



*cutting through complexity*

INFRASTRUCTURE

# MINING AND RESOURCES

**Achieving efficient infrastructure  
solutions in a low commodity  
price environment**

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# ABOUT THE AUTHORS

## **Graham Matthew** **Partner, KPMG**

**National Mining and Resources Leader,  
Infrastructure and Projects Group**

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Graham is the partner in charge of KPMG's Infrastructure and Projects Group in Queensland and is the National Leader for Mining and Resources Infrastructure Projects. Over the last five years he has worked on some of the largest mine-enabling infrastructure projects in Australia with a focus on rail and port arrangements. He has acted for miners, infrastructure owners, investors, and mining service providers. Graham has more than 25 years of experience in advising on major infrastructure projects including financial and commercial assessments, project modelling, risk analysis, strategic options analyses, project evaluation, procurement strategy, project restructuring, and capital raising.

Prior to joining KPMG, Graham was a General Manager of Queensland Treasury Corporation and was a trusted adviser to the State of Queensland on matters of funding, procurement, commercial and financial risk assessment, and commercial policy on major infrastructure projects, government investments, and commercial arrangements in the rail, port, energy, water, justice, health, and accommodation sectors. He is also a former Vice President and Corporate Finance Group Head for Citibank in Queensland.

## **Andrew Hoyling** **Director, KPMG**

**Mining and Resources,  
Infrastructure and Projects Group**

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Andrew is a Director in KPMG's Infrastructure and Projects Group and focuses on Mining and Resources Infrastructure Projects. In recent years he has advised miners, infrastructure owners and potential purchasers on a range of infrastructure projects connected to coal and iron ore mines.

More broadly, Andrew has over 14 years of experience in infrastructure investment and advisory roles. He has advised corporates and government and undertaken principal investments across a range of infrastructure types including rail, port, road, social and energy and for both greenfield and brownfield projects. Andrew's experience includes roles in project feasibility assessment and investment evaluation, commercial structuring and documentation, transaction execution, preparing investment proposals, financial modelling, joint venture arrangements and asset management.

# INTRODUCTION

In recent years we have seen major falls in commodity prices. These prices may be here to stay in the short to medium term.

This is challenging the viability of new and existing mining projects and leading to long-term shifts in approaches to operations, investment, enabling infrastructure solutions, procurement, and financing. In this article, Graham Matthew and Andrew Hoyling explore the impacts these price falls are causing as well as the issues (and opportunities) that are being created for operations, investment, restructuring and refinancing of mine-enabling infrastructure in Australia.

