

### Industry Analysis

1. How to do your own
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#### 1. How to do your own industry analysis

It is a challenge to find a guide on how to do your own industry analysis. There are many organisations who specialise in this activity but few if any disclose their methodology. So here are some findings to give a head start if you are tackling your own.

#### The process

Usually the most productive way of getting inside an industry is to first research the two sides of its market: demand and supply. Then bring these together for an industry surplus or deficiency and finally focus on the customers and competitors of the mine to generate a marketing plan.

The overall process is to:

##### **A. Analyse and Forecast Demand:**

- a) Analyse demand history – not just numbers but the forces that shaped that history.
- b) Identify the key forces that will drive demand in the future including strong and weak scenarios
- c) Synthesise demand into the future for a full range of possibilities – for example minimum, maximum, low, high and mid.

##### **B. Analyse and Forecast Supply**

- a) Analyse supply history – especially the forces that shaped that history.
- b) Identify the key forces that will drive supply in the future including their strong and weak scenarios
- c) Synthesise supply into the future for a full range of possibilities – for example minimum, maximum, low, high and mid.

##### **C. Forecast global volumes and prices**

- a) Mix and match supply forecast scenarios with demand forecast scenarios to generate estimates of evolving market surpluses and market deficiencies.
- b) Forecast price and volume trends for a full range of possible industry scenarios such as minimum, maximum, low, high and mid.

##### **D. Generate a marketing plan for the mine**

- a) Focus on the mine's key customers and key competitors, including a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats).
- b) Generate a marketing plan that recognises the full range of possible scenarios. It should produce a base case to steer the mine and to develop a production plan. This plan should be capable of flexing toward minimum or toward maximum. 'Mid Case'

marketing plans very rarely eventuate, so the mine management has to be ready to adapt to whatever evolves globally.

#### A. Analyse and forecast demand

1. Establish the history of global consumption: back to 1900 or before is excellent, but if not then back to the world's major economic growth that began in the 1950's. This should provide a long enough base. Market histories back only 20 or 30 years can give misleading impressions. (Dishonest professionals usually can select a period of history to support whatever demand profile they want.) 'New' metals and commodities of course may have short commercial histories.
2. Split this global history of demand into major natural categories.
  - a. The prime set of categories should be "customers' needs" (rather than "end-products"). Always view the market from the perspective of the customers and not from the perspective of the producers. (For example 'starting a vehicle' rather than 'lead batteries'; 'structural integrity' rather than 'galvanising'; or 'wealth storage' rather than 'gold bullion'.) This encourages underlying technology and economic forces to be better recognised.
  - b. Repeat the split into natural categories by sorting according to geographic regions if the logistic costs are likely to be a major factor. This is likely to be required for low value and for low density commodities, where customers tend to purchase within the region. Or split by quality if a major differentiation.
  - c. Thirdly by ownership or by long term commercial/political/religious relationships if these are significant.
3. Analyse the histories and identify the forces that have shaped demand in each category.
4. Forecast how these forces may evolve in the future and any new forces that may be created by technology, global economics, substitution, new products, politics, etc.
5. Generate strong, weak and mid scenarios for each, recognizing how these forces might interact.
6. Understand how the key customers for the metal or mineral will evolve; which segments or geographic regions will grow and which will recede. Identify key customers who should flourish and those which may wither or exit.
7. Synthesise future global demand for a full range of possibilities – for example minimum, maximum, then low, high and finally mid.

It is important when creating scenarios for mid, high and low, maximum and minimum, not to start from the mid case and work outward. This normally invokes unconscious prejudice and overconfidence. Instead start from the extremes of how bad could this really get if the world collapses or how good if it booms, and then work inwards to highs and lows, and finally to mid.

#### B. Analyse and forecast supply

Continue the above process for the supply side:

1. Split the global history of supply into major natural categories.
  - a. Usually by customer needs - rather than by end-product types.
  - b. Secondly by geographic region if logistical costs are important, or by quality.

- c. Thirdly by ownership or long term commercial/political/religious relationships if these are significant. Some metal and minerals industries are vertically integrated to a high degree meaning that most customers are likely to be purchasing most of their metal or mineral requirements from a related party.
2. Analyse their histories and identify the mineral deposits and the forces that shaped global supply.
3. **Industry cost curves** can be extremely valuable in deciding the future of each mine and project. Create economic models of key global and regional mines. This provides a sound basis for comparing and later deciding which mines may expand and which may exit.
4. Forecast how these mineral deposits and these forces may evolve in the future, including the exhaustion or expansion of existing mines and the commissioning of new mines. Generate strong, weak and mid scenarios for each.
5. Synthesise global supply into the future for a full range of possibilities – for example minimum, maximum, then low, high and finally mid.

### C. Forecast global volumes and prices

1. Match and mix supply with demand across a full range of scenarios to generate sets of surplus or deficiency. Forecast prices for maximum, minimum, high, low and mid. This is the most difficult step and therefore the most controversial. There are several techniques for forecasting prices that can be explained by experienced market specialists and by research on the Internet.
2. For the mine manager (and study leader) this gives the direction of where the market is likely to head next. Probably equally important is it gives a measure of how bad things may get and how good things may get. The mine needs to be managed and planned so it can optimise on the mid scenario, but also be able to adapt to markets turning sour or booming.

