



CURRENT ENTRY VALUE

5

OBJECTIVES After studying this chapter you should be able to:

- explain the effects and implications of using current entry values to record the possession and usage of economic resources
- carry out the necessary technical manipulation
- explain the strengths, usefulness and weaknesses of the resulting information.

INTRODUCTION

The ideas of the previous chapter are of fundamental importance. But they are inherently highly subjective to apply. Of crucial importance from the point of view of accounting thinking, they are far removed from the marketplace. All 18 of the value concepts considered by Edwards and Bell (1961) (see Chapter 4) relate directly to actual or expected market values. One of these, past entry values, i.e. the historical cost (HC) of the initial inputs, is the traditional process which we summarized in Chapter 1.

Four of the remaining five are current values, two being current entry values and two current exit values. We look first at current entry values. Remember that entry values represent a market buying price, i.e. current entry values represent a cost-based process (but not a historical cost-based process).

BACK TO BASICS

ACTIVITY 5.1

On 1 January, Mr Jones starts off in business with 100 cents. His transactions are as follows:

2 January	Buys one bag of sugar for 40c
4 January	Sells one bag of sugar for 50c
5 January	Buys one bag of sugar for 44c

Prepare balance sheets on 2 January and on 6 January, and a P&L account for the intervening period.

Activity feedback

This should not present major problems.

Balance sheet 2 January

Inventory	40	Capital	100
Cash	60		
	<u>100c</u>		<u>100c</u>

Balance sheet 6 January

Inventory	44	Capital	110
Cash	66		
	<u>110c</u>		<u>110c</u>

Profit and loss

Sales	50
Cost of sales	<u>40</u>
	<u>10c</u>

In terms of our very general equation, $W_1 + P - D = W_2$:

$$100 + 10 - 0 = 110$$

So Jones has made a profit of 10c. This, of course, is the usual accounting approach. But it is important to notice that there are really two stages in the progress from 2 January to 6 January. Between 2 January and the evening of 4 January, after the sale was made, Jones has turned 100c into 110c. On 4 January he actually has physically 110c and nothing else. Then, between the

evening of 4 January and 6 January he has changed 110c plus nothing into 66c plus a bag of sugar. Since the second bag of sugar cost 44c and we are recording all our resources at original, or historical, cost, it necessarily follows that we show total resources of 110c on both 4 January and 6 January. The 4 January balance sheet was as follows:

Balance sheet 4 January

Cash	110	Capital	110
	<u>110c</u>		<u>110c</u>

Comparing this 4 January position with the 2 January and 6 January balance sheets confirms that:

- 1 A profit of 10c was made between 2 January and 4 January.
- 2 No profit or loss at all was made between 4 January and 6 January.

Jones, of course, is running a business. He also has to live. So he decides to withdraw the business profit for his own spending purposes.

If he takes 10c out then, by the accountant's definition, he has still left in all the money originally put in. This 10c must therefore be genuine gain, so it can obviously be withdrawn from the business without in any way reducing the resources of the business. So we can rewrite our 6 January sheet, after the withdrawal, as follows:

Balance sheet 6 January

Inventory	44	Capital	100
Cash	56		
	<u>100c</u>		<u>100c</u>

Our equation now becomes:

$$100 + 10 - 10 = 100$$

ACTIVITY 5.2

Compare the physical possessions of Jones' business on 2 January with those on 5 January, assuming still that Jones withdraws his 10c profit.

Activity feedback

In physical terms the business possesses: On 2 January:

- 1 one bag of sugar
- 2 a pile of 60 shiny bright 1c pieces.

On 6 January:

- 1 one bag of sugar
- 2 a pile of 56 shiny bright 1c pieces.

Now, by simple subtraction, we can compare the physical position between 2 January and 6 January in terms both of sugar and of shiny bright 1c pieces. In terms of sugar, we are comparing one bag with one bag.

(Continued)

ACTIVITY 5.2 (Continued)

There is no difference. In terms of bags of sugar, the business is exactly the same size as it was before. In terms of shiny bright 1c pieces, the business had 60 on 2 January, and 56 on 6 January. There is therefore a reduction of four shiny bright 1c pieces. In terms of shiny bright 1c pieces the business has got smaller by four pieces.

Something must be wrong somewhere. The accountant has shown us that there is a 'genuine gain' of 10c over and above the original 100c capital put in. Jones has therefore withdrawn the 10c, and yet the result is not that the business is 'back where it started'. The result is that the business has got smaller to the tune of 4c.

Surely, either the physical comparison is wrong or the profit and loss statement prepared in Activity 5.1 is wrong. If the physical comparison is correct (try it yourself) then the 'genuine gain' of 10 per cent mentioned is quite simply not genuine! Further thinking is needed. On 4 January we had, in physical terms, as we have already seen, a pile of 110 shiny bright 1c pieces. We have also already seen that the profit of 10c was made by 4 January. It therefore follows that the accountant's statement at 4 January is identical with the actual physical position at that date. The accountant says cash is 110c and profit is 10c. The physical position shows a pile of 110 shiny bright 1c pieces. It is obvious that since the physical position and the accounting position were identical as at 4 January the divergence, the difference between the two, must have occurred after 4 January. But only one event has happened after 4 January. This was the purchase of the second bag of sugar on 5 January. So the problem must be something to do with the accounting treatment of the second bag.

Question: Why did Jones have to buy a second bag of sugar for 44c? The answer is because he has sold the first bag of sugar (for 50c). He would not have

bought the second bag of sugar had he not sold the first one. It seems, therefore, that the selling of the first bag of sugar and the buying of the second bag of sugar are really two parts of one complete action. If he does not sell the first bag of sugar and does not buy the second bag of sugar, he obviously ends up with the same amount of cash on 6 January as he had on 2 January, i.e. 60c. If he does sell the first bag of sugar for 50c and does buy the second bag of sugar for 44c, he will end up with 6c more cash on 6 January than he had on 2 January. So the result of selling bag 1 and buying bag 2, as compared with doing neither, is a gain of 6c.

We can show this as follows:

Sales	50c
Costs incurred as a direct result of making sale	44c
Profit	6c

We are now suggesting a profit of 6c, as compared with the earlier suggestion of 10c. This will presumably reduce the maximum drawing payable by $10c - 6c = 4c$. And remember, we argued earlier that the error, the difference between the original accountant's calculations and physical reality, the amount by which Jones' business had unintentionally 'got smaller', was 4c. We seem to have corrected the error exactly. We have produced an accounting calculation that agrees with actual physical events:

$$W_1 + P - D = W_2$$

$$100 + 6 - 6 = 100$$

THE BUSINESS ITSELF

It is essential to remember the purpose and nature of Jones' business. It is a sugar-selling business. The essence of our conclusion is a very simple one. It is that the cost of sales figure that we should relate to any particular sale should be calculated as equal to the *cost of the resulting replacement*, assuming that the replacement occurs immediately. The cost of sales figure should not be related to the cost of the item actually sold. This raises a difficulty. In order to be able to transfer this higher replacement figure out of the balance sheet and into the profit and loss calculation, the higher replacement figure must obviously first be recorded in the balance sheet. The complete picture is most easily seen by a series of balance sheets:

1 January			
Cash	<u>100</u>	Capital	<u>100</u>
	<u>100c</u>		<u>100c</u>
2 January			
Sugar	40	Capital	100
Cash	<u>60</u>		
	<u>100c</u>		<u>100c</u>
3 January			
Sugar (1st bag)	44	Capital	100
Cash	<u>60</u>	Gain	4
	<u>104c</u>		<u>104c</u>
4 January			
Cash	110	Capital	100
		Gain	4
		Profit	6
	<u>110c</u>		<u>110c</u>
5 January			
Sugar (2nd bag)	44	Capital	100
		Gain	4
Cash	<u>66</u>	Profit	6
	<u>110c</u>		<u>110c</u>

Now, we must choose our words carefully. It is perfectly correct to say that Jones began his business on 1 January with 100c. But that is not the point. The point is that Jones began the business on 1 January with *60c plus the capacity to buy a bag of sugar*. Jones is setting up in business for the purpose of acquiring and selling bags of sugar. Therefore, we need to evaluate his position at any time in terms of his capacity, his ability, to carry out his purpose. In other words, his capacity to acquire and sell sugar.

So on 1 January, Jones had the capacity to buy one bag of sugar (for 40c) plus also 60c. On 4 January, Jones had 110c. More usefully, we can say that on 4 January, Jones had the capacity to buy one bag of sugar (for 44c), plus also 66c. Comparing the 4 January position with the 1 January position clearly shows that Jones has:

- 1 maintained his capacity to buy one bag of sugar, and
- 2 gained six shiny bright 1c pieces.

This calculation agrees with the real physical events. Jones has:

- 1 six more shiny bright 1c pieces, and
- 2 a statement from his accountant giving a figure for profit of 6c.

ACTIVITY 5.3

Open individual accounts to reflect Jones' balance sheet on 2 January (as before). Record in these and any other necessary accounts the increase in inventory figure leading to the 3 January balance sheet, then the full effect of the sales transaction on 4 January.

Activity feedback

We have on 2 January, the inventory T account shows a debit of 40c and on 3 January, a total debit of 44c.

In full we have on 2 January:

<u>Inventory</u>	<u>Cash</u>	<u>Capital</u>
40	60	100

On 3 January, we increase the inventory so as to bring the recorded figure up to the current level of replacement cost (RC). Thus there is a debit of 4c to inventory and a credit of 4c somewhere else. This credit cannot be to cash, neither can it be to capital, so it must be to a new
(Continued)

ACTIVITY 5.3 (Continued)

T account. Now this 4c represents a gain that has arisen as a result of holding our inventory over a period of time. We did not sell it, but we held it over a period during which the replacement cost rose. We shall more formally refer to this gain as a holding gain. So on 3 January:

Inventory		Cash	
Bal b/f	40	Bal b/f	60
Holding gain	4		
	44 Bal c/d		
	44		
Bal b/f	44		

Capital		Holding gain	
	100 Bal b/f		4 Inventory

This enables us to show on 4 January:

Inventory		Cash	
Bal b/f	44	Bal b/f	60
	44 to P&L	To P&L	50

Capital		Holding gain	
	100 Bal b/f		4 Bal b/f

P&L account			
Inventory sold	44	50 Cash sales	
Bal c/d	6		
	50	50	
		6 Bal b/f	

On the assumptions that Jones wishes to carry on selling and buying bags of sugar, this is obviously the correct answer.

We have solved a major problem. We have shown the accountant how to produce a profit figure that actually makes physical sense and that Jones can actually believe. But we have created another difficulty. The statement from the accountant showed not only a *profit* of 6c, but also a separate, different *gain* of 4c. This gain of 4c occurred earlier than the profit. The gain was included in the balance sheet of 3 January and the profit did not appear until 4 January. We know that this 'gain' is not the same as profit – the whole point of all this is that the 'total' profit, i.e. the total increase in the capacity of the business to do things, is only 6c. So if the 'gain' is not profit, what on earth is it?

In the most simple of terms it is the double-entry for an increase in the recorded figure for an item of inventory.

CAPITAL MAINTENANCE

Given that we are considering a different profit concept from the traditional historical profit, we are necessarily implying also a different capital maintenance concept from that discussed in Activity 4.7.

ACTIVITY 5.4

Define clearly the capital maintenance concept implied by the T account calculations just examined.

Activity feedback

Profit could here be defined as the amount generated by the business over and above that necessary to replace the assets. The capital maintenance concept

could therefore be said to be the maintenance of the capacity to replace the resources of the business.

A more rigorous analysis

If an item of inventory is bought for €10, held until its buying price increases to €12, and then sold for €15, then the HC profit is €15 – €10 = €5. But we know from the previous discussion that this can be split into two parts as follows.

(Continued)

ACTIVITY 5.4 (Continued)

During the time the inventory is held, the cost price rises from €10 to €12. There is therefore a holding gain of €2, giving a recorded inventory figure immediately before the sale of €12. When the inventory is sold, an asset of €12 (inventory) is transformed into an asset (cash) giving rise to a profit from operating of €3. Clearly we have split the HC profit into two elements, namely the operating profit (revenue minus current replacement cost) and the holding gain (current replacement cost minus original purchase cost). In these circumstances both elements would be regarded as 'realized' (see Chapter 1).

More normally, both realized and unrealized gains will be involved, as in the following example:

1 October 20X1	Buy 2 at €30
1 November 20X1	Sell 1 at €50, when RC is €35
31 December 20X1	RC is €38
31 January 20X2	Sell 1 at €60, when RC is €40

The HC profits are:

Year 1	$50 - 30 = €20$
Year 2	$60 - 30 = €30$

A fuller analysis gives the following:

- Between 1 October and 1 November there has been a holding gain of:

$$2 \times (35 - 30) = €10.$$
- On 1 November one of the items is sold; therefore on 1 November:
 - half of the holding gain becomes realized (i.e. $1 \times [35 - 30]$), as the item to which it relates has been sold
 - there is a (realized) operating profit of $50 - 35 = €15$.
- On 31 December there is an additional holding gain of $38 - 35 = €3$. This will be unrealized as the item is still unsold. Between 31 December 20X1 and 31 January 20X2 there has been a holding gain of $40 - 38 = €2$.
- On 31 January the second item is sold and therefore:
 - there is a (realized) operating gain of $60 - 40 = €20$
 - all the unrealized holding gain related to the second item becomes realized.

