages are based on those companies that have prepared sustainability report)

|       |           |       |
|-------|-----------|-------|
| > 85% | 50% - 85% | < 50% |
|-------|-----------|-------|

The ESG revolution

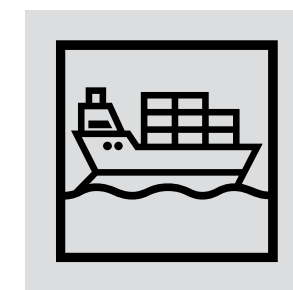
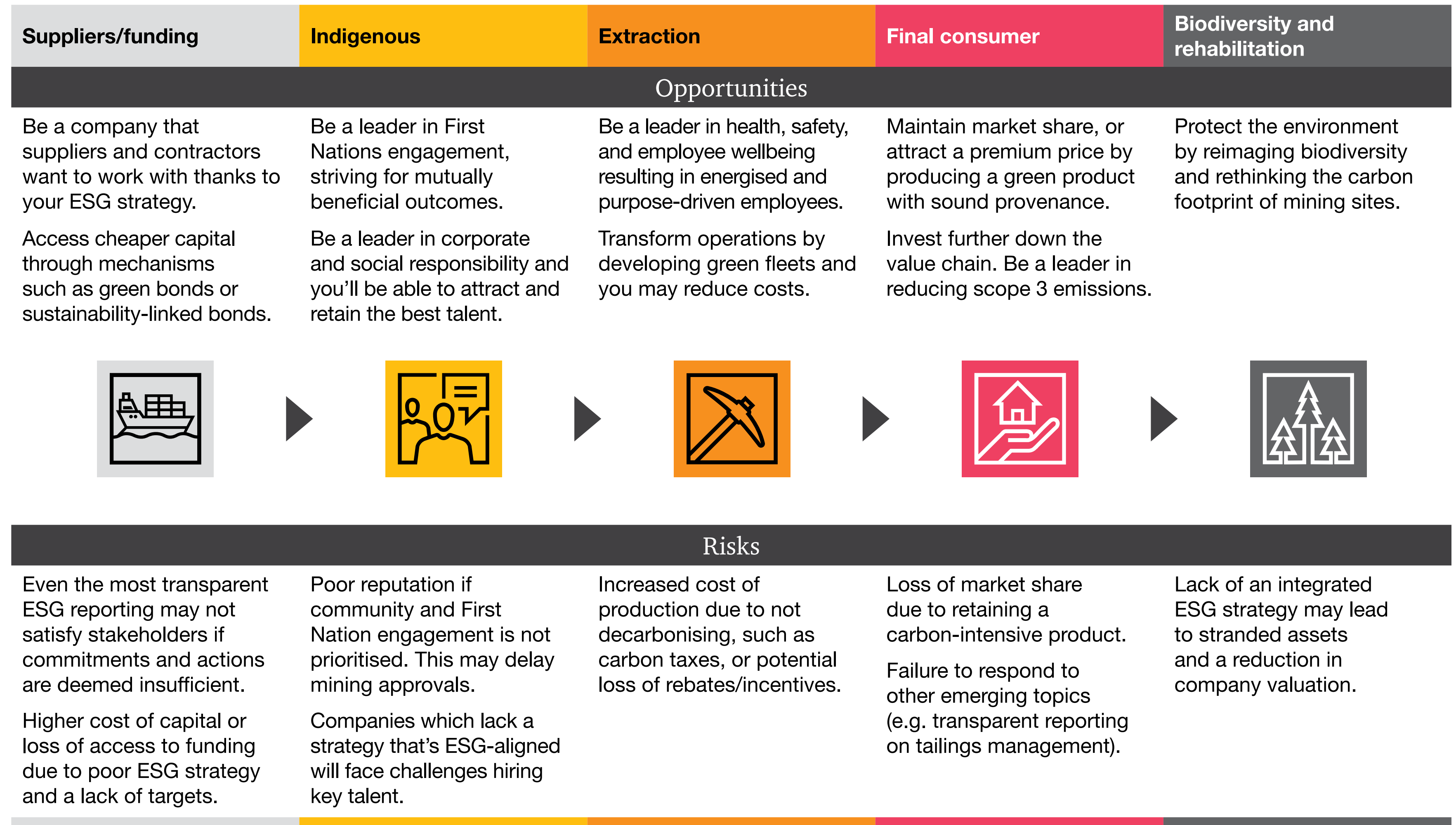
# Opportunities and risks

## Value chain

The ESG revolution presents risks and opportunities to mining companies up and down the value chain. Whether you're transitioning mining operations to a low-carbon economy, or addressing growing consumer preferences for sustainable products and services, ESG-related changes present new opportunities for growth.

## Nature-related financial disclosures

Climate risks are intrinsically linked to healthy ecosystems. The Task-force on Nature-related financial disclosures (TNFD) was recently launched, building on the success of TCFD. TNFD aims to develop a risk management and disclosure framework for nature-related risks. The mining industry will need to be at the forefront of these new requirements.



Deals

# Critical minerals driving deal values



Total deal value increased by **18%**

Critical Minerals make up **64%** of total deal value

Total deal volume increased by **180%**

Both the volume and overall value of M&A transactions completed by the MT50 increased significantly in FY22. A total of 31 transactions were completed, with an overall value of \$12 billion. Five transactions represented 77% of the total deal value in FY22.

Critical minerals were the most significant group, with copper, nickel and lithium transactions representing more than 65% of transaction value in FY22.

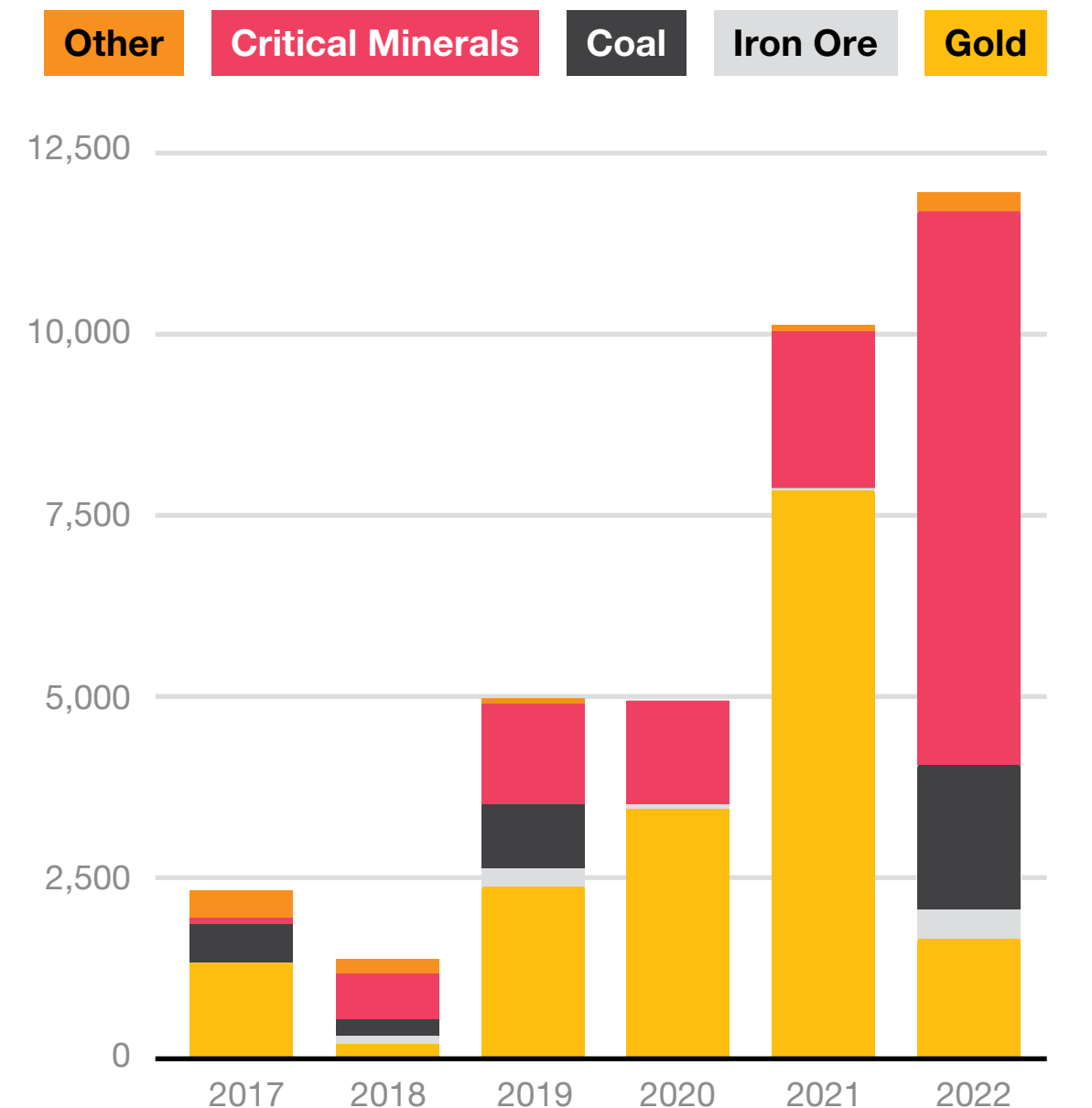
Gold players remained active, accounting for half of the MT50's total deal count, but only 14% of total transaction value. BHP's divestment of its BMC coal assets in Queensland was the largest coal deal of the year and gave **Stanmore Resources** the opportunity to transform itself into a genuinely diversified, mid-tier coal producer.

Other notable transactions completed during the year included **Sandfire's** \$2.5 billion acquisition of MATSA, the merger of Galaxy Resources and Orocobre to form **Allkem**, the acquisition of Western Areas by **IGO**, and **Evolution's** \$1 billion acquisition of Glencore's interest in Ernest Henry.

Scale is again becoming increasingly important, with corporates seeking the benefits of diversified production portfolios, more robust balance sheets, and larger project development pipelines.

It's also interesting to note the demerger activity in recent years, which has created plenty of single-focus companies.

Deal value by commodity (\$m)



Source: PwC Analysis, S&P Capital IQ



## Deals

# Expected increase in deal activity

Critical minerals remain at the top of many target lists and interest in these minerals will remain strong. The scarcity of large-scale, quality opportunities means these assets aren't likely to come cheap, and valuations will be key. Can dealmakers carve out a space between buyer and seller expectations? Will customers at tier one and tier two on the supply chain take further upstream equity positions in projects or companies?

Markets will be watching to see what becomes of BHP's proposed acquisition of **OZ Minerals** and the possible demerger of **Minerals Resources'** lithium operations. We may see more Australian miners look to US capital markets. Particularly, given the spotlight on critical minerals. Also, given the amounts of capital needed for project development and expansion opportunities.

Coal producers will continue to benefit from strong prices into 2023. They're well placed to consolidate non-core positions, which may become available.

Inflationary pressures and supply chain disruptions are expected to continue to impact the cost and deliverability of projects. Will it be more effective to achieve growth through acquisition rather than expansion? And is now the right time to be a single-asset producer or developer?

One thing's for sure, regional consolidation among gold producers became evident during FY22. This is expected to be a trend for mining M&A over the next few years.

## Direct investment by OEMs

Of particular importance will be to what extent we'll see customers getting comfortable taking on exploration and project risks.

We're seeing an increase in original equipment manufacturers (OEMs) dealing directly with mining companies via offtake and lending agreements. This includes pre-contracting supply (through memorandums of understanding and non-binding offtake arrangements) at early project stages, prior to financial investment decisions (FID) being made.

We expect this to continue. In fact, it may extend to include many more early-stage direct equity interests in projects.

We'll need this if we're going to meaningfully close the supply gaps ahead. Plus, there are more opportunities with early stage projects. Customers are seeing intense competition for supply from advanced projects.

These developments are important to progress critical minerals projects. Critically important! Pre-FID project funding is typically the hardest to raise.

## MT50 transactions (\$m)

| Commodity group          | 2017         | 2018        | 2019         | 2020         | 2021          | 2022          |
|--------------------------|--------------|-------------|--------------|--------------|---------------|---------------|
| <b>Gold</b>              | 1,297        | 208         | 2,364        | 3,458        | 7,850         | 1,668         |
| <b>Iron ore</b>          | 0            | 105         | 281          | 70           | 32            | 400           |
| <b>Coal</b>              | 540          | 230         | 860          | 0            | 0             | 1,983         |
| <b>Critical Minerals</b> | 72           | 645         | 1,401        | 1,423        | 2,161         | 7,641         |
| <b>Other</b>             | 393          | 184         | 72           | 0            | 84            | 260           |
| <b>Total</b>             | <b>2,302</b> | <b>1372</b> | <b>4,978</b> | <b>4,951</b> | <b>10,127</b> | <b>11,952</b> |

Source: PwC analysis, S&P Capital IQ

Tax

# Critical contributions

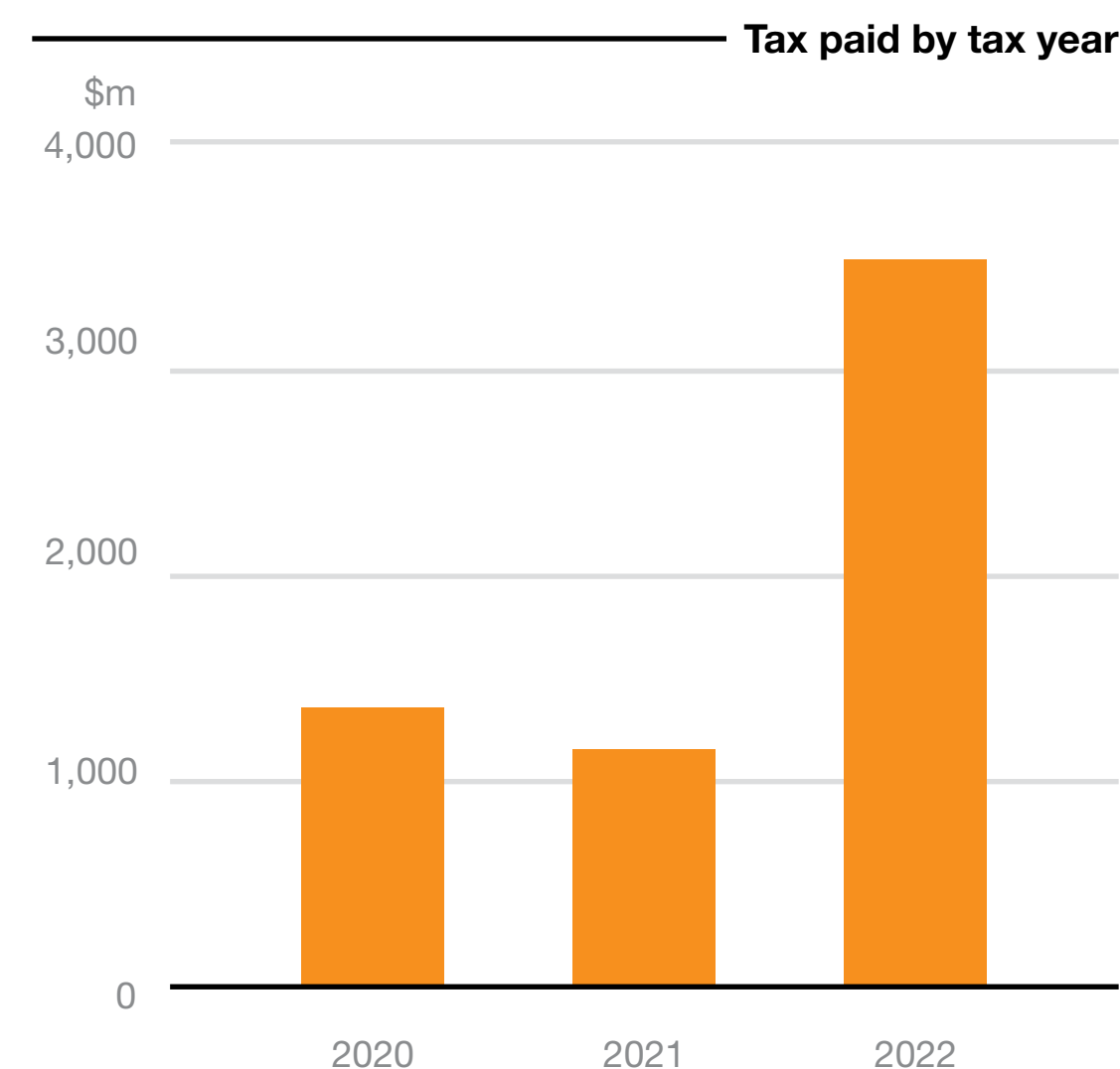
The MT50 are making significant contributions to government funding at both state and federal levels. Income tax payments in FY22 were a record \$1.7 billion. This excludes the \$2 billion tax liabilities of coal companies, which will be paid in FY23, on a lag basis, due to the run-down of historic tax losses.

