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Unveiling the VPM Filter

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Unveiling the VPM Filter

By Brian Chu

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In this special report, I share with you something that has helped me to beat the market consistently.

I do not mean just edge ahead of the market index every couple of years…

I talk about making 15–20% more each year against the benchmark in the long term.

This method has helped me make a 650% return in the last seven years while the ASX Gold Index returned 217%.

I call it the '*VPM filter*'.

Smart investors use rule-of-thumb metrics to help them separate the good companies from the bad. They can flick through company reports in minutes and find the numbers they need to make decisions.

My *VPM filter* can take the key production figures for gold producers and convert them into one simple ratio. I use this ratio to help me decide whether a company is good value or not.

I don't make the decision based on that number alone, of course. Investors may see gold as out of favour and stay away from the industry. But at least I have an idea which company is worth holding onto.

The good thing about this filter is that it has stood the test of time. Those who have seen it agree it's a neat addition to their toolkit.

Even better is that this filter is no gimmick. It's easy to understand and makes a lot of sense once you read this report.

Let me take you on a journey...

Like every good story, we start in the midst of a crisis…

I began investing in gold in mid-2013.

Soon after, the price of gold crashed. The gold mining industry fell hard.

Gold stocks made up 30% of my portfolio at the time. It took a beating.

I thought this was an opportunity to buy more. I even started selling some of my other stocks and doubled down onto gold producers thinking it would bounce quickly.

It did bounce in July and August...before resuming its decline.

And so it continued into 2014...

I didn't give up, but I knew I needed a better plan.

How could I select the right gold stocks to buy? What indicators do I look for?

These questions ran through my mind.

I used my analytical skills from my actuarial studies background and experience in research to solve this problem.

It was a long slog. But it was worth it.

Finding the right metric to analyse gold stocks led to big profits later on. It certainly was worth my time.

Long story short, the framework you're about to learn came from years of trial and error, and refinement.

It forever changed the way the I invest in gold stocks. And it transformed my results.

I hope it does the same for you...

Introducing the *VPM filter*

You probably know the financial industry uses the price-to-earnings (P/E) ratio as a basic yardstick for value.

It basically tells you how much you are paying (P) for a given level of earnings (E).

A 'high' PE stock is expensive. A 'low' PE stock is cheap.

But the earnings referred to are accounting earnings. Gold mining companies are more about the cash flows they produce. Often, cash flow and earnings are very different, and it can be enough to produce big differences in valuation.

Therefore, you need a different filter to judge the value of gold mining companies.

This is what the *VPM* lets me do.

The *VPM* stands for *Valuation-to-Profit Margin*. Now, that sounds technical. But essentially, it's a way to consistently judge a gold mining stock via its cash flows.

That's really it in a nutshell. But it allows you to view the current and future prospects of a gold stock in an entirely new light.

Let me go into a bit more detail...

Mining companies spend a lot on building and maintaining their mines.

This also allows them to capitalise their expenses and 'recognise' them over a longer period of time.

So, for example, they may spend $200 million to build a mine. However, they may recognise that $200 million over the next 10 years to reflect the mine's useful life. On its books, it means the company can report $20 million of expenses each year, but they had already spent $200 million.

Can you see the big difference between $200 million of cash paid and $20 million of recognised expense in the first year?

This is why standard analyses like the P/E ratio doesn't work well for gold miners and producers.

Normally, the P/E ratio can give us a rough idea of whether we're paying a reasonable price to buy a company relative to the profits earned.

To find the same information for gold companies, I realised I needed to look at their cash flows rather than profits.

Fortunately, mining companies report their production volume, costs, and the average price received on their sales.

This data is not published in the other industries. For example, you won't find out how many items Woolworths sold and the price they sold it for. It's just not practical. They have far too many items for sale.

But miners are different. I realised the production data in the quarterly reports give valuable information to test out valuation ratios. You can see how their production affects profits and cash flows. They also report the prices of commodities. This means you can see how efficiently they operate.

I began to browse through these reports. At first, I made a mental note of anything interesting I noticed. By the second half of 2014, I started to pick up patterns. There was one pattern that showed itself time and time again.

There was a direct correlation with a company's strong performance to their reported cash flow surplus.

This was a light-bulb moment in my investing career.

I examined all kinds of mining companies. Same thing.

For instance, I saw gold companies reporting lower production costs when the price of oil fell by almost 50%. This made sense. Trucks and processors consume a lot of fuel. A lower price of oil increased the company's profit margin as operating costs fell.

I kept at it.