To summarize, for year 1 we have:

Operating profit	€15
Realized holding gain	€5
Unrealized holding gain	€8 (5 + 3 or 38 - 30)

For year 2 we have:

Operating profit	€20
Realized holding gain	€10
Unrealized holding gain	€0

Note carefully that the €10 holding gain realized in the year 2 includes the €8 holding gain that was recognized and recorded in year 1, but which had not become realized in year 1, as well as the €2 of holding gain recognized in year 2.

These figures demonstrate that the HC profit consists of two of the three elements involved:

HC profit = Operating profit + Realized holding gains

In year 1	$€20 = 15 + 5$
In year 2	$€30 = 20 + 10$

Notice that we include all the holding gains realized in the year, whether or not they have been recognized and recorded (as unrealized) in earlier years. Edwards and Bell (1961) referred to the reported results under an RC system as business income, which they defined as follows:

$$\text{Business income} = \begin{cases} \text{Operating profit} + \text{Realized holding} \\ \text{recognized in the period} + \\ \text{Unrealized holding gains} \\ \text{recognized in the period} \end{cases}$$

Thus business income in year 1 is:

$$15 + 15 + 8 = €28$$

And in year 2 is:

$$20 + 2 = €22$$

Observe that the proportion of the realized holding gain in year 2 which had already been included in business income of year 1 (as an unrealized holding gain) is not included in year 2. To do so would, of course, involve double counting.

Examination will show that the differences between accounting (HC) income and business income are caused by different elements of the holding gains being included.

ACTIVITY 5.5

Derive the formal relationship between accounting income and business income and apply it to the preceding situation.

Activity feedback

Accounting income includes:

- 1 Realized holding gains of the period recognized in the period; plus
- 2 Realized holding gains of the period recognized in previous periods.

Business income includes:

- 3 Realized holding gains of the period recognized in the period; plus
- 4 Unrealized holding gains recognized in the period.

Since 1 and 3 are the same, it follows that:

$$\text{Accounting income} - 2 = \text{Business income} - 4$$

or:

$$\text{Accounting income} = \text{Business income} - 4 + 2$$

(as defined earlier)

For the year 1	€20 = 28 – 8 + 0
For the year 2	€30 = 22 – 0 + 8

The important thing about all this analysis is that it enables us to discuss and decide which elements we wish to include in our own preferred definition of income. Edwards and Bell, arguing in favour of a current entry (RC) approach, include all the holding gains recognized

in the period as being included in income. This has been criticized on two grounds. First, it is suggested that no unrealized gains should be included, as this would lack prudence. Second, and more importantly, it is suggested that all the holding gains, whether realized or unrealized, need to be retained in the business in order to enable it to replace resources as they are used. Using the terminology we developed earlier, the operating profit is the gain after having retained sufficient resources to enable us to do those things that we originally had the capacity to do. If we ask the question: 'How much profit can I remove without impairing the substance, the operating capability of the business?' then the answer is the operating profit. Only the operating profit should be regarded and reported as income. Holding gains, whether realized or not, should be excluded. This objection to the Edwards and Bell conclusion is generally regarded as a valid one, and most authors argue that the central profit figure under a current entry value system should consist of the operating profit alone.

Remember the capital maintenance concept as we defined it in Activity 5.4, i.e. the maintenance of the capacity to replace the resources of the business. The holding gains represent reserves – i.e. ownership claims on resources – corresponding to the resources which will have to be used in addition to replace existing assets if they are replaced at current prices. Income, within this capital maintenance requirement, therefore excludes all such holding gains.

In practice, the changes in cost levels are likely to be approximated to by the use of appropriate price indices. Activity 5.6 provides an example of the application of this mechanism to the principles already discussed. Study the activity carefully and try to at least rough out a solution before you work through the feedback which follows.

ACTIVITY 5.6

Chaplin Ltd's balance sheet on 31 December year 1, after one year's trading was as follows:

	€		€	€
Capital – €1		Land and buildings at cost		110 000
Ordinary shares	200 000	Plant and equipment at cost	40 000	
Profit	26 000	less Depreciation	4 000	36 000
	<u>226 000</u>			<u>146 000</u>
Creditors	50 000	Inventory	90 000	
Loan	50 000	Debtors	<u>90 000</u>	
				180 000
	<u>326 000</u>			<u>326 000</u>
				(Continued)

ACTIVITY 5.6 (Continued)

- The capital and loan had been contributed in cash and the land and buildings, plant and equipment and opening inventory of €60 000 had been purchased on 1 January.
- Transactions took place evenly during the year. The situation may therefore be treated as if all opening balances were held from 1 January until 30 June, as if all transactions took place on 30 June and as if all closing balances were held from 30 June until 31 December.

- Price indices were as follows:

	General inflation	Plant	Inventory
1 January	100	100	100
30 June	110	105	115
31 December	120	110	130

- The land and buildings were professionally valued at 31 December at €135 000.

Prepare a closing balance sheet on RC lines.

Activity feedback

Chaplin Ltd RC solution HC profit less Adjustments:

Depreciation	$4\,000 \times \frac{(110 - 100)}{100}$	400	26 000
Inventory	$60\,000 \times \frac{(115 - 100)}{100}$	9 000	9 400
Current operating profit add holding gains:			16 600
Inventory: realized as previously		9 000	
unrealized	$90\,000 \times \frac{(130 - 115)}{115}$	11 740	
Plant and equipment: realized as previously		400	
unrealized	$40\,000 \times \frac{(110 - 100)}{100} - 400$	3 600	
Land and buildings: Unrealized	$135\,000 - 110\,000$	25 000	49 740
			<u>€66 300</u>

Business income

The general view today is that the holding gains should be shown separately as holding gains, rather than combining all gains of every sort as 'business income'. This leads to the following balance sheet:

		€	€
Land and building			135 000
Plant and equipment	$40\,000 \times \frac{110}{100}$	44 000	
less Depreciation	$4\,000 \times \frac{110}{100}$	<u>4 400</u>	<u>39 600</u>
Current assets			174 600
		€	€
Inventory	$90\,000 \times \frac{130}{110}$	101 740	
Debtors		<u>90 000</u>	<u>191 740</u>
			<u>€366 340</u>

	€	€
Share capital		200 000
Holding gain reserve		49 740
P&L account		16 600
		<u>266 340</u>
Loan		50 000
Creditors		50 000
		<u>€366 340</u>

In checking through Activity 5.6, note the treatment of the inventory gains; it is assumed that the opening inventory was all sold on 30 June, so the relevant holding gain is realized, the €90 000 closing inventory is treated as being purchased on 30 June and held ever since. Check that you understand the usage of all the index adjustments (and note the irrelevance of the general inflation index here). As regards the distinction between realized and unrealized holding gains, note that only the current operating profit can be distributed without impairing the ability to replace physical assets.

REPLACEMENT COST ACCOUNTING AND DEPRECIATION

ACTIVITY 5.7

There is one particular problem with replacement cost (RC) accounting and depreciation that is not revealed by the Chaplin illustration. Consider the following:

A fixed asset costs €100, has an expected useful life of four years, with zero scrap value and the RC of a new asset rises by €20 each year. Calculate the profit and loss (P&L) account charge and show the balance sheet position, for each of the first two years, under RC.

Activity feedback

The year 1 position is simple enough. We have:

Cost (RC)	€ 120
Depreciation (25%) (in P&L a/c)	30
Balance sheet	€ 90

But year 2 is problematic. From a P&L account viewpoint we have an RC figure of €140 and we have had 25 per cent of the benefit, therefore we should have an expense to match of 25 per cent of 140 = €35. This leaves total accumulated depreciation of €65 and a balance sheet figure of €75 (140 – 65). But taking a balance sheet view, we have an asset with an RC of €140 that is exactly half used up. Therefore, again following the matching convention, we should have accumulated depreciation of exactly half of €140, leaving a balance sheet figure also of exactly half of €140 to carry forward for future matching. This implies an expense figure in year 2 of €40 (closing depreciation balance €70, opening balance €30, therefore necessary charge for this year €40).

We are obviously in trouble. In year 2 we need a €35 charge in the P&L account (25% of 140) and at the same time a deduction of €40 (70 – 30) in the balance sheet. From a double-entry viewpoint this is somewhat disturbing. This problem is usually solved by the idea of backlog

depreciation. The year 2 balance sheet deduction is regarded as consisting of two elements:

- 1 The proper annual charge (€35).
- 2 The extra figure necessary to bring the accumulated depreciation at the beginning of year 2 up to what it would have been if the current (end of year 2) RC had been prevailing earlier (€5).

Thus we have a credit of €40 to depreciation provision, a debit of €35 to P&L account and a debit of €5 to – well, where?

Since the €5 relates in effect to the correction of what we now know with hindsight to have been under-depreciation in earlier years, one possibility would seem to be to reduce the accumulated revenue reserves figure brought forward – like a prior year adjustment. By the same token, the earlier years' accounts were certainly correct at that time with the matching convention properly applied in the then current circumstances. It could be argued that the problem of this backlog adjustment is covered by the existence and recording of holdings gains. Therefore, the €5 could be 'charged to' holding gain account. This last argument is usually followed. This would give year 2 balance sheet entries as follows in our example:

Fixed asset	RC		140
	Depreciation		70
	(Net book value) NBV		70
Holding gain reserve	b/f	20	
	Add	20	
	Less	5	35

CURRENT ENTRY VALUES: PRELIMINARY APPRAISAL

ACTIVITY 5.8

Prepare a list, in point form, of advantages and disadvantages which you think could reasonably be said to apply to current entry value accounting.

Activity feedback

Possible, but not necessarily exhaustive, suggestions are as follows:

(Continued)

ACTIVITY 5.8 (Continued)**Advantages**

- 1** It provides more information in that it splits the total profit into holding gains and operating profit. This permits better appraisal of earlier actions and provides more useful data for decision-making purposes.
- 2** By permitting holding gains to be excluded from reported profit, it allows for a proper maintenance of operating capacity – the ‘business substance’.
- 3** It provides a balance sheet based on current value, on figures relevant to the date of the balance sheet.
- 4** It is consistent with accounting concepts – if holding gains are excluded from reported profit it is more prudent than HC.
- 5** Holding gains are recognized and reported when they occur.

6 Comparisons over time, and performance analysis, are more valid and meaningful.

7 It is practicable, it has been shown to be feasible in practical application.

Disadvantages

1 It requires more subjectivity (or arbitrary choice between different available indices). It is therefore less ‘auditable’.

2 It requires the use of replacement cost figures for assets that the firm does not intend, or perhaps could not possibly, replace.

3 It still fails to give an indication either of the current market value of most assets in their present state or of the business as a whole.

4 It fails to take account of general inflation, of changes in the purchasing power of money.

You may recall from the array of value concepts analyzed by Edwards and Bell that they suggested that two different concepts of current entry value were worthy of more detailed consideration. They named and defined these as:

- 1** *Present cost* – the cost currently of acquiring the asset being valued.
- 2** *Current cost* – the cost currently of acquiring the inputs which the firm used to produce the asset being valued.

So far in this chapter we have ignored this distinction. We would suggest, broadly following the thinking of Edwards and Bell themselves, that the route to making a rational choice between them lies in remembering the underlying arguments for using current entry values in the first place. As we saw in Activity 5.4, we are seeking the maintenance of the capacity to replace the resources of the business. We are therefore seeking to ensure the continued long-run operation of the business. The approach we need to adopt, therefore, is that which accords with the expected operations of the firm in the ordinary course of its business. Given that the going concern convention applies, and given that the firm is going to continue operations in the long run, it is clear that current cost rather than present cost (both as defined earlier) will better reflect the reality of transactions and economic events in most cases. To a firm in business to manufacture motor cars and aiming for long-run operations as a manufacturer of motor cars, it is the cost of the replacement inputs which it needs to manufacture motor cars which is the relevant datum to ensure the maintenance of operating capacity. The cost to a manufacturer of motor cars of buying in complete motor cars (at present cost) is not normally an operationally relevant figure.

So it is argued that current cost is normally the appropriate current entry value to use, on the grounds of its relevance to normal ongoing business operations. It follows,

however, that where this justification ceases to be true, because, for example, the inputs are no longer available, then the conclusion may well no longer be correct. If the firm *would* as a matter of expected action (not merely *should* as a matter of efficient management) replace an asset in a more complete state than with the previous raw components, then the appropriate present cost should be used instead.

