

Low productivity the test: discovery, growth, bigger risks

Pursuit of productivity is tactical rather than strategic when discovery, growth and prices are the main drivers

Mining Journal recently asked its Twitter followers (@MiningOnline) whether they agreed that low productivity is now the greatest business risk facing mining companies. The question arises after industry productivity and operating cost performance have plummeted through the recent cycle and industry participants are grappling with how to restore profitability without the benefit of buoyant commodity prices.

In an investment market context, higher productivity or more aggressive cost control can be sources of outstanding investment returns. Sales by S&P 500 companies since the December quarter of 2009, for example, have risen 25% while operating earnings have gone up 70% to justify a 76% rise in equity prices. Productivity enhancing measures have been at the heart of the US market recovery.

Getting costs out to compensate for relatively weak top line growth, adopting new technology to manage supply chains or improving interaction with customers are adding value in the broader market. In theory and practice, business efficiencies from these sources will be capitalised by markets and embedded in new equity valuations.

The mining industry finds itself in less fortunate circumstances. Cost structures of individual businesses within the industry are going to be dictated more by Mother Nature than the work of entrepreneurs or thoughtful business managers. Relocating a plant to a more propitious operating environment is an option for a manufacturer which is not even thinkable for a miner.

How ores are moved and processed are usually less important than geology and physical location in determining the lower end of possible cost outcomes. There are also forces at play continually pushing costs higher. Between opening in 1990 and now, the average grade at the world's largest copper mine, for example, has halved.

The productivity of capital in even the most attractive and efficient parts of the industry has dropped dramatically. Through the 1990s incremental production at the Escondida copper mine cost a little over US\$4,000/t. Over the past decade, the cost rose to \$15,000/t.

Large mines offering economies of scale are not only more costly to develop but discover-



In the 1990s, incremental production at the Escondida copper mine cost a little over US\$4,000/t. Over the past decade, it was US\$15,000/t

ies are rarer. Today's copper market is more than twice as large as it was when Escondida was discovered. No mines of a similar size have since been found. In other industries, plants would have been getting bigger to take advantage of the scale of the market. In mining, with the possible exception of iron ore in Western Australia, operations have been getting smaller or battling to stand still.

Iron ore is where economies of scale should have had the greatest effect. Higher-capacity rail, more efficient ports, bigger ships and the application of technology to loading and transport have enabled far-larger-scale production. Costs are lower than they might have been otherwise, but have also been on the rise. Rio Tinto operating costs have risen from US\$11.40/t of ore in 2003 to US\$40.90/t in 2013 while output doubled.

Rio Tinto cut iron-ore operating costs 5% in 2013. Being in the bottom quartile of a cost curve is a common benchmark test for a mining development, but achieving regular 2-5% cost gains around this starting point has little value impact compared with the market reaction to a retailer or a banker doing the same.

While good operators will always seek to produce as efficiently as possible, the gains from productivity enhancing measures will typically be swamped by potential changes in commodity prices. Knowing this, investors price income gains accordingly.

With commodity prices doubling or tripling through the course of a cycle, saving even 10-15% on costs will not be as important as taking advantage of the cycle to maximise revenue. Consequently, costs will

typically rise through a cyclical upswing. Some of that rise may be clawed back in preparation for the next cycle, but not by enough to affect the trend.

Reflecting their circumstances and the demands being made on them, companies position themselves to take advantage of the cycle not necessarily to run the most efficient operations. The moves toward daily pricing of iron ore, for example, were a step away from a formula in which prices could be held relatively stable while the producer enhanced its profitability through operational improvements.

These pricing changes said a great deal about where the market leaders saw their rewards. They expected to get less for operational prowess than they could get from greater exposure to cyclical conditions.

In reality, widespread pursuit of lower costs may not benefit those making the effort. Confronted by low copper prices in the 1980s, individual companies sought to survive by aggressively lowering their cost bases. In the USA, where some of the pressures were most acute and companies were sitting on the steepest part of the industry cost curve, many moved to a higher proportion of SX/EW production. Costs were lowered dramatically but shifting the cost curve downward and making it less steep simply invited lower prices.

One person's view at the concert or football might improve if he stands but, if everyone stands, the advantage is lost. Perversely, the biggest risk faced by the industry might be dramatic and widespread productivity improvements, not low productivity. A radical realignment of costs could lead to still lower prices for everyone and no financial benefit from operational improvements.

Those companies with the highest cost structures in the industry will need lower costs to survive a prolonged cyclical trough. Failure to act could lead to their demise. On the other hand, many of the most efficient miners will have no interest in the least competitive producers cutting costs.

Pursuit of productivity is tactical rather than strategic in an industry in which discovery, growth and prices are the primary value drivers. From an investment market standpoint, inadequate contributions from discovery and growth will be far greater risks than low productivity. ▼