The MT50 also pay substantial royalties at a state level. The coal companies alone paid royalties of \$1.8 billion. And while the Queensland government's increase in coal royalties from July 2022 will support the budget and debt position, it comes at a cost to future investment. Mining companies across the country have raised concerns about the impact of the royalty increase – a tax brought in without consultation.

The significant increase in tax and royalty payments comes at a critical time as governments (except Western Australia) manage large deficits and debt.



Source: PwC Analysis, S&P Capital IQ

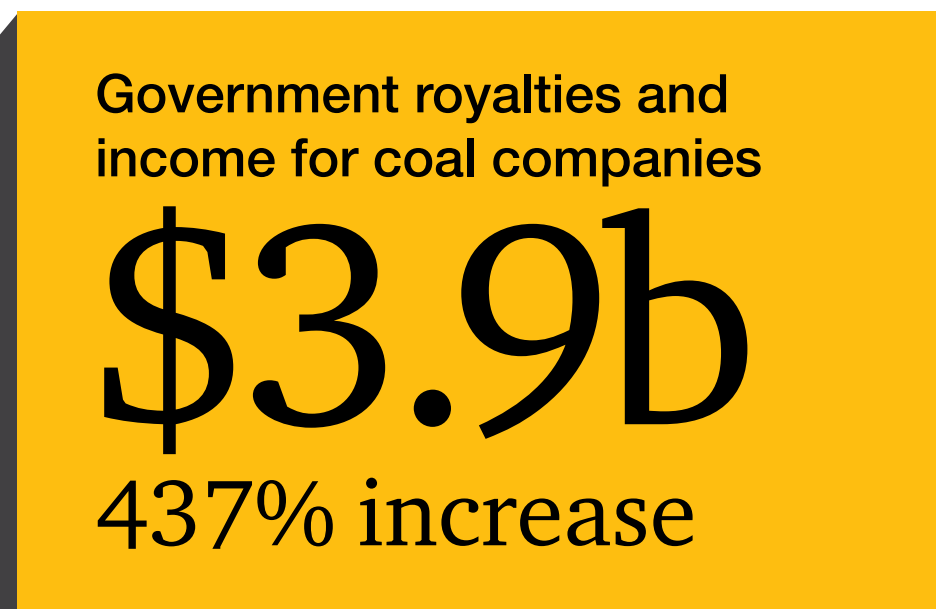


Source: PwC Analysis, S&P Capital IQ

## Critical support

It's not just all about budget repair, though. We need to consider how Australian governments can support more production of critical minerals. This is key to global decarbonisation. And it's a win-win for governments.

Supporting the development of new critical minerals mines, and investment in downstream processing, will not only pave the path to net zero – there's also a financial return for governments in the form of higher royalties and taxes.



**The US Inflation Reduction Act of 2022 (IRA) will provide substantial opportunities for Australian mining companies. Worth US\$369 billion in funding and tax incentives for energy security and emissions reduction initiatives, the IRA will accelerate demand increases for all minerals supporting renewable energy technologies and EVs.**

EV manufacturing and technology support – eligible if at least 40% (increases to 80% by 2027) of the battery's critical minerals are extracted from, or processed in, the US or a free trade partner (e.g. Australia), or from recycling.

Tax credits for energy storage investments.

Tax credits for carbon capture and direct air capture projects, which may support increased R&D aimed to commercialise these potential solutions.

Tax credits for nuclear energy generators.

Tax credits for energy storage investments.

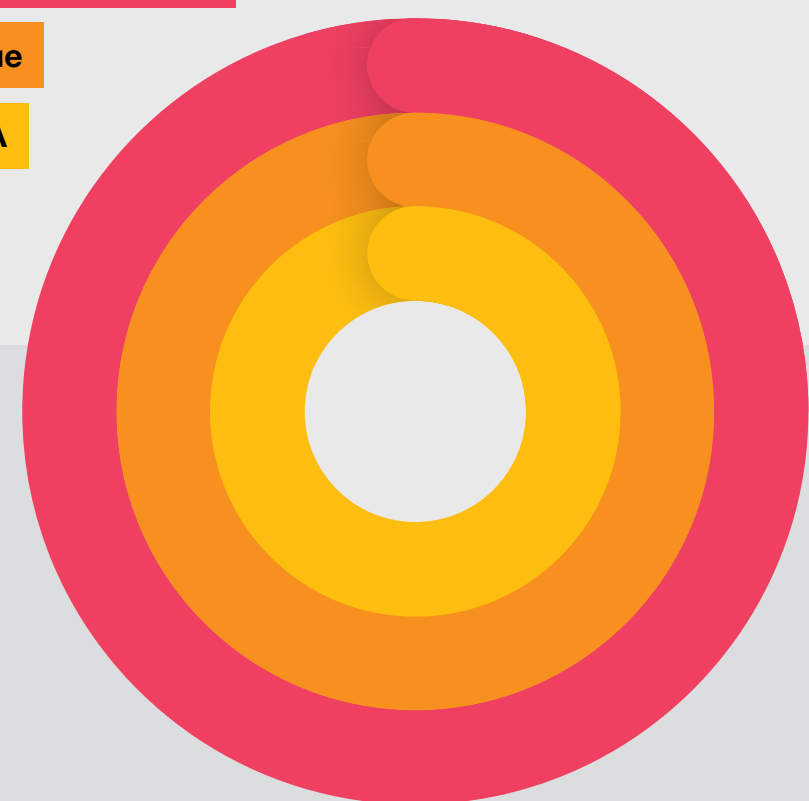
Financial analysis

# MT50

Market capitalisation

Revenue

EBITDA



Market capitalisation

**\$123.8b**

\$18.3b 17% ▲

Revenue

**\$52.7b**

\$22.6b 75% ▲

EBITDA

**\$23.4b**

\$12.9b 123% ▲

Operating cash flows

**\$20.7b**

\$11.5b 125% ▲

Dividends paid

**\$3.7b**

\$2.2b 139% ▲

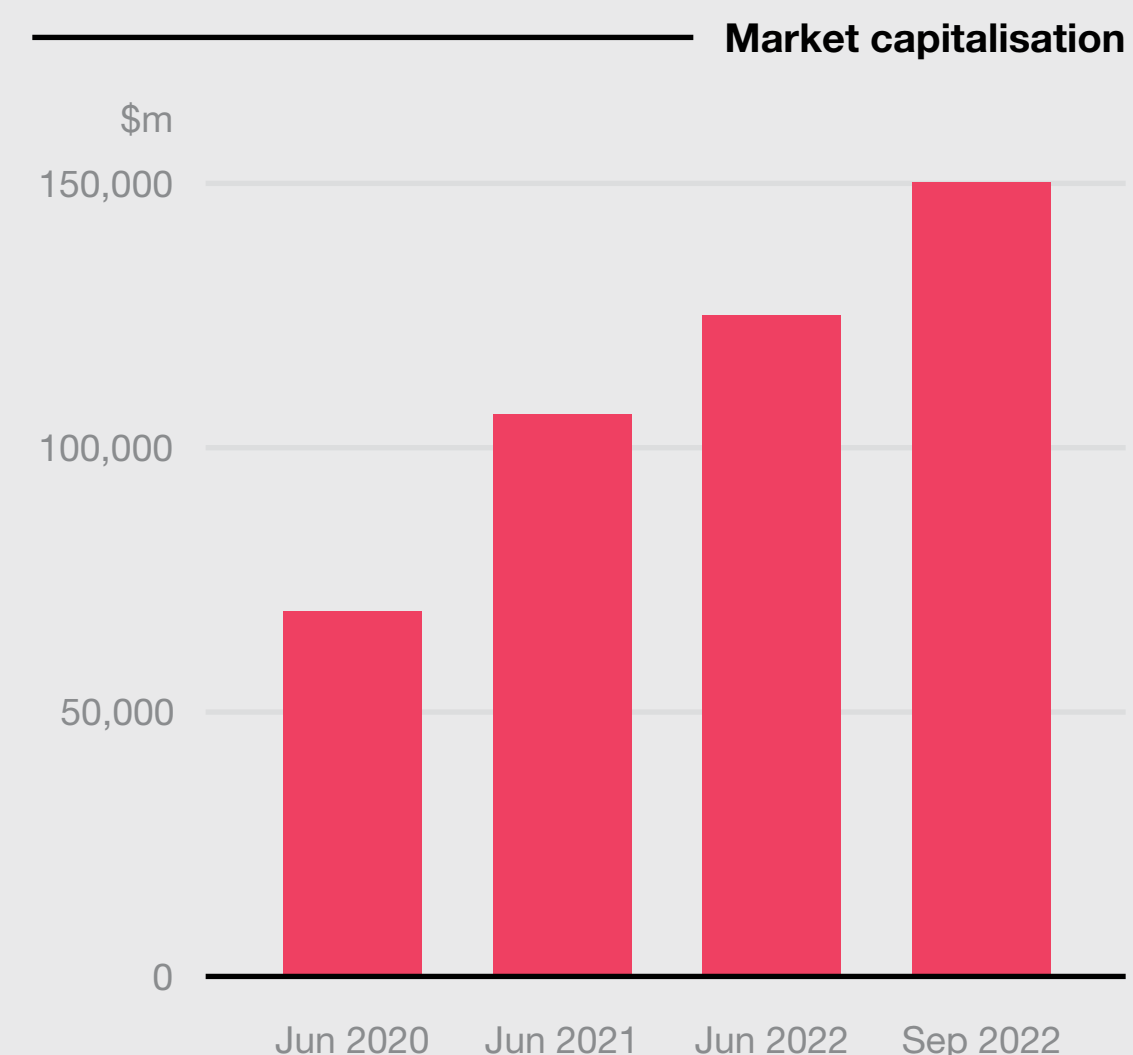
Capex

**\$8.6b**

\$1.7b 24% ▲

## New record market values

The market capitalisation for the MT50 companies increased 17% to 123.8 billion at the end of June 2022, and an additional 21% to \$149.9 billion at the end of September 2022.



Source: Commodity analysis

## Rise in commodity prices driving revenues

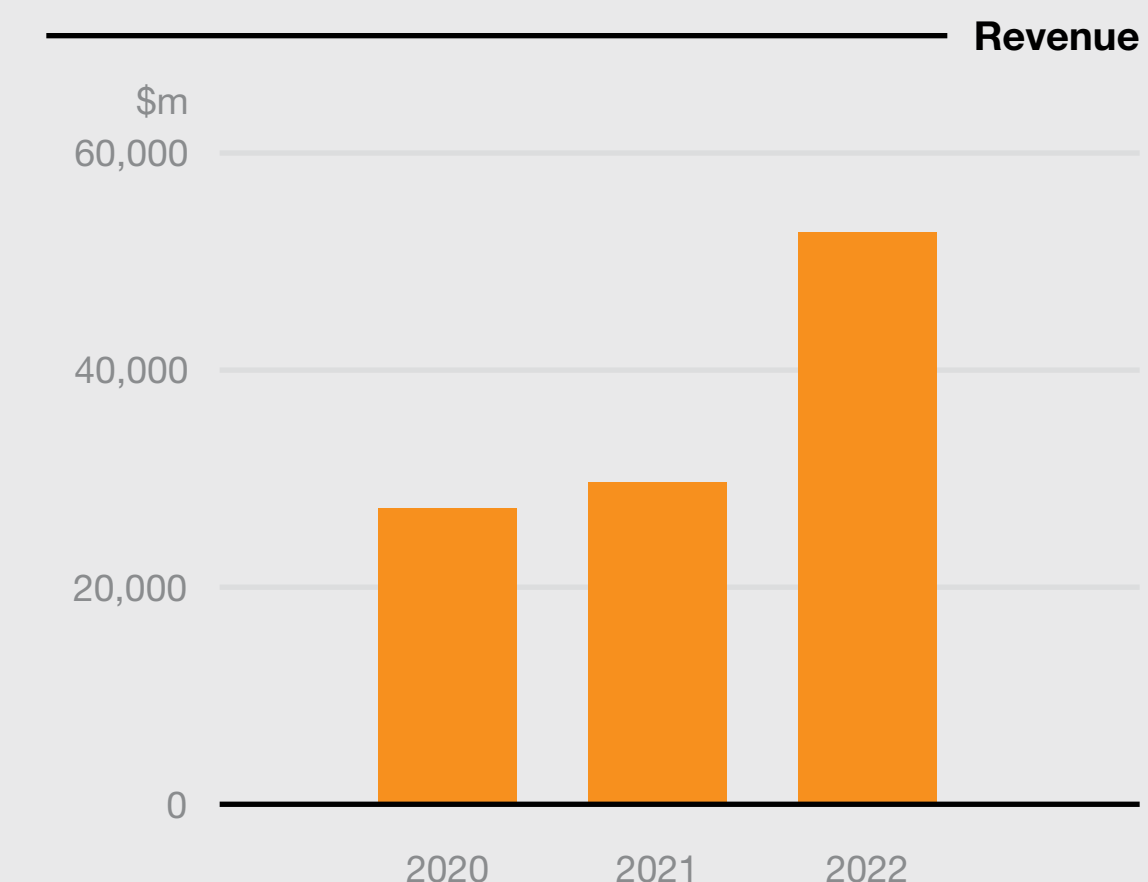
The higher revenues achieved in FY22 were driven mainly by the commodity price increases rather than production. In particular we saw record prices for lithium and coal resulting from supply challenges to meet increased demand.



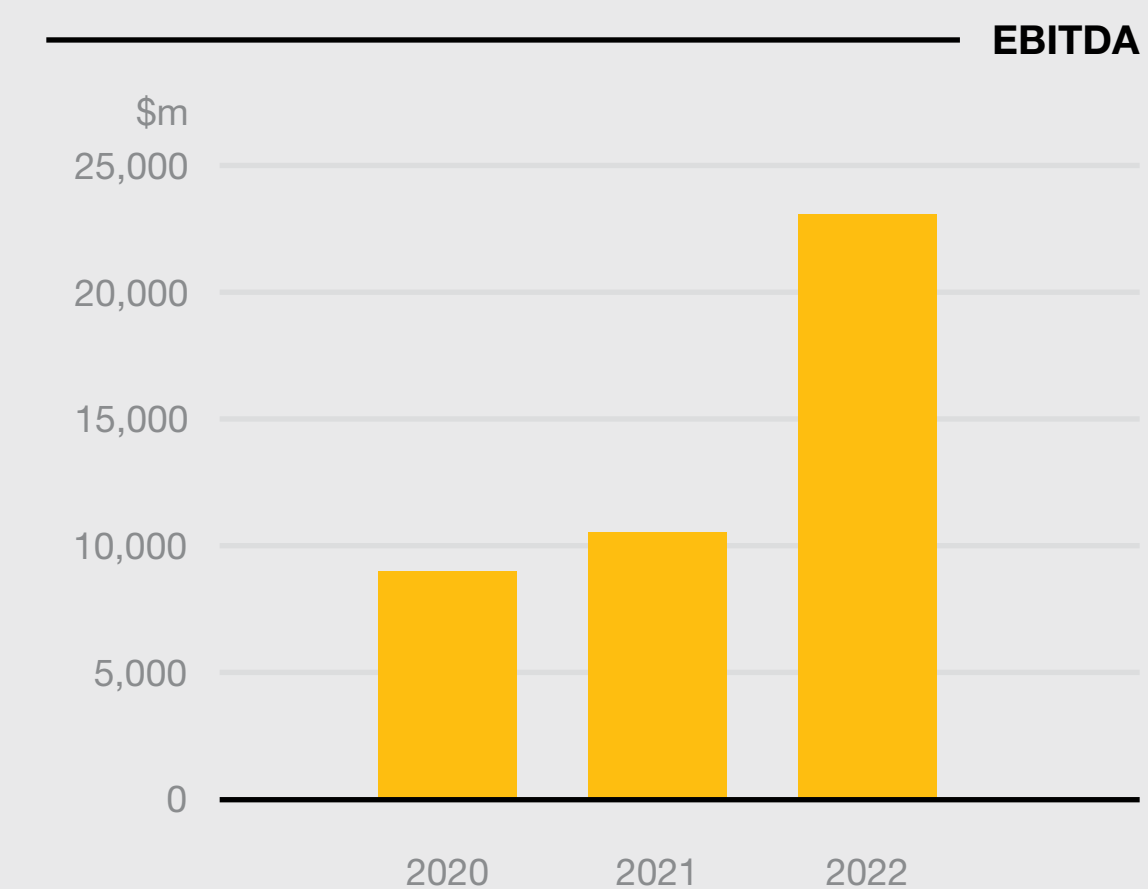
## Record earnings and profitability

By all measures, the MT50 has generated record earnings and profitability in FY22. Revenue increased by 75%, while EBITDA increased by 123% compared to FY21. Notably, the returns for lithium and coal companies were significant.

The EBITDA margin and return on equity measures were significantly higher than the 10-year average.



