It is well known that Australian listed gold companies generally trade at market capitalisations well in excess of any valuations which could be justified utilising a discounted cash flow analysis on the companies’ gold resources. This phenomenon has been attributed to many factors including:

- producers ultimately prove up or discover additional gold reserves;
- gold mining, particularly with open-cut mining, carries little production risk;
- gold mining generally has little metallurgical risk;
- gold is a homogenous commodity sold into a sophisticated market, so there is virtually no realisation risk;
- the volatility of the gold price, and in particular its potential upward movement, is factored into equity market values;
- there is an active, developed forward market that facilitates sales and project financing;
- gold is the ultimate store of value.

This paper is not intended to explain why the market capitalisation of gold companies is so high, but rather to investigate whether the equity and financial markets are fully informed about Australian gold companies, their activities and the consequent impact of those activities on the companies’ value as perceived by the market.

THE PRODUCER’S LOGIC

Any investment decision is made subject to uncertainties about the future. This is particularly true of the decision whether or not to invest in a mining project. Depending on location and mining conditions, many projects require considerable upfront capital expenditure. However, returns are spread over a number of years. Further, many major mining discoveries occur in geographically inconvenient places. This can result in particularly long gestation periods and require considerable patience on the part of investors awaiting a return.

Securing finance for such projects, and reducing its cost, requires reducing risk whenever possible. Gold projects, fortunately, can do this through the gold derivatives market. Forward contracts for the sale of the gold to be delivered in the future and the purchase of options to sell gold in the future at acceptable prices can “lock in” a minimum cashflow and income stream for producers. In essence, these contracts are a form of insurance.

Producers can enter into forward sale agreements or purchase options to sell sufficient of their gold output in future periods to recover their costs and ensure they can repay their borrowings. Thus, a project can be guaranteed to produce at least a break-even result and meet its debt commitments. A producer can take advantage of any spike in the gold price by not committing all of the expected production to forward sale or by allowing put options to lapse.

To the extent that companies are locked into forward contracts, they sacrifice the ability to take advantage of future price rises. However, this is viewed as an acceptable risk, whereas the failure to achieve a minimum return could result in the breach of borrowing agreements or the failure of the company.

Even in the case of relatively low-cost projects, financial institutions will often
insist that a forward selling program is put in place to assure future repayments of interest and capital. Further, the use of a forward sale program may significantly alter the effective interest cost of debt finance.

However, the market is much more sophisticated than this basic function implies. For example, producers and potential producers are able to take out "gold loans". These allow the drawdown of funds equivalent to a specified quantity of gold at the current price, to be repaid in the future by the equivalent amount of gold production plus gold borrowing costs.

Depending on the future price of gold and the level of interest rates at the time the investment decision is made or the contract is entered into, the appropriate use of the forward market can even convert an otherwise uneconomic mine into an economic proposition.

The existence of a sophisticated market therefore provides cashflow and funding facilities and flexibility to gold producers on terms which are not as readily available to other mining facilities, let alone the fledgling widget manufacturer.

ACCOUNTING ISSUES
ED 65 - financial instruments
The recently released exposure draft ED 65 deals with disclosure requirements for financial instruments. These requirements will be subject to some changes, following the issue of the exposure draft for public comment in June 1995. However, ED 65 reflects many of the comments submitted on ED 59, an earlier exposure draft on financial instruments issued in March 1993. The requirements of ED 65 are very similar to those of International Accounting Standard IAS 32, issued in March 1995. As a result, it is likely that most of the technical requirements of ED 65 will find their way into an Australian Accounting Standard which is likely to become mandatory some time during 1996.

The purpose of ED 65 is to inform the users of financial statements of risks involved in financial instruments, be they price risk, credit risk, liquidity risk or cashflow risk. ED 65 requires that, for each class of instrument, there should be disclosure of the accounting policy for that particular instrument, information affecting timing and certainty of future cashflows and the strategy and objectives of the company in holding such derivatives. It is also important from the perspective of assessing a gold company’s position that ED 65 requires disclosure of the net market value of the derivatives – their mark-to-market value.

In the context of gold-based financial instruments, the exposure draft requires not only a description of the anticipated transactions and the instruments themselves, but a maturity profile of any gains or losses deferred. While certain Australian mining companies are currently disclosing this information, compulsory disclosure is to be welcomed.

