WHITTLE CONSULTING

BUSINESS OPTIMISATION FOR THE MINING INDUSTRY

RESPONSE TO HIGHGRADE ARTICLE – GOLD'S GREAT DIVIDE, 14 JULY (ORIGINAL ARTICLE FOLLOWS)

Response from Gerald Whittle, 28 July 2011

Very interesting article. I like Chris's explanation of the difference between the behaviour gold bullion and gold stocks. I have no expertise or view on the gold market price but am heavily involved (through Whittle Consulting Money Mining courses and Enterprise Optimisation studies) in helping mining companies improve their economic performance, which you would think would have a direct impact on stock values.

Amongst some very insightful comments, a few stood out like proverbial hand grenades, and relate back to previous discussion through High Grade on the gap between a mining companies view of economics and the way the market and its observers/commentators behave and influence the industry. I am not sure if Chris is using some of these comments in earnest or tongue-in-cheek, but either way he has just verbalised some widespread conventional "expert" thinking, which has opened the gate for me to raise some issues that have been causing confusion and stress to the mining companies we deal with.

Referring to companies who process grades above their average reserve as "sinners" !! – well I have to point out that front ending production in the life of mine is exactly where the 20's – 40's – 60's percent improvement in NPV have come from that we often refer to. Accelerating cash flow increases economic value and therefore one would expect stock valuation - unless comments like the article are allowed to have a distorting effect on the market perception. If a policy of processing at the average grade of the deposit were adopted then the majority of mining projects we know would never be approved and existing operations would slash their current cash generation overnight. Early cash generation is the key to return on investment, payback, risk minimisation, market resilience, flexibility and options to expand, invest etc, etc. This comment shows a spectacular misunderstanding of mining economics, (in fact economics in general) – how mining companies realise the economic value of their mineral resources by turning them into cash and how important the pattern of that cash flow over time is.

Also the reference to considering "ounce-per-share" as a means of evaluating a mining stock. It is this type of thinking that is driving the mindless pursuit of reserves and "adding ounces for ounces sake", which frequently means the inclusion of more and more marginal material, which usually dilutes economic value when the rate at which this material can pass through the bottlenecks in the system is considered. One mining CEO stated in a presentation "it is all about reserves". Which business school did he go to? It is all about cash generation, timing and the associated risk and opportunity cost involved. His comment is a sad reflection of the behaviour that industry analysts are promoting by their over simplistic methods of economic assessment. Marginal ounces may add small amounts of net cash value to the resource but string out the time frame in which cash can be generated, especially if you process to the average grade rather than leave the low value material to the end of the life of mine (!), decreasing economic value. Given a finite resource at their disposal, there is a tendency for mining companies to look lower down the grade tonnage curve for a solution, trying to find more and more creative ways of getting low grade material over the line – adding ounces, reducing stripping ratio, but often reducing economic value.

Whether acquisition or exploration is the best means of increasing resources will depend entirely on the opportunities at hand, and the core competency of the particular mining company as an explorer, developer or operator – there is no right or wrong. Why is organic growth more noble than acquisition.

Organic growth in cash flows is a fine concept for general industrials but making it an objective causes confusion for a mine operator. The mine plan that maximises economic value is likely to have high early revenues, by processing high grades first, and low early costs by deferring waste stripping and processing of low grade or difficult ores. An individual mine will therefore by nature have declining cash flows over time – because such a good job of producing early cash has been done. For a given resource, a flat or growing cash flow profile can be achieved – by underperforming now. Is that attractive?

Cost per ounce as a measure – well what would you like it to be? We can raise the cut-off grade and shrink the pit to a lower stripping ratio (or shrink the underground mine to a

higher grade lower development/operating cost) to make a lower cost per ounce – that is good – but that would reduce our reserves – that is bad. This is kindergarten stuff. How about we develop a mine plan that exploits the high value (high grade low stripping ratio material first) with a low cost per ounce, and then let's keep reviewing our options as to how far we progress down the value-tonnage curve as the life of mine develops and conditions change. The average cost per ounce is just a function of how inclusive we are when we quote reserves, which due to inappropriate market forces (due to the thinking displayed in this article), is usually to the point at which we start to lose cash which is well past the point at which we start to lose economic value.