Source: PwC analysis, S&P Capital IQ



Source: PwC analysis, S&P Capital IQ

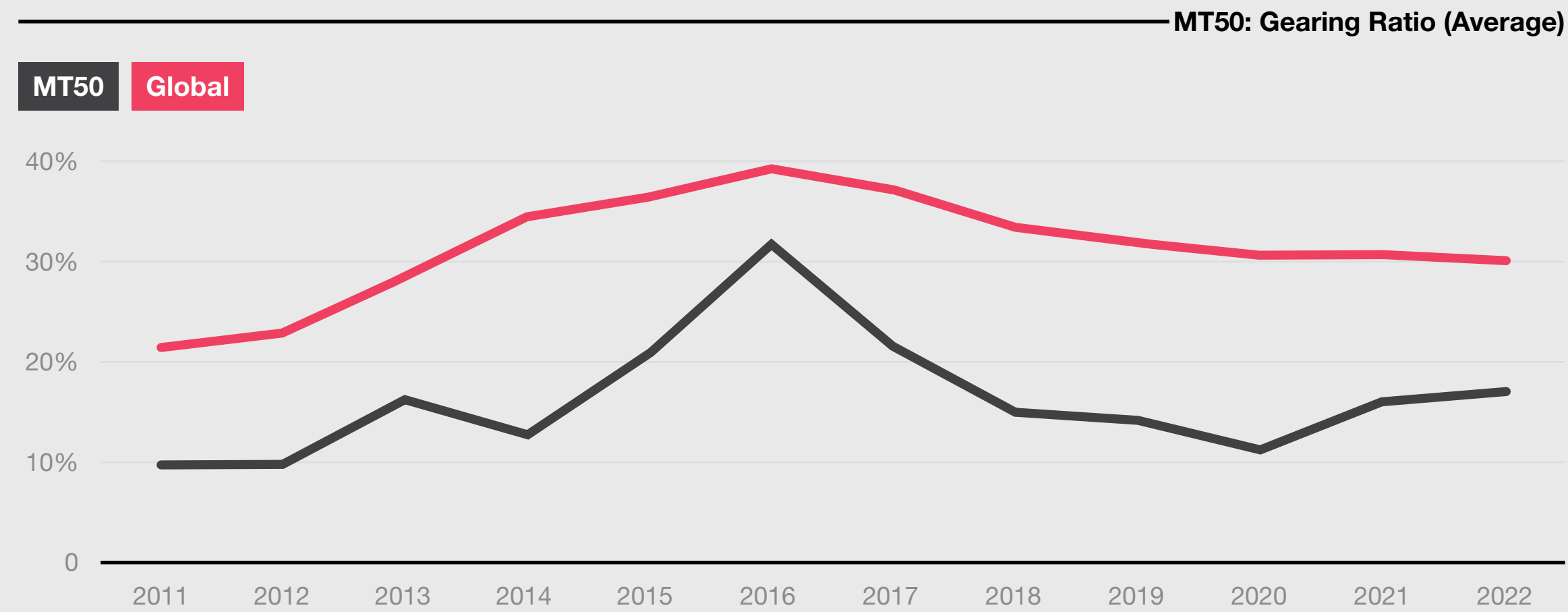
Financial analysis

# MT50

| Earnings            | 2022<br>\$m | 2021<br>\$m |
|---------------------|-------------|-------------|
| Revenue             | 52,675      | 30,115      |
| EBITDA              | 23,380      | 10,471      |
| Net profit          | 12,193      | 2,056       |
| Adjusted net profit | 12,654      | 3,663       |

| Financial position | 2022<br>\$m | 2021<br>\$m |
|--------------------|-------------|-------------|
| Assets             | 115,496     | 81,488      |
| Liabilities        | 44,563      | 29,116      |
| Equity             | 74,008      | 54,184      |
| Cash               | 20,515      | 10,494      |
| Borrowings         | 15,489      | 10,378      |
| Net cash           | 5,026       | 116         |
| Gearing            | 17%         | 16%         |

| Profitability measures     | 2022 | 2021 | 10 yr avg |
|----------------------------|------|------|-----------|
| EBITDA margin              | 44%  | 35%  | 36%       |
| Return on equity           | 20%  | 9%   | 10%       |
| Return on capital employed | 16%  | 7%   | 7%        |



## Cash and borrowings increased

Aggregate cash nearly doubled in FY22. Almost half of this cash is held by the critical mineral companies, providing important funding to support their projects.

Coal companies also held significant cash at June 2022. This will come down as tax liabilities and dividends are paid, along with reductions in borrowings. The financial position of coal companies has changed significantly in the past year, from a net debt position of \$4.5 billion to a net cash position of \$1.6 billion.

Borrowings increased by nearly 50%, mainly to fund acquisitions. But borrowings are generally at a modest level.

The overall MT50 gearing ratio increased marginally in FY22 to the highest level in five years. This reflects the switch to a higher growth phase. However, MT50 gearing remains significantly lower than the large-cap global miners.



Financial analysis

# MT50

## Record cash from operations

Higher earnings translated into an operating cash flow record of \$20.7 billion (an increase of \$11.5 billion or 125%). Over 80% (\$9.6 billion) of this increase came from coal companies benefiting from record prices.

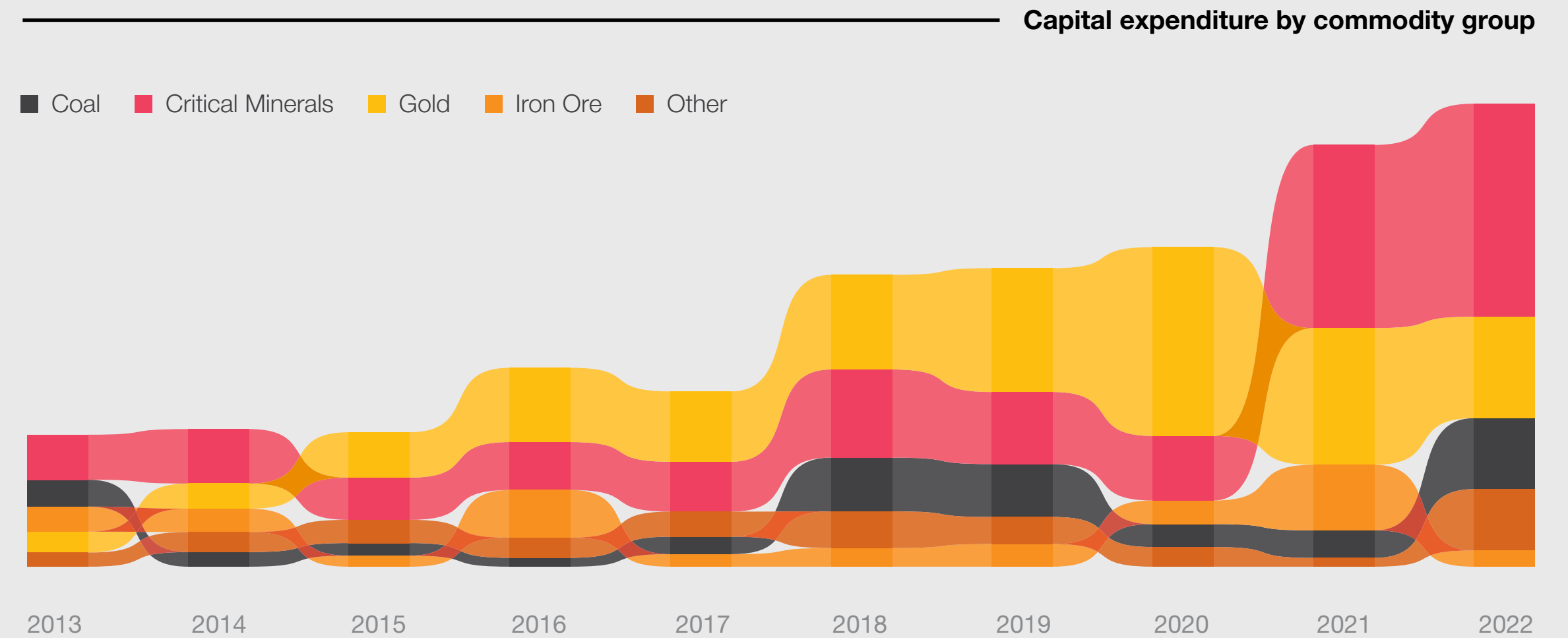
| Cash flows                      | 2022<br>\$m     | 2021<br>\$m    |
|---------------------------------|-----------------|----------------|
| <b>Operating cash flows</b>     | <b>20,712</b>   | <b>9,204</b>   |
| Capital expenditure             | (8,599)         | (6,937)        |
| Cash acquisitions               | (7,522)         | (2,358)        |
| <b>Net investing cash flows</b> | <b>(15,100)</b> | <b>(8,984)</b> |
| Net debt issued                 | 2,562           | 542            |
| Cash from share issues          | 6,253           | 4,467          |
| Dividends and share buybacks    | (4,134)         | (1,675)        |
| <b>Net financing cash flows</b> | <b>4,590</b>    | <b>1,767</b>   |

## Investing for growth

Cash investment spending was up \$6 billion in FY22 (a 68% increase on FY21 levels). The growth activity is largely across critical minerals and gold. Growth funding was sourced from new debt and equity raises, along with cash generated from existing operations and cash reserves.

Unsurprisingly, the substantial increases in debt repayments, dividends and cash balances were primarily from the cash generated by coal operations.

Debt and equity markets continue to be supportive of the growth projects of critical minerals and gold companies. Critical minerals companies raised \$3.5 billion in debt and \$2.5 billion in equity. Gold companies raised \$2 billion in borrowings.



Source: PwC analysis, S&P Capital IQ

Financial analysis

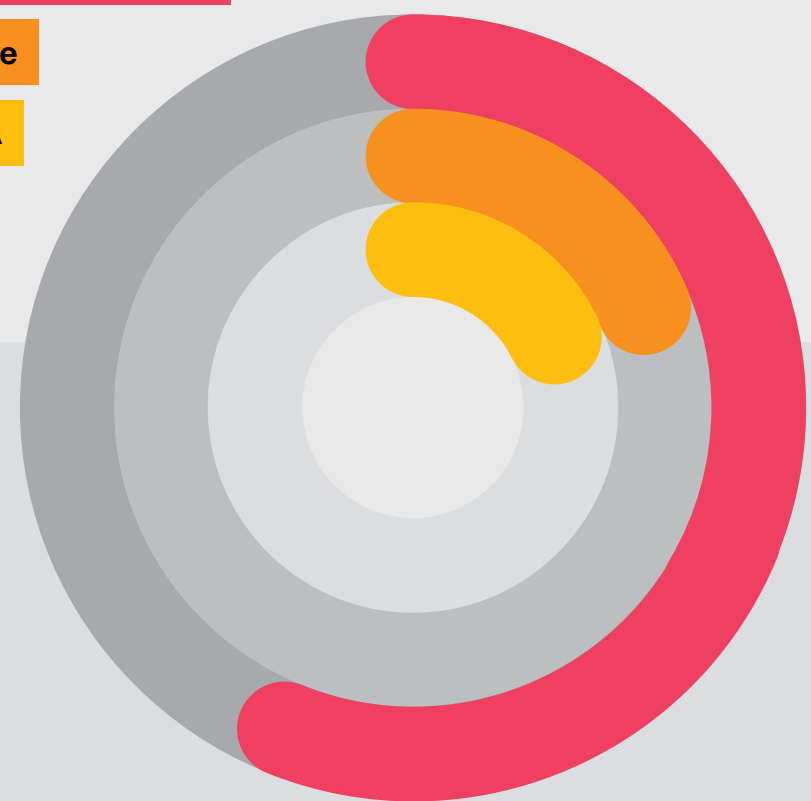
# Critical minerals



Market capitalisation

Revenue

EBITDA



Market capitalisation

**\$70.3b**

\$14.6b 32% ▲

Revenue

**\$12.6b**

\$6.4b 96% ▲

EBITDA

**\$5.7b**

\$3.2b 128% ▲

Operating cash flows

**\$4.6b**

\$2b 77% ▲

Dividends paid

**\$1.1b**

\$0.4b 57% ▲

Capex

**\$2.7b**

\$1.5b 125% ▲

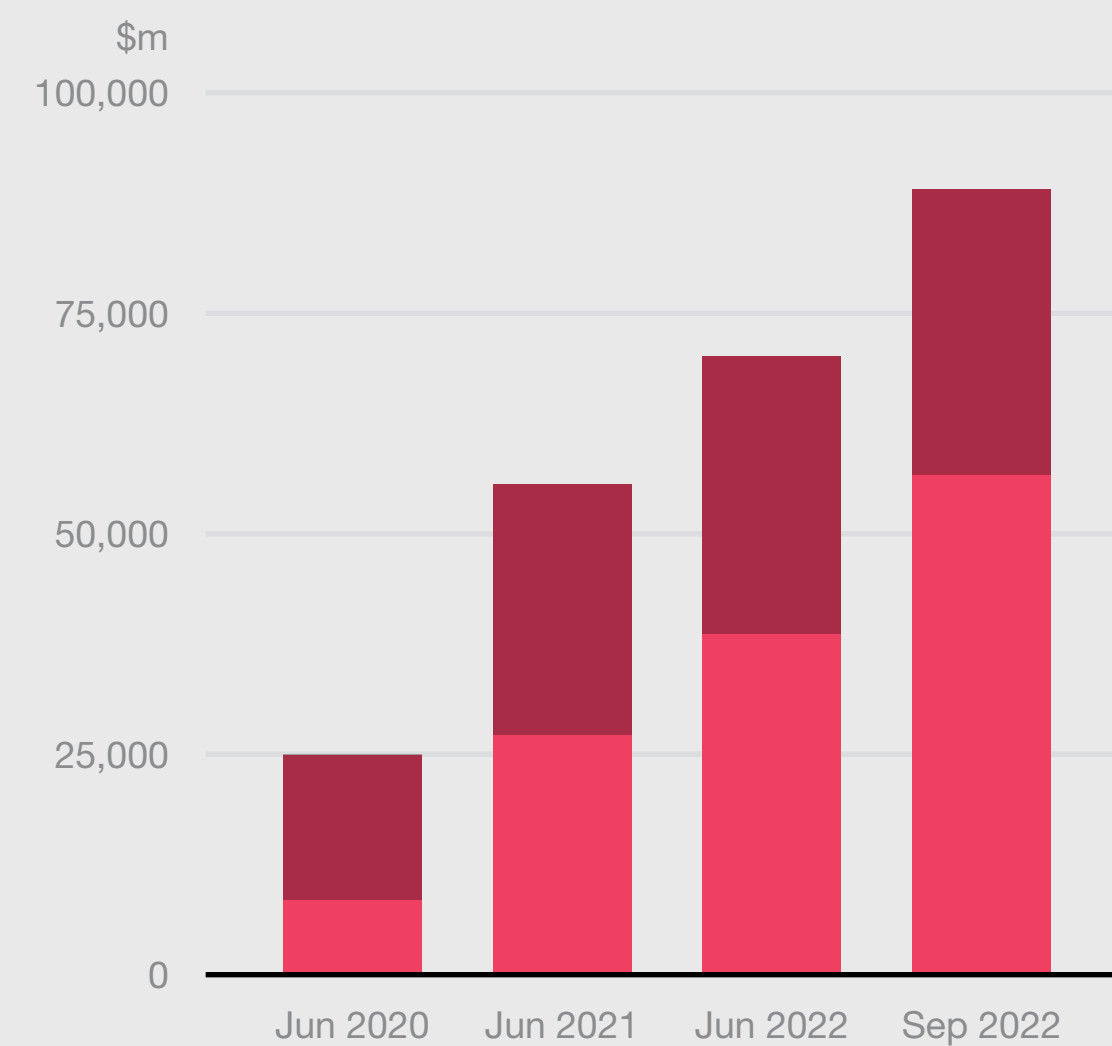
## Steep increase in critical minerals' market values

The market capitalisation for the MT50 critical mineral companies increased 27% to \$70 billion at the end of June 2022, and an additional 34% to \$89 billion at 30 September 2022.

In particular, the value of lithium companies increased 136% to \$39 billion at June 2022, and an additional 46% to \$57 billion at September 2022.

