

Accounting for financial instruments

After a long period of discussion, both the IASB and FASB have standards on derivatives.

IAS 39 Financial instruments: recognition & measurement, issued 1999, effective 2001.
SFAS 133 Accounting for derivative instruments and hedging activities, issued 1998.

Following these there was also a joint working group of various international standard setters, which produced a report in 2000, but the comments from the proposals are still being considered. Although there is some attempt at explanation in these documents, they tread very carefully over the many complicated issues which arise; and many of their decisions are *ad hoc* and are not the best way of understanding the issues underlying financial instruments. These notes are based on a very early but still useful discussion paper by the UK's ASB.

Derivatives and other financial instruments: Discussion Paper (Accounting Standards Board), July 1996

1. The basics

I - FINANCIAL AND REAL TRANSACTIONS

In economics it is common to distinguish between the real economy, in which the production of goods and services (real wealth) takes place and the financial economy. The essence of the financial sector in an economy is that it allows people to own, not only the real wealth which has been produced, but also the rights to those goods and services. The existence of money allows those who create real wealth to exchange it, not simply for other forms of real wealth, but for financial wealth (money).

One advantage of having a financial sector is that it allows people in the economy to defer their consumption, which is not always possible if assets are held in the form of real goods. In order to achieve this they will undertake a real contract; there will be an exchange of real wealth (goods or services) for financial wealth (cash or a promise of cash). In such economies, there are very few transactions in which real assets are exchanged for other real assets, even if the traders intend to exchange the cash for real assets immediately.

However, once financial wealth is acquired it may also be exchanged for other forms of financial wealth, through a financial contract. An example would be a loan contract in which the lender exchanges £100 now for £120 in the future.

II - THE TRADITIONAL FUNCTION OF THE COMPANY

Balance sheet of a company with equity finance only

Assets		Liabilities
<i>Current assets</i>		
Cash	20	
Stock	30	
Fixed assets	150	
		<i>Equity capital:</i>
		Initial share capital 100
		Reserves 80
		This year's P&L 20
	<hr/>	<hr/>
	200	200
	<hr/>	<hr/>

The simple traditional company raises money in financial markets through the issue of shares. These funds are invested in productive operations, in real assets in the economy. Those who provide finance invest in real markets through the medium of the company and its management. They do so because it makes sense for them. They do not have either (i) the special skills needed to organise and control the factors of production, or (ii) the special information needed to identify profitable opportunities.

III - ECONOMIC RISK

Of course, even in this simple operation, there is economic risk. This is concerned with the variability in cash flows arising from the company's investment in the real productive opportunities. In this simple company, one way in which the economic risk would be reported to shareholders would be through segmental reporting; this is used to identify the different product and geographical markets in which the company operates.

The accounts will also reflect some of the changes in a company's production circumstances as a consequence of the risks which it faces in its productive operations. For example, the accounts will recognise:

- the annual performance of the company through its profit and loss account;
- impairments in fixed assets (when the recoverable amount falls below the carrying amount);
- contingent payments which the company may need to make as a result of its operations;
- post balance sheet events.

In the above example, the shareholders have made a financial contract with the company. When the company was formed, they gave £100 to the company in exchange for future

dividend payments which the company will make. Subsequently, they have exchanged a further £80 for future dividends, by leaving profits in the company. However, the financial investment of the shareholders is risky, but this risk is entirely reflected in the economic risk of the company. The risk is reflected in how well the company will perform in its economic markets, and whether the real assets on the balance sheet are stated at their market value.¹

IV - FINANCIAL RISK

Not many companies are as simple as the one above, and typically they are much more involved with financial markets. Companies undertake financial transactions as well; the company exchanges a financial asset for another financial asset; or a financial liability for another financial liability. A few examples are given below.

The most obvious example is that companies often raise loans in order to finance operations. The company receives cash (being the principal borrowed) and promises to pay cash in the future (being the interest).

Another, not so obvious, example is debtors. When companies allow customers to pay for goods and services after delivery, this is in effect a loan to the customer. So a sale on credit is fact made up of two transactions: (1) a real transaction in which goods are sold for cash; (2) a financial transaction in which the cash is exchanged for a promise to pay the same amount at a future date.

Another financial transaction which a company may undertake is insuring its buildings against fire. In this case, cash is exchanged for a *conditional* cash receipt. A premium is paid by the company so that they will receive the value of the buildings in the event of it being destroyed by fire.