## KEY MARKET TRENDS

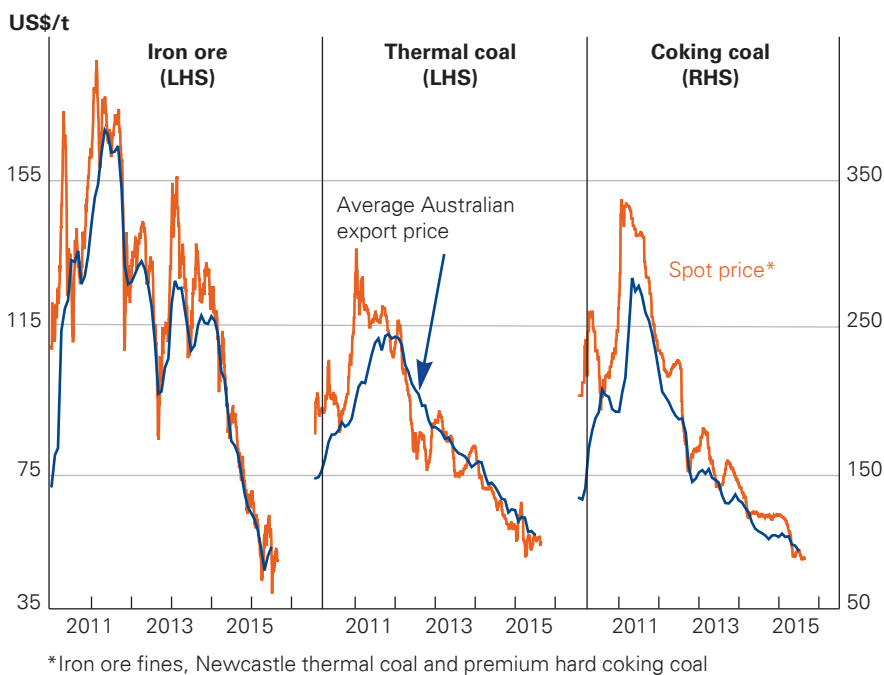
### Commodity prices have crashed

There can be no doubt that the falls in commodity prices in major export commodities coal and iron ore have been pronounced. The following charts highlight the fall in two of Australia's primary export commodities, coal and iron ore over the last five years.

### Exchange rates have also fallen

#### Bulk commodity prices

Free on board basis



Sources: ABS, Bloomberg, IHS, RBA

The following chart highlights the relevant USD/AUD movement over the same period. Whilst to some extent the fall in the Australian dollar will have helped miners, it has not offset the magnitude of the fall in commodity prices.

### Production has risen

#### Month-ending USD/AUD exchange rate

\$ USD/AUD

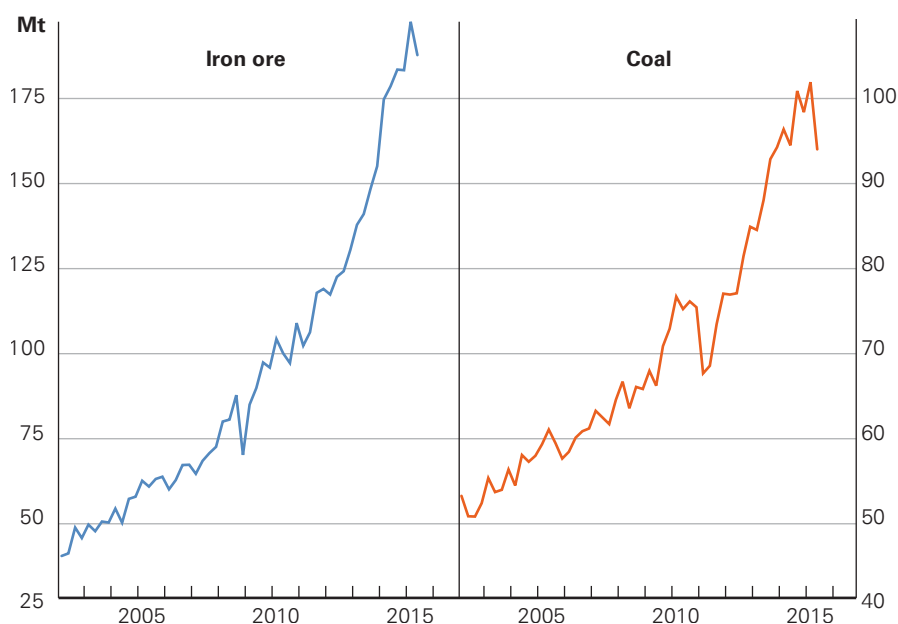


Source: RBA

Miners have largely maintained production levels despite the falls in commodity prices. In some cases this has been attributed to the take-or-pay arrangements for rail and port infrastructure and the fixed costs associated with these arrangements. The following chart highlights recent trends and coal and iron ore exports from Australia over the last five years.