It could be suggested that in arguing for the relevance of current cost as a useful entry value measure leading to the practical maintenance of operational capability, we are failing to follow properly the logic of the arguments put forward. The essence of the whole thinking is that a firm should charge as an expense the costs of replacing the resources used or consumed. Past (historical) costs are useless for this purpose. But what is theoretically needed is obviously the amount that *will* have to be paid for the replacement items at the time when they are replaced. The *current* cost may or may not be identical to the actual cost when replacement eventually occurs. In many cases current cost will be the same as expected actual cost. But if it is not, should we make some adjustment?

Theoretically, at least from the viewpoint of the income statement and capital maintenance in the operating sense, the answer seems to be yes. But there are at least two arguments against this. The first is the essentially practical one that a considerably greater degree of subjectivity is introduced which may more than outweigh the theoretical advantages. The second argument is that there are perhaps implications for the matching principle and the balance sheet. A current entry value balance sheet can be argued as being consistent within itself, giving proper additivity in the mathematical sense. But a future entry value balance sheet, with the timing implications of the word future being different for different items, is of more suspect validity. And since today's asset figure affects next period's results there are possible implications for future periods too.

SUMMARY

In this chapter we have explored the logic of using current entry values for the preparation of accounting results, analyzed the effects and usefulness of the additional information derived, related the approach to capital maintenance and prepared and interpreted current entry value information.

The main advantages of current entry value accounting lie in its effects on the profit and loss account information given. It can be argued as giving more effective application of the matching and accruals conventions (*rent* costs against current revenues) and, through its long-run economically rational capital maintenance concept, of the going concern convention. It provides important information, at minimum, about those elements of historical cost profit which do not represent increases in economic wealth (given continuing operation). As regards the balance sheet it gives figures based on up-to-date market numbers. However, the approach is still clearly to determine profit and loss figures and then to 'stick what is left' in the balance sheet. The balance sheet is still essentially a statement of unexpired expenses, not a list of marketable assets at valuation.



EXERCISES

Suggested answers to exercises marked ✓ are to be found on our dedicated CourseMate platform for students.

Suggested answers to the remaining exercises are to be found on the Instructor online support resources.

- 1 Explain and demonstrate how replacement cost accounting affects reported profit as compared with historical cost accounting.
- ✓2 Is replacement cost accounting more or less prudent than historical cost accounting?
- 3 Under a replacement cost accounting system, which holding gains should be reported as:
 - (a) realized
 - (b) part of profit
 - (c) distributable? Why?
- 4 In general, replacement cost accounting produces reported profit figures which are a better indication of long-run future performance than historical cost accounting does. Discuss.
- 5 A replacement cost balance sheet is just as useless as a historical cost balance sheet. Discuss.
- ✓6 I.M. Confused, computer dealer.
From the following information compute
 - (a) Profit and loss accounts and closing balance sheets for each of the years 20X1 and 20X2 under historical cost principles.
 - (b) Profit and loss accounts and closing balance sheets for each of the years 20X1 and 20X2 under current replacement cost principles.
 Comment briefly on the significance of the results.

Date	Event relating to trading in computers	'Wealth' Computers	€ cash
01/01/X1	Set up business with €10 000 in the bank		10 000
02/01/X1	Buy six computers for €1 000 each	6	4 000
01/05/X1	Sell two for €1 500 each (RC = €1 100)	4	7 000
01/09/X1	Buy two computers for €1 200 each	6	4 600
01/10/X1	Pay annual rent of €600	6	4 000
31/12/X1	Financial year-end. Pay tax of €200	6	3 800
03/03/X2	Sell two computers for €1 800 each (RC = €1 300)	4	7 400
01/10/X2	Pay annual rent €700	4	6 700
01/11/X2	Buy two computers for €1 400 each	6	3 900
31/12/X2	Financial year-end. Pay tax €450	6	3 450

- 7 Mallard Co. was formed on 1 January 20X1 with 10 000 issued €1 ordinary shares. The same day they obtained a 12 per cent loan of €8 000 and bought fixed assets for €9 000. During 20X1 their purchases and sales of widgets were as follows:

	<i>Purchases</i>		<i>Sales</i>	
3 January	100 at €80	8 000		
1 February			60 at €120	7 200
1 April	110 at €75	8 250		
1 May			90 at €120	10 800
1 July	100 at €85	8 500		
1 August			130 at €120	15 600
1 October	120 at €90	10 800		
1 November			110 at €130	14 300

- (a) Purchases and sales were all paid for in cash.
- (b) The loan interest was paid early in the following year (20X2).
- (c) The buying price of widgets changed on 1 March, 1 June, 1 September and on 1 December (when it was €100).
- (d) The fixed assets are to be depreciated at 10 per cent p.a. At 31 December 20X1 their buying price was €12 600.
- (e) General expenses during the year were €13 200.
 - (i) Prepare a balance sheet as at 31 December, 20X1 together with a trading profit and loss account for the year to 31 December 20X1, on replacement cost lines.
 - (ii) What are holding gains? In what circumstances are they distributable?

8 *L and H*

On 1 January, L and H each started a business by investing €100 in cash, and then immediately purchasing one widget.

L sold her widget on 3 March for €110, but on 1 April discovered that she needed to pay this to buy another, which she did.

On 30 June this was sold for €120, and a new one bought in July for €120.

On 29 September this was sold for €130, and a replacement purchased on 30 September for €130.

H had been less active and had merely kept his first widget and read the newspaper. Both have decided to adopt 30 September as their accounting date, and come to you for accounting services.

- (a) How would the above appear under:
 - (i) historical cost
 - (ii) replacement cost.
- (b) Which results make more sense, and why?



CURRENT EXIT VALUE AND MIXED VALUES

6

OBJECTIVES After studying this chapter you should be able to:

- explain the effects and implications of using current exit values to record the possession and usage of economic resources
- outline the implications of using an ad hoc mixture of valuation methods
- define and explain the effects and implications of deprival values as the basis of recording the possession and usage of economic resources
- discuss the overall relevance of current values.

INTRODUCTION

In this chapter we look first of all at remaining current values worthy of consideration, current output or exit values. We then explore the possibility of using a combination of different valuation methods in preparing financial reports and, in particular, the concept of deprival value. In each case, as in earlier chapters, we seek to investigate both the techniques and logic of calculation and the meaning and usefulness of the resulting information.

CURRENT EXIT VALUE ACCOUNTING

Edwards and Bell (1961) suggested two current exit value concepts as worthy of consideration (see p. 66). These were current values and opportunity costs.

Current values they defined as ‘values actually realized during the current period for goods or services sold’. On reflection, however, it quickly becomes apparent that the idea of substituting current values so defined into our basic equation of $W_1 + P - D = W_2$ does not make a great deal of sense. Values actually realized for goods and services already sold cannot obviously be argued as relevant to resources still possessed at the date or dates under consideration. Rather, of course, these realized values are the basis of revenue flows.

It is the second concept, that of opportunity costs, which we need to develop. Edwards and Bell defined this as ‘values that could currently be realized if assets were sold ... (without further processing) outside the firm at the best prices immediately obtainable’. This is certainly a concept relevant to the resources possessed at the date under consideration. It shows the amount of money we could derive immediately (currently) from the resources held, or to take the alternative viewpoint, it shows the amount of money we choose not to derive immediately if we retain the resources for any reason. We can adapt the application of the definition slightly to allow for further unavoidable processing or expenses of disposal and consider the concept of net realizable value (NRV), i.e. the proceeds after deducting these additional unavoidable expenses of disposal. These ideas are explored further in this chapter.

We intend to base our valuation figure on the current market selling price, more precisely, on NRV. So if an asset could be sold for €250, but the sale would involve €10 of selling expenses, the NRV is €240. The income under this method is based on the difference between the NRV of all resources at the two chosen dates. Following Edwards and Bell, it is often referred to as realizable income. It can be defined as follows:

$$Y_r = D + (R_e - R_s)$$

where Y_r is the exit value income, D is the distributions (less new capital inputs), R_e is the NRV of the assets at the end of the period and R_s is the NRV of the assets at the start of the period.

In practice, several possibilities exist as to exactly what we mean by NRV.

ACTIVITY 6.1

Consider an item of work in progress that has an NRV today of €10 in its existing state. The finished product (which would require a further €4 of expenses) has an NRV today of €20, but by the time the actual item of current work in progress is finished and sold, it is expected to have an NRV of €22. On a forced sale (e.g. if all the assets have to be sold off at once by a liquidator), the item in its existing state would realize €6.

Suggest possible figures for the exit value and which one of these you would normally find most useful.

Activity feedback

Possible figures for the exit value would seem to include €6, €10, €(20 – 4) and €(22 – 4). It is generally agreed that exit values should refer to assets in their existing state, on the assumption that they are sold in an orderly manner, i.e. in the normal course of business. Thus, in our example, the exit value for the work in progress would be €10.

It is clear that the exit value capital (R) at any particular date shows the amount of money that the business

(Continued)

ACTIVITY 6.1 (Continued)

could obtain from its assets as on that date. Turning this around, exit value is seen as an opportunity cost concept – it shows the amount of cash that the business could obtain if it did not keep the asset. The opportunity cost of having an asset is the amount of cash the business sacrifices by retaining the asset instead. Advocates of exit value accounting argue that it is necessary to know the cash resources tied up in a business in order to measure efficiency. The amount of cash potentially available – the ‘current cash equivalent’ of the resources of a business – also provides a genuinely common measuring unit when comparing different businesses.

It is often argued – indeed often merely stated – that exit value accounting does not conform to the going concern convention. Its advocates argue that it is not intended to show what will happen, rather it is intended to show the results of what could happen, in order to assist decision making and internal appraisal.

We can usefully divide the exit value income (Y_r) into four elements:

$$Y_r = \left. \begin{array}{l} \text{realized operating gains} \\ + \text{unrealized operating gains} \end{array} \right\} \text{i.e. on assets held for resale}$$

$$\left. \begin{array}{l} + \text{realized non-operating gains} \\ + \text{unrealized non-operating gains} \end{array} \right\} \text{i.e. on assets held for use}$$

Before looking at an example, it is important to understand the effect of exit value accounting on the P&L account. Since the opening and closing balance sheets are now value based and not cost based, it necessarily follows that the P&L account is also value based and not cost based. For example, ‘depreciation’ is no longer a process of cost allocation under the matching convention. It simply becomes the loss in value of the asset in the period.

Now work through the following example. Remember particularly that an unrealized gain in year 1, reported as such, will become a realized gain in a later year and will need to be reported as a realized gain. Care is needed to ensure that gains are not reported twice: as both unrealized and realized. This of course would be double counting.

Example

A company commences business with capital in cash of €15 000. It buys a fixed asset for €10 000. The following information is available:

	Year 1		Year 2
	€		€
NRV of fixed asset	6 000		4 000
Sales	20 000		25 000
Cost of sales	11 000		12 000
Closing inventory: cost	2 000		3 000
NRV	2 500		3 800
<i>Exit value revenue statements</i>			
Sales	20 000		25 000
Cost of sales	11 000		12 000
	<u>9 000</u>		<u>13 000</u>
‘Depreciation’	4 000	(1)	2 000
	<u>5 000</u>		<u>11 000</u>
less Operating gain included in previous year	–		500
	<u>5 000</u>		<u>10 500</u>
add Unrealized operating gain	500	(4)	800
Realizable income	<u>5 500</u>		<u>11 300</u>

	Year 1 €		Year 2 €	
<i>Exit value balance sheets</i>				
Fixed assets	6 000		4 000	
Inventory	2 500		3 800	
Cash	12 000	(6)	24 000	(7)
	<u>20 500</u>		<u>31 800</u>	
Capital	15 000		15 000	
Realizable income	5 500		16 800	
	<u>20 500</u>		<u>31 800</u>	

Notes:

- 1 10 000 – 6000
- 2 6000 – 4000
- 3 Included as realized in the 11 000, but already included, as unrealized, in the 5500 for year 1.
- 4 2500 – 2000
- 5 3800 – 3000
- 6 15 000 – 10 000 + 20 000 – (11 000 + 2000)
- 7 12 000 + 25 000 – (12 000 + 1000)

The unrealized gain on inventory is here calculated on an annual basis, inventory during the year being left at cost. It would be possible, although more complicated, to record such unrealized gains more frequently – even daily if desired. Care must be taken, however, to ensure that a previously recorded unrealized gain is not again added into ‘realizable income’ when it is realized.

Now try the following activity, making a proper attempt before looking at the feedback which follows.

ACTIVITY 6.2

Bonds plc commenced business on 1 January year 7. Let us assume all transactions are by cheque and no credit is given or taken and that Bonds plc deals only in one type of item of inventory.

1 January Year 7

Introduced capital of €25 000 and purchased a machine for €9 000

Purchased 500 items of inventory for €15 each.