Financial transactions, just like real transactions, give rise to risk. For example, some of the company's debts may not get paid in full. And when this event is anticipated, then a provision is made and charged to the profit and loss account (Cr Provision for doubtful debts, Dr P&L). So what is all the fuss about financial risk? What is so special about it? This is considered next.

2. What's all the fuss about financial risk?

I - INCREASING COMPANY INVOLVEMENT IN FINANCIAL MARKETS

Increasingly, companies are getting more and more involved in financial markets because it is becoming essential to their survival. Competitive forces are requiring it; either in the raising of capital for their operations or in the selling their goods in the product markets. Let's look at a few examples.

Raising finance

Companies are getting more and more involved in financial markets because they need to raise funds in the cheapest way. Raising funds is not now simply a choice between debt and equity; more complicated instruments are required by investors. For many years, companies have found it useful to issue convertible securities, in which fixed interest debt can be exchanged, at the investor's option, for equity shares. This gives the investor a fixed income stream if the

¹ Even this simple company is in fact affected by what happens in financial markets. Inflation will affect the purchasing power of the cash it holds, and the level of interest rates will affect the demand for its products. However, these are of secondary importance in relation to the financial risk to be discussed here.

performance of the company is poor, but a chance to participate in the profits if the company does well. Companies may also choose the type of debt which it issues; it might be fixed interest, but it may also be debt in which the rate of interest varies with market conditions.

Companies not only have a variety of choice concerning the type of instrument to use in raising funds, they also have a choice of currency. For example, a company may raise its finance in a foreign currency because of (a) lower rates of interest in that country and (b) its expectations about the rate of exchange between sterling and the local currency. For example, a company may raise funds in French Francs not only because interest rates may be expected to be lower in France than in the UK, but also because sterling is expected to appreciate against the French Franc; therefore the sterling cost of the payments in French Francs will be lower as the £ sterling appreciates against the FFr.

Active fund management

Instead of raising finance and then accepting the cost of the capital as given, some companies are continuously re-appraising the costs of different forms of capital and will exchange one form of security for another, depending on their expectations. For example, a company may take out a fixed interest loan, but subsequently may believe that interest rates are going to fall. They would enter a transaction in which the fixed interest payments are exchanged for variable payments in the belief that the payments would be lower.

These companies are in effect taking a view about future market conditions, and are speculating against other traders in the market. They therefore have some exposure to the risks. For example, a company takes out a variable interest loan; however, subsequently, rates rise dramatically and the company wishes to switch to fixed interest finance. If other traders in the market also expect rates to continue to rise, the price the company will need to pay for the switch will simply reflect the benefits to be gained; and so the company would be as well off sticking with the variable rate arrangement.

International sales

Companies have also become involved in financial markets as a result of the operational decisions. For example, when a company sells its products in the USA, then the products may be priced in terms of dollars. A sale on credit is then made up of three components:

- a real transaction, the sale of goods, on credit, for dollars;
- a financial transaction, a loan to the customer, in dollars; and
- a financial transaction, converting the dollars in to sterling when the dollar loan is paid.

So apart from facing the economic risk of whether sales will take place, the company has additional financial risks:

- a debt risk, concerning whether the customer will pay, in dollars; and
- a foreign exchange risk, concerning the rate of exchange between dollars and sterling when payment is made. It is this risk that may be reduced by purchasing a financial instrument, namely the future sale of dollars (for sterling) at the time when the customer is anticipated to pay the dollars.

The situation is even more complicated when a company purchases its raw material in one foreign currency and sells in another. For example, a UK company may buy some of its raw

materials in Malaysian Ringgit and sell its product in German Marks.

II - HEDGING: TAKING OUT INSURANCE TO REDUCE FINANCIAL RISK

Rather than simply accepting financial risk or continuously appraising their risk position through active fund management, there are some companies which want to be sure that they reduce their exposure to movements in financial markets. Therefore, when faced with an unavoidable risk in a financial market, they take out insurance; that is they hedge.