Market capitalisation

Other critical minerals | **Lithium**

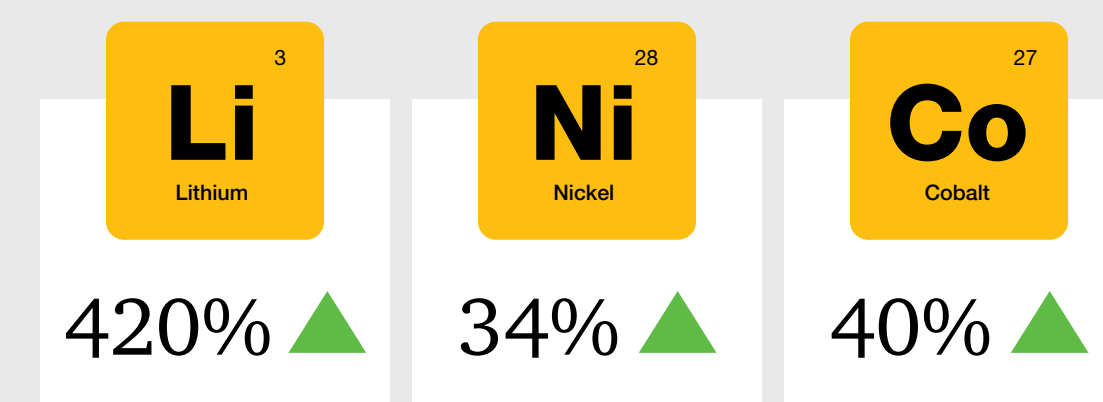


Source: PwC analysis, S&P Capital IQ



## Rising prices

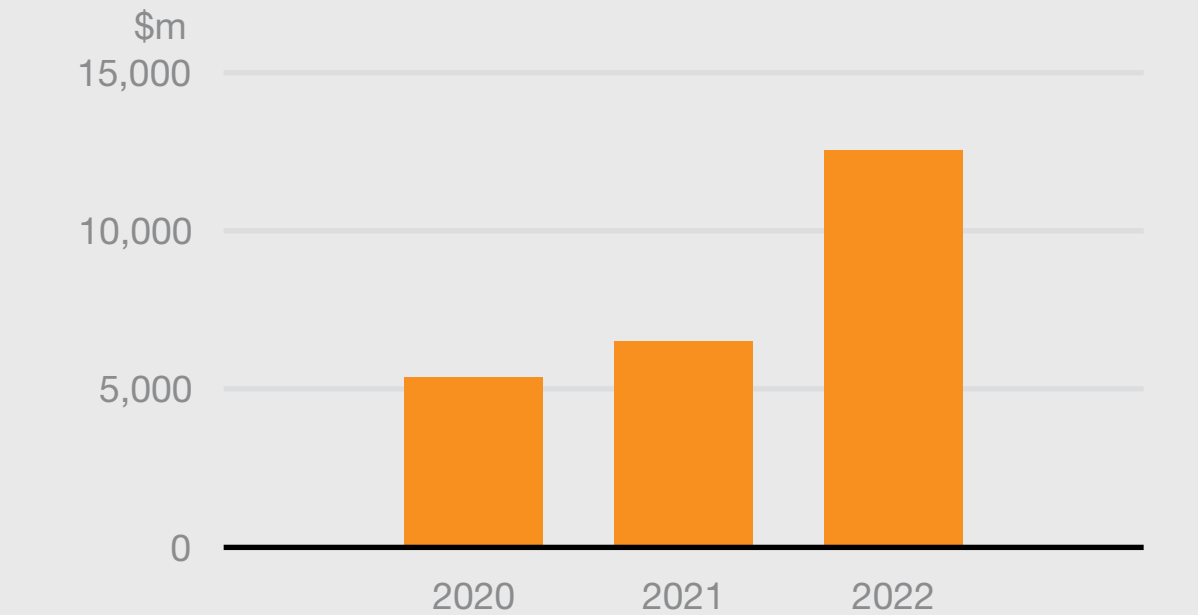
Surging demand coupled with ongoing tight supply conditions and concerns about supply chain bottlenecks saw prices for key critical minerals rise significantly over the past 12 months.



## Rising revenues and profits

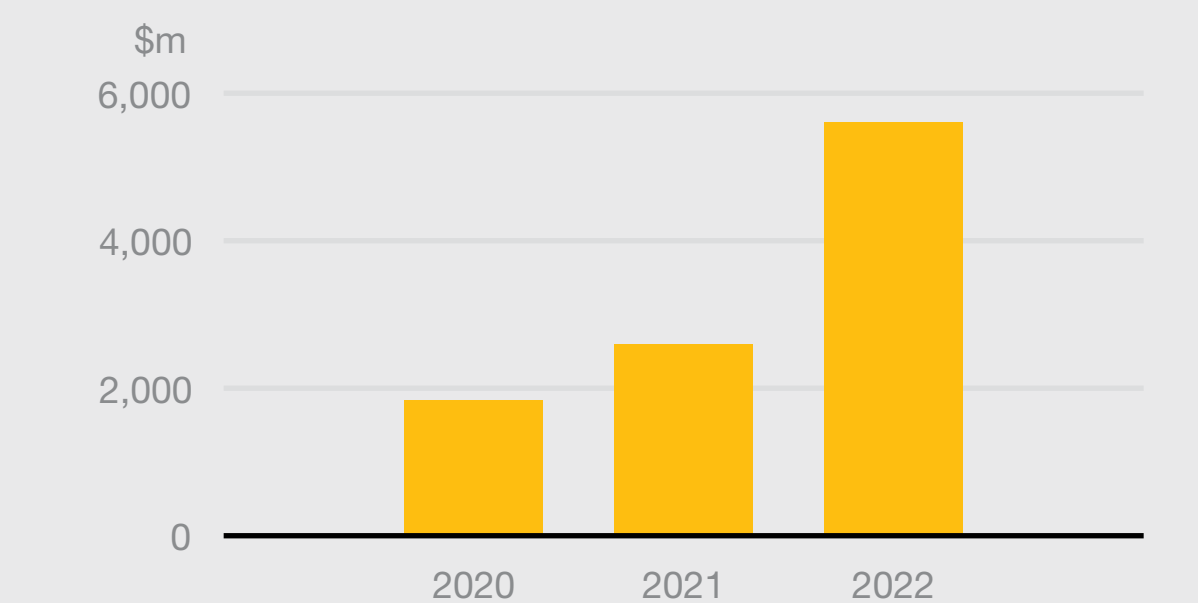
Record revenues and profits achieved in FY22 on the back of rising prices and higher lithium production. Revenue was up 91% to \$12.6 billion, EBITDA grew 61% to \$5.9 billion, while cash generated from operations increased 31% to \$5 billion.

Revenue



Source: PwC analysis, S&P Capital IQ

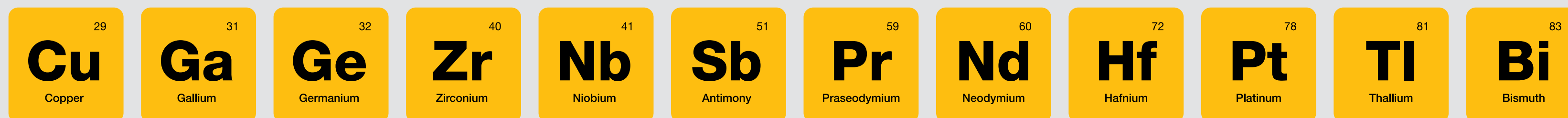
EBITDA



Source: PwC analysis, S&P Capital IQ

Financial analysis

# Critical minerals



## Higher lithium production + record prices = record revenues and returns

2022 has seen record high prices for spodumene and lithium chemicals. Coupled with higher production levels, the four existing lithium producers have earned record revenues and profits.

### Revenue

\$4b, 4x ▲

### Underlying EBITDA

\$2.4b, 6.5x ▲

### Operating cash flows

\$1.7b, 4.3x ▲

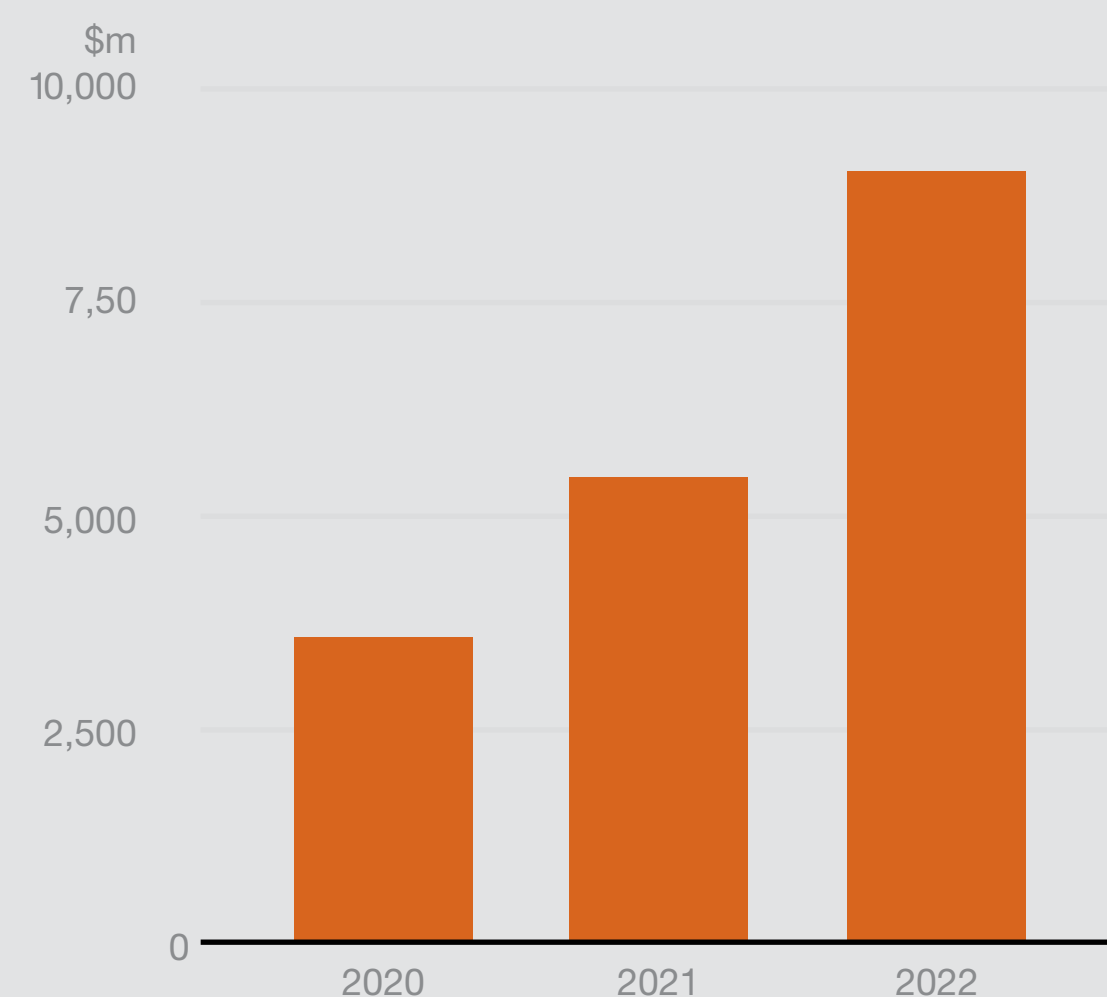
## Strong growth phase

Almost all of the critical minerals companies in the MT50 are growth oriented, with new projects or expansion plans underway. This growth is needed to support significant demand increases particularly from energy transition investment. Importantly, these companies have substantial cash reserves and supportive finance markets to fund this growth phase.

## High cash balances

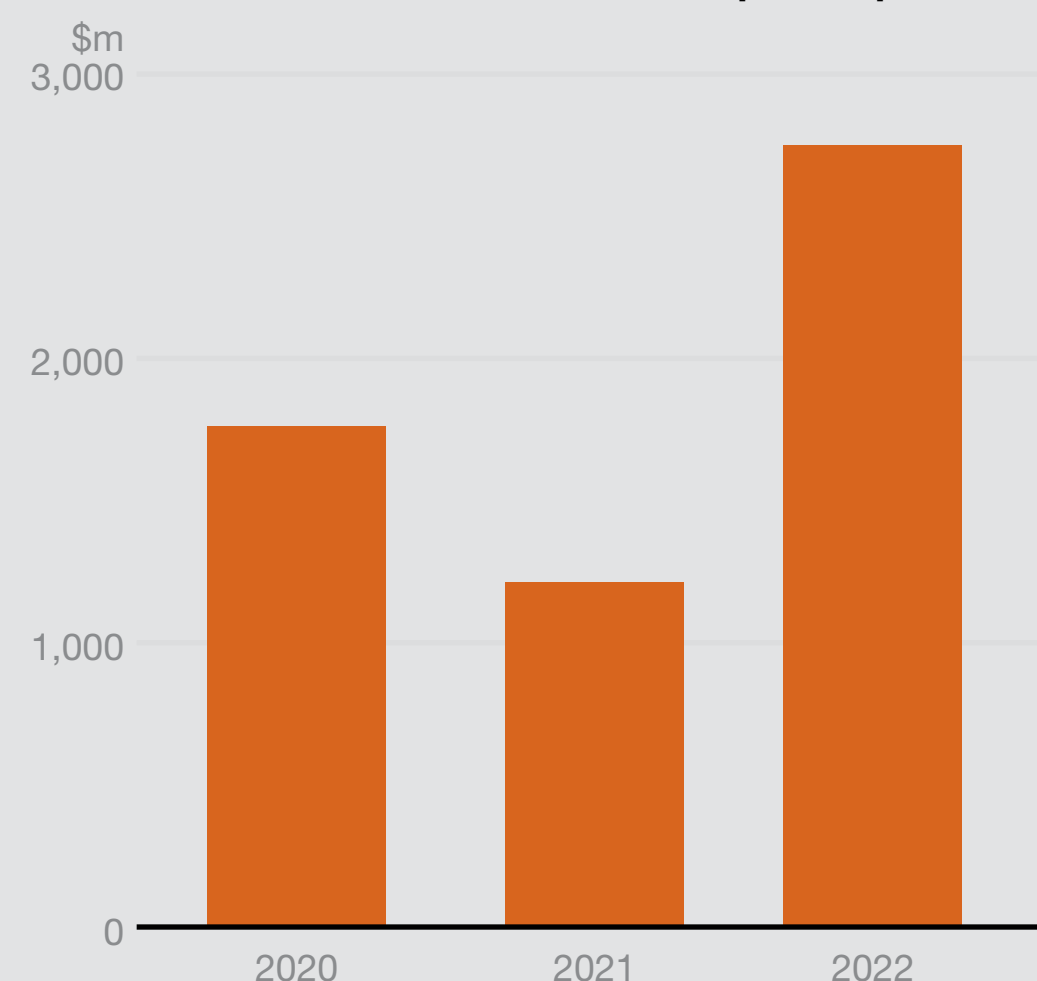
The aggregate cash position at June 2022 was over \$9 billion, more than \$3.5 billion higher than June 2021. This has been built up from operating cash flows, along with debt and equity raised for growth projects.

Cash balances



Source: PwC analysis, S&P Capital IQ

Capital expenditure



Source: PwC analysis, S&P Capital IQ

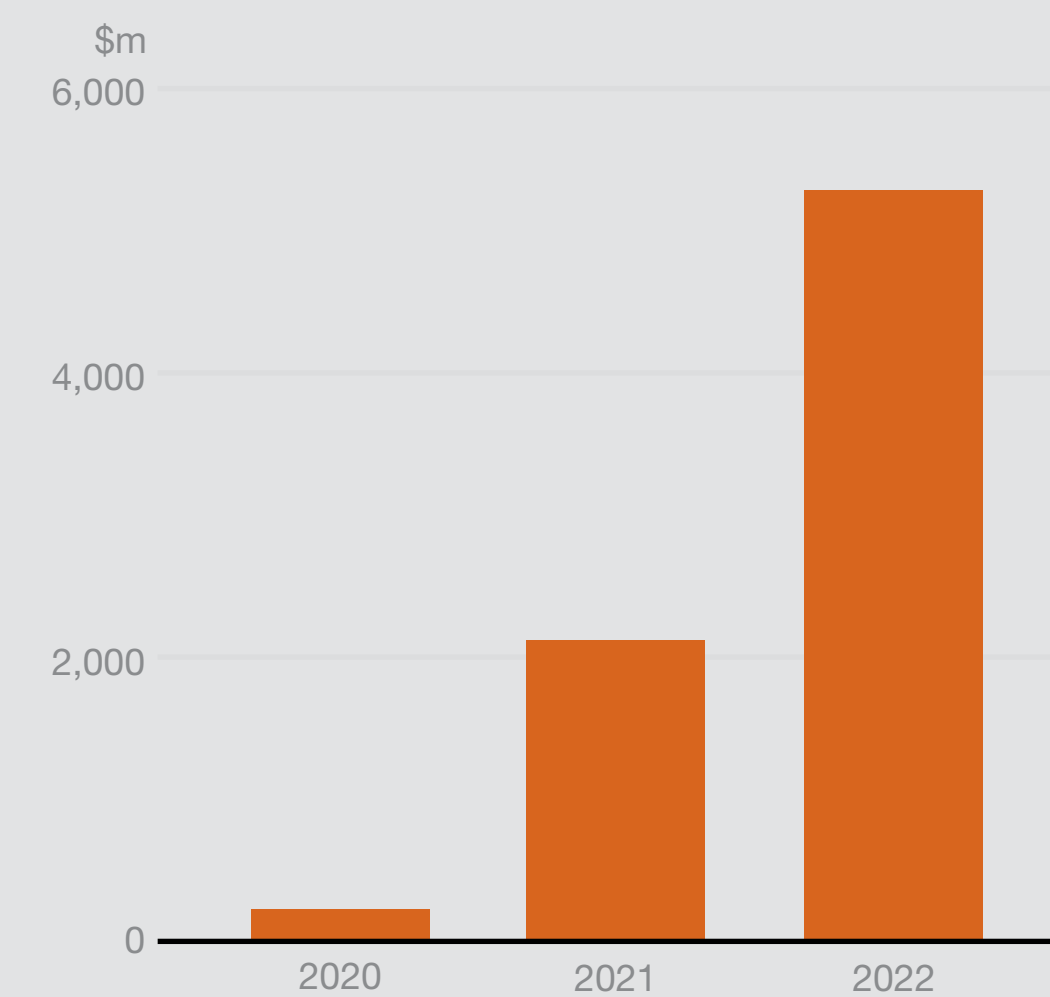
## The race to meet demand

FY22 saw capital expenditures double to \$2.7 billion. Around half of this spending was in lithium projects. This trend will continue with increased spending on new lithium mines and downstream lithium hydroxide facilities.