31 December Year 7

Sold 300 items of inventory for €30 each

Paid rent for the year of €1 000

Paid other expenses for the year of €1 000.

1 January Year 8

Purchased 400 items of inventory for €17 each.

31 December Year 8

Sold 500 items of inventory for €33 each

Paid rent for the year of €1 100

Paid expenses for the year of €1 200.

The following information relates to the machine:

	31.12.7 €	31.12.8 €
Replacement cost	10 000	12 000
Realizable value	8 000	6 000
Cost of realization	1 000	1 000

Required:

Produce a set of realizable value accounts for years 7 and 8.

Activity feedback

Bonds plc Trading and P&L account for the year ended 31 December.

	31.12.7 €	31.12.8 €
Sales	9 000	16 500
Less cost of sales	(4 500)	(8 100)
Gross profit	4 500	8 400
Rent	1 000	1 100
Expenses	1 000	1 200

(Continued)

ACTIVITY 6.2 (Continued)

	31.12.7 €	31.12.8 €
Depreciation (note 2)	<u>2 000</u>	<u>2 000</u>
	(4 000)	(4 300)
Gross profit	500	4 100
Holding gain (note 3)	<u>3 000</u>	<u>(1 400)</u>
	<u>3 500</u>	<u>2 700</u>

Balance sheet as at 31 December

	31.12.7 €	31.12.8 €
Fixed assets		
Machine at NRV	7 000	5 000
Current assets		
Inventory at NRV (note 1)	6 000	3 300
Bank	<u>15 500</u>	<u>22 900</u>
	<u>21 500</u>	<u>26 200</u>
	<u>28 500</u>	<u>31 200</u>
Share capital	25 000	25 000
Profit	<u>3 500</u>	<u>6 200</u>
	<u>28 500</u>	<u>31 200</u>

Notes:

- 1** The inventory is also brought into the balance sheet at the end of each year at its net realizable value.

31.12.8	200 units × €30 = €6 000
31.12.7	100 units × €33 = €3 300

- 2** Depreciation. The depreciation is the difference between the NRV of the asset at the end of each year less the NRV of the asset at the beginning of the year. Note that the NRV is after deducting the costs of realizing the asset.

Year 1	€7 000 – €9 000
Year 2	€5 000 – €7 000

- 3** Holding gain. In year 7 the holding gain is the unrealized holding gain on the closing inventory:

$$200 \text{ units} \times €15 \text{ (i.e. } €30 - €15) = €3\,000$$

In year 8 the holding gain of year 7 has now been realized (and therefore included in the trading account for year 8) while there is an unrealized holding gain on the closing stock of:

$$100 \text{ units} \times €16 \text{ (i.e. } €33 - €17) = €1\,600$$

Therefore, in year 8 the holding gain (loss) is:

	€
Unrealized holding gain in year 8	1 600
less Unrealized holding gain from year 7 now realized in year 8	<u>3 000</u>
	(1 400)

In effect we have a holding loss.

CURRENT EXIT VALUES: PRELIMINARY APPRAISAL**ACTIVITY 6.3**

Prepare a list, in point form, of advantages and disadvantages which you think could reasonably be said to apply to current exit value accounting.

Activity feedback**Advantages**

- It follows the economic 'opportunity cost' principle. It reveals the money sacrifice being made by keeping an asset. This permits rational decision making on the alternative uses of resources.
- Exit values facilitate comparisons. They provide a genuinely common measure for the value of assets – cash or current cash equivalent.

- The concept of realizable value is easy for the non-accountant to understand.
- Useful information about assets is provided to outsiders, e.g. creditors.
- It is already widely used, e.g. debtors, inventory at lower of HC and NRV, revaluation of land and buildings.

Disadvantages

- It is highly subjective. Arguably more so than replacement cost (RC) accounting.
 - It fails to follow the going concern assumption, fails to recognize that firms do not usually sell all
- (Continued)

ACTIVITY 6.3 (Continued)

their assets (the proponents of exit value accounting explicitly deny this charge, arguing that it makes no assumptions either way, it merely provides useful information).

- 3** *It fails to concentrate attention on long-run operational effectiveness.*
- 4** *It fails to give realistic information about the internal usefulness of assets – particularly of highly specialized assets that could have a very low NRV on the general market.*

You may, of course, have some slightly different views. One point we should certainly consider is the possible relevance of expected values, which Edwards and Bell (1961) suggested to be a concept worth further exploration. They defined expected values (see Table 4.2) as 'values expected to be received in the future for output sold according to the firm's planned course of action'. Expected values are therefore a future exit rather than a current exit way of thinking. Expected values defined in this way certainly give useful information. In fact they form the raw material for the preparation of both cash and revenue budget statements. However, our essential purpose here is to prepare statements of current position and similar arguments apply to those already considered in relation to future entry values. To use future exit values would introduce greater subjectivity, greater possible

inconsistency of evaluation and could be argued as failing to reflect current reality. Current exit values are suggested as a more useful concept.

It is essential to remember that exit value NRV accounting tends to focus on the balance sheet to a considerably greater extent than current entry value RC accounting. Profit or gain is very much determined by a consideration of changes in output values of resources. The balance sheet under NRV can be regarded as a consistent statement, with all figures on the same basis and as at the same date. This balance sheet is not just a list of 'balances left over' in the sense that a current entry value balance sheet is (see Chapter 5). However, it follows from this that it is the profit and loss calculation which in a sense picks up and contains 'the figures lying around'. Current exit value is essentially a short-run concept. It provides valuable information about market values of business resources and therefore about short-term alternatives and possibilities. This is clearly seen in the capital maintenance concept associated with NRV. This could be expressed as: the maintenance of the NRV, the current cash equivalent, of the resources of the business. But exit value accounting information does not provide us with the information necessary for management to seek to ensure the long-run operational capability of the business.

MIXED VALUES – AD HOC METHODS

As we shall see in detail later on, companies following IAS, and also some national systems, may have a great deal of flexibility in practice as regards the valuation policy they wish to adopt. There is no requirement for any consistency of approach as between one asset and another. It is in fact extremely common for businesses that broadly follow historical cost accounting principles to revalue some of their fixed assets at intervals (not necessarily annually), sometimes then depreciating on the revalued figure, sometimes not depreciating at all. This may well lead to the provision of more useful information as regards particular resources. For example, a current or recent valuation of land or factory is surely more useful than a 50-year-old cost figure. But, of course, it further increases the inconsistencies within the accounting reports as a whole, making the balance sheet as a statement of resources and the sources thereof ever more difficult to understand, usually influencing the size of expense figures charged and certainly influencing any interpretational ratios relating return with the source base being employed.

MIXED VALUES – DEPRIVAL VALUE

A much more theoretically defensible approach to the idea of using different valuation bases for different assets – or more accurately for using different valuation bases for assets in different circumstances – is the concept of deprival value.

Assume that a business owns an asset. What is that asset ‘worth’ to the business? The deprival value (DV) approach says that the DV of an asset is the loss that the rational businessman or businesswoman would suffer if he or she were deprived of the asset. This loss will depend on what would rationally have been done with the asset if he or she had not lost (been deprived of) it.

ACTIVITY 6.4

Six people, A to F, are possessors and owners of six assets, U to Z, respectively. The various monetary evaluations (in €) of each asset by its owner are shown in the following table.

Person	Asset	HC	RC	NRV	EV
A	U	1	2	3	4
B	V	5	6	8	7
C	W	9	12	10	11
D	X	16	15	14	13
E	Y	17	19	20	18
F	Z	23	22	21	24

All six people signed a contract with an insurance agent, Miss Prue Dential, under which they shall be reimbursed, in the event of loss of their assets, by ‘the amount of money a rationally acting person will actually have lost as a result of losing the asset’.

Put yourself in the position of the rationally acting person, decide what action you would take in each circumstance and then calculate the net effect on your monetary position.

Activity feedback

In each situation the first question to ask is: Would the rationally acting businessman or businesswoman replace the asset or not? He or she will replace it if the proceeds of either selling it (NRV) or using it (economic value, EV) are higher than the costs of replacing it. If it is going to be replaced, then the loss suffered is clearly the cost of replacement. Thus, in situations where the rationally acting businessman or businesswoman would replace the asset, DV is RC. If he or she would not replace it, the loss suffered is given by the value of the benefits that would have derived from the asset but

which he or she will now never receive. Being rational, the intention must have been to act so as to derive the highest possible return, i.e. the higher of NRV and economic value (EV). Therefore, in situations where the rationally acting businessman or businesswoman would not replace the asset if deprived of it, DV is the higher of NRV and EV. This last element – the higher of NRV and EV – is known as the ‘recoverable amount’.

So we can formally state that DV is the lower of RC and recoverable amount, where recoverable amount is the higher of NRV and EV (see Figure 6.1). Given three different concepts (RC, NRV and EV), there are in fact only six possible different rankings:

EV	>	NRV	>	RC
NRV	>	EV	>	RC
RC	>	EV	>	NRV
RC	>	NRV	>	EV
NRV	>	RC	>	EV
EV	>	RC	>	NRV

The example contains all six of these alternatives. The DV in each situation is as follows:

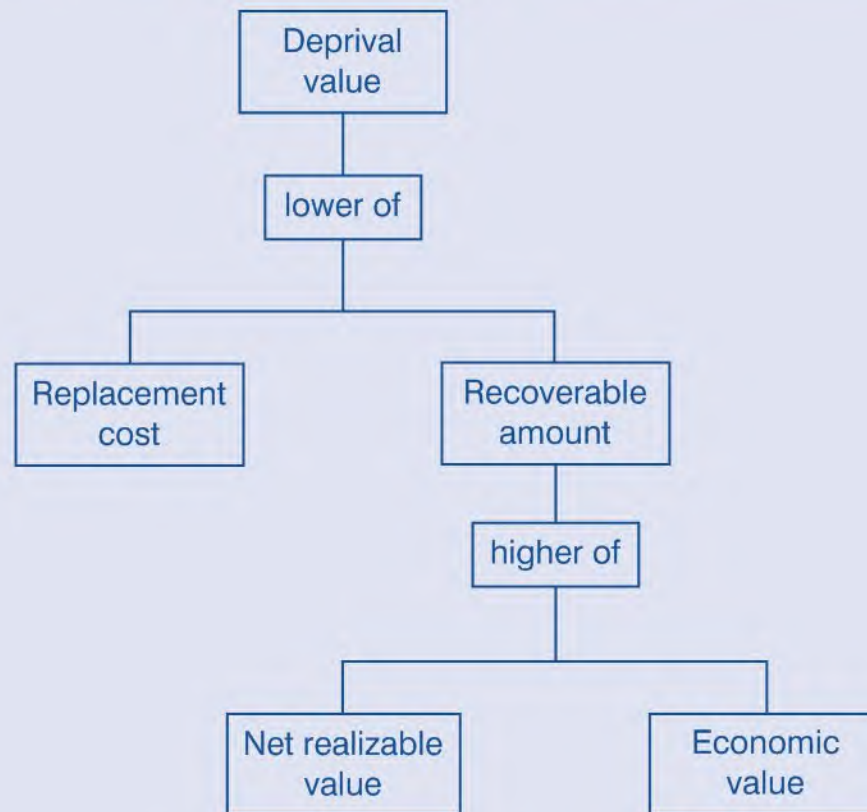
Person	DV	Reason
A	2	Cost of replacement
B	6	Cost of replacement
C	11	EV not received
D	14	Realizable value not received
E	19	Cost of replacement
F	22	Cost of replacement

Make sure that you understand why, in the context of the logic of the DV definition (and notice the irrelevance of the HC figures).

(Continued)

ACTIVITY 6.4 (Continued)

Figure 6.1 Relationship between DV, RC, NRV and EV

**DEPRIVAL VALUE: APPRAISAL**

Deprival value (DV) has a clearly definable concept of capital maintenance. Profit is here being regarded as the excess after maintaining the ‘value to the business’ of its assets. The value to the business is clearly seen to be related to actual operations (what the business would do). Following from this, we can say that DV seeks to maintain the business’s capacity to do things, usually expressed as the *operating capacity or operating capability*. We saw earlier that in four of the six possible rankings, DV equals RC. In the practical business situation, the chances of replacement cost being higher than both NRV and EV will generally be relatively small, so the other two rankings will in practice not occur frequently. This means that, in a practical business context, DV usually comes back to RC.

Theoretically, therefore, it can be suggested that deprival value provides an improvement and refinement on current replacement cost accounting. It reduces itself to replacement cost when the economically logical action is to replace and uses the more relevant benefit foregone figure in those situations where replacement would logically not occur. Notice, of course, that it is not strictly a completely current concept at all, as the EV possibility is a future orientation. Another way to look at the implications of the previous discussions would be to take the more practical line of arguing that deprival value shows that replacement cost is relevant most of the time. In other words, deprival value thinking positively explores the possibilities of refining replacement

cost thinking and shows that in most situations the refinements introduce difficulty and subjectivity for very little benefit in terms of extra relevance of information.