### D. Generate a marketing plan for the mine

1. Focus on the mine's key customers (existing and potential). Look at the market from their perspectives to understand their particular needs and why they would purchase from the mine. How will the mine's product quality, volume, form, logistics, timings, etc need to change and evolve to capture or retain their custom?
2. Identify the key customers that have a competitive advantage and which will survive. Identify the key customers at risk of market evolution and which may not survive. Obviously it is dangerous developing a marketing plan that relies on vulnerable customers.
3. Focus on key competitor mines (existing and potential). Understand their strengths and weaknesses. Create high level economic models of their businesses.
4. Using all the knowledge from the above industry analysis conduct a "SWOT" analysis (Strengths, Weaknesses, Opportunities, Threats).
5. **Generate a marketing plan, with a full range of possible scenarios, for the mine to steer its business and to develop a flexible production plan.**

6. Include an assessment of any price premium or price discount that would be brought by the mine's product quality and geographic location. (Compute its value in use when consumed by the customer.)
7. 'Mid Case' marketing plans very rarely eventuate, so the mine management has to create a plan that is ready to adapt to whatever evolves in the global industry.

### Sources of data

As with price forecasting the best sources of information include:

- i. Seasoned marketing professionals in that metal/mineral. In-house experts should be able to provide historical data, explanations of the market's evolution and driving forces in the future.
- ii. Internet searches: Common minerals and metals have very long histories of sales available from a variety of websites. The World Bank Commodity Price Data (Pink Sheet) lists in Excel, monthly and annual prices in US dollars from 1960 for energy, raw materials, agriculture and metals & minerals. The US Geological Survey, producer organisations, customer organisations and a few company websites are other sources.
- iii. Commercial market research organisations of course will research history, and may directly contact customers and competitors. The processes and motivations of the market research organisation and its individuals need to be understood, and this is discussed below.

### Managers and Evaluation Specialists

Managers and evaluation specialists need a **helicopter view** of the market and to think divergently. They should not restrict thinking and planning to the mid case but be flexible and adaptable.

They should never blindly follow convention and industry practices, or be bamboozled by mathematical processes that derive price forecasts.

Managers and evaluation specialists should be wary of colleagues who assert firm views on the future of competitor mines, especially of new projects. In the past too many experienced professionals have been unable to adapt to the changing world and ended up with biased and very outdated views.

A common failing of senior managers is to identify the market evolution that best suits the mine and then generate amongst themselves reasons why customers and competitors will comply. They look at the market from their own perspective rather than from the customers' and competitors' positions of self-interest. It is not a matter of being positive about the business but is self-deceiving. By contrast, if those same people were managing a customer or a competitor-mine they would probably adopt a contrary behaviour. Similarly it is common to underestimate the resilience of companies in a market downturn, and to predict a wipe-out of marginal mines. Some troubled mines defy the odds and survive using a variety of devices. A room of managers needs at least one free thinker to adopt the role of the customer or competitor.

## 2. Using a Commercial Industry Analysis Organisation

The industry analysis can be done by a mix of in-house and external organisations. Larger companies are more able to justify in-house staffing augmented by external research, whereas smaller companies tend to hire external market specialists.

Mine managers (and study leaders) should not automatically defer to the expertise of a market specialist and passively accept their conclusions. Care is needed when reading reports by external market specialists as they will vary in quality and objectiveness. There is a history of research organisations getting markets and price forecasts very wrong: even major, respected research companies.

Managers and evaluation specialists should remember that external researchers are more likely to get further work if the market is made to appear attractive, at least in a special niche, and if price forecasts are higher rather than lower.

Large market research organisations should be able to develop rigorous research procedures and cultivate a wide network of industry contacts. While there are good reasons why they should produce high quality industry analysis, there are other forces that detract. Being well established in an industry does not automatically mean high performance. They may suffer turnover so the expert of past years may no longer be undertaking the analysis. They may face large corporate costs and so would be tempted by junior researchers being lower cost than seasoned professionals or updating a previous report rather than starting afresh.

Some small market research companies have proven very effective in focussing on special metals or special commodities. Other small research organisations specialise on a narrow product segment of the market or on a geographic region.

As with any research, the output is only as good as the individuals undertaking the market study and their motivations. Unfortunately in both big and small organisations some persons can become over-confident and biased and so the research becomes subjective. Some of the worst research has been by organisations – big and small - relying on desktop research using the Internet. Their reports were a collation of extracts from websites with a poorly derived set of conclusions that focus on favourable opportunities leading to recommendations that would keep them researching.

Any industry analysis report should not be passively accepted but perused and compared with other sources of the same information. It should be treated as one set of opinions made by a party which may have a mix of motives. If done well it should provide a base for the company to understand demand/supply, the key players in the market and the forces that will be driving change in the market. It could be used as a starting point for the company to develop its own conclusions.

***Every company has to make its own conclusions and develop its own marketing plan.***

END