With its emphasis on enhanced disclosure and a description of the underlying strategy behind entry into the derivatives market, the exposure draft is wholly consistent with the view that financial reporting in Australia will benefit from the equivalent to the US "MD&A" (management discussion and analysis). Interestingly, a similar requirement to the MD&A has been proposed in the Corporate Law Simplification Bill No 2.

Commodity-linked instruments
One of the key differences between ED 65 and IAS 32 is the treatment of commodity-linked contracts. Under ED 65, commodity-linked contracts are defined as those that as a matter of general market practice are normally settled other than by physical delivery. It should be noted that the reference to general market practice means that even if a gold producer has a forward sale agreement that will be settled by physical delivery, the producer will have to comply with the disclosure requirements of ED 65 because of the existence of an actively traded gold market. The intention is that a forward sale of gold would be subject to the disclosure requirements of ED 65 because gold contracts are normally settled other than by physical delivery (e.g., by rollover, cash settlement, etc). In essence, such contracts are required to be treated as financial instruments, giving rise to financial assets and financial liabilities.

The different treatment of commodity-linked contracts in ED 65 reflects not only the commodity-dependent nature of the Australian economy, but also the economic reality of such contracts in the Australian environment. The requirements of ED 65 will oblige Australian mining companies to disclose much more information about their financial instruments than has previously been required. This disclosure will enable analysts and investors to better appreciate the real profitability and real value of listed gold mining companies. In some cases, this disclosure may result in a major revaluation of some listed companies.

Hedges
A financial instrument is generally viewed as a hedge if the effect of holding the instrument is to offset the holder's exposure to risks.

Accounting standard-setters around the world have had great difficulty in setting appropriate accounting and disclosure rules for hedges. These difficulties reflect definitional problems (i.e., how can hedge activities be clearly distinguished from trading activities) and rapidly changing market practices in this area.

Traditional accounting thinking would generally require that hedges be accounted for on a basis that is consistent with the accounting of the underlying asset or liability. For example, if trading invest-
ments were marked to market, then the financial instrument that hedged the exposure to market-value fluctuations would also be marked to market for accounting purposes.

The debate over how to account properly for hedges is further complicated in the case of hedges of forecast transactions such as forward sales of gold which has not yet been mined.

In essence, historic cost accounting values for hedges is not very useful information (other than perhaps to estimate tax liabilities). Further, the failure of financial statements to recognise material profits or losses on hedges, derivatives or other financial instruments until they are realised does not sit easily with economic reality or commercial common sense.

**Market practice in financial reports**

Accounting for commodity-linked treasury transactions (referred to subsequently in this paper as “gold-based financial instruments”), in particular forward sales and, until recently, options, while not governed by a specific accounting standard, has received generally consistent treatment by gold producers in their statutory accounts. General practice has been to defer recognition of forward sales in the accounts until the forward sale being hedged occurs.

Similarly, cash inflows and outflows in respect of options are generally deferred until expiry of the option. Premiums on options which lapse or are delivered into/against are generally recognised in the profit-and-loss account on the date of the expiry/delivery. Premiums on options which are subsequently rolled into forwards are generally deferred and recognised in the profit-and-loss account when the forward sale occurs.

Whether this method of accounting is appropriate, or whether some other method of accounting, which marks to market each gold-based financial instrument, is preferable, is the subject of continuing debate. What is clear is that the accounting practice described above is widespread in Australia and it is generally fairly clearly disclosed in the accounting policy section of the financial statements of gold producers.

This consistency of approach in accounting, and the disclosure of accounting policies, is not seen in other aspects of disclosures.

Quarterly reports, as one might expect, are less informative than annual reports. Few quarterly reports disclose the total ounces subject to forward contracts, let alone delivery year and price details. However, this information is often available in annual reports. Without this information it is difficult for an investor to ascertain the level of exposure of the gold producer to changes in the gold price. Indeed, even information on total ounces hedged is not sufficient for this purpose. Details of the delivery years of forward contracts and the forward prices applying are necessary for a more complete picture. It is not clear why companies do not feel compelled to disclose further details, at least quarterly, under their “continuous disclosure” obligations.

Most annual reports disclose the total number of hedged ounces. Full disclosure of delivery years and forward prices is patchy, with most companies not disclosing sufficient information. Similarly, while there is generally some disclosure of the types of contracts entered into, many companies are silent on this. Still more companies, while showing a split between forwards and options, do not disclose, for example, the type of forward contracts (eg, spot deferred, flat forwards, etc).