By 2015–16, I'd come up with a quick rule-of-thumb calculation to help me find undervalued mining companies. I also figured out more important drivers of value (I'll cover those in a moment).

Point is, I was on the right track.

The process was gradual. I looked at how mining companies operated. I mapped their processes against their reported data. I then looked for links between this data and any movement in the stock price. This intuition became the building block of a framework I consistently applied to different companies.

I turned this into a formal system at the end of 2016. I began building a substantial database by collecting data from company quarterly reports and financial results.

This allowed me to test and refine my framework. My database now contains over 500 entries from over 30 ASX-listed gold producers.

I can say that my approach has helped me outperform the benchmark index over a sustained period. You can find my performance on my Australian Gold Fund website. The information is publicly available.

This method is the first of its kind in the industry. I confidently say that because it's personally developed. Others have adopted this framework recognising its usefulness. I hope you will too.

A valuation multiple specifically for gold producers

This methodology may seem confusing at first but bear with me. Once you grasp it, you can apply it to any gold producer, no matter the size.

Essentially, the idea is to calculate how much you are paying to buy the earnings of the mining company. A good investment is one where you pay less than $1 to buy $1 of earnings. That is basically what the P/E ratio is.

But I mentioned before that the P/E ratio does not work for mining companies. I use the same principle but use different variables.

I will set the scene by defining a few key terms.

The first is *Enterprise Value* (*EV*). This is the *Market Capitalisation* of a company (stock price multiplied by number of stocks on issue) minus its *Net Cash* (cash minus debt).

EV gives you a good idea of the market's assessment of the company's assets used to run the business. In the case of a mining company, this includes the land, the mine properties, machinery, and mineral resources underneath the ground.

Next is to calculate the earnings, or what is left over from revenues after subtracting costs.

Let us start with the next key term: *All-In Sustaining Costs* (*AISC*). This is an industry-wide, standardised metric that seeks to measure all the costs that have gone into producing an ounce of gold. It includes both the production cost and the investment needed to maintain current production.

It's accepted by the World Gold Council as the industry standard since 2013. Therefore, it's the preferred proxy measure for production costs.

Mining companies report their revenues in per-unit terms. They report how much they receive for each unit of production sold. This is the *Per-Unit Sales*.

The *Profit Margin per oz* would then be the difference between the *Per-Unit Sales* and *AISC*.

Therefore, the earnings would be the *Production* multiplied by the *Profit Margin per oz*.

However, I tested this out and found something was missing.

My adjustment is what sets my method apart from industry practice.

This part is well worth your time. We're getting to the good bit!

A little-known method that levels the playing field

Not every ounce of ore mined out of the ground is equal.

Some are easier to extract because they're closer to the surface. Others are deeper. Others are chemically bonded to the rock.

Each ounce differs by the production cost incurred. You will see very soon why this makes intuitive sense when I show you an actual example.

I use *AISC* (units per sales) as a proxy for costs, as this is the industry-accepted standard.

Now what I want to do is to compare two producers with different costs in a meaningful way. I can take their production and adjust it by their production cost. Under this measure, the less expensive company would be better than the more expensive one.

You can work this out by using the *AISC-Adjusted Production*, or *Cost-Adjusted Production*.

Let me show you using two companies, **Regis Resources Ltd [ASX:RRL]** and **Resolute Mining Ltd [ASX:RSG]**.

For the last financial year, Regis Resources produced 352,042oz at an *AISC* of $1,246/oz. Meanwhile Resolute Mining produced 395,137oz at an *AISC* of $1,563/oz.

I can compare these two companies by making an adjustment to their production with respect to their costs.

For Regis Resources, I divide the 352,042oz by 1.246 (*AISC*, the standardised cost factor, divided by 1,000). This gives me a *Cost-Adjusted Production* of 282,538oz.

I do the same for Resolute Mining and I will get 395,137 divided by 1.563 or 252,807oz.

You can see that Regis Resources has a higher *Cost-Adjusted Production* even though Resolute Mining produced more gold.

The *Cost-Adjusted Production* gives a company with lower production cost a higher ranking than one that produces at a higher cost.

You can explicitly compare two companies using this approach.

I will discuss more about why I make this adjustment on production later. Let's continue with getting our valuation measure.

We have calculated our *Cost-Adjusted Production*.

Next comes the earnings figure...

We do this by finding the *Profit Margin per oz*. This is simply the price the company sells its gold for minus the *AISC*.

Let's assume that the company receives $2,300/oz for their gold sales. The *AISC* for Regis Resources is $1,246/oz. The *Profit Margin* per oz, therefore, is $1,054/oz.