#### Bulk commodity exports

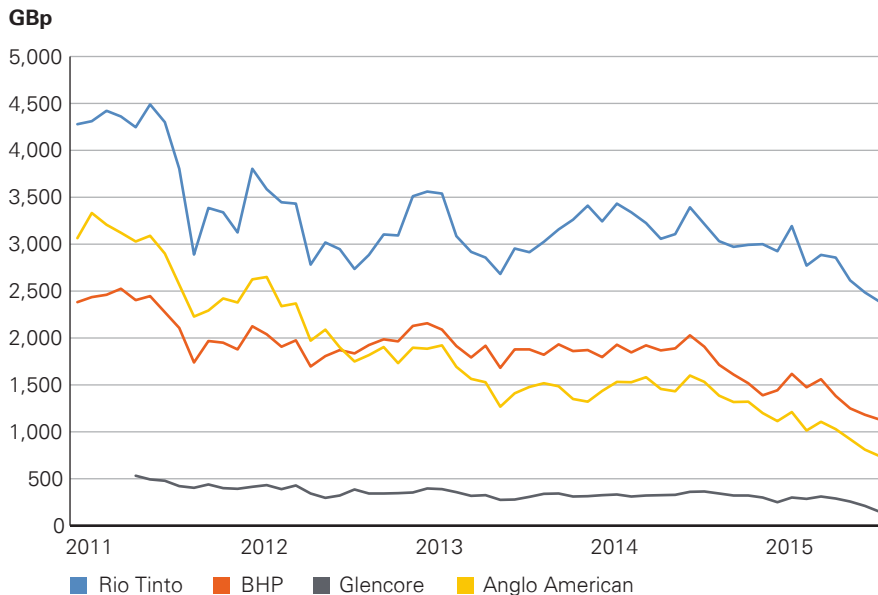
Quarterly



Source: ABS, RBA

## Market value has been eroded

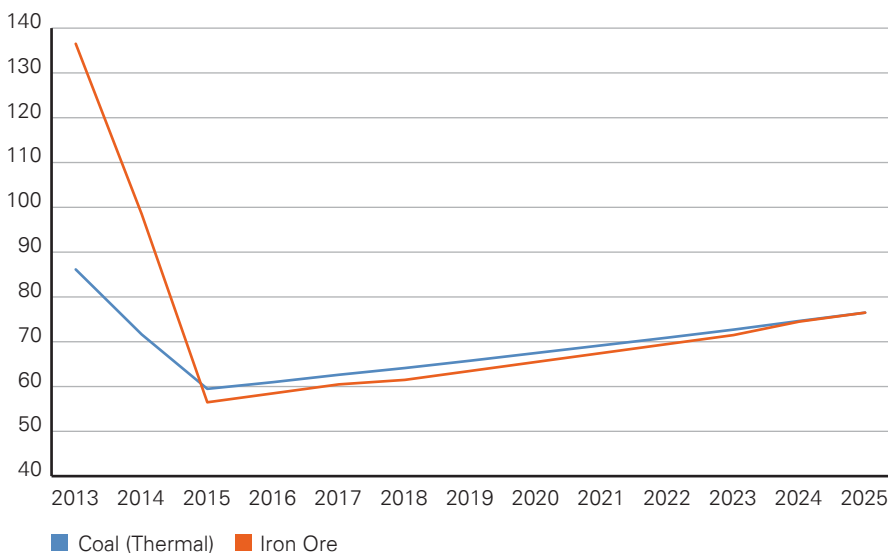
Not surprisingly, the significant fall in commodity prices has been associated with a pronounced loss in shareholder value over the same period. Most market participants have also suffered a fall in their credit ratings. The following chart shows movements in the share price of four of the leading global mining companies over the last five years.



Source: London Stock Exchange month ending share price:  
Rio Tinto, BHP, Glencore, Anglo American

## The outlook remains clouded

Continued uncertainty around global growth has meant that the outlook for commodity prices remains uncertain. Consensus forecasts show no prospect of a return to previous historical highs and there are continued risks on the downside.