In short, current statutory accounts omit the following key information:

- a meaningful outline of the entity’s strategy;
- details of contract types – without this information other disclosures cannot be calculated;
- marked-to-market valuations and sensitivity analyses of those values.

Most of these disclosures will be required when ED 65 becomes an accounting standard.

**THE TRUE IMPACT AND HIDDEN RISKS**

Lack of information about gold-based financial instruments in Australia means the true impact of these activities cannot generally be assessed. As a result, the value of some gold mining companies may have been materially distorted. Further, certain risks inherent in the strategies of Australian gold mining companies not only remain hidden from many market players, but also may not be properly understood by some company directors.

An obvious point is that by locking in the gold price with a forward selling program, Australian producers miss out on any “upside” gains in the event of a dramatic increase in the price of gold. The extent to which they miss out would depend on the type of program undertaken (an options-based program allows greater flexibility, but at a cost) and the extent to which future production is committed. (A significant price rise might also enable presently uneconomic resources to be profitably mined.)

A second impact of forward selling programs, for certain Australian companies, is a “front loading” of profits resulting from the use of flat forwards. Flat forwards are contracts in which a producer agrees to sell a specified number of ounces over a specified number of years for a fixed price per ounce, irrespective of the year of delivery. This is in contrast to the normal forward selling contract, in which the price received rises year-on-year as a result of the contango (the excess of market interest rates over the gold lease rate, or borrowing costs). The contrast between the two contract types is demonstrated graphically in Figure 1.

Producers who enter flat forward contracts are sacrificing future revenue in the...
later years of production in order to receive increased revenue in the earlier years of production. This “borrowing” from the future to fund current capital, and sometimes operating, expenditure may well be a sound financing decision for gold producers. It is not, however, generally fully disclosed and properly recognised as a financing transaction in their financial statements, with the “gain” (which is interest on the contango which has not yet been earned) deferred for profit-reporting purposes. Instead, gold sales are generally recorded at the flat forward contract rate as the sales are made. As a result, reported earnings in the early years are enhanced (overstated) to the detriment of reported earnings in later years. This represents a “front loading” of profits.

VALUATION DISTORTIONS
Without full information about the nature and extent of the use of gold-based financial instruments and other financial instruments in the Australian market, it is not possible to assess their true impact. However inappropriate accounting of gold-based financial instruments can materially distort reported results and hence assessed value.

Further, if the company is evaluated on the basis of the net present value of its future cashflow (as it should be), valuation distortions may occur due to inconsistencies between the discount rate applied to cashflows and the interest rate inherent in the gold-based financial instruments.

These valuation distortions may be even greater if the gold-based financial instrument is in substance a borrowing, part of which is used to finance tax and/or dividend payments out of front-ended profits. In such cases there is not only a timing and interest-rate effect but also a real cash outflow from the entity.

The cash costs of production of gold mines vary widely. The level of costs is a reflection of many factors, in particular the head grade, recovery rate, mining methods and conditions, workforce efficiency and the use of subcontractors. A comparison of long-term costs per ounce of gold produced is the most reliable benchmark of the first-class gold mine compared with a second or even third-class deposit. Details of the annual cash costs of gold produced are generally to be found in annual reports.

The existence of substantial hedging programs may obscure these fundamentals for many investors. For example, during a low gold-price period, low-cost gold producers who are exposed to the spot price may show low profitability or even losses in comparison with a high-cost producer with an advantageous hedging program. An examination of 20 gold producers’ annual reports showed that 19 provide sufficient information to calculate the profit impact of their hedging program.

An indication of the profit effect of using gold-based financial instruments is found by multiplying the number of ounces sold by the difference between average spot prices and average realised prices, for convenience referred to here as “hedging profits”. In fact, the difference reflects the timing of sales compared with the average price plus the hedging profits (including currency effect) plus the realisation of other gold-based financial instruments. Among the gold producers surveyed, 20 per cent of pre-tax, pre-abnormal profit was attributable to hedging and other gold-based financial instruments. The five most “successful” users of derivatives earned 47 per cent of their pre-tax, pre-abnormal profits from hedging, with the “leader” generating more than 100 per cent of its reported profit from hedging (that is, it made losses from mining gold). This information is contained in Table 1.