## Deals activity up and set to continue

Mergers and acquisitions also more than doubled in 2022 to a total of \$5.3 billion. Notable were IGO's acquisition of Western Areas for \$1.3 billion, Evolution Mining's acquisition of the remaining interest in Ernest Henry Mine for \$1 billion, Sandfire's \$2.5 billion MATSA acquisition and the Allkem merger (Galaxy Resources and Orocobre).

Cash Acquisitions



Source: PwC analysis, S&P Capital IQ

Financial analysis

# Gold



Market capitalisation

Revenue

EBITDA



Market capitalisation

**\$27.1b**

\$8.1b 23% ▼

Operating cash flows

**\$5.2b**

1.2b 29% ▲

Revenue

**\$13.6b**

\$3.2b 31% ▲

Dividends paid

**\$0.4b**

\$0.3b 43% ▼

EBITDA

**\$5.5b**

\$1.4b 25% ▲

Capex

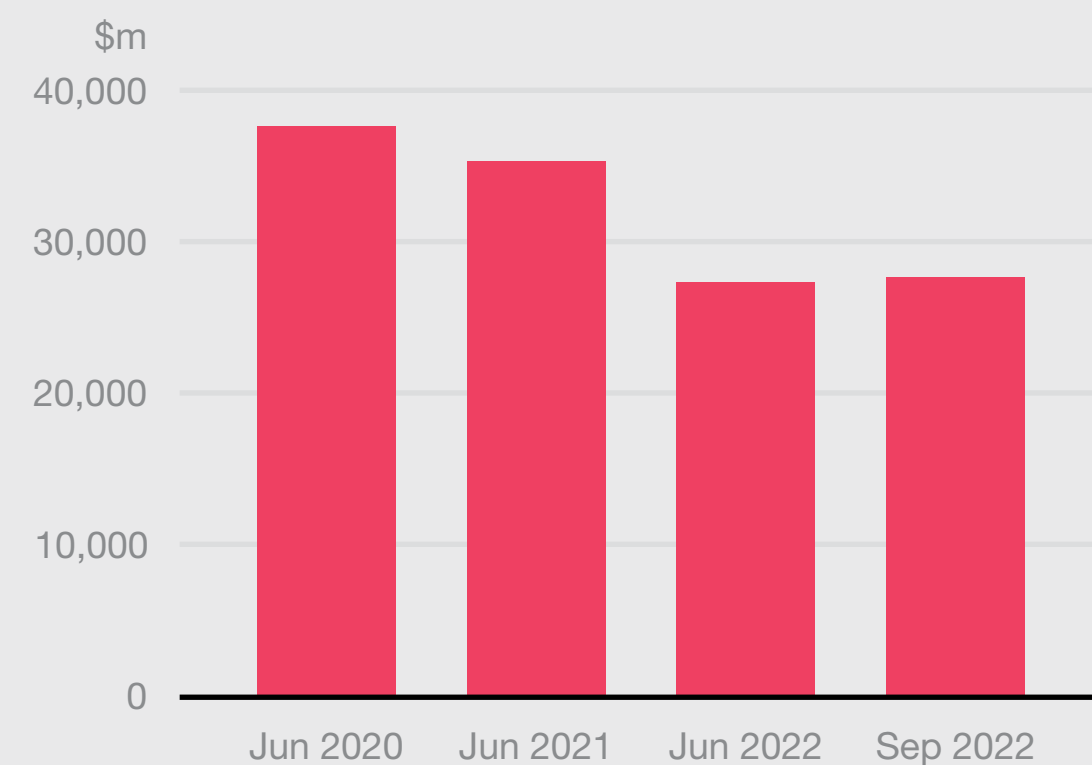
**\$3.8b**

\$0.3b 7% ▼

## Decline in values

The market capitalisation of the group is at its lowest point in three years. There's currently weaker market sentiment in the face of medium-term price expectations and reducing margins.

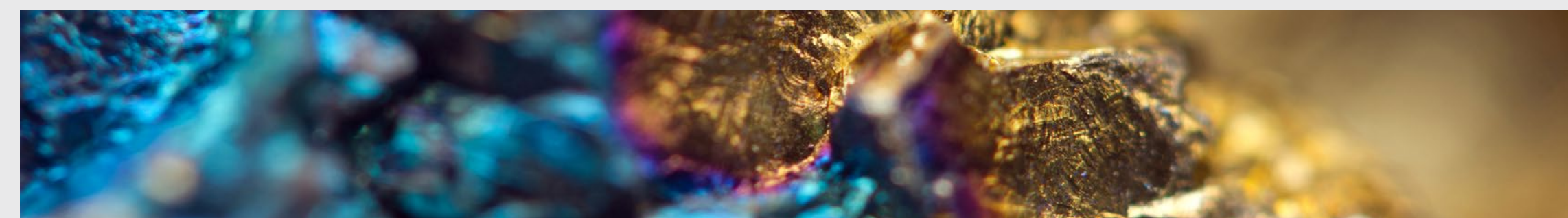
Market capitalisation



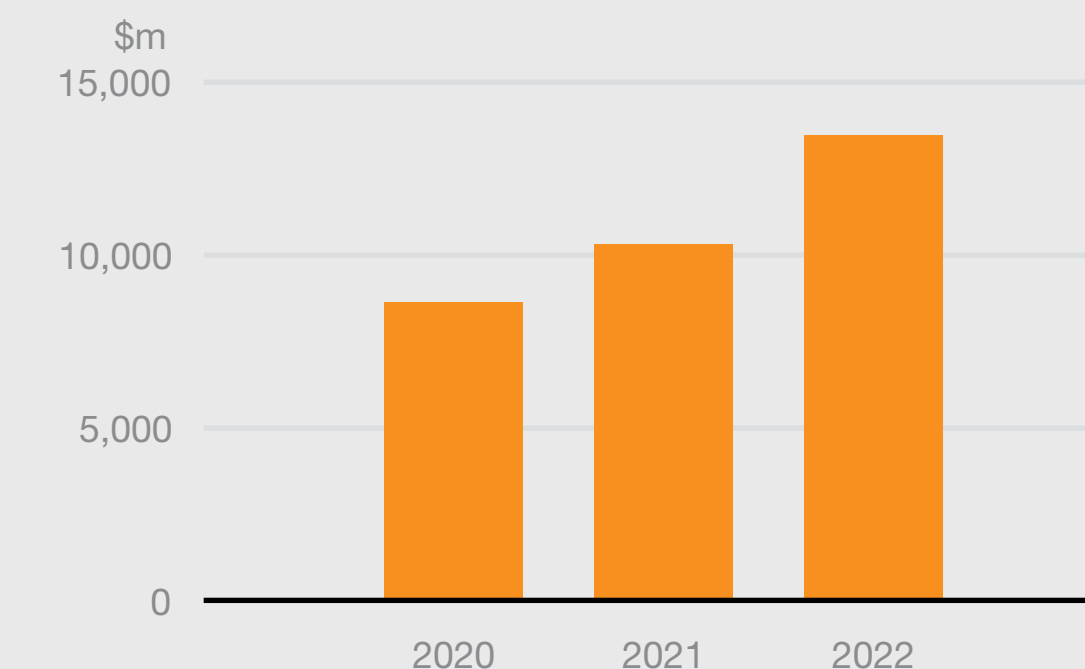
Source: PwC analysis, S&P Capital IQ

## Rising revenues, margins squeezed

Gold revenues increased 27% to nearly \$13 billion on the back of higher gold prices (particularly on an Australian dollar basis) and production. While earnings increased, margins are under some pressure with EBITDA margins declining from 24% in FY20 to 20% in FY21, and 19% in FY22. Costs in the June 2022 quarter increased reflecting the rising costs of fuel, energy, labour and steel.



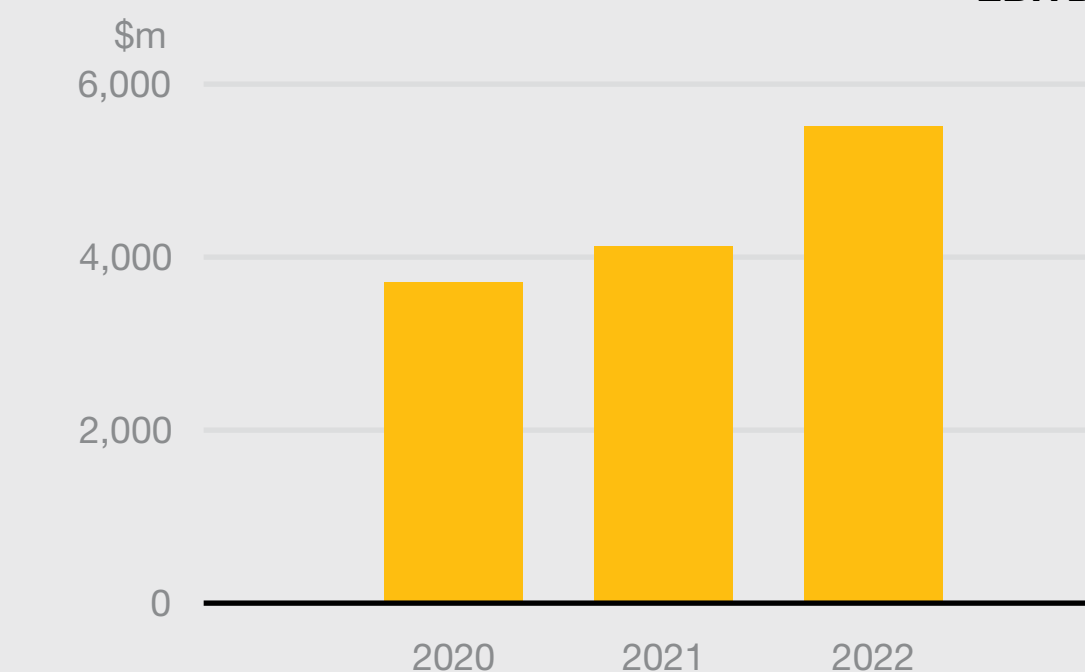
Revenue



Source: PwC analysis, S&P Capital IQ

While the gold price fell in the September quarter due to higher bond yields and a strong US dollar, it is still relatively high in Australian dollar terms at over A\$2,500 per ounce.

EBITDA



Source: PwC analysis, S&P Capital IQ



Financial analysis

# Gold



## Impairment charges

Despite a higher price, impairment charges totalling \$700 million were recognised in FY22. This is reflective of challenges with individual mines rather than the sector.



## Ongoing growth phase

MT50 gold companies have been in a high growth phase in recent years, with high spending on growth capital and acquisitions. While the acquisitions have now tapered in value, growth capex remains high. Northern Star and Evolution Mining are both notably ahead of the others in value, production and growth activities. For example, these two companies earned 45% of the total MT50 gold revenue.

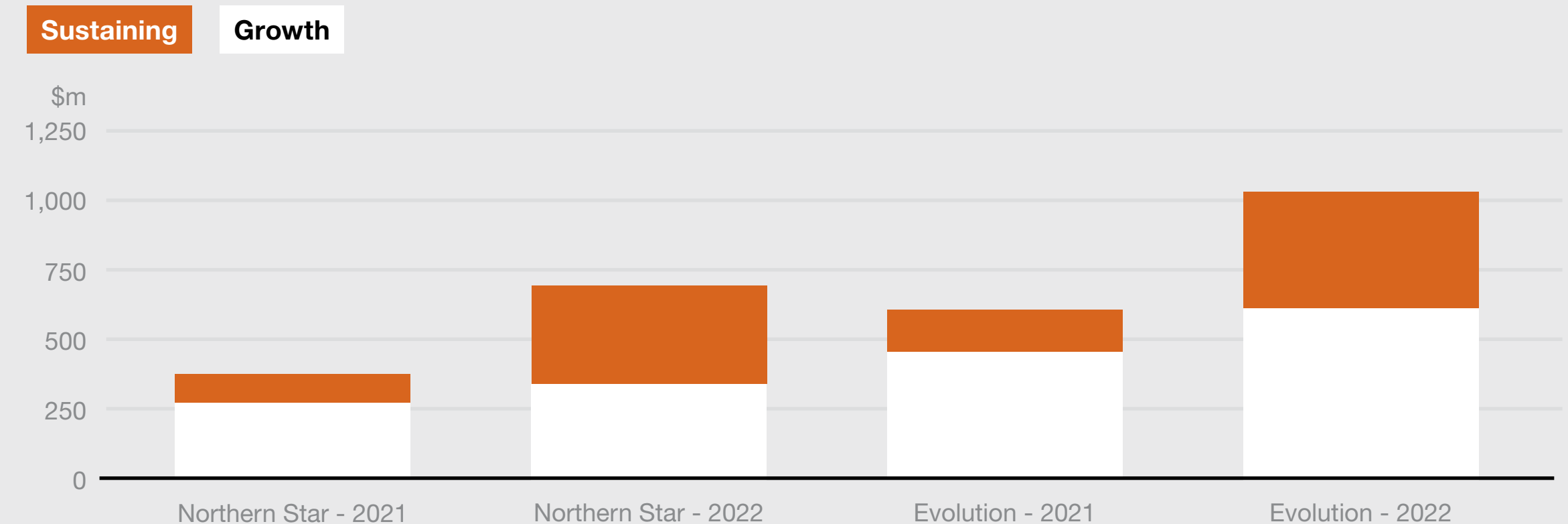
### Focus on growth ...

The growth phase by MT50 gold companies continues with cash acquisitions and growth capital at high levels. Total cash spent on acquisitions by the MT50 gold companies in FY22 was \$1.4 billion a significant increase from FY21 (but lower than FY20). This included Evolution Mining's two acquisitions (Ernest Henry, Kundana). The growth capital budgets for both Northern Star and Evolution Mining remain high, with growth capex of \$0.6 billion and \$0.5 billion respectively.

### ... and exploration

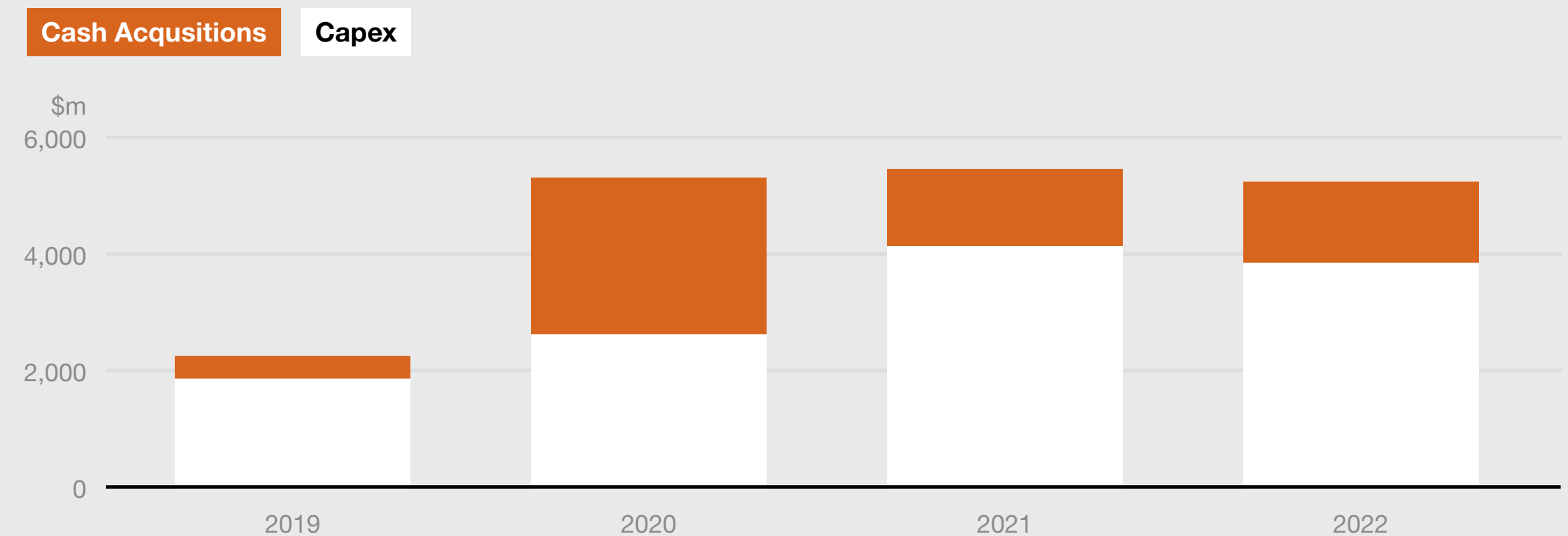
Australia's gold exploration for FY22 was a record \$1.6 billion, representing 41% of total mineral exploration spending.<sup>1</sup>

## Capital expenditure



Source: PwC analysis, S&P Capital IQ

## Growth spend by year



Source: PwC analysis, S&P Capital IQ

(1) Department of Industry, Science and Resources, Commonwealth of Australia Resources and Energy Quarterly September 2022. The Commonwealth of Australia does not necessarily endorse the content of this publication.

