In the information age, much can depend on how the information is interpreted and then used. ROBERT McDONALD and TIM BARKER look at the implications of different valuation techniques, and metal price expectations, when applied to an initial public offering by a resource company.

Price-earnings ratios and price-cash-flow ratios as applied to expected earnings and cashflows were recently used as the valuation method in an initial public offering (IPO). The method was used by an underwriting syndicate on an international zinc company. The applicable multiples were derived from the observed market value of similar companies, divided by their predicted earnings. (The earnings estimates, in turn, were most influenced by the analysts' view of future metal prices.)

It was interesting that none of the underwriting syndicate employed as the primary valuation technique the traditional industry discounted cashflow approach or the more advanced contingent claims analysis.

Even though members of the syndicate were using a common measuring technique, they derived a wide range of estimates, with the low estimate of value being as much as 50 per cent below the high valuation estimate.

We found that most of the valuation differences were due to the inconsistent application of generalised information such as that contained in analyst surveys reported by groups such as BARCEP and I/B/E/S. In short, we argue that the application of average P/E multiples with anything other than average metal price forecasts will produce incorrect valuation results.

We have noticed, however, a tendency for inexperienced valuers to apply industry average multiples to earnings estimates incorporating their own views on metal prices – views that could differ significantly from industry averages. For example, a sample of zinc price forecasts from 21 analysts produced an average prediction of $US0.60/lb in 1996, but the range was $US0.45/lb to $US0.70/lb.

In this paper we show the relationship between forecast metal prices and forecast price-earnings multiples over the next several years. Earnings estimates from a dozen analysts were obtained on six zinc companies for 1994 to 1996, a total of 61 observations. For comparison between industries, information from a dozen analysts was also collated on copper and nickel companies.

ACCOUNTING MULTIPLES

Accounting multiples for zinc companies, generated by a number of analysts all using different zinc prices, were derived using share prices prevailing in September and October 1994 and earnings projections for 1994/95 and 1995/96.

At $US0.60/lb, the 1996 average price-earnings multiple appears greater than 10, probably in the 12-15 range. The price-cashflow multiple, at $US0.60/lb, is higher than 8.

At $US0.50/lb – around the average zinc price expected for 1995 – the P/E ratio appears to be in the 15-20 range with the price-to-cashflow multiple around 10.

Price/earnings: Zinc companies PER

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There is, however, a wide range of observations making a definite conclusion difficult, but the point we want to make is obvious: higher expected metal prices correspond to lower accounting multiples.

Now we investigate the estimated P/E and PCF multiples for a number of "pure" copper and nickel companies as well as the zinc companies covered previously. In order to fit on a common axis we have somewhat arbitrarily indexed metal prices as follows:

<table>
<thead>
<tr>
<th>Metal</th>
<th>High</th>
<th>Medium</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zinc</td>
<td>80</td>
<td>275</td>
<td>0</td>
</tr>
<tr>
<td>Nickel</td>
<td>412</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>550</td>
<td>120</td>
<td>80</td>
</tr>
</tbody>
</table>

This analysis tends to confirm the observation that mining companies trade at a price-earnings multiple of around 12, and a price-to-cashflow multiple of around 8, under normal metal price conditions, but that different multiples are more appropriate if something other than industry average metal price conditions are used by the valuer.

However, it is not sufficient for the valuer to consistently apply accounting multiples and metal price forecasts. In the case of the IPO company referred to earlier, the following table shows a number of adjustments that a valuer would need to make to an industry-derived multiple.

It should now be self-evident that analysts with high estimates of zinc prices (and hence earnings) need apply a lower P/E multiple than the industry actual to generate the observed market value of a zinc company. On the other hand, analysts with a less bullish metal price forecast need to use a higher-than-average industry P/E multiple.

Maintainable earnings for zinc companies probably incorporate zinc prices of around $US0.60/lb, the average forecast of 21 analysts for 1996. At these zinc prices and maintainable earnings, zinc companies appear in October 1994 to be trading at prospective P/E multiples of around 12 and PCF multiples of 8.

For accounting multiple analysis to retain its place as a useful valuation tool, valuers need to be alert to various issues that are likely to trap the unwary, such as the need for consistency between the way the multiples are derived and then applied.

NOTES
1 Pasminco, Aberfoyle, MIM, Savage, Cominco, Brunswick.
2 Phelps Dodge, Asarco, Magma, Rio Algom, Inco, Falconbridge, Eramet.