It should be clear that over the medium to long term, it is the low-cost producer which is the preferable basic investment opportunity, not the high-cost producer with a presently profitable hedging program.

HEDGE ACCOUNTING DISTORTION
It is generally accepted accounting practice that a three-year financial asset with a cost of $500, a 10 per cent per annum coupon rate payable on redemption, in an environment where interest rates remain constant, will generate the follow-
It is difficult to see why a zero coupon bond with a cost of $500 and a redemption value of $650 would not generate (again ignoring compounding) the same profit result in each of the three years.

However, most Australian gold mining companies which had the same cost value of assets (ie, $500 of gold) and a three-year forward gold sale contract maturing at $650 would show the following profit result (again ignoring compounding):

<table>
<thead>
<tr>
<th>Asset value</th>
<th>500</th>
<th>550</th>
<th>600</th>
<th>650</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reported</td>
<td>0</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>profit (present value $500)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>150</td>
</tr>
</tbody>
</table>

(Prior to ED 65, many companies would not have disclosed the asset value.)

In the three cases the cost of the asset, its coupon rate, its realisable value and the cashflow generated by its ownership are identical in all three years.

However, in the case of the gold contract, traditional financial reporting would generally show a very different, and in the view of some people, a materially misleading profit result. (Note that allowing for compounding in the above examples does not alter the principle being raised.)

**PROPER VALUATION METHODOLOGY**

The proper valuation of a gold project should be based on the net present value (NPV) of its future cashflows. These cashflows should be separated into:

(a) those being generated from the use of derivative financial instruments, which should be valued at their current market value (ie, marked to market); and

(b) those being generated from the basic mining operation unaffected by the use of derivative financial instruments - ie, core mining operations valued at their net present value.

Appropriate allowance needs to be made for the present value of any tax liabilities. In the case of (a) above, the timing of any liability will be based on optimising the present value of after-tax proceeds. In the case of (b), taxation liabilities should be built into the cashflow projections.

Even where NPV analysis is used, valuation distortions occur because many gold producers' cashflows have been materially altered by the use of gold-based financial instruments. The discount rates used to discount those cashflows:

- do not properly reflect the true interest cost of the financial instruments used by the entity, and

- discount at a cost of capital, weighted for equity and debt, cashflows which have been materially affected by what, in substance, is a debt instrument carrying an implicit interest charge at a different rate of interest.

For example, assume that the nominal weighted average cost of capital (WACC) for gold mining companies is 10 per cent. On this basis, as shown in Table 2, a mine with a 10-year life, producing a constant output each year, would have a capital value of $956 after tax. However, if as is presently the case, the gold contango is (approximately) 5 per cent nominal, then the use of financial instruments to front-end gold revenue (eg, a flat forward) could bring forward cashflow at the cost of the contango (5 per cent) but increase value at the WACC of 10 per cent.

Table 2 shows that the net present value has been increased by $76 or 8 per cent simply by using a flat forward contract to front-end profits and cashflow. Clearly, the valuation potentially created...
by the use of different gold-based financial instruments can be significantly greater. Further, a decision to realise all profitable gold-based financial instruments in a particular year could significantly affect not only reported results but also the net present value.

Where cashflows have been materially affected by the use of gold-based financial instruments their cashflow effect should be assessed separately or, alternatively, the WACC discount rate should be adjusted. However, the level of financial disclosure by many listed gold producers is insufficient to enable this calculation to be made.

COMMODITY PRICE FLUCTUATIONS
The distortion of reported results and asset values is exaggerated where the underlying commodity is subject to significant price fluctuations. For example, assume that two gold projects are identical in all respects except that the output of Mine A was forward sold for three years when the spot price of gold was $500 an ounce (contango $50 per year) whereas the output of Mine B was forward sold when the spot price of gold was $600 an ounce (contango $60 per year). If both mines had identical production costs of, say, $350 an ounce then the reported results, and potentially the capital values (if based on a PER analysis), would be significantly different, as is shown in Table 3.

Similar distortions in reported results and capital values can result from changes in the prevailing level of interest rates, even if there is no change in the spot price of gold. The relationship between interest rates (LIBOR is considered most relevant) and the contango is shown in Figure 2.