As a final thought, what about additivity? Is deprival value a separate concept, leading to a balance sheet consistently valued in deprival terms? Or is deprival value merely a formula for choosing which of the three (RC, NRV, EV) valuation bases to use in any particular situation? Under the latter way of thinking, deprival value obviously leads to a variety of bases in the balance sheet and therefore to a lack of additivity.

ACTIVITY 6.5

Prepare a list, in point form, of advantages and disadvantages which you think could reasonably be said to apply to deprival value accounting.

Activity feedback

Advantages

- 1** All the advantages of RC accounting can be claimed here also.
- 2** As a 'mixed value' system it is more realistic and relevant than either RC or NRV. It values resources at RC if it is profitable to replace them and at the expected proceeds if they would not be replaced.

Disadvantages

- 1** Disadvantages 1, 3 and 4 of RC accounting can be claimed here too.
- 2** It is more subjective than RC.
- 3** If the balance sheet is expressed in 'mixed values', what do the asset and capital employed totals mean? Can mixed values be validly added at all?
- 4** Firms are not in practice being continually deprived of their assets.

The concept of fair value seems to have become popular in recent years. It is certainly a form of current value, but its precise nature and meaning has been a matter of considerable controversy, and indeed confusion. It is now important enough, with a new standard (IFRS 13) recently issued, to warrant a chapter by itself. We therefore defer consideration of fair value to Chapter 8.

SUMMARY

In this chapter we have analyzed the logic and implications of current exit value accounting and prepared accounting statements on a current exit (NRV) basis. We then explored the possibility of ad hoc mixtures within the framework of traditional accounting reports and analyzed the logic and implications of deprival value accounting.



EXERCISES

Suggested answers to exercises marked ✓ are to be found on our dedicated CourseMate platform for students.

Suggested answers to the remaining exercises are to be found on the Instructor online support resources.

- 1 Explain the principles of exit value accounting, providing a simple made-up illustration.
- 2 Explain the principles of deprival value accounting, providing a simple made-up illustration.
- ✓3 Discuss the proposition that businesses should be required to publish their P&L statement on replacement cost lines and their balance sheet on net realizable value lines.
- 4 Deprival value removes significant disadvantages of replacement cost, while retaining its advantages. Discuss.
- 5
 - (a) Provide a definition of the deprival value of an asset.
 - (b) For a particular asset, suppose the three bases of valuation relevant to the calculation of its deprival value are (in thousands of euros): €12, €10 and €8. Construct a matrix of columns and rows showing all the possible alternative situations and, in each case, indicate the appropriate deprival value.
 - (c) Justify the use of deprival value as a method of asset valuation, using the matrix in (b) to illustrate your answer.
- ✓6 Steward plc commences business on 1 January year 1. Let us assume all transactions are by cheque and no credit is given nor taken and that Steward deals only in one type of item of inventory.

1 January Year 1

- Introduced capital of €30 000.
- Purchased machine for €10 000.
- Purchased 1000 items of inventory for €10 each.

31 December Year 1

- Sold 800 items of inventory for €15 each.
- Paid expenses for the year of €1000.
- The NRV of the machine is €9000.

1 January Year 2

- Purchased 800 items of inventory for €13 each.

31 December Year 2

- Sold 500 items of inventory for €20 each.
- Paid expenses for the year of €1200.
- The NRV of the machine is €8000.
- Produce profit and loss accounts and balance sheets relating to years 1 and 2 using NRV accounting.

- 7** On 1 January, Stan and Oliver each started a business by investing €100 in cash, and then immediately purchased one widget, which at that date could have been resold for €120.

Stan sold his widget on 31 March for €130, but on 1 April discovered that he needed to pay €115 to buy another, which he did. On 30 June this was sold for €140, and a new one bought on 1 July for €125.

On 29 September this was sold for €150, and a replacement purchased on 30 September for €130, on which date the new one could have been sold for €160.

Oliver had been less active and had merely kept his first widget and read the newspaper.

Both have decided to adopt 30 September as their accounting date, and come to you for accounting services.

All widgets are identical.

Replacement costs changed on 31 March, 30 June, 29 September. How would the above appear under:

- (a)** historical cost
- (b)** replacement cost
- (c)** net realizable value.

You may find it helpful to do this by using a table with each date on the left and columns for Cash, Inventory, Profit, Holding gains, etc. across the top.



CURRENT PURCHASING POWER ACCOUNTING

7

OBJECTIVES After studying this chapter you should be able to:

- explain the concept of general inflation and its implications for accounting measurement
- explain the mechanisms for taking account of general inflation in financial reporting, especially, but not exclusively, in the context of historical cost accounting
- discuss theoretical arguments, and practical considerations, for and against current purchasing power accounting
- outline present attitudes to the whole changing prices and inflation debate.

INTRODUCTION

In our discussion so far we have considered various methods of ‘putting a monetary figure on something’. There are many ways of deriving a figure with a € sign in front that we must consider and appraise. But we have not yet stopped to consider what we mean by the € sign. What is a euro? It is a unit of money – and money is of no use by itself. Money has no intrinsic value. Its value is related to what we can get with it, what we can do with it. When most prices are rising, then we can obtain gradually less and

less with any given number of euros. This means that if, under any particular valuation basis, we have maintained our capital appropriately defined in terms of numbers of euros, we have not necessarily maintained our capital in terms of the purchasing power of those euros. *Current purchasing power* (CPP) accounting attempts to take account of this.

THE MEASURING UNIT PROBLEM

There are many examples of difficulties with measuring units. Litres and gallons or inches and centimetres are classic examples. In these cases the use of different measuring units may be a nuisance, but the problems are capable of rapid and objective solutions. An inch has a precise or standard specification. A centimetre has a precise or standard specification. It follows, of course, that the relationship between the two also has a precise or standard specification. We can very exactly convert one to the other and, even more significantly, the conversion factor is fixed and constant between different people, between different places and between different times.

None of this is true of money as a measuring unit. A unit of money is an artificial construct. It is related to spending power and spending patterns, and these are personal and individual. It follows that a unit of money is not fixed as between different people, is not fixed between different places and, crucially for accounting, it is not fixed between different times. We need a conversion factor between our altering measuring units. But since our units (euros) are not fixed in inherent valuation, it follows that the conversion factor cannot be fixed either. The solution (or evasion) which current purchasing power provides to this problem is to use averages as an approximate surrogate for the theoretically unique conversion factor required. The euro is converted, or adjusted, by means of general indices.

CURRENT PURCHASING POWER

It is vital to understand that current purchasing power (CPP) is a general purchasing power concept. We are concerned with general inflation, usually expressed as the average rise in the cost of living, i.e. with inflation in the politicians' sense. If inflation in the last year is 10 per cent, then €100 last year has the same general (i.e. average) purchasing power as €110 this year. This means that in order to know what we are talking about we have to 'date' all our euros. Euros at different dates can no longer be regarded as the same, as a common measuring unit. In order to return to the position, essential for proper comparison, of having a common measuring unit, we have to convert euros of one date's purchasing power into euros of the other date's purchasing power. This needs illustrating!

Basic figures (all at 31 December) are:

- 20.1 €200
- 20.2 €250

The general inflation index stood at 300 in 20.1 and 330 in 20.2 (i.e. inflation in the year was 10 per cent). Over the year 200_{20.1} euros have been changed into 250_{20.2} euros. How much better off are we?

The description 'basic figure' is deliberately vague. The idea of CPP adjustments can be superimposed on any valuation basis. The practical proposals made in recent

years for the introduction of CPP have generally assumed an HC basis and for the present we will discuss and illustrate the ideas under this assumption.

ACTIVITY 7.1

Well. How much better off are we?

$$200 \times \frac{330}{300} = \text{€}_{20.2} 220$$

Activity feedback

To answer this, we need to calculate the equivalent in $\text{€}_{20.2}$ of $\text{€}_{20.1} 200$. In terms of general purchasing power this will be:

So in terms of a common measuring unit ($\text{€}_{20.2}$) we have an increase in well-offness of $250 - 220 = \text{€}_{20.2} 230$.

It is important to distinguish, when considering CPP accounting, between monetary and non-monetary items. Monetary items are items fixed by contract, custom or statute in terms of numbers of euros, regardless of changes in the general price level and the purchasing power of the euros. Examples are cash, debtors and creditors and longer-term loans. Non-monetary items are all items not so fixed in terms of number of euros, for example land, buildings, plant, inventory and shares held as investments.

Suppose I held a monetary asset in 20.1 of €200 (i.e. $\text{€}_{20.1} 200$). If I still hold this asset, untouched and unchanged, a year later, it will be worth €200. It might even be a pile of 200 physical € coins, although it could equally be a debtor or a loan. But in 20.2 what sort of euro is it worth 200 of? The answer is 20.2 euros. By definition the item is fixed in terms of number of euros. So I have turned $\text{€}_{20.1} 200$ into $\text{€}_{20.2} 200$. But we know that in terms of general purchasing power $\text{€}_{20.2}$ is worth less than $\text{€}_{20.1}$ was. Therefore, in maintaining my position in terms of the number of euros of my monetary asset, I have failed to maintain my position in terms of purchasing power.

Contrariwise, suppose we borrow €100 in 20.1 and repay the loan, €100, one year later. We have borrowed $\text{€}_{20.1} 100$ and repaid $\text{€}_{20.2} 100$. We have repaid the same number of euros that we borrowed, but each euro is of lower purchasing power. Therefore, in terms of (general) purchasing power we have repaid less than we borrowed, so we have gained. (We shall also have to pay interest of course, which may have attempted to take account of the effects of inflation.) These gains and losses on monetary items are an important part of the argument in favour of CPP accounting – it is suggested that such gains and losses should be calculated and reported.

With monetary items, then, when considering two sets of accounts at different dates, no *adjustment* to the € figure reported is needed, but care must be taken in interpretation. However, when *comparing two* sets of accounts of the same business at different dates it is necessary to adjust all the contents of one balance sheet into the measuring unit (dated euro) of that of the other. The question may be: what is the current (today) purchasing power of the €100 I held one year ago (and still hold)? The answer is 100 of today's euros. But the question might be: If I have €200 today and I had €100 one year ago, how much better off am I in terms of purchasing power? The answer, in terms of today's euros is:

$$200 - 100 \times \frac{(\text{RPI today})}{(\text{RPI 1 year ago})}$$

For example:

$$\begin{aligned}
 200 - 100 \times \frac{(330)}{(300)} \\
 &= 200 - 110 \\
 &= \text{€ today } 90
 \end{aligned}$$

This process leads to a good deal of confusion. Study the following example carefully.

Example

Given: All the information of Chaplin Ltd, as on pp. 87–88. Prepare: A closing balance sheet under CPP principles.

Chaplin Ltd – CPP solution

		€	€
Capital	$200\,000 \times \frac{120}{100}$		240 000
Operating profit			<u>21 382</u>
			261 382
Gain on net monetary liabilities			<u>2 000</u>
			263 382
Loan			50 000
Creditors			<u>50 000</u>
			363 382
Land and buildings	$110\,000 \times \frac{120}{100}$		<u>132 000</u>
Plant and equipment: cost	$40\,000 \times \frac{120}{100}$	48 000	
Depreciation	$4\,000 \times \frac{120}{100}$	<u>4 800</u>	<u>43 200</u>
			175 200
Inventory	$90\,000 \times \frac{120}{110}$	98 182	
Debtors		<u>90 000</u>	
			<u>188 182</u>
			<u>363 382</u>

Notes

1 *Operating profit. Balancing figure or provable as follows:*

Per HC results		26 000
less Depreciation adj.	$4\,000 \times \frac{110 - 100}{100}$	<u>400</u>
Inventory sold adj.	$60\,000 \times \frac{110 - 100}{100}$	<u>6 000</u>
Adjusted profit at 30 June prices		19 600
Adjusted profit at 31 December prices	$19\,600 \times \frac{120}{110}$	<u>€ 21 382</u>

2 *Gain on net monetary liabilities.*

(a) In total, this is easily provable as follows:

Net monetary liabilities 1 January €10 000 (loan 50 000 less cash 40 000).

Net monetary liabilities 31 December €10 000 (loan 50 000 plus creditors 50 000 less debtors 90 000).

Therefore, the gain is $10\,000 \left(1 - \frac{120}{100}\right) = €2000$ (at 31 December prices).