Source: World Bank

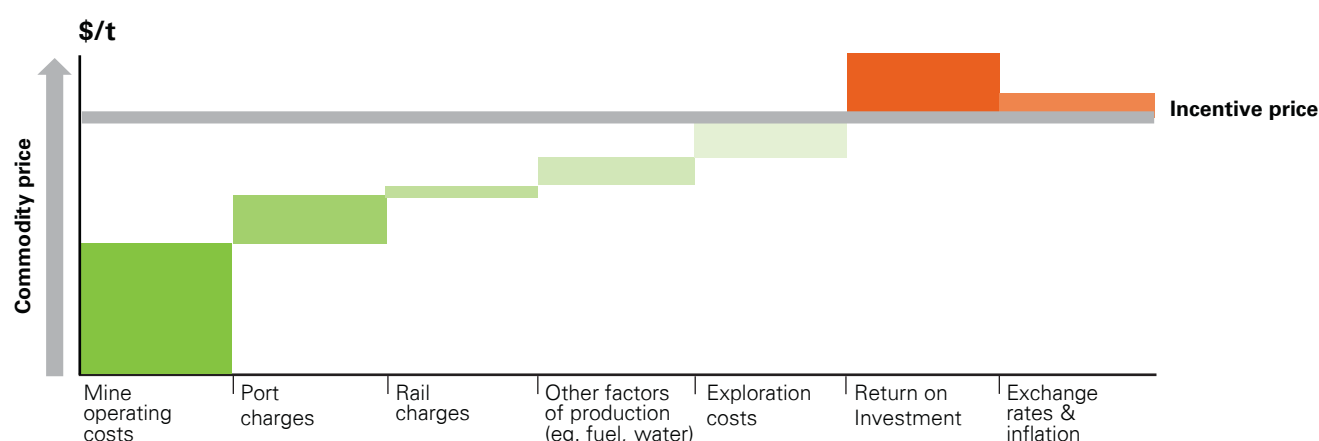




**‘The pressure on commodity prices and revenues has stimulated a focus on opportunities for cost optimisation, efficiency and savings at every stage of the mining process and across every factor of production.’**

# IMPACTS ON MINING AND ASSOCIATED INFRASTRUCTURE PROJECTS

In many cases the falls in price have been to levels below the incentive prices for mines, making proposed new mines and/or new mining infrastructure investment uneconomic, and existing mining operations unprofitable. This is depicted in the diagram below:



The collapse in prices has placed pressure on every factor of production, for both new and existing projects, and stimulated a range of corporate responses from miners, infrastructure owners and service providers. Some of these impacts are outlined below.

## Impacts on operations and productivity

The pressure on commodity prices and revenues has stimulated a focus on opportunities for cost optimisation, efficiency and savings at every stage of the mining process and across every factor of production (mining, energy, water, rail, port and port to market) as miners have attempted to both increase the efficiency of production and claw their way down the cost curve. This has placed pressure on miners and all of their service providers to seek efficiencies and savings. This has taken many forms including staff retrenchment, more onerous rosters, re-negotiation of prices for goods and services and increasingly innovative approaches to the outsourcing of traditional services using a variety of forms of risk-based contracting. It is evident that in many mining organisations this approach has become the cultural norm, most likely leading to further innovations in contestable forms of outsourced service provision, similar to those which were originally developed as part of social infrastructure PPPs.

Given the downside risk to prices, we would expect to see the search for savings and further risk transfer to continue and for miners to embrace increasingly innovative risk sharing arrangements and to adopt these as part of contracting arrangements with infrastructure owners and service providers.



### Impacts on investment, ownership, and financing

For mining investment to take place there has to be a reasonably held belief that revenues will be able to be generated from mining operations that will enable the miner to pay for all of its factors of production and produce a return to debt and equity providers for the risks involved. The commodity price at which this investment will take place can be referred to as the incentive price.

The same holds true for investors in mine-enabling infrastructure. For mining related infrastructure investment to take place there has to be a reasonably held ex ante belief that for a given level of capital investment it is possible to derive a tariff that is affordable for miners in terms of their incentive price, and will be capable of paying a return on and of capital to debt and equity investors for the risks they have incurred in making the investment on the enabling infrastructure. Typically the tariffs are included in take or pay or similar arrangements which are necessary in order to arrange finance for investment.

The fall in commodity prices has had profound effects on both existing and proposed projects for miners and for infrastructure providers.





## Impacts on existing projects

In many cases for both miners and infrastructure providers the fall in commodity prices has been to levels below the incentive prices at the time investments were made, or to levels that no longer cover all of the current costs of investment.