Clearly, investors who rely on, or at least pay some regard to, earnings multiples could be materially misled about the true value of a company when in fact significant differences in reported profitability due to the effect of interest rate changes on the contango:

- will not generally be maintainable for many years; or
- may be the result of pure chance (eg, the date when borrowings for the mine commenced or were rolled over) rather than the result of the systematic application of logic (eg, sell forward when interest rates are high, reduce/eliminate or even buy back when interest rates are low).

Even when investors are assessing values (as they generally should) on the basis of net present value analysis, the discount rate applied to earnings from contango differences should be significantly different from that applied to the core mining earnings after eliminating the impact of financial instruments such as forward sales.

For companies which enter into forward contracts in US dollars, fluctuations in the exchange rate between the Australian and US dollar also affect the contango as reported in $A terms. All other things being equal (which, of course, in reality they rarely are) it is preferable to enter into forward sale agreements when the $A is high relative to the $US rather than when it is low.

INAPPROPRIATE USE OF LOW DISCOUNT RATE
The most appropriate valuation methodology for mining operations, due to the finite life of mines, widespread reporting of mine cash costs and the high level of upfront capital expenditure, is the discounted cashflow technique. It is common practice to use a low real discount rate in assessing the value of gold companies. Real discount rates of 5 per cent and less have been utilised by the market.

Obviously, where very low discount rates are being used, what otherwise might be a relatively small difference (say 1 or 2 per cent) between the interest rate implicit in a financial instrument and the weighted average cost of capital used in the discounted cash flow analysis can have a very significant impact on the value calculated.

One of the reasons behind the low discount rate used is that investors can have a "punt" on the gold price while investing in gold companies; that is, the volatility of the gold price affects the discount rate. If, however, a large proportion, if not all of, a gold company's future production is locked into forward prices through hedging, then this volatility will have little or no impact on these companies (unless they have substantial resources that become economic to mine as a result of the increase in the gold price). Therefore, to continue to use a low discount rate in valuing these companies for reasons of gold price volatility is generally erroneous.

A further reason for the low discount rate utilised in valuing gold companies is a perceived low level of both production risk and realisation risk. Although this perception is generally correct, there are risks inherent in undertaking a hedging program and considerable costs may be incurred. The use of an inappropriately low discount rate will not properly reflect the risks of these costs materialising.

There is an additional risk for those gold producers who make use of gold loans. The gold lease rate has been restricted to a fairly narrow band and a low level for the past decade. A range between 0.75 to 1.5 per cent has been typical with occasional spikes, when central banks embark on massive disposal programs, to 3 per cent. While these movements may seem small, in the context of discount rates of 5 per cent real or less, even relatively small movements in the gold lease fee are potentially significant and may materially affect assessed value.

AUSTRALIAN MINERS' COMPARATIVE POSITION
Australian gold producers have had a "love affair" with gold-based financial instruments over the past decade. Of the three major western gold producers, South Africa, the United States and Australia, Australia is by far the most
heavily committed to this market.

Jessica Cross, formerly of Rio Tinto Zinc, in a speech at the 1995 Financial Times gold conference at Lugano, pointed out the extent to which Australian gold producers were hedged by year of production and then compared this to US experience. The disparity was at its height in the early 1990s.

Hedging in Australia committed about 90 per cent of year one gold production to fixed prices, whereas only approximately 40 per cent of US production was sold forward into contracts in year one.

In more recent times the size of Australia's hedge book has diminished. However, Australia remains ahead of the US in its propensity to forward sell gold.

The comparison with South Africa is even more startling. South Africa has normally been considered "risk-friendly" in its practices. There was, for example, a stir in the financial press in late August 1995 when Gengold, a large South African gold producer, placed on the market the largest and longest forward gold-selling program ever established by a South African gold producer. This program forward sold 2.9 million ounces over a six-year period.

This is, however, small fry compared with the Australian scene. Australian companies have collectively forward sold (over a number of years) approximately 500 tonnes of gold, equivalent to some 21 per cent of total world annual production.