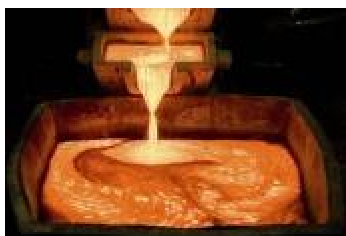
I can see some fundamental principles are being overlooked, those being "the time value of money" and the "opportunity cost" associated with what we choose to put through the bottlenecks in the system.

I remain deeply concerned at the difference in thinking between those who manage mines and focus on cash flow patterns as the determining factor of economic value, and the market and its analysts who use a range of very questionable metrics for evaluating mining stocks, and unfortunately induce some very dysfunctional behaviour from mining company managers as a result.

HIGHGRADE - GOLD

Gold's great divide

Chris Cann in London, 14 July 2011



INVESTORS holding gold stocks for leverage on the gold price have been jilted in the first half of this year as gold equities have not only failed to keep pace with a bolting bullion price, but have taken some big steps in the opposite direction.

Gold was up 8% at the halfway point of this year or more than 15% if you include the current mini-rally so far this month that has pushed the price back up past $US1590 an ounce. One would expect gold stocks to have followed suit but the performance of equities has been spectacularly less impressive. Some majors have lost up to 20% of their market value (Barrick Gold and Gold Fields) over the year-to-date, while some of the smaller guys have lost more than 50% – and there are plenty of Aussies in that crop (Navigator Resources, Norseman Gold and Crescent Gold to name the worst hit).

This relationship is counter-intuitive and requires some explanation, which will start with the reasoning of Numis Securities mining analyst Andy Davidson. He said while the historical long-term relationship between gold equities and physical gold had seen equities reflect a strongly leveraged value against bullion, the gold sector was cyclical and we should not expect this relationship to be constant.

"Gold stocks are pulled by two factors – the first is the gold price and the second is the fact that they are in fact stocks so will be affected by general sentiment in the wider stock market," Davidson said. "We're in a situation now with a gold bull market and a questionable stock market, with the strength at the end of last year looking at this point like a bear market bounce.

"Gold stocks haven't gone along with the gold price because they've been dragged down by the relative underperformance of the general stock market."

GFMS World Gold managing director Paul Burton agreed that the market played a leading role in the performance of equities but also put forward a handful of other recent phenomena that all supported a preference for physical gold over paper.

For starters, there has been increasing demand for gold from India and the Far East, two regions where the metal is generally held in preference to shares. In India, investment demand has complimented more traditional jewellery buying, while in China gold is being used as a hedge against inflation on top of futures buying on the Shanghai Gold Exchange.

Burton also pointed a finger at silver, which has attracted speculative money in recent months that may have otherwise found its way into gold stocks. Similarly, the rise and rise

of Exchange Traded Funds – the SPDR gold trust is today worth more than $US60 billion – has been cherry-picking investment dollars for five years.

Gold companies must also take some responsibility. Rising cash costs have limited the ability of producers to capitalise on the higher gold price, which has frustrated investors looking for leverage. Meanwhile, investors who had bought into the junior gold market for growth potential during the excitement of last year have been disappointed by promises unfulfilled as those investments matured.

Adding to the pain of investors who have lost on gold equities this year is the disproportionately heavy leverage against stocks when the gold price drops. Equities were slammed when the gold price fell in 2008 but have not recovered their value proportionally as gold has moved higher.

So, what now?

Normality in the physical-equity gold relationship is set to resume by the end of the northern summer. Unfortunately for those invested in equities at the moment, the reestablishment of that relationship will begin with a pull-back in physical gold combined with stoicism in equities, rather than a reinvigoration of the stock market.

"I worry that a substantial part of the catch-up move will be gold stocks outperforming gold when both are tracking down," Davidson said. "In the next few months the gold price is likely to drift or come off, while a lot of the downside has already come out of equities."

Influential US fund manager Frank Holmes recently argued that economic recovery was still extremely fragile and would continue to provide a catalyst for strong gold prices. He stated that gold companies were undervalued, offered strong cash flows and attractive yields and would soon be rewarded by the market. Holmes cited BMO Financial analyst Don Coxe in support of his view: "Gold and gold stocks offer a protection that is going to become more valuable in the period of months ahead. It's possible that the long-awaited period, when gold stocks outperform bullion, is coming soon."

Sceptics may be tempted to put Holmes' optimism down to a fund manager talking his own book, but such an accusation cannot be levelled at Burton, who also predicts a sunny second half for gold stocks.

"Although the performance of many gold stocks has been poor over the first half of this year, we believe this represents a good buying opportunity. Investors probably have the rest of the summer to evaluate good opportunities before the gold price starts to climb again – and this time takes stocks with it," he said.