For example, a company that raises loan in a foreign currency may do so because of the low interest rates. However, when the loan needs to be paid back, sterling may have weakened and the liability in terms of sterling may be much larger than was expected. One way round this is to contract to buy the currency at the same time the loan is taken out. Of course there is a price to be paid for this. The rate at which the company can buy foreign currency for the future (the forward rate) will reflect the market's expectations about the future. If there is some general feeling that the sterling will weaken then the company will have to pay more sterling for delivery in the future than if delivery were now. However, at least the company has some certainty. Whatever happens to sterling, then there is no risk; they will be able to pay off the loan in the foreign currency.

III - TYPES OF RISK WITH FINANCIAL INSTRUMENTS

The accounting for some risks with financial instruments is already well established; they are credit risk and liquidity risk.

Credit risk is the chance that a party with whom the company has a financial contract will not honour their promises. For example: the risk that a debtor will not pay; the risk that cash held by the company's bank or cash put on short term deposit will not be repaid.

If there is any credit risk, then the accounting treatment is determined by prudence which indicates that the amount at risk should be deducted from the carrying value of the asset and charged to the profit and loss account.

Liquidity risk relates to the risk that the company itself will not be able to meet its obligations under its financial contracts. There are, of course, many reasons why this may be so. Liquidity risk is concerned with the likelihood that although the company has sufficient assets to meet its obligations, they are not in a sufficiently liquid form. For example, if all the company's assets are tied up in its productive operations (fixed assets, stock, debtors) then it may not be able to meet its financial commitments to its creditors such as the Inland Revenue.

If there is sufficient liquidity risk, then the creditors may force the company in to liquidation in order to recover the amounts owing to them. Such action is a potential threat to the company's operations, and the accounting treatment is that auditors will indicate that the company is not a going concern and will adjust the value of the assets to their selling value.

The additional types of financial risk which are highlighted by the emergence of financial instruments are cash flow risk and market price risk²

Cash flow risk is the risk that the payments made or received by a company under a financial contract will vary. For example: if a company borrows funds under a variable interest loan

² Market price risk is a term used by the ASB. The IASB and FASB refer to this risk as fair value risk.

agreement, then the interest payable on the loan will vary with market interest rates; if a company sells overseas and prices its product in the foreign currency, then the amount it receives *in sterling* from a sale will vary according to the rate of exchange between sterling and the foreign currency. This type of risk can be seen as affecting the profit and loss account.

Market price risk is the risk that the market (or fair) value of the financial instrument will change. For example, if a company raises a fixed interest loan, then the market value of the loan (the present value of the liability) will change with market interest rates; as market rates rise, the value of the loan will fall. Another example is the raising of funds on foreign markets in the foreign currency; the liability *in sterling* will vary with the exchange rate between sterling and the foreign currency. This type of risk can be seen as affecting the balance sheet.

3. Key issues

I - WHAT SHOULD BE CLASSIFIED AS A FINANCIAL INSTRUMENT?

What types of financial instrument should be treated together? Do we need to distinguish between different types of financial instrument? For example, should the classification depend on whether the item is a derivative or a non derivative?

Another problem concerns contracts for raw material commodities such as tea, coffee, silver and gold. Strictly, they are not financial instruments because they are contracts to deliver or supply goods, but they can give rise to much the same risks. In many commodity markets, it is possible to take risk positions which are similar to those in financial markets. Generally, regulators have wanted to include commodity contracts only to the extent that settlement can take place in cash or a financial instrument.

One approach would be to deal with all financial instruments together. Although this is intellectually tempting, the substantial disadvantage is that the scope of the project would become very wide; proposals and agreement are then more difficult to achieve.

As we mention above, simple financial instruments such as loans, debtors and creditors have always been a part of company activity and there are well accepted (if imperfect) accounting treatments. For example, *FRS 4 Capital instruments* deals with the treatment of debt finance. The treatment for a few of the more complicated financial contracts has also been agreed; *SSAP 21 Accounting for leases and hire purchase contracts* deals with leases and *FRS 17 Retirement benefits* deals with pension costs obligations.

Therefore, a more practical approach is to concentrate on the instruments which have given rise to the most problems. This makes sense since the goal of financial reporting is to provide shareholders and others with information about the company. If there are already accepted practices for dealing with some financial instruments, it is sensible to concentrate on those for which no currently acceptable practice exists, particularly if these instruments give rise to the largest risk. This seems to have been the approach adopted in SFAS 133 and the IAS 39.

II - DISCLOSURE OR MEASUREMENT?

