

Aluminium an analogy for lithium

Advocates of lithium-related investments hang their enthusiasm for the metal on the rapid electrification of motor vehicles.

John Robertson* | 30 Aug 2017 | 23:00 | Opinion



Aluminium experienced a similar price surge in the early 1900s to that which lithium is currently enjoying

Ken Brinsden, the chief executive of one of the leading new entrants into the lithium mining space, recently took 15 pages out of a 33-page Pilbara Minerals presentation to put the case for a dramatic increase in the size of the lithium market.

Brinsden told investors to expect a 10-year demand growth rate of 23-33% a year.

On this point, Brinsden and others could easily be right. Motor vehicle manufacturers are not only embracing electrification but lithium-ion batteries are the only energy storage solution with commercial appeal, presently.

However, on several other points relevant to investment outcomes, the lithium zealots are mistaken, or at least guilty of exaggerating the potential.

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Their advocacy contains a usually unstated assumption that metals with the most strongly growing demand profiles are likely to offer the best investment prospects.

Those pursuing lithium extraction developments continue a long mining industry tradition of naively forecasting future lithium prices, or the prices of any other metals, by extrapolating what has happened in the past six or 12 months.

The economic connection between the demand for lithium and its price mostly goes unexplored as charts showing demand outstripping supply are used to titillate investors.

The market imbalance argument comes from an extension of the traditional approach to forecasting prices for metals like copper and zinc.

"Gold producers making the switch to lithium may have an especially regret-filled future"

Most of the major daily traded non-ferrous metals have a history of commercial production extending back centuries. In the event short-term demand exceeds current production, the shortfall can be drawn from accumulated inventories or secondary supplies.

Without a historical accumulation of inventories, the amount of lithium used cannot exceed current production.

Analytical misperceptions about future lithium-market conditions arise partly from wishful thinking but also come in the absence of recent experiences from which to infer an alternative forecasting framework.

The closest parallel is what happened to the aluminium market.

Aluminium is the newest of the major non-ferrous metals. Commercial production of aluminium was enabled by technical breakthroughs in the late 19th century.

The US Geological Survey has estimated that only 6,800 tonnes of aluminium were produced worldwide in 1900. Over the succeeding 15 years, use grew by an average 20% a year, akin to the expected growth from lithium over the coming decade.

As a strong, lightweight material with attractive recyclable properties, aluminium revolutionised transport and packaging options in its own way. It remains at the leading edge of materials technology innovation, including a possible future role in energy storage devices.

To this day, growth in aluminium usage is outstripping use of other mining products.

Since 1990, aluminium use has grown at a 4.7% annual pace. Copper, zinc and nickel demand growth rates have ranged between 2.8% and 3.1%.

Over the same time frame, aluminium prices increased by less than the prices for 10 of the main mining products including uranium, coal, iron ore and the major non-ferrous daily-traded metals.

The average aluminium metal price of US\$1,604/t in 2016 compares with an inflation adjusted price of \$14,430/t in 1900 and a 1900-1905 average of \$14,310/t.

The highest aluminium metal prices over the past 120 years occurred in the first few years of the 20th century, just as production of the new metal was getting underway.

Statistically, aluminium prices remain on a downward price trend, which has remained remarkably consistent over more than a century.

As with aluminium, high prices for lithium in the early stages of its adoption are providing the necessary market signalling to attract funding for new production capacity.

Lithium is also similar to aluminium in that mineral supplies are plentiful and readily accessible.

If lithium was to echo the course of the aluminium market, one would expect to see lithium prices near their peak presently.

A long-term downward trend in lithium prices is consistent with future lithium demand being at least as strong as currently expected, based on the aluminium experience.

The longer-term evolution of prices has implications for corporate strategic positioning.

Overly rosy expectations have given many company directors a mistaken impression about their choices.

Jumping on the lithium bandwagon in the near term has given smaller companies in the sector an easier route to raising capital, comprehensively skewing strategic decisions in one direction.

Kidman Resources is a case in point. Its chief executive had been adamant in mid-2016 that the company would remain focused on gold and look for alternative ways to realise the value from its recently unveiled and previously unanticipated lithium prospects.

The company, cheered on by many investors, has ended up embracing lithium as the mainstay of its development strategy while jettisoning its gold exposures. Other companies are looking to switch from zinc, copper and iron ore as they prioritise near-term capital raising efforts.

To the extent the aluminium parallel plays out, all of these companies will face a falling lithium-price trend.

Gold producers making the switch to lithium may have an especially regret-filled future. Gold offers advantages with which lithium is unlikely to compete.

As a unique monetary asset, gold cannot price itself out of the market. Redundancy or obsolescence risk is low. The internal diversification properties of gold offer attractive risk-management characteristics.

Gold prices benefit from rising wealth effects as well as from instability in the prices of non-gold financial assets including during periods of weakening demand for industrial materials and durable consumer goods on which the fortunes of lithium producers will rely.

More broadly, investments in metals such as zinc, copper, nickel and even aluminium will have one outstanding investment advantage over lithium.

The longest-established metals will have moved well beyond the early-stage adjustment confronting lithium and characterised by a halving of aluminium prices in the early years of the metal's industrial ascendancy.

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