To an international investor looking for some upside from the volatility of the gold price, it would appear more attractive to invest in a South African or American gold company than in an Australian. Further, successful earnings

### Table 1: Australian Gold Companies – Effect Of Hedging

<table>
<thead>
<tr>
<th>Company</th>
<th>Realised average price per ounce ($)</th>
<th>Average spot price for year (1)</th>
<th>No. of ounces sold ('000)</th>
<th>Profit on hedging before tax ('000) (2) (3)</th>
<th>Profit before abnormals and tax ('000)</th>
<th>Hedging profit as % of total profit (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acacia Resources</td>
<td>552</td>
<td>525</td>
<td>126</td>
<td>3,402</td>
<td>29,694</td>
<td>11%</td>
</tr>
<tr>
<td>Australian Resources (4)</td>
<td>546</td>
<td>548</td>
<td>235</td>
<td>(470)</td>
<td>45,262</td>
<td>-1%</td>
</tr>
<tr>
<td>Burmine (5)</td>
<td>547</td>
<td>549</td>
<td>61</td>
<td>(81)</td>
<td>5,795</td>
<td>-1%</td>
</tr>
<tr>
<td>Central Norseman</td>
<td>581</td>
<td>525</td>
<td>78</td>
<td>4,368</td>
<td>10,666</td>
<td>-1%</td>
</tr>
<tr>
<td>Delta Gold</td>
<td>557</td>
<td>548</td>
<td>148</td>
<td>1,332</td>
<td>12,405</td>
<td>11%</td>
</tr>
<tr>
<td>Dominion Mining</td>
<td>563</td>
<td>548</td>
<td>362</td>
<td>4,430</td>
<td>4,290</td>
<td>-1%</td>
</tr>
<tr>
<td>Forrestania Gold</td>
<td>580</td>
<td>548</td>
<td>69</td>
<td>2,208</td>
<td>9,332</td>
<td>24%</td>
</tr>
<tr>
<td>Gold Mines of Kalgoorlie</td>
<td>574</td>
<td>548</td>
<td>438</td>
<td>11,388</td>
<td>39,453</td>
<td>29%</td>
</tr>
<tr>
<td>Kidston Gold Mines</td>
<td>530</td>
<td>525</td>
<td>209</td>
<td>1,045</td>
<td>15,633</td>
<td>7%</td>
</tr>
<tr>
<td>Mount Edon Gold Mines</td>
<td>572</td>
<td>548</td>
<td>61</td>
<td>1,464</td>
<td>11,786</td>
<td>12%</td>
</tr>
<tr>
<td>Mt Loyshon Gold Mines</td>
<td>604</td>
<td>548</td>
<td>229</td>
<td>12,824</td>
<td>42,891</td>
<td>30%</td>
</tr>
<tr>
<td>North Flinders Mines</td>
<td>585</td>
<td>548</td>
<td>206</td>
<td>7,622</td>
<td>44,789</td>
<td>17%</td>
</tr>
<tr>
<td>Placer Pacific</td>
<td>540</td>
<td>525</td>
<td>923</td>
<td>13,845</td>
<td>153,940</td>
<td>9%</td>
</tr>
<tr>
<td>Plutonic Resources</td>
<td>579</td>
<td>525</td>
<td>333</td>
<td>17,982</td>
<td>59,172</td>
<td>30%</td>
</tr>
<tr>
<td>Poseidon Gold</td>
<td>583</td>
<td>548</td>
<td>1,301</td>
<td>45,535</td>
<td>191,146</td>
<td>24%</td>
</tr>
<tr>
<td>Resolute Resources (6)</td>
<td>572</td>
<td>548</td>
<td>184</td>
<td>4,416</td>
<td>25,770</td>
<td>17%</td>
</tr>
<tr>
<td>Ross Mining</td>
<td>542</td>
<td>548</td>
<td>69</td>
<td>(414)</td>
<td>16,427</td>
<td>-3%</td>
</tr>
<tr>
<td>Sons of Gwalla</td>
<td>665</td>
<td>548</td>
<td>116</td>
<td>13,572</td>
<td>24,991</td>
<td>54%</td>
</tr>
<tr>
<td>Wiluna Mines</td>
<td>570</td>
<td>525</td>
<td>104</td>
<td>4,680</td>
<td>4,624</td>
<td>101%</td>
</tr>
</tbody>
</table>

**SUMMARY**

Average hedging profit as percentage of total profit of the top five companies (based on hedging profit percentage): 47 per cent.

Average hedging profit of all companies (excludes Poseidon subsidiaries already included in Poseidon Group numbers): 19 per cent.

**NOTES:**

2. Number of ounces times difference between average spot price and average realised price.
3. Difference reflects the timing of sales compared with the average price plus the hedging profits (including currency effect).
4. The company has confirmed that the difference between the realised price and average spot price results from timing rather than financial instruments.
5. Burmine accounts were for 17 months ending June 1994; ounces sold and profit have been time-apportioned to make comparable.
6. As advised by the company.
performances by some Australian companies may merely reflect a short-term run of good luck in entering into gold-based financial instruments at an opportune time, rather than being indicative of long-term value due to cost efficiencies and a top-class deposit.

