

# The Australian

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## Miners caught between a rock and a hard tax

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**THE resource super-profits tax does not take into account the special risk profile the mining industry has and it seems highly unlikely that wealth created by ground-breaking iron ore projects would have seen the light of day had an RSPT been in place. Let me explain.**

Back in mid-2003, I pondered whether or not to join a start-up company called Fortescue Metals Group, which at the time had four employees. I asked friends and colleagues for advice and a geophysicist at Rio Tinto Iron Ore drew a sketch showing the classic stages of development from exploration to production and assigned probabilities of success to each stage and cumulative probability that a find would lead to successful profitable operation.

I was counselled that the odds of FMG ever making it were maybe around 1:200. In comparison, a recent statement by the Association of Mining and Exploration Companies cites Mark Fraser, editor of the Gold and Minerals Gazette, as saying that the odds of finding an economic deposit are 1:100 and the odds of finding a world-class deposit are 1:1000. Further, according to a 50-year mineral discovery trend study by Chris Blain, ore bodies are becoming harder to find and the economic -- not to mention environmental and social -- threshold bar is being constantly raised, increasing discovery risk.

So why did I join a start-up with such horrible odds? To be sure, it was my belief that FMG's founder, Andrew Forrest, would somehow find a world-class ore body. But an even more compelling reason for taking such a risk was that I expected a large payoff in the event of success for myself personally and for the company. If at that time the government had put an arbitrary limit on those future rewards in the form of an RSPT, I would not have joined FMG, and I doubt anyone else would have, and Mr Forrest would probably have directed his talents elsewhere. None of us would have wasted our time with a task of such immensity if the risk -- financially and reputation-wise -- were not commensurate with the rewards. Economist Fisher Black called this the "cruel truth" -- "to get higher expected gain you must take more risk. If you wish to climb a tall mountain you must be prepared to suffer some pain".

According to Doug Bissell, BHP Billiton's former vice-president of marketing, iron ore, mining exploration and development is a high-risk venture with potentially high rewards but also marked by a high incidence of total failures. He also believes that without the vision of an above-normal reward no one is likely to be "silly enough" to risk a chance of failure, if the reward is only mediocre -- particularly where that is declared by government fiat, such as through a "super-profits tax".

But exploration risk is only the beginning of a miner's "pain". Once you have found a deposit you have to turn rock into a product. So for those who say that mineral resources are finite and belong to the Australian people and who therefore should get maximum value out of those resources, it is important to remember that we are not talking about a precious piece of metal that you just pick up and sell for a lot of money. It takes a huge amount of capital and human effort to convert bare rock into a saleable product. If ore contains high impurities, steel mills cannot use it at all or can only use it in small quantities as they need to blend it with low-impurity ore.

It took BHP and Rio many years of technical marketing to build a market for goethite and pisolitic ores such

as Yandi. The Yandicoogina deposits were discovered in 1963, but it took great marketing effort and innovative development strategies to have the first commercial shipment in 1992 -- a gestation period of 29 years. Similarly, the suppliers had to conduct extensive metallurgical test programs before the Japanese steel mills accepted increasing proportions of Marra Mamba ores in product blends. Now BHP and Rio are again building new markets for ores with challenging chemistry, such as high phosphorus content. Steel mills cannot use very high phosphorus ore because phosphorus affects the surface quality of steel, effectively rendering it worthless -- especially for the production of flat steel products. However, by blending this ore into its Pilbara Blend, Rio is creating a market for something that would otherwise have no value. Rio has also invested in a new iron-making technology, HIs melt, which can eliminate the phosphorus in the hope of commercialising an ore that otherwise could not be used. Further, if ore has low impurities but is located thousands of kilometres from a port, it is essentially worthless. So only a player willing to take on a huge financing risk to put in infrastructure would have any hope of turning such a deposit into something of economic value. Now let's try to understand the rationale behind the RSPT. The KPMG Econtech study commissioned by Treasury says that an economic rent tax on resources is an efficient tax because it taxes an immobile factor that cannot escape taxation and therefore the tax does not distort investment.

Conversely, corporate income tax is considered inefficient because it taxes capital, which is highly mobile. What the study does not take into account is that it requires considerable capital and labour to turn rock into something valuable. These factors are mobile and will be deployed elsewhere in the world where iron ore resources are also plentiful, if economic incentives to undertake mining risk are undermined by an RSPT, leaving the rock in the Australian ground. The economic rent tax discourages investment as we have seen by the announcements from Xstrata, Peabody and FMG that they are putting on hold new developments. The new tax encourages miners to look to higher-risk environments such as Africa where their return on investment can be higher.

Contrary to the government advertising, which implies that existing royalties are not linked to iron ore prices, in Western Australia royalties are directly linked to iron ore prices because they are levied as a percentage of revenue. Corporate income tax is also impacted by iron ore prices. Consequently both federal and state governments are benefiting from rising iron ore prices.

Miners' profits are already taxed and royalties are an additional charge for the use of resources belonging to the states. Consequently, it seems that there is no urgent need to make any radical changes to the existing tax regime and yet there is a real risk that entrepreneurial activity in exploration and mining could be affected. It is the hope of substantial rewards -- or, dare we say, super profits -- that drives the entrepreneurial spirit that is the lifeblood of our economic system. Much of this "super" profit is reinvested in the mining sector and used by companies to undertake new exploration and capital investments, which also drive the economy and generate more taxes and employment for Australians.

We need to say more about the realities of mining risk and the potential impact of the new tax. The problem is if we keep silent, we run the risk of not keeping markets informed; if we try to explain we are accused of bluffing or "argy bargy". Indeed miners are caught between a rock and a hard tax.

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