This summer is shaping up as a time of reflection. A time when investors evaluate what they want from a gold stock and which gold assets in general, both paper and physical, they want to be holding when the next stage of the gold bull market takes off.

Mark Bristow is chief executive of respected mid-cap London gold producer Randgold Resources. He told ***HighGrade*** investors who had been burnt by last year's gold equity investments would continue to seek leverage from gold stocks but had started to be more discerning. Bristow joined the chorus predicting a seasonal correction in the gold price over summer and said some companies would appreciate on a relative basis while others would continue to decline.

"In the early 2000s after moving from $300/oz to $US500/oz, there was a big rearrangement in equities with some doing very well and others having big corrections – I think we'll see something similar over this summer," he said. "Investors and fund managers are starting to look hard and not just investing across the board in anything. An alertness and discernment has developed recently in the market and it will be interesting as we come out of the summer to see how this whole equities versus gold arrangement plays out."

Davidson suggested that a review of gold equities and bullion should lead investors to a portfolio that included junior exploration and development stocks for maximum leverage, along with a chunk of physical gold.

"The ideal portfolio if you want to invest in gold is a mix of gold bullion and junior gold companies. You play the junior gold stocks for the possibility of a multiple uplift if they make the big discovery and you want to balance that with the safety of bullion, which actually outperforms the larger gold stocks."

Davidson also said there was also an opportunity to pick up well-managed mid-cap producers such as African Barrick and Randgold for their ounce-per-share value and organic growth potential.

The notable absentees from this recommendation were the major producers, for which he said he could not make an investment case when bullion was a better performing option. While others in the industry have not necessarily drawn a line through the majors, the underperformance of the big guys has been lost on nobody.

Where the majors went wrong

The problem with the major gold miners started more than a decade ago during a period of mergers and acquisitions that was designed to form companies large enough to show up on the radar screens of major investment funds. That worked, but also started an ongoing struggle to top up reserves in the face of ever increasing production profiles.

This battle has intensified in the past few years as majors repeatedly come in for criticism for either paying too much for ounces, issuing loads of paper during acquisitions, or both. These deals are rarely rated by analysts as 'value accretive' and are widely regarded as 'adding ounces for ounces sake'. Meanwhile, the exploration arms of the majors are virtually non-existent and investors have rightly asked themselves how buying shares in a value neutral gold producer – essentially, a static gold reserve – should be preferred over an ETF.

"The reputation of major gold mining companies, the backbone of the industry and once an essential component in any serious investor's gold portfolio, has been tarnished in recent times by poor market returns," Burton wrote in a recent GFMS report. "Year-to-date

returns in the market are broadly negative and intermediate gold producers as a group are currently valued higher than the majors in terms of enterprise value per resource ounce.

"What seems to be more important for investors than quantity of reserves is growth in reserves per share and few of the majors have exhibited any upward trend in this respect," Burton wrote. "One notable exception is Agnico-Eagle, which has grown reserves per share over the past few years and is consequently valued more highly than its contemporaries in terms of enterprise value per resource ounce."

Holmes does not dispute the shortcomings observed by Burton, but argues that the market has failed to recognise prudent reserve management by most majors, which have been targeting lower grade and therefore higher cost deposits. The implication is that richer deposits are being held back in case prices fall.

However, figures ratified by brokerage Collins Stewart showed that while majors were definitely mining lower grades, this was a function of a lower average reserve grade, rather than a specific strategy. The figures showed that the grades currently being mined by most majors were in fact higher than their average reserve grade.

Australia's largest producer, Newcrest, led the list of sinners and returned a milled grade more than 150% above its average reserve grade during the final quarter of 2010, while Yamana Gold, Eldorado Gold, Newmont, Barrick Gold, Kinross Gold, and Petropavlovsk were also on the naughty side of the ledger. AngloGold Ashanti, Gold fields, and Randgold were in the minority of larger producers currently milling grades lower than their reserves.

Though more critical of the majors than Holmes, Burton agreed that, despite their shortcomings, there would be a resurgence in the value of the big boys toward the end of the summer, when GFMS has forecast another hike in the gold price. Bank of America-Merrill Lynch has forecast a gold price of $US1650/oz late this quarter.

Whether that makes majors a better bet than the juniors and intermediate producers who offer better leverage (with more risk) and more value per ounce respectively, is up to the individual investor.