Conversely, however, international investors who are less optimistic about the future price of gold or who are seeking a greater degree of "insurance" from their investments may well see Australian producers as more attractive investments. In particular, many Australian producers have made significant profits out of their hedging programs (eg, Plutonic $100 million, Posgold Group $364 million, Newcrest 2.5 million ounces forward sold at some $100 an ounce over the current spot price).

**SUMMARY**

- Gold companies use gold-based financial instruments for legitimate and economically sound purposes, in particular to facilitate financing and ensure a positive cashflow.
- Until recently, there were no Australian accounting standard requirements dealing with gold-based financial instruments. ED 65, when it becomes a standard, will significantly improve financial disclosure in the gold industry.
- Current accounting disclosure is inadequate to enable proper assessment of the true value of many gold companies. Better disclosure may result in a substantial re-rating of some listed gold companies.
- The use of gold-based financial instruments can materially distort the reported profits and affect the stockmarket value of gold companies. Flat forward contracts, in particular, distort annual profits and result in profits being front-ended.
- Some gold-based financial instruments have hidden costs and risks which are not widely understood.

- Changes in spot prices, the rate of interest and exchange rates can have a major impact on reported results and apparent value.
- The use of very low discount rates to value gold mining companies does not adequately reflect: inconsistencies between the interest rate implicit in gold-based financial instruments and the interest rate included in the discount rate; the true quality of some companies' earnings; the risks of hedging; or the fact that part of the volatility value suggested by the low discount rate has already been forward-sold away.

There are those who suggest that the marketplace will never be fully informed about the true value of gold companies until annual market value changes of gold-based financial instruments are fully reflected in reported results. However, conventional accounting thinking presently falls a long way short of such proposals.

**Table 2: Example of NPV distortion**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Future gold prices</strong></td>
<td>500</td>
<td>525</td>
<td>550</td>
<td>725</td>
</tr>
<tr>
<td>Costs</td>
<td>350</td>
<td>350</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Net profit</td>
<td>150</td>
<td>175</td>
<td>200</td>
<td>375</td>
</tr>
<tr>
<td>Less tax at 36%</td>
<td>54</td>
<td>63</td>
<td>72</td>
<td>135</td>
</tr>
<tr>
<td>(a) Net present value</td>
<td>956</td>
<td>112</td>
<td>128</td>
<td>240</td>
</tr>
<tr>
<td>discounted at WACC of 10%</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Gold prices based on flat forwards</td>
<td>612</td>
<td>612</td>
<td>612</td>
<td>612</td>
</tr>
<tr>
<td>Costs</td>
<td>350</td>
<td>350</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Net profit</td>
<td>262</td>
<td>262</td>
<td>262</td>
<td>262</td>
</tr>
<tr>
<td>Less tax at 36%</td>
<td>94</td>
<td>94</td>
<td>94</td>
<td>94</td>
</tr>
<tr>
<td>(b) Net present value</td>
<td>1,032</td>
<td>168</td>
<td>168</td>
<td>168</td>
</tr>
<tr>
<td>discounted at WACC of 10%</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Difference [(b) less (a)]</td>
<td>76</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
</tbody>
</table>

**NOTE:** Cost escalation ignored for the sake of simplicity. In reality, the flat forward price would be reduced for the effective interest rate charged by the financier. This has been ignored for the sake of simplicity.

**Table 3: Effect of gold price**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mine A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue</td>
<td>500</td>
<td>550</td>
<td>600</td>
</tr>
<tr>
<td>Cost</td>
<td>350</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Value at PER of 10</td>
<td>1,500</td>
<td>2,000</td>
<td>2,500</td>
</tr>
<tr>
<td>Mine B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue</td>
<td>600</td>
<td>660</td>
<td>720</td>
</tr>
<tr>
<td>Cost</td>
<td>350</td>
<td>350</td>
<td>350</td>
</tr>
<tr>
<td>Value at PER of 10</td>
<td>2,500</td>
<td>3,100</td>
<td>3,700</td>
</tr>
</tbody>
</table>

(Tax and cost escalation ignored for the sake of simplicity.)