Another issue is whether the financial reporting needs of investors should be met by disclosure. Generally measurement is preferred to disclosure since investors wish to assess the performance of the company. Sometimes where measurement issues are complicated, commentators suggest that disclosures be made so that investors can make their own assessments of company performance; but of course, this is *exactly* the time when investors are typically unable to do it for themselves. If accountants cannot decide on suitable rules to measure performance, there is little hope that investors can do this by themselves.

In the case of financial instruments, measurement rules may take some time to develop and many regulators have taken the view that disclosure is better than nothing. Therefore they have first issued an interim disclosure standard before finalising their views on measurement. For example, the IASC issued *IAS 32 Financial instruments: disclosure and presentation* in March 1995 prior to publishing its views on measurement with its (joint with CICA) discussion paper in March 1997 and its exposure draft in June 1998. In the UK the only statement on the subject, *FRS 13 Derivatives and other financial instruments: disclosures*, deals only with disclosure.

III - MARKET VALUE OR HISTORICAL COST?

In traditional areas of accounting, historical cost is used sometimes with the option of using current values (for example in the area of fixed asset accounting). The problem with using historical cost in financial instruments is that the cost of the instrument is relatively small to its potential impact on performance. For example, a company can swap a fixed interest security for one with variable interest payments for very little cost; and yet the impact of this arrangement on the cash flow risk can be large if interest rates rise substantially. One possibility might be to retain historical cost for those instruments giving rise to relatively low levels of risk, with market values being used for the rest.

A further advantage of keeping track of current values of financial instruments is that they are very close to cash. A historical cost system would allow companies to choose which gains to realise and to report in the accounts. Generally, regulators have preferred market values to historical cost.

IV - DOES THE INTENTION OF HOW THE INSTRUMENT IS EXPECTED TO BE USED AFFECT THE ACCOUNTING TREATMENT?

Should the treatment of any gains and losses differ according to whether or not the instrument is held for trading or for investment? Should the treatment of any gains and losses differ according to whether or not the instrument is expected to be held to maturity or not?

V - DOES THE POSITION IN THE ACCOUNTS HELP TO DETERMINE THE TREATMENT?

For example, should the treatment depend on whether the item is an asset or a liability.

Should the treatment depend on whether the item gives rise to a gain or a loss? Should any loss-gain be recognised:

- in the profit and loss account; or
- in the Statement of Total Recognised Gains and Losses (STRGL) or its international equivalent; and
- should recycling from the STRGL to the P&L should be allowed on realisation.

VI - SHOULD HEDGING BE RECOGNISED ?

The basics of hedging

As mentioned above, a reason why companies hold certain financial instruments is to offset risks held in other parts of the company's portfolio. For example, when a company invests abroad the value of the investment will vary with the value of the foreign currency; this market value risk can be important particularly if funds for the investment have been raised in sterling. A rise in sterling (relative to the foreign currency) means that the value of the asset is falling, whilst the liability remains the same. Therefore many companies may finance the purchase of an overseas investment by raising the funds in the same foreign currency as the investment. This means that any change in the currency will affect both the value of the asset and the liability. That is, the foreign currency loan is a hedging instrument against the foreign currency investment (the hedged item).

This means that the hedged item and the hedging instrument should perhaps be treated together in some sense. Hedge accounting is the process by which the hedged item and the hedging instrument are "kept together" and treated as one. Hedge accounting is needed because of three main situations.

As a correction for measurement differences.

If both the hedged item and the hedging instrument are measured at market value, any gains or losses on the hedged item and the hedging instrument can be treated together³.

However, it may be that the gains or losses on the item are recognised at a different time to those on the instrument. For example the item may be measured at historical cost (with any gain or loss being recognised only on realisation) and the hedge might be measured at market value. In this case, hedge accounting would ensure that the gain or loss on the hedging instrument is kept to one side until the item is realised. But where? If the gain/loss is kept in reserves, this has all the problems of reserve accounting. If it is kept within assets and liabilities, then the result is counter-intuitive; gains will land up as a liability and losses will land up as assets.