(b) More generally, however, the figures should be considered individually:

Debtors – arose on 30 June, remained until 31 December:

$$90\,000 \left(1 - \frac{120}{100}\right) = \text{Loss} \quad \text{€8181}$$

Creditors – arose on 30 June, remained until 31 December:

$$50\,000 \left(1 - \frac{120}{100}\right) = \text{Gain} \quad \text{€4545}$$

Loan – arose on 1 January, remained until 31 December:

$$50\,000 \left(1 - \frac{120}{100}\right) = \text{Gain} \quad \text{€10 000}$$

Cash – arose on 1 January, remained until 30 June:

$$40\,000 \left(1 - \frac{110}{100}\right) = \text{Loss} \quad 4000$$

But this loss on holding cash is expressed in 30 June euros. This figure must be converted to 31 December euros, i.e.:

$$40\,000 \times \frac{120}{110} = \text{Loss} \quad \text{€4364}$$

So in summary, we have:

Losses of 8181 + 4364	€ 12 545
Gains of 4545 + 10 000	€ 14 545
Giving a net gain on net monetary liabilities of:	<u>€ 2 000</u>

Is this €2000 gain distributable? Is it realized? In fact, as the practical businessman or businesswoman might say, where is it?

- 3** *Indices used.* Study carefully which index number is used where and make sure you see why. Remember the simplifying assumption that all sales, purchases and associated payments occurred on 30 June and also that monetary items need no adjustment for balance sheet purposes. Note the irrelevance of the plant and inventory indices.
- 4** *Complexity.* This example is highly simplified yet the numbers and, more importantly, the logic, are not at all easy.
- 5** *Comparatives.* Next year this balance sheet will be used as a comparative for next year's results. For this purpose it will need, next year, to be multiplied by:

$$\frac{(\text{RPI at 31 December next year})}{120}$$

This will need to be done to every figure, whether monetary or non-monetary. Thus, for example, the loan figure at the end of the year 2 will be 50 000 year 2 euros. If the RPI is then 150, then the comparative figure from year 1, as updated to year 2 euros, will be:

$$50\,000 \times \frac{150}{120} = \text{€}62\,500$$

This cannot, of course, mean that the loan has been reduced in monetary amount by €12 500. What it does mean is that the loan has reduced in value in terms of year 2 euros (i.e. there has been another gain on monetary liabilities).

Now try the following activity. Our solution follows, but we strongly suggest that you make a serious attempt at your own solution first.

ACTIVITY 7.2

Mushroom Ltd was established on 1 January 20X4. Its opening balance sheet (on this date) was as follows:

	€
Land	6 000
Equipment	4 000
Inventory	2 000
Equity	<u>12 000</u>

During 20X4, the company made the following transactions:

- Purchased extra inventory €10 000.
- Sold inventory for €11 000 cash, which had an historical cost value of €9000.
- Closing inventory on 31 December 20X4 had an historical cost of €3000 and was bought when the RPI index was 115 (average).
- The equipment has an expected life of four years and nil residual value. The straight line method of depreciation is used.
- The general price index stood at:
 - 100 on 1 January 20X4
 - 110 on 30 June 20X4
 - 120 on 31 December 20X4

You should assume that purchases and receipts occur evenly throughout the year. There are no debtors or creditors.

Required

Calculate the CPP profit for 20X4 and prepare the CPP balance sheet as at 31 December 20X4.

Activity feedback

		€ _{CPP}	€ _{CPP}
Sales	11 000 × 120/110		12 000
Opening inventory	2000 × 120/100	2 400	
Add purchases	10 000 × 120/110	<u>10 909</u>	
		13 309	
less Closing inventory	(3000 × 120/115)	<u>3 130</u>	
			10 179
			<u>1 821</u>
Less			
Depreciation			<u>1 200</u>
			621
Loss on holding monetary assets (cash)*			<u>91</u>
CPP profit			<u>530</u>

*If cash accrues evenly over the year, the loss is €(1000 × 120/110) – €1000 = €91

The historical cost profit (€11 000 – €9000 – €1000 for depreciation = €1000) and the CPP profit can be reconciled as follows:

(Continued)

ACTIVITY 7.2 (Continued)

Historical cost profit	1000	*The historical cost profit is based on:			
<i>Inventory</i>			€	€ _{CPP}	€
Additional charge based on restating the cost of inventory at the beginning and end of the year in euros of current purchasing power, thus taking the inflationary element out of the profit on the sale of inventory. Opening inventory + 400 – closing inventory – 130	(270)	Sales	11 000	12 000	1 000
<i>Depreciation</i>		Purchases	10 000	10 909	(909)
Additional depreciation based on cost, measured in euros of current purchasing power of fixed assets €1200 – €1000	(200)	Net difference			<u>91</u>
<i>Monetary items</i>		<i>Calculation of balance sheet items, and reconciliation of profit figure with balance sheet:</i>			
Net loss in purchasing power resulting from the effects of inflation on the company's net monetary assets	(91)	1 Value of equity, 1 January 20X4		€	12 000
Sales, purchases and all other costs* These are increased by the change in the index between the average date at which they occurred and the end of the year. This adjustment increases profit as sales exceed the costs included in this heading	<u>91</u>	Revalued in terms of € _{CPP} at 31 December 20X4 (€12 000 × 120/100)		€ _{CPP}	14 400
<i>CPP profit</i>	<u>530</u>	2 Mushroom Ltd			
		CPP balance sheet as at 31 December 20X4		€ _{CPP}	€ _{CPP}
		Land	6000 × 120/100		7 200
		Equipment	4000 × 120/100	4 800	
		less Depreciation	1000 × 120/100	<u>1 200</u>	
					3 600
					<u>10 800</u>
		Inventory	3000 × 120/115	3 130	
		Cash	(11 000 – 10 000)	<u>1 000</u>	
					4 130
					<u>14 930</u>
		Financed by equity and reserves			14 930
		CPP profit – ECPP			<u>530</u>
		(14 930 – 14 400) =		€ _{CPP}	<u>530</u>

COMBINATION OF METHODS

As already stated, CPP thinking can be applied to any valuation basis, not just historical costs. It is often suggested that CPP adjustments could and indeed should be applied to replacement cost calculations. It is important to remember that:

- 1 RC accounting deals with specific price rises only
- 2 CPP accounting deals with general price rises only
- 3 both types of change are in fact occurring at the same time.

Thus, to take the simplest of examples, if HC = 10 and a year later RC = 13, there is a holding gain of €3. But if the GI has increased by 10 per cent, then $(10 \times 110/100) = €11$ of that holding gain of 3 (closing date) euros is not 'real' because it cannot be translated into increased purchasing power. The 'real' holding gain is arguably only 2 $(3 - 1)$ (closing date) euros. This combined approach, known as *stabilized accounting*, is shown for Chaplin Ltd in the following example.

Example*Chaplin Ltd – stabilized (RC plus CPP) solution*

	€
Capital (per CPP answer)	240 000
Operating profit	18 328
	<u>258 328</u>
Real holding gain	8 012
	<u>266 340</u>
Loan	50 000
Creditors	50 000
	<u>366 340</u>
Land and building (per RC answer)	135 000
Plant and equipment (per RC answer)	39 600
Inventory (per RC answer)	101 740
Debtors	90 000
	<u>366 340</u>

Notes:

1 Operating profit

Per HC answer	$26\,000 \times \frac{120}{110} = 28\,364$
Depreciation RC 30 June	4 200
Depreciation <i>less</i> HC	<u>4 000</u>
	$200 \times \frac{120}{110} = (218)$
Cost of sales	
(per RC answer)	$9\,000 \times \frac{120}{110} = (9\,818)$
	<u>18 328</u>

2 Real holding gain

Gain on net monetary items (per CPP answer)	2 000
Land and buildings	$110\,000 \times \left(\frac{135}{110} - \frac{120}{100} \right) = 3\,000$
Plant and equipment: Cost	$40\,000 \times \left(\frac{110}{100} - \frac{120}{100} \right) = (4\,000)$
Depreciation	$\left(400 \times \frac{105}{100} \right) \times \left(\frac{110}{105} - \frac{120}{100} \right) = \underline{182} \quad (3\,818)$
Cost of sales: Opening inventory	$\left(60\,000 \times \left(\frac{115}{110} - \frac{110}{100} \right) \right) \times \frac{120}{110} = 3\,273$
Closing inventory	$(90\,000 \times \left(\frac{130}{115} - \frac{120}{110} \right)) = \underline{3\,557} \quad \underline{6\,830}$
	<u>€8 012</u>

CURRENT PURCHASING POWER – WHAT DOES IT REALLY MEAN?

It is most important when thinking about CPP accounting to be fully aware of exactly what it is doing and what it is not doing. The crucial point is that it is not producing a current valuation of the term concerned in any sense. What it is doing, in general terms, is to re-express, in terms of current euros, the figures as originally calculated under the original measurement basis, whatever that was. It does not alter the basis of valuation. It alters the measuring unit which is being applied to the original basis of valuation.

ACTIVITY 7.3

Look at the figure of €132 000 for land and buildings shown in the Chaplin Ltd example (p. 110) and think about it carefully. What does it mean?

Activity feedback

We would suggest it means something like: the number of current euros that would have to be spent today to buy the land and buildings if all economic circumstances were exactly unaltered from when the original purchase was made. Since all economic circumstances will most certainly not be unaltered from when the original purchase was made, it is not obvious that this is particularly useful information.

The other point that could be made concerns the assumption that a general adjustment to purchasing power is of relevance even when viewed in measuring unit terms to the particular user of the particular set of accounts of the particular business being considered. Can the spending or purchasing power of one euro be equated as between a retail shop and a chemical manufacturer? Can the spending or purchasing power of one euro be equated as between a non-smoking pensioner and a smoking teenager? Is general purchasing power so general that it is not really relevant to any particular user?

SOME INTERNATIONAL PRACTICES AND TRADITIONS

No attempt is made here to replicate a full coverage of either national research traditions or of national practices. Readers wishing to investigate the story as it applies in their own country should look elsewhere. We merely present a brief sketch and overview.

A significant starting point is the publication of a French *ordonnance* (law) in 1673 and an authorized (by Royal Decree) commentary on it published in 1675 by Jacques Savary. Savary argued that an annual inventory – which we would now call balance sheet – had two functions. The first function is to give an indication of the position of the business as a performing (and continuing) operation. This function logically requires that assets are measured on a cost basis if not yet sold. The second function is an indication of debt coverage, i.e. to give an indication of the risk of bankruptcy. This function logically requires that assets are measured on a net realizable value basis.

ACTIVITY 7.4

Prepare a list, in point form, of advantages and disadvantages which you think could reasonably be said to apply to current purchasing power accounting.

Activity feedback

Advantages

- 1 All necessary figures are stated or restated in terms of a common measuring unit (CPP units). This facilitates proper comparison.

- 2 It distinguishes between gains or losses on monetary liabilities and assets, on the one hand, and 'real' gains or losses through trading activities, on the other.
- 3 It requires only a simple objective adjustment to HC accounts. Easily auditable.

(Continued)

ACTIVITY 7.4 (Continued)

Disadvantages

- | | |
|---|---|
| <ol style="list-style-type: none"> 1 It is not clear what CPP units are. They are not the same as monetary units. 2 General purchasing power, by definition, has no direct relevance to any particular person or situation. 3 When CPP is applied to HC-based accounts, the resulting figures necessarily contain all | <p><i>the disadvantages of the original HC accounts.</i></p> <ol style="list-style-type: none"> 4 It fails to give any sort of meaningful 'value' to balance sheet items, although it gives the impression to non-accountants that it has done precisely that. 5 It is extremely difficult to understand and interpret. |
|---|---|

These two functions, and the resulting balance sheets, later became known as dynamic and static respectively. These are the terms used in the German tradition, developed to considerable sophistication by theorists in the early years of the twentieth century. Schmalenbach wrote *Dynamische Bilanz*, in several editions to 1926 (also available in English (1959)), which argues for a reporting system based on historical costs together with general indexation adjustment. This is in contrast with Schmidt, who, in various writings, supported the essentially static view (in the sense already described) that current values should be used, actually current entry (replacement cost) figures under his proposals.

The Dutch academic Theodor Limperg broadly followed and developed the Schmidt approach in the years to 1940 (e.g. see Mey (1966)). The essential argument is that replacement cost is the sacrificed value for production resources used. Distributable income is then logically defined as the difference between revenue and the value sacrificed in order to obtain that revenue, i.e. profit is revenue less replacement cost of consumption.

A connection into the English-speaking world was made through the publication by Sweeney of *Stabilized Accounting* (1936). Sweeney had access to the German literature and was strongly influenced by Schmidt. Sweeney went further, however, demonstrating in detail the feasibility of a full-scale combination of replacement cost measurement in combination with general indication, i.e. RC and CPP at the same time.

The 'resources sacrificed' approach, essentially an opportunity cost philosophy, can be traced to *The Valuation of Property*, by Bonbright, published in the USA in 1937. It was this book that provided the foundations for the development of the concept of deprival value, already discussed.