Financial analysis

# Coal



Market capitalisation

Revenue

EBITDA



Market capitalisation

**\$19b**

\$11.4b 152% ▲

Revenue

**\$22.5b**

\$14.4b 178% ▲

EBITDA

**\$11.8b**

\$10.4b 758% ▲

Operating cash flows

**\$10.4b**

9.5b 1,229% ▲

Dividends paid

**\$1.8b**

\$1.8b 100% ▲

Capex

**\$0.8b**

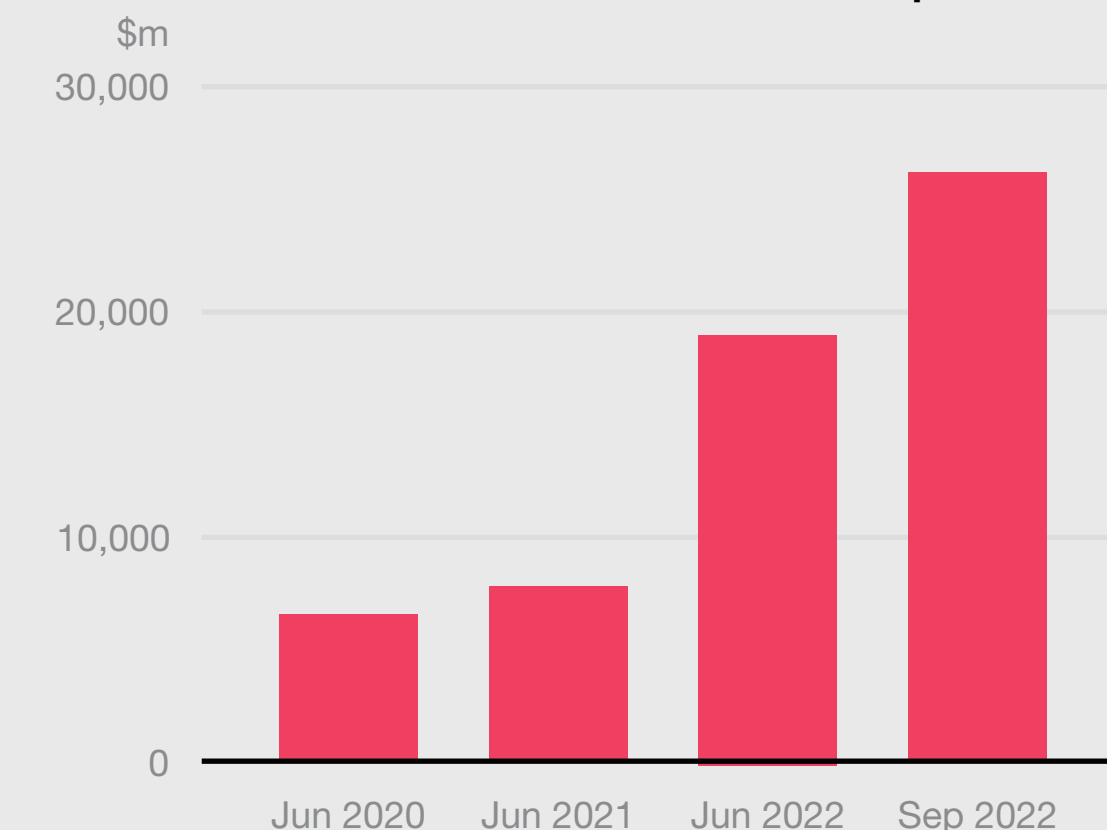
\$0.2b 26% ▲

## 152% increase in values

The market capitalisation of the group is at record highs. Market capitalisation at September 2022 was more than three times the value at June 2021.

The aggregate value of the coal companies at June 2022 was only 1.6 times FY22 EBITDA. By September 2022, the coal company share prices increased significantly (after reporting their financial results). However, the market capitalisation still only reflected around 2.2 times FY22 EBITDA.

Market capitalisation



Source: PwC analysis, S&P Capital IQ



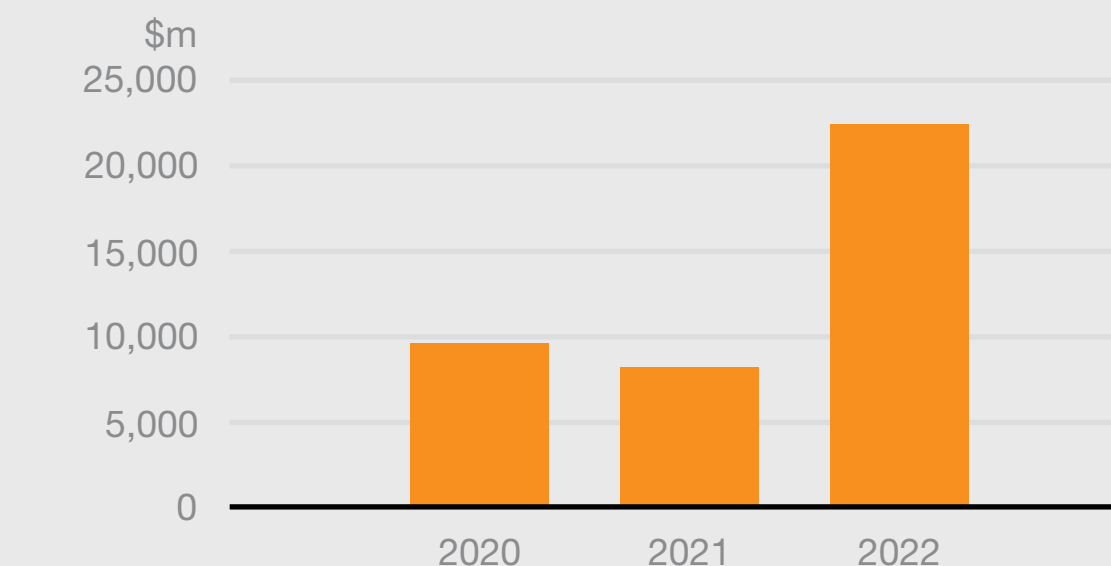
## Record coal prices

Coal companies enjoyed record high prices in 2022, with demand continuing to outstrip supply amid the ongoing energy crisis in Europe and the Russia-Ukraine conflict.

## Soaring revenues, earnings and cash

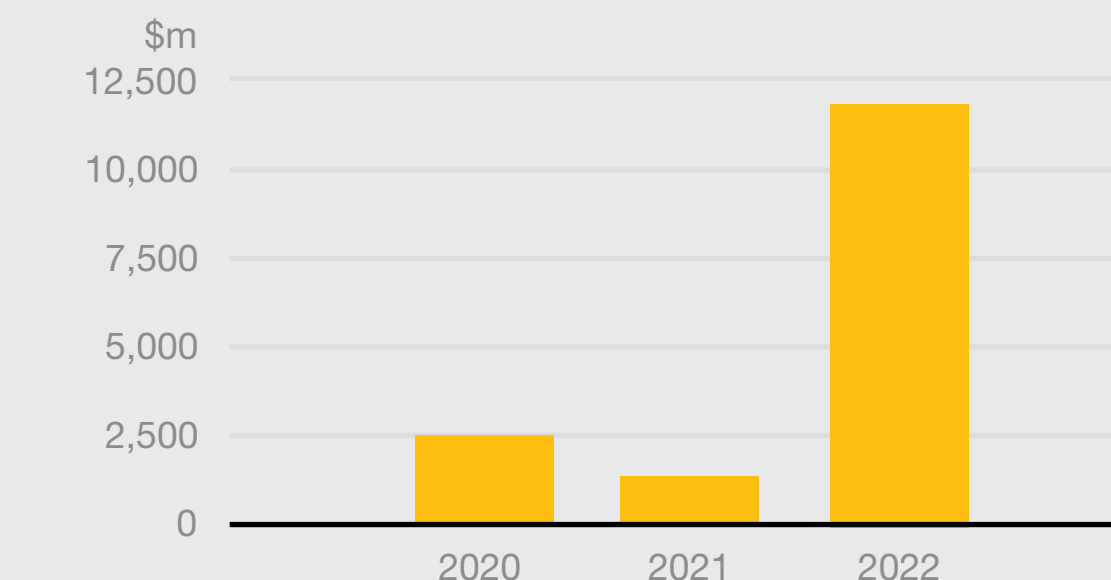
Combined revenues from the five coal companies rose to \$22.5 billion in FY22 – a 178% increase from 2021, representing 43% of the aggregate revenue of the MT50. The higher prices translated to record earnings and operating cash flows across the coal companies of the MT50.

Revenue



Source: PwC analysis, S&P Capital IQ

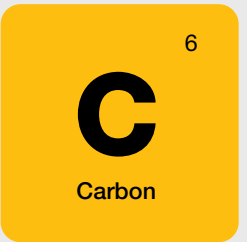
EBITDA



Source: PwC analysis, S&P Capital IQ

Financial analysis

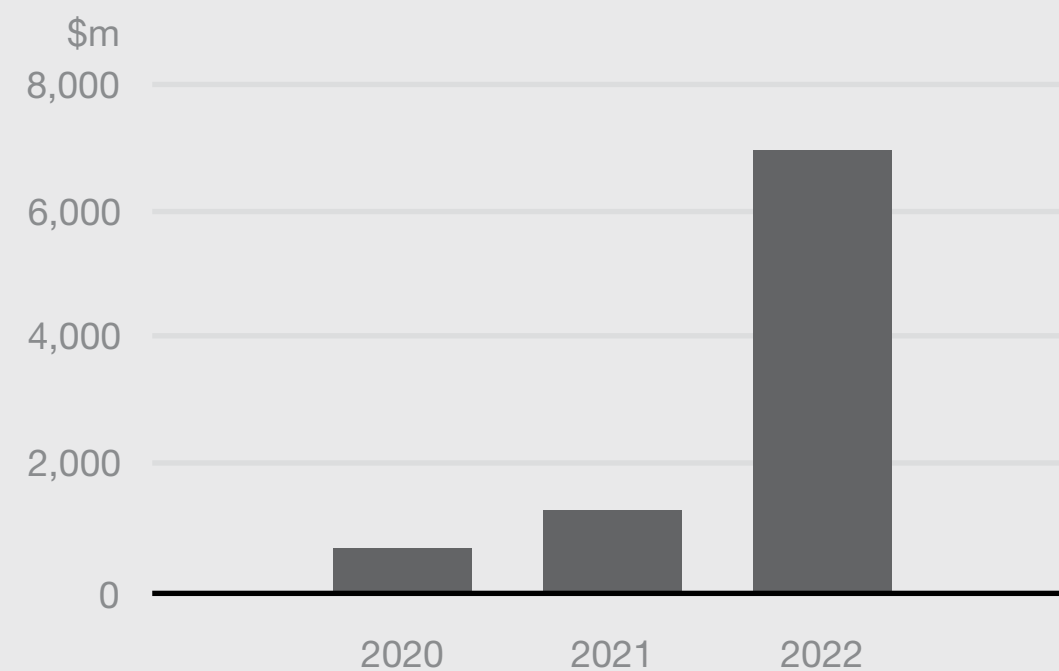
# Coal



## Significant improvement in cash and net cash positions

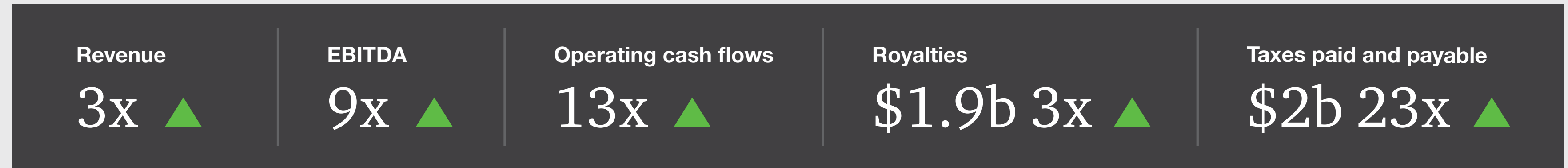
Cash at June 2022 was \$6.9 billion, an increase of more than 450% on the back of record operating cash flows. From the \$9 billion free cash flow (after capex), \$1.1 billion has been used to repay debt with \$2.4 billion in dividend payments and buybacks. Further dividend payments of \$1.7 billion will be paid during the balance of 2022. The coal companies also have an income tax bill of \$2 billion to pay out.

Cash balances



Source: PwC analysis, S&P Capital IQ

Unsurprisingly, the net cash positions of the coal companies improved significantly in FY22. Debt repayments were \$1.1 billion in FY22 compared to \$0.2 billion in FY21. Additional debt repayments have been made after June 2022.



## Bumper returns for shareholders

Shareholders saw a substantial improvement in dividends – \$1.8 billion paid in FY22, with an additional \$1.7 billion declared at earnings release dates.

## Significant increase in royalties and taxes

Government royalties and taxes were up significantly in FY22 on the back of the higher profits.

These royalties exclude the increase in royalty rates, which were recently announced by the Queensland government, and which will impact FY23.

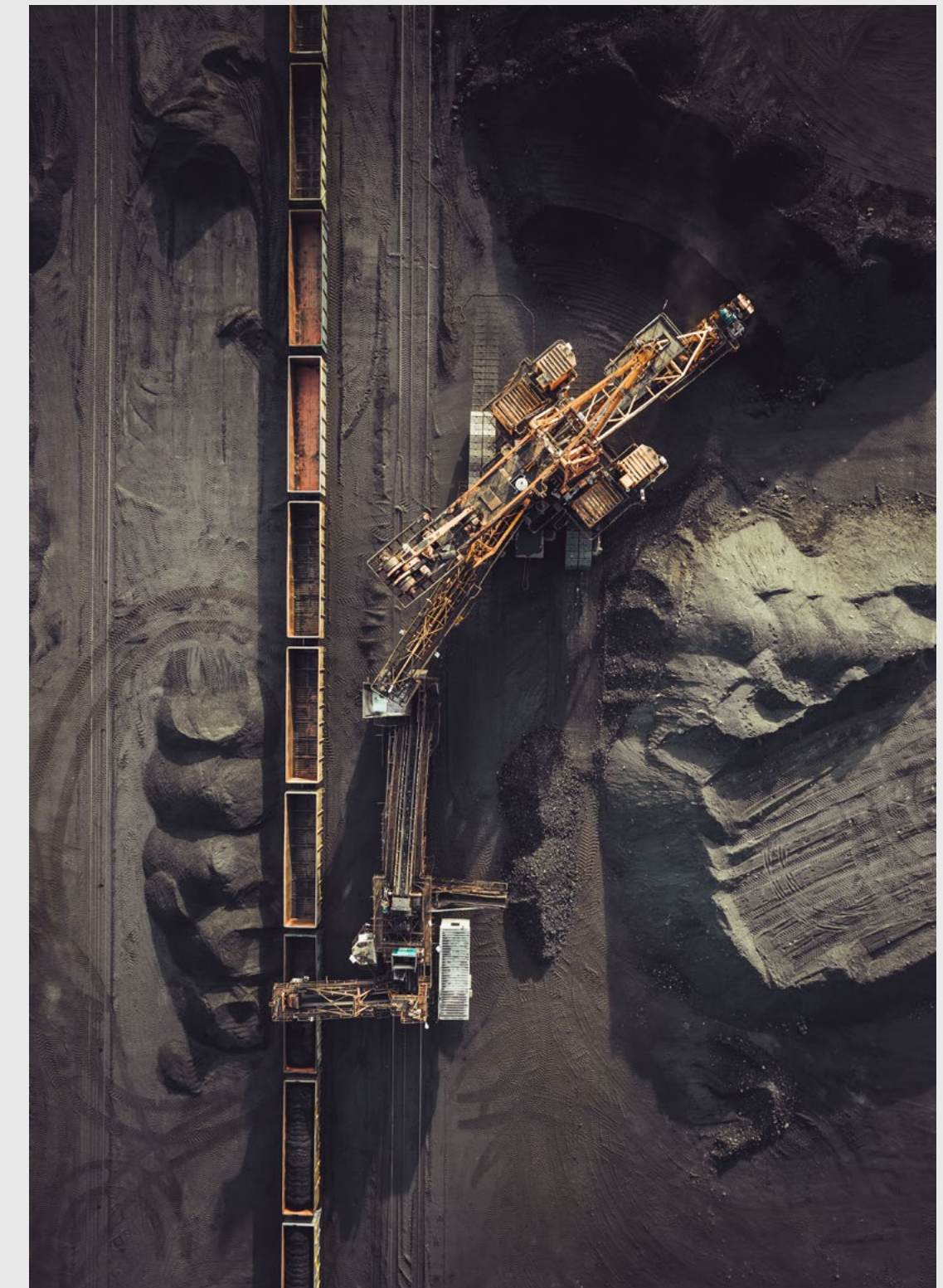
## Investment in growth

Stanmore was the standout as the only coal company to raise equity, using the funds to acquire an 80% interest in BHP Mitsui Pty Ltd in May 2022 for US\$1.6 billion, and the remaining 20% in October 2022 for US\$0.4 billion.