An example is where a company invests £100 in the purchase of 100 shares in September 2001. These are valued at cost (£1) in the balance sheet. During November 2001, the price rises to £3 a share. The company believes that the share price may rise further over December and January, but will fall after that. In order to protect its gains so far, the company purchases an option to sell 100 of the shares at a fixed price of £3 during December and January. This financial instrument will be in the December 2001 balance sheet at fair value; consequently, if the price of the share falls, then the value of the option in the balance sheet will rise. Since the purpose of the option is to lock in the gains on the share, it would make some sense to hold over any changes in the option value in the December balance sheet until the shares are realised during January 2002 when the shares and the option can be treated together.

As a correction for recognition differences

Sometimes the hedged item is not even recognised by the accounting system. For example, if a company has an operating lease denominated in a foreign currency, then the liabilities should recognise the minimum payments (*IAS 17 Leases*). However, it may be that the company intends to lease longer than this and has set up a hedge to cover the risk of variation in the exchange rate. Another example is where a company is making a provision for future

³ Of course it is possible that one is treated in the profit and loss account and the other is treated in the STRGL. This is one reason why a standard on comprehensive income is being developed.

expenditure which is not recognised as a liability in the accounts. In these cases, hedge accounting would hold over any gains or losses on the hedge until the payments are made.

For example, during 2001 a company whose accounts are drawn up in £ sterling needs to pay \$100 on an operating lease contract in 2005. Although the spot is \$1.4=£1, the forward rate for delivery on 2005 is \$1.3=£1; that is the dollar is expected to rise against the pound.

2001		Balance sheet date 2001		Payment date 2005
\$ to £ spot rate	\$1.4=£1	\$1.2=£1		\$100
\$ to £ forward rate for 2005 delivery	\$1.3=£1	Buy dollars, -100/1.3	-76.92	
		Sell dollars, +100/1.2	83.33	
		Gain	6.41	

In order to fix its 2005 payment in sterling, it buys dollars in the forward market. The problem is that the \$100 payment on the operating lease is not recognised as a liability in the accounts because it is too far in to the future. But the forward contract will be marked to market in the 2001 balance sheet. At the balance sheet date the dollar has appreciated significantly since the spot rate is now \$1.2= £1. The gain on the contract will be 6.41, from buying dollars at the forward rate of 1.3 and selling them at 1.2, the spot rate⁴. Under hedge accounting, the value of this future potential gain would be kept to one side until the payment of \$100 is made.

As a correction for existence differences

A further problem arises when the hedge relates to a transaction which has yet to occur. For example, a company strongly anticipates that during January to September 2002 it will sell \$200m worth of goods in the USA. In order to be certain about the value of those future dollars it enters in to a contract to sell \$200m between January and September at the rate of £1=\$1.6.

If the dollar falls to £1=\$1.7 at the balance sheet date (December 2001) then the hedging instrument will record the market value of the potential future gain of 7.35 from selling dollars at 1.6 and buying dollars at 1.7 as shown below.

⁴ Of course, this transaction could not actually be executed because the forward contract is for 2005, but the accounts would include an estimate of the value of the likely gain when the contract could be executed.

Purchase of forward contract	Balance sheet date, December 2001		September 2002
Contract to sell \$200 @ \$1.6= £1 in September 2002	Spot: \$1.7= £1		
	Sell dollars, + 200/1.6	125.00	
	Buy dollars, -200/1.7	-117.65	
	Gain	7.35	

Therefore it would make sense to put aside the gain on the financial contract (through hedge accounting) until the sales are complete. Hedge accounting is needed because the hedged item does not yet exist!

The argument against hedge accounting

Hedge accounting is a form of matching. It's much the same as recognising a sale in one period (because the costs have been recognised in that period) even though the cash has not been collected. But there is also a case against hedging, and not dealing with the two transactions together. This is called "telling it as it is".

Consider the above example and what happens if the original expectations are not fulfilled. What happens if, at the December balance sheet date, sterling falls to \$1.5 against the dollar and between January and September, and the company sells only \$150m of goods. At the balance sheet date, the hedging instrument will record a loss of $[200 \div 1.6] - [200 \div 1.5]$ from selling dollars at \$1.6 and buying dollars at \$1.5. Part of this loss can be offset against the sale of the goods in the next financial year, but there will be a loss of $[50 \div 1.6] - [50 \div 1.5]$ which will have to be borne by the company. The argument against hedge accounting is that it would have been better to recognise the loss on the financial contract earlier rather than at the time of the sale of the goods, since we now know that the part of the financial contract has nothing to do with the sale!