Practice since the middle of the twentieth century bears little resemblance to the earlier research developments. The general middle European practical approach, influenced by the factors discussed in Chapter 2, has been a strict adherence to historical costs. The same is true in the USA, although perhaps more for reasons of objectivity (and fear of the power of lawyers) than for reasons of prudence. The UK (and also the Netherlands) have adopted a more flexible approach, both in law and in practice. The large Dutch company, Philips, used a broadly Limpergian reporting system for several decades.

In the 1970s the UK experimented with a compulsory supplementary *Current Purchasing Power System* (SSAP 7, 1974). Following the government-sponsored (and influenced) Sandilands Report (1975), an expanded (and excessively complicated) development of deprival value, known as *Current Cost Accounting* (SSAP 16, 1980) was required (without general indexation). Neither lasted very long. Moves along similar lines were made over this period in a number of other countries, including the USA,

which briefly introduced additional note disclosures using both specific and general adjustments. But the timing of these events strongly influenced the content and wording of the Fourth European Directive on the accounts of limited companies, published in 1978 and still very much with us today. This Directive allows a very wide variety of different approaches.

In terms of the future, general inflation adjustments are regularly employed in hyperinflationary economies, such as some South American countries and supported by requirements in IAS 29, discussed in Chapter 23. Specific price change adjustments are not generally in fashion at present. But as trends of price rise tend to increase, then the debate is likely to return.

SUMMARY

In this chapter we have explored the concept of general inflation and current purchasing power adjustments and seen how the figures are calculated. Finally, we attempted to consider the meaning and usefulness of the resulting accounts and statements and to outline some practical developments.



EXERCISES

Suggested answers to exercises marked ✓ are to be found on our dedicated CourseMate platform for students.

Suggested answers to the remaining exercises are to be found on the Instructor online support resources.

- ✓1 What do CPP adjustments do and how do they do it?
- 2 Are general indices more or less useful in financial reporting than specific price changes?
- 3 Look at the figure of €240 000 for capital shown in the Chaplin CPP example (p. 114) and think about it carefully. What does it mean?
- 4 To what extent do current purchasing power adjustments to historical cost figures lead to up-to-date valuations in a balance sheet?
- 5 Current purchasing power adjustments are simple to apply, but hard to explain and interpret. Discuss.

- 6 From the following historical cost accounts of Page plc, prepare a set of CPP accounts for the year ended 31.12.8.

		31.12.7 €000		31.12.8 €000
Fixed assets				
Cost (purchased 1.1.5)		500		500
less depreciation		<u>300</u>		<u>400</u>
		200		100
Current assets				
Inventory (purchased 31.10)	100		150	
Debtors	200		300	
Bank	<u>150</u>		<u>350</u>	
	450		800	
less Current liabilities	<u>300</u>		400	
		150		400
		<u>350</u>		<u>500</u>
Share capital		100		100
Reserves		<u>250</u>		<u>400</u>
		<u>350</u>		<u>500</u>

Profit and loss account for the year ended 31 December year 8:

		€ 000
Sales		1 850
Cost of goods sold		
Opening inventory	100	
Purchases	<u>1 350</u>	
	1 450	
Less Closing inventory	<u>150</u>	
		1 300
Gross profit		<u>550</u>
Expenses	300	
Depreciation	<u>100</u>	
		400
Net profit		<u>150</u>

The movement on the retail price index has been as follows:

1 January year 5	180
1 January year 7	200
Average for year 7	210
31 October year 7	215
31 December year 7	220
Average for year 8	230
31 October year 8	235
31 December year 8	240

Assume all sales, purchases and expenses accrue evenly throughout the year.

- 7** You are the management accountant of a manufacturing company where production is capital-intensive, using machinery that is estimated to have a five-year life. The present machinery is now approximately three years old. Whilst raw material stocks have a low turnover due to supply problems, finished goods are turned over rapidly and there is minimal work-in-progress at any one time. The technology incorporated in the means of production is thought to be stable.

In recent years, it has not been possible to increase the price of the company's outputs beyond the rate of general inflation without diminishing market share, due to keen competition in this sector. The company does not consider that it has cash-flow problems. The company is all equity financed. Although a bank overdraft is a permanent feature of the balance sheet, this is primarily due to customers being given a 60-day credit period, whilst most suppliers are paid within 30 days. There is always a positive balance of short-term monetary assets.

In the previous financial year, net profit after taxation on a strict historical cost basis was considered very healthy, and the directors felt that they could prudently distribute a major portion of this by way of dividend. The directors are considering whether, and if so how, to reflect price-level changes in their financial statements. They are concerned that this would affect their profit figure and therefore the amount they could distribute as dividend.

The following price-level changes have been brought to the attention of the directors:

	<i>Retail price index</i>	<i>Index for company's machinery</i>	<i>Raw materials stock index</i>
3 years previously	100	100	100
2 years previously	104	116	102
1 year previously	107	125	108
Present	112	140	120

You are required to prepare a report for your directors setting out in general terms how to explain to the shareholders the likely impact on the historical cost profit of possible methods of accounting for price-level changes.

(CIMA – adapted)



FAIR VALUES

8

OBJECTIVES After studying this chapter you should be able to:

- explain and discuss the concept of fair value
- describe and appraise the requirements of IFRS 13, *Fair Value Measurement*
- discuss the arguments for and against the usage of fair value
- articulate your own views on the various valuation methods considered in Chapters 4, 5, 6 and 7.

INTRODUCTION

The notion of fair value has a long and complicated history. It emerged gradually in a number of IASs from the early 1980s. However the term, without a clear definition, could be found rather earlier in the US. Generally the (limited) extent to which fair value has a coherent theoretical basis has grown up in a rather ad hoc way. For many years the formal IASB definition of fair value was ‘the amount by which an asset could be exchanged, or a liability settled, between knowledgeable willing parties in an arm’s length transaction’. This definition was used in a number of specific standards by both IASB and the American FASB. The definition has the obvious characteristic, since an exchange must by definition involve a buyer (with therefore an entry (cost) value) and a seller (with therefore a selling price (exit value)), of avoiding, or defining away, the problem of exactly

what kind of concept and number is represented by fair value. Since it is gross of transaction costs, it is necessarily the same number, under this definition, for both buyer and seller, so was arguably an entry and an exit concept at the same time. It is certainly a current value, being updated for each reporting date, but exactly what kind of current value, in the context of the exposition in the previous four chapters, is not so obvious.

In 2006 the FASB, at the same time as officially professing a desire for convergence with the IASB, issued a new standard, then numbered FAS 157, with a new and different definition, which changed fair value to an explicitly exit value concept. Eventually the IASB accepted this new definition, and issued a completely new standard relating to the definition and operationalization of fair value.

IFRS 13, FAIR VALUE MEASUREMENT

IFRS 13, *Fair Value Measurement*, issued in May 2011, does not impose fair value (FV) measurement as a requirement. Instead, it:

- defines FV
- sets out:
 - a framework for measuring FV, including the ‘Fair Value Hierarchy’
 - requirements for disclosures when FV measurement is used.

In other words, it specifies *how* an entity should measure FV and disclose information about FV measurement, but not *when* FV measurement should be used. When it should or may be used is a matter for individual standards, as discussed extensively in Parts Two and Three of this book.

FV is now defined as ‘the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date’. It is therefore now a market-based exit price. Before we go into details, try the following activity, to put the general idea of fair value into context.

ACTIVITY 8.1

S takes a product to market, incurring transaction costs of €2 and exchanges it with B, in an arm’s length (i.e. independent) transaction at an agreed exchange price of €30. B takes the product to his own entity, incurring transaction costs of €3. Calculate each of the following within the limits of the given data:

- (a) S’s selling price
- (b) S’s net realizable value
- (c) B’s buying price
- (d) B’s historical cost
- (e) B’s current replacement cost
- (f) Fair value to S before the sale
- (g) Fair value to B after the sale.

Activity feedback

Answers would seem to be as follows:

- | | | |
|-----|--------------------------------|-----|
| (a) | S’s selling price | €30 |
| (b) | S’s net realizable value | €28 |
| (c) | B’s buying price | €30 |
| (d) | B’s historical cost | €33 |
| (e) | B’s current replacement cost | €33 |
| (f) | Fair value to S before sale | €30 |
| (g) | Fair value to B after purchase | €30 |

A number of points emerge: (a) and (c) are necessarily equal, (f) and (g) are necessarily equal at least instantaneously before and after the transaction. Further, (a), (c), (f) and (g) are all necessarily equal. Third, (b) < (c) < (e), i.e. in the general case where disposal and acquisition costs are not nil:

$$\text{NRV} < \text{Fair value} < \text{CRC}$$

Both practically and conceptually, FV measurement is problematic insofar as it requires assumptions about ‘an orderly transaction between market participants’ in situations where there is in fact no active market. These assumptions relate among other things to prices, market characteristics, characteristics of market participants, assumed uses and accounting choices. The IASB has insisted that FV measurement is both feasible and meaningful in such circumstances. Its response is the ‘Fair Value Hierarchy’ of inputs into the FV measurement process. In this three-level hierarchy (passages in quotation marks below are from the text of IFRS 13):

- The unproblematic Level 1 inputs are ‘quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date’.
- The Level 2 inputs are those which, while not being quoted prices as in Level 1, are observable, such as quoted prices for similar assets in active markets, or in markets that are not active, or are not quoted prices but are valuation-relevant information such as interest rates and yield curves, etc., or are market-corroborated data derived from or corroborated by observable market data by correlation or other means.
- The Level 3 inputs are to be used in the absence of Level 1 or Level 2 inputs (or in some cases to adjust Level 2 inputs) and are unobservable inputs which are ‘used to measure FV to the extent that relevant observable inputs are not available, ... [but which] reflect the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. [Such inputs] might include the entity’s own data’. Nevertheless, the IASB insists that FV is not an entity-specific value such as net present value or net realizable value, but a market-based value.

It will be clear that it is FV measurement based on Level 3 inputs which is particularly problematic. IFRS 13 seeks to mitigate this problem by means of disclosure. For both Level 2 and Level 3 inputs, where so-called ‘marking to model’ is involved, IFRS 13 requires a description of the valuation technique and the inputs used, while for Level 3 inputs assumptions about risk and much more extensive disclosures are required, including the sensitivity of the FV measurement to changes in unobservable inputs. The application of this hierarchy is discussed in more detail later in this chapter.

Whether or not market information from observable market transactions is available, the objective of FV measurement under IFRS 13 is the same: to estimate the price at which an orderly transaction to sell the asset or transfer the liability would take place between market participants at the measurement date under current market conditions, i.e. an exit price from the standpoint of a market participant holding the asset or owing the liability. Because FV is a market-based measurement, the measurement takes place based on the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. Thus, in such measurement an entity’s intention to hold or dispose of an asset, or settle or fulfil a liability, is irrelevant. As well as being applied to assets and liabilities, IFRS 13 is to be applied to an entity’s own equity instruments. (IFRS 13, paras 1–4).

IFRS 13 applies, in both initial and subsequent measurement, when another IFRS requires or permits FV measurements or requires disclosures about such measurements or measurements based on FV, with the following exceptions:

- 1 Share-based payment transactions within the scope of IFRS 2, ‘Share-based payments’ (see Chapter 22);

- 2 Leasing transactions within the scope of IAS 27, *Leases* (see Chapter 16);
- 3 Measurements that have some similarities to FV but are not FV, such as net realizable value in IAS 2, *Inventories*, or value in use in IAS 36, *Impairment of Assets* (see Chapters 17 and 15).

In the first two cases, the relevant standards both state, surely bizarrely, that the earlier ‘exchange price’ definition continues to apply.

Further, the disclosure requirements of IFRS 13 do not apply to:

- 4 Plan assets measured at FV in accordance with IAS 19, *Employee Benefits* (see Chapter 22);
- 5 Retirement benefit plan investments measured at FV in accordance with IAS 26, *Accounting and Reporting by Retirement Benefit Plans* (see Chapter 22);
- 6 Assets for which recoverable amount is FV less costs of disposal in accordance with IAS 36 (see Chapter 15).

On the other hand, the measurement requirements (and the disclosure requirements) apply when FV measurements are disclosed by an entity even if they are not used in the entity’s financial statements, for example being disclosed only in the Notes (IFRS 13, paras 5–8).

FV measurement applies to a particular asset or liability (or a particular interest in an entity’s own equity instruments, e.g. an equity interest issued or transferred in a business combination). Depending on its unit of account, an asset or liability measured at FV may be either:

- a stand-alone asset or liability such as a financial instrument
- a group of assets or a group of liabilities, which function together
- a group of assets and liabilities which necessarily function together, such as a business or a cash-generating unit.

The unit of account is determined based on the IFRS in accordance with which the FV measurement is being applied, except where otherwise stated in IFRS 13.