We get the total earnings by multiplying the *Cost-Adjusted Production* by the *Profit Margin per oz*.

We call this our *Cost-Adjusted Profit*.

For Regis Resources, the *Cost-Adjusted Profit* is the *Profit Margin* per oz of $1,054 times the *Cost-Adjusted Production* of 282,538oz = $297.795 million.

For Resolute Mining, the *Profit Margin per oz* is $737/oz. The *Cost-Adjusted Profit* is therefore $186.319 million.

Finally, I divide the company's *Enterprise Value* by this *Cost-Adjusted Profit*.

This gives us a unique valuation multiple for gold producers.

This is what I call the *Valuation-to-Profit Margin* (*VPM*) multiple.

This is what I believe makes this proprietary filter completely unique. It lets me calculate the value of gold and mining stocks in a similar way to the price-to-earnings ratio.

However, this *VPM filter* standardises mining companies by their production and costs.

Now, let's assume Regis Resources had an *Enterprise Value* of $2.6 billion and Resolute Mining had an *Enterprise Value* of $1.1 billion.

The *VPM multiple* for Regis Resources is $2.6 billion divided by $297.795 million or 8.73. Resolute Mining would have a *VPM multiple* of $1.1 billion divided by $186.319 million or 5.9.

Now how do we interpret this *VPM filter*? What multiple is good and what is not?

Based on my observations and analysis of the ASX-listed gold producers, I have found a range for the VPM that would imply a fair value for gold producers of varying sizes.

The fair value range for the VPM is:

- 8–12 for large producers delivering more than 500,000oz pa.
- 6–10 for mid-tier producers delivering 150,000–500,000oz pa.
- 3–5 for junior and micro producers delivering less than 150,000oz pa.

The above range is just a guide and a starting point. I also factor other things when assessing value. You'll find out more at the end of this report.

But first...

Now you know the workings of my *VPM filter*, let me show you how effective it is...

How the *VPM filter* can transform your mining returns

I started studying how to value gold mining companies by looking at what ratios the industry uses. Standard practice is to use *EV/Resources* and *EV/Reserves*. These measure the price paid for what they have beneath the ground.

However, I've tested these multiples. It did not help identify which companies are better value.

The problem is in-ground resources do not mean profitable production.

A low *EV/Resources* number can make a non-producing company with vast undeveloped resources look better in value than a company that's producing already, but with a smaller resource deposit.

I find the *EV/Resources* and *EV/Reserves* multiples useful measures for finding companies with a longer mine life.

However, they do not help to identify profitable companies now.

Some companies use the *EV/Production* multiple to compare against their peers. And I saw this metric used a few times and decided to delve further into it.

I tested it using a few companies and found it was missing something. I noticed the *EV/Production* multiple would deem a company to be of better value when it shouldn't be. The reason for it being a less attractive investment as the multiple implies is because they are a less efficient producer.

Going back to our example with Regis Resources and Resolute Mining. Our *Cost-Adjusted Production* measure showed Regis Resources is performing better than Resolute Mining. However, Resolute Mining appears to have better value because it has a lower *Enterprise Value* and *VPM multiple*.

You see, our approach can differentiate between the company's production, costs, and whether it's good value or not. So it is more nuanced.

The *EV/Production* lacks this nuance. It just shows that Resolute Mining is better because it has a higher production and appears to be better value.

And because of this, I believe my filter will be clearer.

I'll now show you how you can use this for yourself.

It involves a couple of calculation steps.

Assessing if a gold producer is good value with the *VPM filter*

Here's a full example of how to use the *VPM filter* to measure a company's true value.

I'll use another company to illustrate...

Silver Lake Resources Ltd [ASX:SLR] is a mid-tier producer.

They have 881.58 million shares on issue. As of 4 June they trade at $1.73.

They currently have $320.4 million in cash.

Now the company claims to have no debt. This is not the full picture as they have leases on equipment. This is a liability, so a form of debt. I will also include the lease. That amounts to $60 million into our calculations.

Considering all this, the *Net Cash* is $260.4 million.

The company expects to produce 240,000–250,000oz this financial year (July 2020 to June 2021) at an *AISC* of $1,400–1,500/oz.

The current price of gold is $2,440/oz.

I expect them to sell their gold at $2,400/oz in this financial year.

Is Silver Lake Resources good value or not?

We can use the *VPM filter*.

The *Enterprise Value* of Silver Lake Resources is the *Market Capitalisation* minus the *Net Cash*.

This gives us $1.73 x 881.58 million – $260.4 million, or $1,264.73 million.

I will calculate the *Cost-Adjusted Production* using the average of the company's guidance range, for simplicity.