A further practical problem of hedge accounting is the practical one; how do we know that any given instruments is held as a hedge for a given item; is management intent enough; what happens if only part of the risk of the item is hedged?

4. Cash flow risk and market price (fair value) risk

Two of the concepts which are mentioned frequently are cash flow and market price risk. It is also stated that they are inversely related, and it is the purpose of this section to explore the relationship between them in the context of a simple example of a loan⁵. It is a bit long winded, but it makes clear the economic relationship and the accounting choices which are available with financial instruments.

⁵In fact, in both SFAS 133 and IAS 39, loans are excluded from the definition of financial instruments, since their accounting is well established. However, the example is a simple way of illustrating the principles at work.

I - THE FACTS

The facts of the example are that company borrows £100 on 1 January 1998 over 4 years, when the interest rate is 7%. Interest payments are annual and the principal is due with the final interest payment.

Company borrowing £100 over 4 years at 7%					
	<i>1 Jan 98</i>	<i>31 Dec 98</i>	<i>31 Dec 99</i>	<i>31 Dec 2000</i>	<i>31 Dec 2001</i>
Interest rate	Present value of repayments	Repayments			
0.07	100	7	7	7	107

The discounted present value of the repayments at the current rate of interest of 7% is 100. This is as expected, since the company has just received 100.

If immediately after the borrowing is received, the interest rate rises to 8%, then the present value of the repayments that the company has agreed to make are reduced to 96.69.

The present value of loan repayments when the interest rate rises to 8%					
	<i>1 Jan 98</i>	<i>31 Dec 98</i>	<i>31 Dec 99</i>	<i>31 Dec 2000</i>	<i>31 Dec 2001</i>
Interest rate	Present value of repayments	Repayments			
0.08	96.69	7	7	7	107

II - THE ECONOMICS OF THE INTEREST RATE CHANGE

What does this mean for the company? It means that if, for example, the company had to close down immediately, then it could arrange for the lender to receive the future agreed payments (from 1998 to 2001), by paying a third party 96.69 now. But it has just received 100 and therefore would make a gain of 3.31.

However, at the 1 Jan 1998, the gain is in fact unrealised, since the company is not going to close down. But it should be noted that although the company is not going to close down, it may immediately realise either the gain with very little trouble; in fact, it would take just one phone call.

The company could immediately lend 96.69 at the current market rate of 8%, for the same period. From the interest received, it would pay the interest on its borrowing, and lend the remainder. At the end of the 4 years, the amount accumulated plus the principal repayment would just be enough to pay off the original borrowing. Again, the company would have received

100 and paid out only 96.69 giving a gain of 3.31. This can be seen as follows.

Cash flows if gain is realised immediately					
	<i>1 Jan 98</i>	<i>31 Dec 98</i>	<i>31 Dec 99</i>	<i>31 Dec 2000</i>	<i>31 Dec 2001</i>
Interest rate	Cash flows from borrowing & lending				
0.08	Original borrowing				
	100	-7	-7	-7	-107
	Initial lending				
	-96.69	7.74	7.74	7.74	7.74
					96.69
	Additional lending				Terminal value
		-0.74	-0.74	-0.74	2.58
Net cash flows	3.31	0.00	0.00	0.00	0.00

In the example above, we show how the company can immediately realise the gain resulting from an interest rate change from 7% to 8%. But if the company does this, then it should be noted that although a gain of 3.31 will have been made, it will no longer have a loan to fund its operations. Although it received a loan of 100, it also made a loan of 96.69. Therefore, if the company wanted the funding for its operations, it would have to raise another loan at the new rate of interest, 8%. Therefore, the price to be paid for realising the gain of 3.31 immediately is the extra interest to be paid on a new loan at 8% instead of 7%; and this turns out to be an informative way of looking at the economics of the situation.

The situation is that the company has raised 100 at 7%. When the rate rises to 8%, it can do one of 2 things:

Either, **it can immediately realise the capital gain of 3.31**. If the company does this, then it will no longer have a loan. In order to be in the same position as it was before, it will need to raise further funds at 8%.

Or, **it do can nothing, taking the gain through the profit and loss account**. If the company does this, then compared to other companies raising loans at 8%, it will have larger profits because the interest charge in the profit and loss will be 7% instead of 8%.