## Outlook

The short-term outlook for thermal coal is positive with high prices expected to continue into 2023. Thermal coal will ultimately decline as a source of energy, however, this will take time. The high-growth economies of China and India account for 70% of the world’s coal demand. Here, coal will not be displaced by renewable sources as quickly as it will in advanced economies, thanks to increased energy demand.

Long-term demand for metallurgical coal will entirely depend on the timing of transitioning steel manufacturing from blast furnaces to ‘green steel’ (i.e., electric arc furnaces and using hydrogen as a reducing agent). Again, this will take time, and will likely differ significantly between regions.



Financial analysis

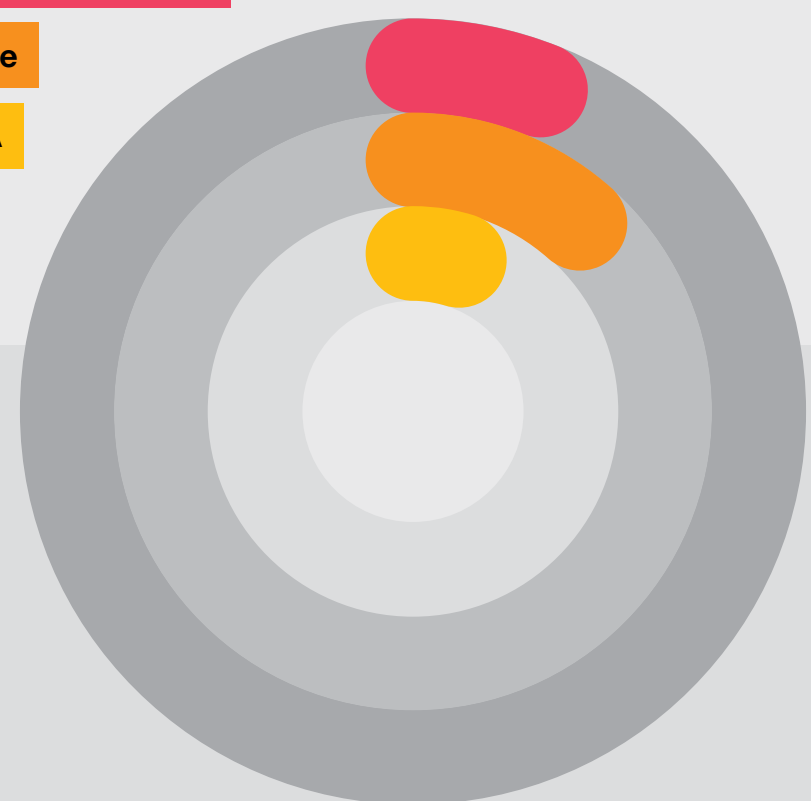
# Iron ore



Market capitalisation

Revenue

EBITDA



Market capitalisation

**\$4.4b**

\$10.0b 70% ▼

Revenue

**\$3.1b**

\$1.2b 28% ▼

EBITDA

**\$0.5b**

\$1.6b 75% ▼

Operating cash flows

**\$0.5b**

\$1.2b 72% ▼

Dividends paid

**\$0.4b**

\$0.3b 376% ▼

Capex

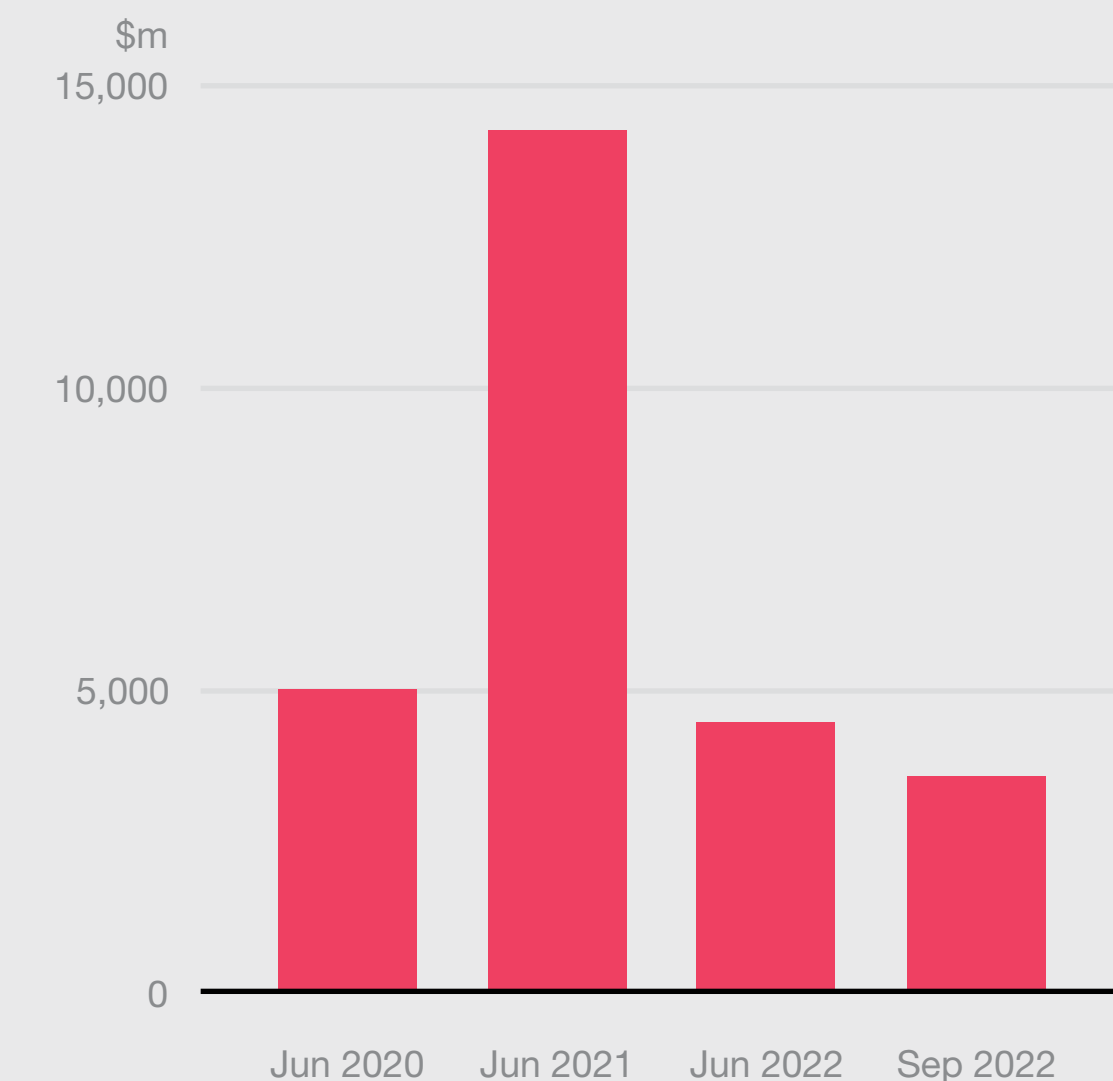
**\$0.7b**

\$0.1b 11% ▲

## Lower values for iron ore

The market capitalisation at June 2021 was three times higher than at any other time, reflecting the much higher prices achieved. We classified Mineral Resources as an iron ore company in 2021 due to the dominance of its iron ore activities at the time. In the current year, however, we have classified Mineral Resources as a critical mineral company (lithium) as the majority of its value at June 2022 was from its lithium assets.

Market capitalisation



Source: PwC analysis, S&P Capital IQ



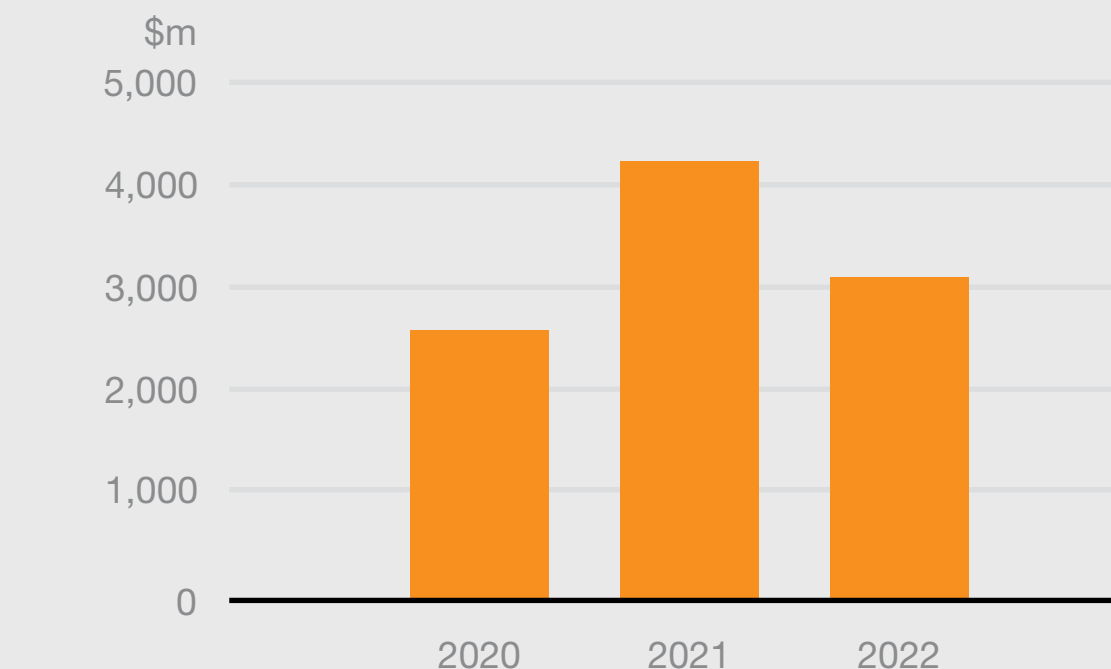
## Prices ease from 2021 records

Moderating iron ore prices in FY22 resulted in lower revenues, earnings and cash flows generated from operations. Iron ore prices reached a low in November 2021 as China sought to cut steel production in the second half of 2021. Since then, there's been an upward trend in prices in 2022 as steel output improves in China. At the beginning of November 2022, however, we are back at that low past.

## Lower revenues and profitability

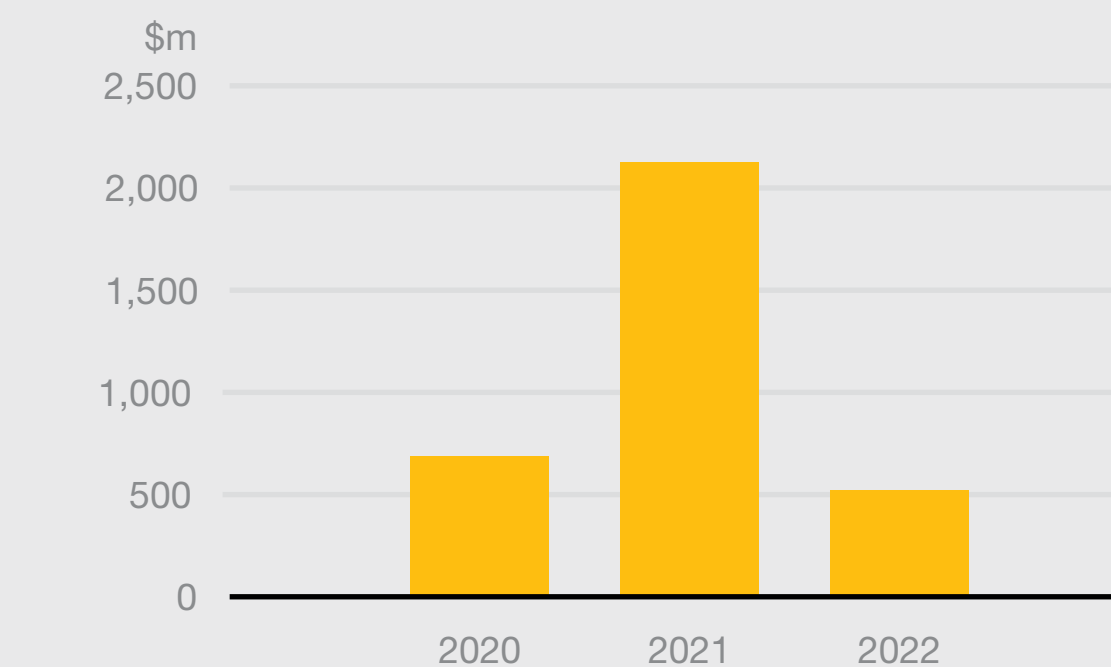
The lower revenues translated into lower earnings and cash flows from operations. EBITDA fell to \$0.5b, a fall of \$1.6b, while cash flow from operations fell by \$1.2b to a total of \$0.5b for the year.

Revenue



Source: PwC analysis, S&P Capital IQ

EBITDA



Source: PwC analysis, S&P Capital IQ

# Iron ore



## Investment in future growth

Total capital expenditure of \$282 million was marginally up from 2021 levels. Notably, Mineral Resources and partners announced the commencement of the \$3 billion Onslow Iron Ore project.

## Risks ahead

Decarbonisation is creating a lot of uncertainty for mid-tier iron ore producers in Australia. The demand for lower-grade iron ore is expected to decline over time as the world decarbonises (as lower-grade iron ore is more carbon intensive in steel manufacturing).

There is likely to be continued demand for lower grades, but they may attract higher discounts to offset higher energy and carbon costs.

Decarbonisation may also alter the way in which iron ore is turned into steel, with the possibility of using hydrogen to produce steel in an electric arc furnace.

## Outlook

Expect iron ore prices to continue to moderate further. In the short term, China's property slump and stringent pandemic curbs will likely continue to weigh on prices.

Over the long term, iron ore prices for lower grades are expected to decline further due to modest growth in blast furnace steelmaking from major producers (compared with the past decade), as the world reduces emissions. At the same time, this softer demand will take place alongside growing supply from the major iron ore producers.

MT50

# What is the MT50

The MT50 are the largest Australian listed mining companies (by value) excluding the Australian-based global mining companies included in PwC’s global mining analysis (see Mine 2022: A Critical Transition). While these companies have a significant Australian footprint, their global exposure and size mean that they do not necessarily reflect trends in the Australian mining environment.