So, it is 245,000oz divided by 1.45 or 168,966oz.

The *Profit Margin* per oz is $2,400 – $1,450 = $950/oz.

The *Cost-Adjusted Profit* is $160.52 million.

Dividing the *Enterprise Value* by the *Cost-Adjusted Profit* gives us the *VPM multiple* of 7.88.

A mid-tier producer will normally trade at a range of 6–10, so a *VPM multiple* of 7.88 means Silver Lake Resources is currently fairly valued.

Using the *VPM filter* to estimate fair value

We can also use this method to determine the fair value range for the price of Silver Lake Resources.

We do this by working backwards on what we did above to get the *Market Capitalisation* and the price.

The lower end of the fair value range has a *VPM multiple* of 6.

We also take the lower end of their production and higher end of the *AISC* for this calculation.

The *Cost-Adjusted Production* would be 240,000oz divided by 1.5, giving 160,000oz.

The *Cost-Adjusted Earnings* would be 160,000oz x $950 = $152 million.

We multiply this by the *VPM multiple* of 6 to give the lower end *Enterprise Value* of $912 million.

Then we add the company's *Net Cash* to get $1,172.4 million, the *Market Capitalisation*.

The stock price is the *Market Capitalisation* divided by the issued shares, or $1,172.4 million divided by 881.58 million shares, or $1.33.

Now to calculate the upper end of the fair valuation range. The *VPM multiple* is 10, the production is 250,000oz and the *AISC* is $1,400. The *Cost-Adjusted Production* is 178,571oz.

The *Cost-Adjusted Earnings* would be 178,571oz x $950 = $169.642 million.

We multiply this by 10 to give the upper end *Enterprise Value* of $1,696.42 million.

The *Market Capitalisation* is 1,956.83 million. The stock price is $1,956.83 million divided by 881.58 million shares, or $2.22.

Our *VPM* approach suggests that Silver Lake Resources would trade at a range of $1.33–2.22. This is a wide range and gives us a rough guide on what the company should be worth.

More than production and costs

The *VPM filter* gives a neat number to help us decide if a gold producer is good value or not.

However, it's not all I account.

You need to consider several other factors in valuing gold companies.

These include:

1. **Dividends and capital investment:** Some producers like **Newcrest Mining Ltd [ASX:NCM]**, **Northern Star Resources Ltd [ASX:NST]**, and **Evolution Mining Ltd [ASX:EVN]** have large operations and can pay a stable dividend. They may also spend a lot to expand their operations to increase future production. Investors may pay for this future growth so they may trade at a higher *VPM multiple*.

2. **Life of mine and size of deposits:** Producers with a larger deposit that supports a longer mine life are going to be more appealing to investors. A longer mine life usually means the company has a larger scope of operations. A larger deposit can also support lower-cost operations because they will be able to scale its operations. These all lead to a company trading at a higher *VPM multiple* than one with smaller deposits or shorter mine life.

3. **Geographic location of mines:** Mines in countries with a stable government are more attractive to investors than mines in unstable countries. Social unrest, the threat of property confiscation and unforeseen changes in rules lead to instability. Countries like Australia, Canada, New Zealand, and the US have a stable legal system. Investors like to buy companies with mines in these countries. Companies operating in less stable countries like parts of Africa, Latin America, Southeast Asia and South America are higher risk. You would expect a higher *VPM multiple* for a company with more operations in stable regions.

4. **Management quality:** You want management to make the right decisions so they stay ahead of the company's peers. You want them to manage their balance sheet effectively. You don't want them paying too much to acquire other mines or companies. I also include here that good management should be able to set and meet their annual production goals. Such companies will have a higher *VPM multiple*.

The *VPM filter* has helped me find and confidently calculate undervalued gold companies.

It's hard-won knowledge. I've lost money in perfecting it, but it's made me great returns on my portfolio too.

This is what I bring to the table.

It's supposed to make intuitive sense by looking at the mining process and finding out where they create value. You can use this to compare different producers.

I hope that it serves you as well as it has me.

But of course, really, you don't need to know or conduct any of this hard analysis. I'll be doing it all for you.

I realise I've gone into heavy detail today. But I figured it's better to be open and completely transparent with my methodology so you can be confident I have the expertise, experience, and credentials to work on your behalf.

I'll use this approach as a basis to finding companies to recommend to you in *Rock Stock Insider*.

Please don't hesitate to contact me if you have any questions. You can do so by emailing customer service and using the subject line 'ROC questions'.

God bless,

Brian Chu,
Editor, *Rock Stock Insider*

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