But the company cannot do both. It cannot have the gain of 3.31 *and* show lower interest payments in the profit and loss. Given that taking the capital gain or having lower interest payments are different ways of taking advantage of the company's fortune in raising funds at below the current market rate (ie at 7% rather than 8%), it is not then surprising to find out that the gain of 3.31 is exactly equal to the present value of the future savings in the profit and loss

account if the loan is retained. That is, whichever way the gain is taken, its present value is 3.31. This can be seen below.

Taking the gain through the profit and loss account is the same present value as taking it immediately					
	<i>1 Jan 98</i>	<i>31 Dec 98</i>	<i>31 Dec 99</i>	<i>31 Dec 2000</i>	<i>31 Dec 2001</i>
Interest rate	Present value of repayments	Repayments			
0.08	100.00	8	8	8	108
	96.69	7	7	7	107
	3.31	1	1	1	1

At the new rate of interest, 8%, the savings which arise if the company raises money at 7% are 3.31. The savings are the difference between the interest payments the company would pay if it raised funds at 8%, and those it actually pays at 7%; the present value of these savings are 3.31, exactly equal to the amount when the company decides to immediately realise the gain due to the rise in interest rate.

Consequently, it is clear that whatever the company decides to do, it will realise the gain. Either:

it will realise the gain immediately by loaning out 96.69 as we show above; or

it will realise the gain over time, through lower charges to the profit and loss account during the life of the loan.

5. Accounting for the interest rate change

The situation is that the company is in a better position than companies which have raised funding at the current market rate of 8%. The problem is how to show this. There are two main issues here.

Should the treatment depend on what the company does, whether it takes the gain immediately or over the life of the loan with lower than market interest payments?

Should the gain be shown in the profit and loss account or in reserves?

These are considered in turn.

I - THE TREATMENT OF THE GAIN

If companies were allowed to recognise the gain as they wished, some might take it over time though the profit and loss as follows.

Gains taken through lower than market rate, over the life of the loan				y/e Dec 1998	
Assets			Liabilities		
Cash			Reserves		
	Interest paid	-7	This year's P&L		
				Interest paid	-7

Others might take it as a one off capital gain, as below.

Gains taken immediately				y/e Dec 1998	
Assets			Liabilities		
Cash	Receipt of loan (1Jan)	100	LT liabilities	Loan (1Jan, @7%)	100
	Loan made (31Dec)	-96.69		Reduction in present value of loan when rates rise to 8%	-3.31
	Interest paid	-8	Reserves		
Debtors	Loan made (31Dec)	96.69	This year's P&L		
				Interest paid	-8
				Gain received	3.31

If the accounting treatment allowed both methods, it would make it difficult to compare company performance. In the year of the change in interest rates, some companies taking the gain immediately would appear more profitable than others, but this would reverse in the following years. Although this is not desirable, it is exactly what happens in IAS 16 Plant, property and equipment. Companies having assets which increase in value, can revalue their assets; in this case, they are taking the gain in one year, and then having a higher depreciation charge in the P&L as if they had purchased the asset at the higher price. They can also retain the historic value; in this case, they are taking the gain through a lower depreciation charge for the life of the asset.

Some discussion during the development of the standards suggest that the gain should not be recognised as "companies are going to retain the loan for its entire life". This misses the point that companies cannot escape benefiting from the interest rate change. The real issue concerns whether the profit and loss or the balance sheet is more important. For example, Ron Paterson⁶ criticises the Joint Working Group draft on Financial Instruments for wishing to recognise the gain immediately. His criticism boils down to pointing out that interest rate changes do not impact the P&L when the company has fixed interest loan. This is true in that the cash flows (interest payments) do not change. However, there is a profit and loss impact in comparison with other companies raising funds at the new rate.

II - IN THE PROFIT AND LOSS ACCOUNT OR IN RESERVES?

The answer to this question will depend on what you think the profit and loss account is for. One school of thought is that the difference between P&L and Reserves relates to the permanence

⁶ Accountancy, July 2001, page 100

of the transaction. Another interpretation is that the separation relates to whether the transaction is operational or financial. Some commentators believe that both views are correct.

This issue is likely to become less important when a new standard on comprehensive income is developed. The statement of Comprehensive income will include all aspects of performance (operational, financial, permanent and transitory) and it will be easier for investors to add their own beliefs about permanence to the information contained in the statement.