## Key changes

The following companies left the MT50 as a result of M&A activity:

- Galaxy Resources was acquired by Orocobre (Allkem), and
- Western Areas was acquired by IGO

Nine new entrants - dominated by critical minerals project companies:

- Core Lithium
- Sayona Mining
- Lake Resources
- 29 Metals
- Jervois Global
- Leo Lithium
- Boss Energy
- Red 5
- Neometals

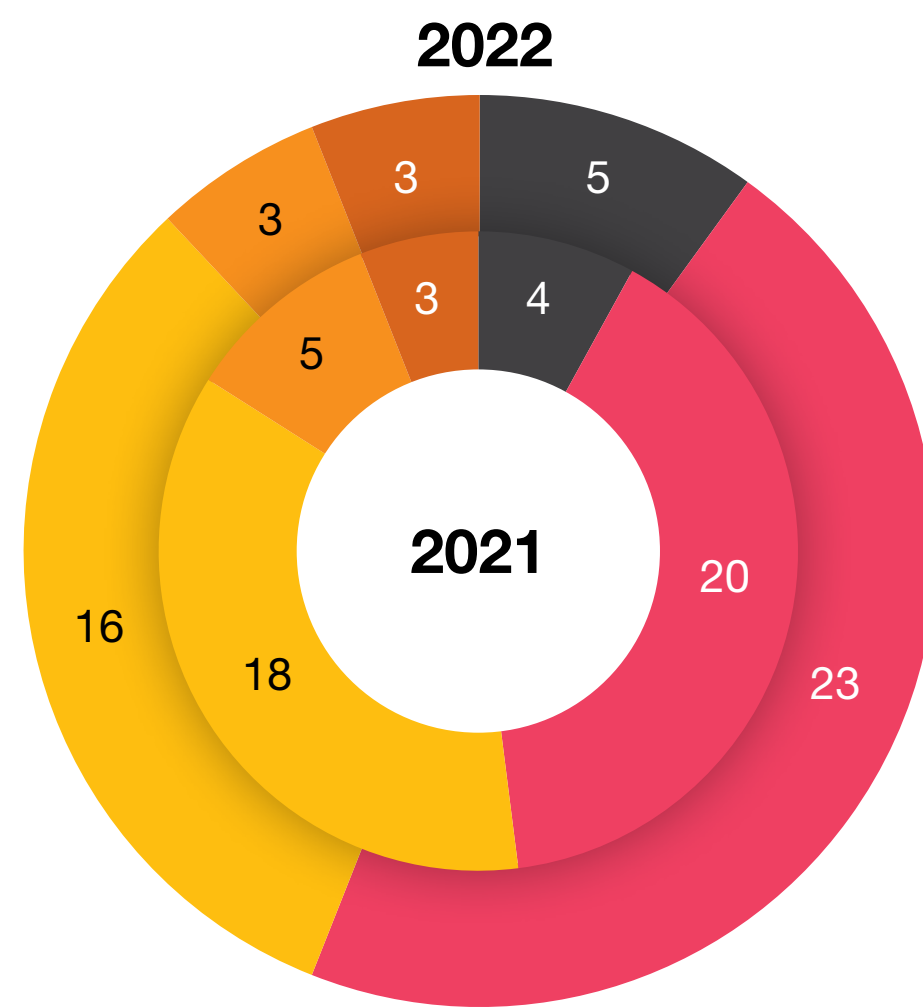
Returning entrants:

- Stanmore Resources

9 companies left as a result of their market capitalisation falling below this year’s cut-off of \$0.5 billion. AV Minerals had a market capitalisation of \$2.8 billion prior to suspending trading on the ASX in May 2022.

The market value of nine companies increased by over 100%.

MT50 constituents



Source: PwC analysis

| 2022 Rank | Change to 2021 rank | Company Name                    | Primary Commodity              | Producer | Market Capitalisation |                     |
|-----------|---------------------|---------------------------------|--------------------------------|----------|-----------------------|---------------------|
|           |                     |                                 |                                |          | at 30/06/2022 \$m     | change 2022 to 2021 |
| 1         | ▲ 1                 | Mineral Resources Limited       | Critical Minerals (& iron ore) | ✓        | 9,081                 | -10%                |
| 2         | ▼ 1                 | Northern Star Resources Limited | Gold                           | ✓        | 7,969                 | -30%                |
| 3         | ▲ 3                 | Lynas Rare Earths Limited       | Critical Minerals              | ✓        | 7,878                 | 53%                 |
| 4         | ▲ 1                 | IGO Limited                     | Critical Minerals              | ✓        | 7,523                 | 30%                 |
| 5         | ▲ 7                 | Yancoal Australia Ltd           | Coal                           | ✓        | 7,104                 | 177%                |
| 6         | ▲ 2                 | Pilbara Minerals Limited        | Critical Minerals              | ✓        | 6,817                 | 62%                 |
| 7         | ▲ 8                 | Allkem Limited                  | Critical Minerals              | ✓        | 6,574                 | 195%                |
| 8         | ▼ 4                 | OZ Minerals Limited             | Critical Minerals              | ✓        | 5,945                 | -20%                |
| 9         | ▲ 7                 | Whitehaven Coal Limited         | Coal                           | ✓        | 4,466                 | 131%                |
| 10        | ▼ 7                 | Evolution Mining Limited        | Gold                           | ✓        | 4,363                 | -43%                |

## MT50

# What is the MT50

| 2022 Rank | Change to 2021 rank | Company Name                   | Primary Commodity | Producer | Market Capitalisation |                     |
|-----------|---------------------|--------------------------------|-------------------|----------|-----------------------|---------------------|
|           |                     |                                |                   |          | at 30/06/2022 \$m     | change 2022 to 2021 |
| 11        | ▼ 4                 | Alumina Limited                | Critical Minerals | ✓        | 4,249                 | -11%                |
| 12        | ▼ 3                 | Iluka Resources Limited        | Critical Minerals | ✓        | 3,997                 | 3%                  |
| 13        | ▲ 10                | New Hope Corporation Limited   | Coal              | ✓        | 2,880                 | 100%                |
| 14        | ▲ 10                | Coronado Global Resources Inc. | Coal              | ✓        | 2,775                 | 97%                 |
| 15        | ▼ 2                 | Nickel Industries Limited      | Critical Minerals | ✓        | 2,663                 | 7%                  |
| 16        | ▲ 5                 | Liontown Resources Limited     | Critical Minerals |          | 2,313                 | 50%                 |
| 17        | ▼ 3                 | Deterra Royalties Limited      | Iron Ore          | ✓        | 2,241                 | -6%                 |
| 18        | ▼ 1                 | Perseus Mining Limited         | Gold              | ✓        | 2,155                 | 20%                 |
| 19        | ▼ 1                 | OceanaGold Corporation         | Gold              | ✓        | 1,960                 | 10%                 |
| 20        | ▲ 7                 | Sandfire Resources Limited     | Critical Minerals | ✓        | 1,824                 | 50%                 |
| 21        | <b>Returning</b>    | Stanmore Resources Limited     | Coal              | ✓        | 1,749                 | 830%                |
| 22        | ▲ 4                 | Paladin Energy Limited         | Other             |          | 1,727                 | 25%                 |
| 23        | <b>New</b>          | Core Lithium Ltd               | Critical Minerals |          | 1,655                 | 487%                |
| 24        | ▲ 14                | Grange Resources Limited       | Iron Ore          | ✓        | 1,464                 | 112%                |
| 25        | ▼ 14                | Chalice Mining Limited         | Critical Minerals |          | 1,405                 | -45%                |
| 26        | <b>New</b>          | Sayona Mining Limited          | Critical Minerals |          | 1,237                 | 176%                |
| 27        | ▲ 6                 | West African Resources Limited | Gold              | ✓        | 1,235                 | 41%                 |
| 28        | ▲ 2                 | Gold Road Resources Limited    | Gold              | ✓        | 1,204                 | 8%                  |
| 29        | ▲ 11                | Capricorn Metals Ltd           | Gold              |          | 1,164                 | 75%                 |
| 30        | ▼ 10                | De Grey Mining Limited         | Gold              |          | 1,134                 | -29%                |

| 2022 Rank | Change to 2021 rank | Company Name                      | Primary Commodity | Producer | Market Capitalisation |                     |
|-----------|---------------------|-----------------------------------|-------------------|----------|-----------------------|---------------------|
|           |                     |                                   |                   |          | at 30/06/2022 \$m     | change 2022 to 2021 |
| 31        | ▼ 9                 | Silver Lake Resources Limited     | Gold              | ✓        | 1,128                 | -23%                |
| 32        | <b>New</b>          | Lake Resources NL                 | Critical Minerals |          | 1,060                 | 211%                |
| 33        | ▼ 14                | Regis Resources Limited           | Gold              | ✓        | 981                   | -45%                |
| 34        | ▲ 7                 | ioneer Ltd                        | Critical Minerals |          | 857                   | 29%                 |
| 35        | <b>New</b>          | 29Metals Limited                  | Critical Minerals | ✓        | 835                   | -                   |
| 36        | ▲ 8                 | Syrah Resources Limited           | Critical Minerals | ✓        | 827                   | 60%                 |
| 37        | ▲ 9                 | Mincor Resources NL               | Critical Minerals | ✓        | 809                   | 73%                 |
| 38        | <b>New</b>          | Jervois Global Limited            | Critical Minerals | ✓        | 805                   | 74%                 |
| 39        | ▼ 5                 | Vulcan Energy Resources Limited   | Critical Minerals |          | 776                   | -7%                 |
| 40        | ▼ 15                | Ramelius Resources Limited        | Gold              | ✓        | 755                   | -45%                |
| 41        | ▼ 9                 | Energy Resources of Australia Ltd | Other             |          | 701                   | -27%                |
| 42        | <b>New</b>          | Leo Lithium Limited               | Critical Minerals |          | 665                   | -                   |
| 43        | ▼ 8                 | Bellevue Gold Limited             | Gold              |          | 660                   | -19%                |
| 44        | ▼ 15                | Mount Gibson Iron Limited         | Iron Ore          | ✓        | 654                   | -42%                |
| 45        | ▲ 4                 | Emerald Resources NL              | Gold              |          | 653                   | 41%                 |
| 46        | <b>New</b>          | Boss Energy Limited               | Other             |          | 624                   | 52%                 |
| 47        | ▼ 19                | St Barbara Limited                | Gold              | ✓        | 612                   | -49%                |
| 48        | <b>New</b>          | Red 5 Limited                     | Gold              | ✓        | 589                   | 32%                 |
| 49        | ▼ 13                | Westgold Resources Limited        | Gold              | ✓        | 561                   | -30%                |
| 50        | <b>New</b>          | Neometals Ltd                     | Critical Minerals |          | 496                   | 89%                 |

## 10 year trend

| MT50 \$b            | 2013  | 2014 | 2015 | 2016 | 2017 | 2018  | 2019  | 2020 | 2021  | 2022  |
|---------------------|-------|------|------|------|------|-------|-------|------|-------|-------|
| Market Cap          | 35.4  | 36.6 | 36   | 53.2 | 46.9 | 78.4  | 79.8  | 85.4 | 112.8 | 123.8 |
| Total Revenue       | 21.3  | 23.8 | 28.7 | 23   | 16.8 | 23.5  | 30.4  | 30.1 | 32.8  | 52.7  |
| EBITDA              | 4.7   | 5    | 6.7  | 8.8  | 6.1  | 8.7   | 11.7  | 10   | 12    | 23.4  |
| Net Profit          | -3.6  | -1.7 | -5.4 | 1.6  | 1.7  | 4.8   | 5.5   | 3.3  | 2.6   | 11    |
| Operating Cash Flow | 3.9   | 4.4  | 4.6  | 7.3  | 5.3  | 7.7   | 10.4  | 9.6  | 10.1  | 19.4  |
| Impairment          | 3.2   | 1.7  | 5.4  | 1    | 0.9  | 0.1   | 0.5   | 1.6  | 2.9   | 1.0   |
| Net Assets          | 36.9  | 35.3 | 35   | 36.6 | 29.7 | 38.5  | 44.9  | 47.4 | 57    | 64.1  |
| Dividends Paid      | 0.7   | 0.6  | 0.5  | 0.8  | 0.6  | 1.5   | 2.8   | 2.3  | 1.6   | 3.7   |
| Average ROE (%)     | -1.10 | 0.03 | 0.20 | 7.47 | 9.29 | 13.64 | 14.10 | 5.84 | 7.23  | 20    |
| Average ROCE (%)    | 6.02  | 1.93 | 0.20 | 2.12 | 4.59 | 6.94  | 7.16  | 9.37 | 14.05 | 16.23 |

## Glossary

| Terms                             | Definition  |
|-----------------------------------|---|
| Battery minerals                  | The raw materials used in the production of batteries, including lithium, nickel, cobalt, manganese and graphite.   |
| Capital employed                  | Property, plant & equipment and mining assets, plus current assets less current liabilities   |
| Capital expenditure (capex)       | Purchases of property, plant and equipment and mining assets plus exploration expenditure   |
| Critical minerals                 | Minerals that are considered essential to the economy which have potential supply risks, including cobalt, copper, lithium, magnesium, manganese, mineral sands (titanium, zirconium), nickel, rare earth elements (REE). This year we have added copper as a critical mineral given its significant role in electrification and potential future supply challenge.                               |
| EBIT, Adjusted EBIT               | Earnings (profit) before interest and tax. Adjusted EBIT excludes the impact of impairments and one-off gains/losses  |
| EBITDA                            | Earnings before interest, tax, depreciation, amortisation and impairments   |
| EBITDA margin                     | EBITDA divided by revenue   |
| Gearing ratio                     | Borrowings (excluding lease liabilities) divided by (borrowings plus equity)  |
| Market capitalisation             | The market value of the equity of a company, calculated as the share price multiplied by the number of shares outstanding   |
| Mid-tier 50 (MT50)                | The 50 largest Australian listed mining companies (by value) excluding the Australian-based global mining companies included in PwC's global mining analysis (see <i>Mine 2022: A Critical Transition</i> ). While these companies have a significant Australian footprint, their global exposure and size mean that they do not necessarily reflect trends in the Australian mining environment. |
| Net borrowings                    | Total borrowings (excluding lease liabilities) less cash  |
| Net profit                        | Net profit after tax. Adjusted net profit excludes the impact of impairment and other non-recurring one-off gains/losses  |
| Net profit margin                 | Net profit divided by revenue   |
| Return on capital employed (ROCE) | Net profit excluding impairment divided by average capital employed   |
| Return on equity (ROE)            | Net profit divided by average equity  |



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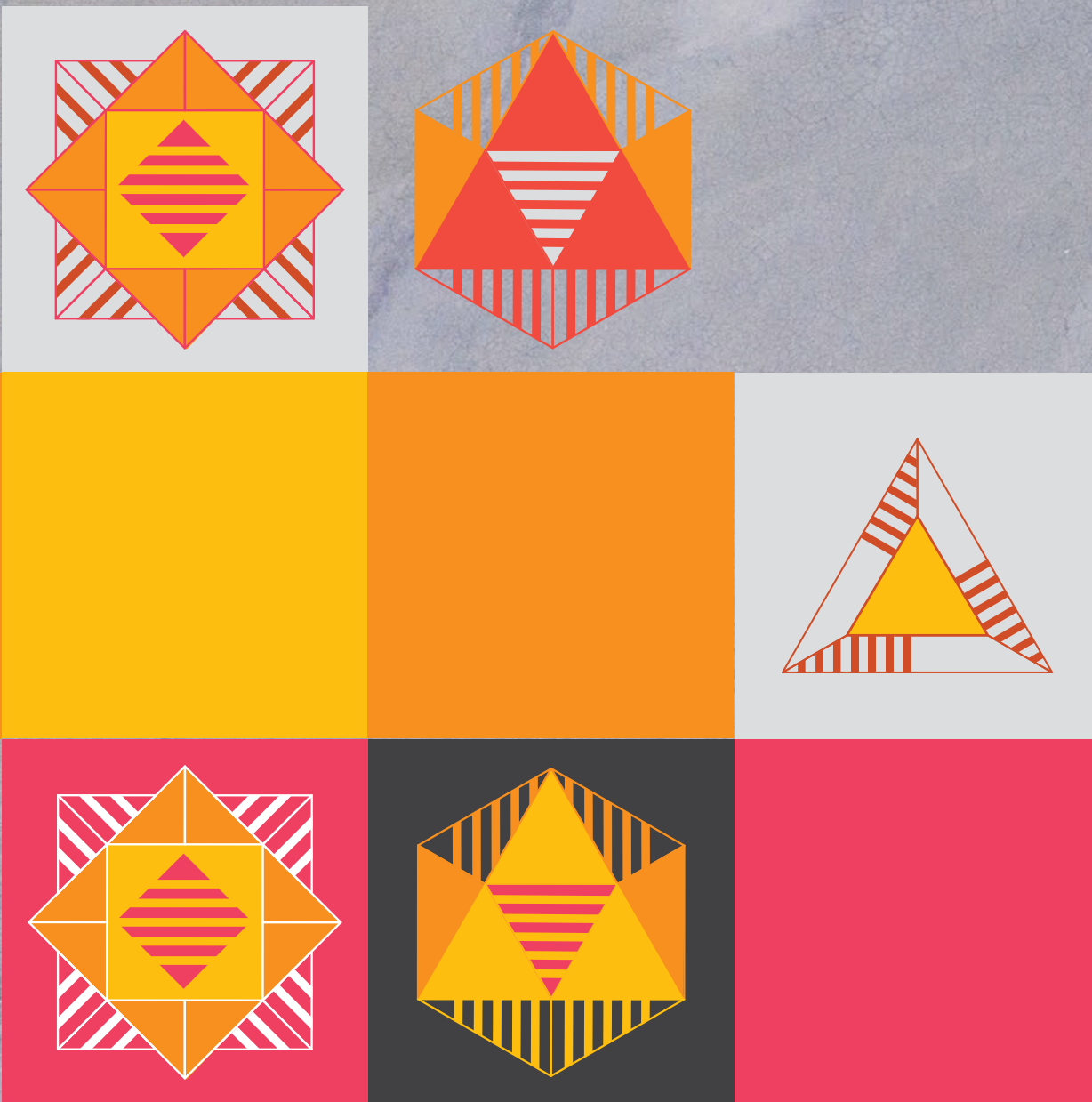
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