For many miners (especially those who bought into resources, or developed projects, at the times of much higher commodity prices) the fall in commodity prices has caused pressure on the carrying values of assets, and in many cases balance sheet impairment. For miners who may have been undercapitalised, or made highly geared investments into the sector, the falls in asset values are now increasingly raising issues of financing or refinancing risk, and in a number of cases default.

Infrastructure owners have been somewhat insulated by the presence of supporting take or pay arrangements (and associated security requirements) and arrangements that permit socialisation of losses. However, the continued decline in the credit quality of miners is raising increased concerns regarding default risk under take or pay arrangements. This in turn is leading to pressures on infrastructure asset owners to reduce tariffs, as well as issues of refinancing risk, and impairment of infrastructure assets as ultimately the credit risk profile of the infrastructure owner reflects that of the users.

If the current downward trend in prices continues it can be expected that further steps will be taken to restore the equilibrium between asset values, tariffs, and the revenues that support them. We expect to see:

- continued write-down in asset values by both miners and infrastructure owners
- increased refinancing risks and risks of default and write-downs by debt providers
- increased pressure on existing contractual arrangements
- an increased focus on counterparty credit quality, and a flight to quality
- increased M&A as distressed miners look to sell out of the sector
- continued interest in sale of non-core assets by miners
- increased investment by specialist infrastructure owners who may see opportunities to make counter-cyclical investments in mine-enabling infrastructure assets at lower entry prices than were obtainable than when commodity prices were at their peak.

## Impacts on new projects

Many projects have been shelved in recent times as the investment in new mines and mine-enabling infrastructure has proven extremely difficult to justify as the delivered cost of many projects is not supportable at commodity prices which are so far below the required incentive prices.

This has led to challenges to existing paradigms for project delivery, ownership, and financing. At current prices the 'race to production' which was evident when commodity prices were higher has been replaced by a more focused analysis on alternative procurement and financing approaches as value for money in procurement and financing becomes more important than speed to market.

In the current environment we expect to see:

- increased capital constraints
- an increased focus on contestability
- an increased focus on infrastructure capital costs and associated tariffs and their impact on miners' incentive prices,
- an increased interest in alternative approaches to tariff development and risk sharing
- an increased focus on counterparty risk, credit risk and sovereign risk

## Joint venture arrangements – a special case

Joint venture arrangements (either formal such as mine ownership arrangements, or informal such as capacity sharing arrangements) are nothing new in the mining and resources sectors but in times of declining commodity prices they present particular challenges that may not have been previously evident:

- joint venture partners may not be of equivalent credit quality and may not be equally well placed to cope with the consequences of a downturn
- there may not necessarily be agreement as to the best approaches to achieve operating efficiencies and risk sharing
- there may an increasing level of misalignment between joint venture partners due to different commercial drivers
- joint venture governance arrangements which may have been designed in times of profitability may prove cumbersome or unworkable to deal with issues of counterparty distress or default
- default by one party may give rise to joint liability provisions or other socialisation of loss mechanisms, which place increased pressure on higher rated counterparties

In the current environment we expect to see:

- increased pressure on joint venture arrangements (especially where joint venturers have different commercial drivers, or are not of equivalent credit quality)
- an increased focus by joint venture partners or miners who are involved in common user arrangements on the credit quality of each other
- an increased focus on joint venture governance and decision-making and directors' obligations.





# WANT TO KNOW MORE?

At times of disequilibrium, market participants will always act to find ways to restore equilibrium. The mining and resources sector is presently in such a state. There will be winners and losers out of the current state of the market as the relationship between asset values, contracting arrangements, and the prices that support them are recalibrated. Whether you are a miner, investor, or service provider there are probably still steps you can take.

Want to know more? Contact KPMG:

**Graham Matthew**  
**Partner**

0419 737 073  
gmatthew@kpmg.com.au

**Andrew Hoyling**  
**Director**

0403 445 208  
ahoyling1@kpmg.com.au

**[kpmg.com.au](http://kpmg.com.au)**

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