APPLYING THE STANDARD

As noted above, a FV measurement assumes that the asset or liability (or interest in the entity’s own equity instruments) is exchanged in an orderly transaction between market participants to sell the asset or transfer the liability or own equity instrument at the measurement date under current market conditions. The market should be either the principal market for the asset, liability or equity interest, or, in the absence of a principal market, the most advantageous market. The reporting entity must have access to the market in question, i.e. the practical ability to trade in the market, at the measurement date. The FV measurement represents the price in that market, whether directly observable or estimated using another valuation technique. Even when the FV measurement is entirely dependent on Level 3 inputs, a FV measurement assumes that a transaction takes place on that date considered from the perspective of a market participant that holds the asset or owes the liability (or transfers the equity instrument). That assumed transaction creates the basis for estimating the price to sell the asset or transfer the liability (IFRS 13, paras 13–21). Extensive guidance is provided in the

Standard on how to carry out FV measurements of assets based on Level 3 inputs and for liabilities and an entity's own equity instruments.

The price in the principal or most advantageous market is not to be adjusted for transactions costs, which should be accounted for in accordance with other IFRSs. Transactions costs are not considered to be a characteristic of an asset or liability, as they are specific to a transaction and may vary depending on how the transaction is entered into. In other words transaction costs are entity specific rather than market specific. Although fair value measurement is gross of transaction costs, thereby confirming our earlier proposition that FV is greater than NRV, transport costs are specifically excluded from transaction costs. Transport costs as regards IFRS 13 are defined as 'the costs that would be incurred to transport an asset from its current location to its principle (or most advantageous) market'. In contrast to transaction costs, transport costs may be a characteristic of an asset as they reflect a change in one of its attributes (its location). Hence, in making a FV measurement, a downwards adjustment to the hypothetical price should be made for any transport costs that would be necessary to transport an asset from its current location to the principal or most advantageous market (IFRS 13, paras 22–26).

ACTIVITY 8.2

Does the distinction between transaction costs and transport costs make sense?

Activity feedback

We find it hard to be positive here! The origin of the distinction seems to be the determination to maintain the position that fair value is defined in relation to a market and not in relation to an entity. Cows live in fields or barns owned by particular farmers/entities, but are sold in (physical) markets, so their location has to be changed (hence requiring transport costs) before they can be considered as market-related. The commission to the auctioneer is integral to the market, not to the farmer, and

presumably is part of transaction costs since it is related to the market and not related to the entity itself.

But we have difficulty with all this. If you wish to sell a cow, or you do sell a cow, there is a selling price. But in order to sell, you have to both transport the cow, and pay the auctioneer. Gross selling (or exchange of course) price has a clear economic meaning. Net realizable value has a clear economic meaning. Fair value, as defined and applied here, is in the general case in-between. What precisely is its economic meaning or message? To whom and for what is it useful? We find these questions difficult to answer.

Apart from the IFRSs dealing with financial assets and liabilities, several IFRSs require or permit measurement at FV for non-financial assets. These include IAS 16, *Property, Plant and Equipment* (see Chapter 13), IAS 38, *Intangible Assets* (see Chapter 14), IAS 40, *Investment Property* (see Chapter 13), IAS 41, 'Agriculture' (see CourseMate) and a number of IFRICs.

A FV measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its 'highest and best use' or by selling it to another market participant that would do so. Highest and best use (HBU) is a valuation concept used to value many non-financial assets such as real estate. The concept is not relevant to items other than non-financial assets since they do not have an alternative use without being changed and therefore ceasing to be the same asset or liability.

The HBU of a non-financial asset must be physically possible, financially feasible and legally permissible. Financial feasibility takes into account whether a physically possible and legally permissible use would generate adequate income or cash flows to

produce an investment return that market participants would require, and any costs of converting the asset to that use.

The HBU is determined from the perspective of market participants, even if the reporting entity has a different use in mind. Nevertheless, the entity's current use of a non-financial asset is presumed to be its HBU unless market or other considerations suggest otherwise (e.g. in the case of an intangible asset that the entity plans to use defensively so as to prevent others from using it).

The HBU establishes the valuation premise used to measure FV for a non-financial asset which might be used in combination with other assets as a group, or with other assets and liabilities as a business or business unit, as follows:

- If the HBU is the use of the asset in combination with a group of other assets or other assets and liabilities, the FV of the asset is the price that would be received in a current transaction to sell the asset assuming that it would be used with that group of other assets or assets and liabilities (its complementary assets and any associated liabilities) and that these would be available to market participants.
- Associated liabilities for this purpose include those that fund working capital but not those that fund assets other than those within the group of complementary assets.
- Assumptions about the HBU must be consistent for all the assets included in the group of complementary assets for which HBU is relevant.
- The HBU might provide maximum value to market participants when the asset is used on a stand-alone basis. In that case, the FV of the asset is the price that would be received on the assumption that the buyer would use it on a stand-alone basis.

A FV measurement of a financial or non-financial liability or an entity's own equity instrument (e.g. as issued as consideration in a business combination) assumes that:

- The instrument is transferred to a market participant at the measurement date.
- A liability would remain outstanding and the transferee would be required to fulfil the obligation which would not be settled with the counterparty or otherwise extinguished on the measurement date.
- An entity's own equity instrument would remain outstanding and the transferee would take on the rights and responsibilities associated with the instrument which would not be cancelled or otherwise extinguished at the measurement date.

Even when there is no observable market to provide pricing information about such a transfer (for example, because transfer is prevented by contractual or other legal restrictions), if such items are held by other parties as assets this may result in an observable market. In all cases, to meet the objective of FV measurement, which remember is to estimate the price at which an orderly transaction to transfer the item would take place between market participants under current market conditions at the measurement date, an entity maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs.

When a quoted price is not available, and an identical item is held by another party as an asset, the FV is measured from the perspective of a market participant that holds the item as an asset at the measurement date, according to the FV hierarchy (see below).

When a quoted price is not available, and an identical item is not held by another party as an asset, the FV of the item is measured using a valuation technique from the

perspective of a market participant that owes the liability or has issued the equity instrument.

The FV of a liability reflects the effect of the risk that the entity that owes it may not fulfil that obligation, i.e. non-performance risk, which includes, but is not limited to, the entity's own credit risk. Hence, when measuring the FV of a liability, an entity takes into account the effects of its own credit risk as well as other factors that may affect the likelihood that the obligation will be fulfilled. Non-performance risk related to a liability is assumed to be the same before and after the transfer of the liability, for various reasons:

- A market participant taking on the obligation would not enter into a transaction that changed the non-performance risk associated with it without reflecting that change in the price.
- Creditors would not knowingly agree to a transfer to a transferee with a lower credit standing.
- Those who might hold the liability as an asset would consider, when pricing those assets, the effects of the entity's own credit risk as well as other factors that may affect the likelihood that the obligation will be fulfilled.

THE MEASUREMENT PROCESS

When an asset is acquired or a liability is assumed in an exchange transaction, the transaction price is an *entry* price, whereas FV is defined as an *exit* price. Nevertheless, in many cases the transaction price will be equal to FV, for example when on the transaction date the transaction to buy the asset takes place in the market in which the asset would be sold (remember that transaction costs are not taken into consideration). When this is not the case, the difference (gain or loss) between FV and the transaction price is recognized in profit or loss for the period unless the applicable IFRS specifies otherwise.

There are some cases where the transaction price will differ from FV:

- The transaction is between related parties, although the transaction price may be used as an input where the entity has evidence that the transaction was entered into at market terms.
- The transaction takes place under duress or in a forced sale (e.g. in financial distress of the seller).
- There is a difference in the units of account between the buyer and the seller, for example in a business combination where the transaction includes unstated rights and privileges that are to be measured separately or the transaction price includes transactions costs.
- The market in which the transaction takes place is not the principal or most advantageous market. This might be the case if the entity is a dealer that enters into transactions in the retail market, whereas the principal or most advantageous market is with other dealers in the wholesale market. If the entity is a dealer, the entry price it will pay for items in the retail market will be lower than the exit price for the same items in the principal or most advantageous market, namely the wholesale market (IFRS 13, paras 57–60).

The objective of using a valuation technique is to *estimate* the price at which an orderly transaction to sell the asset or transfer the liability takes place between market participants at the measurement date under current market conditions. Valuation techniques that are used should maximize the use of observable inputs and minimize the use of unobservable inputs. They include the market approach (a current transaction price), the cost approach (a historical cost) and the income approach (a present value calculation), all of which have been discussed at length in previous chapters. If a transaction price is used to measure FV on initial recognition, and a valuation technique that uses unobservable inputs is used to measure FV in subsequent periods, that valuation technique needs to be calibrated so that if applied at initial recognition it would result in the transaction price.

The FV hierarchy was originally included in IFRS 7 (see Chapter 18), but has now been transferred to IFRS 13. It classifies the inputs to valuation techniques used to measure FV into three levels. The FV hierarchy prioritizes inputs to valuation techniques, not the techniques themselves. Where a combination of inputs from different levels is used, the combined input is classified at the level of the lowest of the inputs. For example, if an observable input requires an adjustment using an unobservable input and the resulting adjustment is of a significant amount, then the resulting measurement is a Level 3 measurement. Hence, the FV hierarchy is also applied to FV measurements based on the lowest level of the inputs used in a particular FV measurement. This then leads to disclosure requirements which are somewhat more onerous for Level 2 measurements than for those at Level 1, and substantially more onerous for Level 3 measurements. The formal definitions are as follows.

Level 1 inputs are unadjusted quoted prices in active markets for identical assets or liabilities that the entity can access at the measurement date. These prices typically provide the most reliable indication of FV and should be used to measure FV whenever available.

Level 2 inputs are all inputs other than quoted prices included in Level 1 that are observable, either directly or indirectly, for the asset or liability, such as quoted prices for similar assets in active markets, or in markets that are not active, or are not quoted prices but are valuation-relevant information such as interest rates and yield curves, credit spreads, etc., or are market-corroborated data derived from or corroborated by observable market data by correlation or other means. Such inputs are substantially less subjective than Level 3 inputs.

Adjustments to Level 2 inputs will vary depending on various factors including the following:

- The condition or location of the asset (for non-financial assets).
- The extent to which inputs relate to items that are comparable to the asset or liability. There may be differences in characteristics such as credit quality or the unit of account.
- The volume or level of activity in the markets within which the inputs are observed.

Level 3 inputs are unobservable inputs to be used to measure FV (or in some cases to adjust Level 2 inputs) to the extent that relevant observable inputs are not available, which reflect the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. Such inputs might include the entity's own data. Nevertheless, as emphasized earlier, FV is not an entity-specific value, but a market-based value.

Assumptions about risk include the risk inherent in a particular valuation technique used to measure FV, such as a pricing model, and the risk inherent in the inputs to the valuation technique. A measurement that does not include an adjustment for risk would not be a FV measurement if market participants would include such an adjustment when pricing the asset or liability. For example, an adjustment might be called for when there is significant measurement uncertainty. This might be the case when there has been a significant decrease in the volume or level of activity when compared to normal market activity for the asset or liability (or similar assets or liabilities) and the entity has determined that a transaction or quoted price does not, as such, represent FV (for example, there might be transactions that are not orderly such as forced or distressed sales).

Where a Level 3 input is used to adjust a Level 2 input and the adjustment is significant, the result is a Level 3 measurement (IFRS 13, paras 67–90).

DISCLOSURE

The disclosures required by IFRS 13 are onerous, especially for FV measurements based on Level 3 inputs. This is intended to mitigate the acknowledged uncertainty and subjectivity of such measurements. Much information is required about the assumptions which underpin the actual measurement process. The detailed disclosure requirements can be found in the standard itself (paras 91–99).

TOWARDS AN APPRAISAL OF FAIR VALUE

There is no doubt that the fair value concept is controversial. One of the major issues is the insistence that it is, and should be, a market-specific value and not an entity-specific value. In a comment letter published in 2006 on an earlier discussion draft concerning the concept of fair value, EFRAG included the following paragraph:

We think that a number of important statements the paper makes are neither generally accepted nor justified in the paper. We are also not convinced by the reasoning underlying a number of important conclusions. For example – and probably most important of all – we are not convinced by the arguments advanced in the paper in support of the statements that (a) the market value measurement objective provides superior information to entity-specific measurement objectives, at least on initial recognition (paragraph 60) and (b) fair value is more relevant than measurement bases that depend on entity-specific expectations (paragraph 102). If the arguments in the paper are the only arguments in favour that exist and have been expressed in the paper in the best way possible, we do not understand how the paper could have reached the conclusions it has.

We tend to be supportive of current values, regard fair value as a valid contender for an appropriate current value, but, like EFRAG, are not at all convinced by the apparent determination to avoid entity-specific measurements. If a user of financial statements is making a detailed comparison of, say, Daimler-Benz and Peugeot-Citroën, surely figures related to Daimler-Benz and Peugeot-Citroën are likely to be more relevant than figures related to the world markets for steel, rubber, cars and so on. Let the debate continue!

Parallel to the theoretical uncertainty of what fair value actually implies in terms of real-life calculation, there is great political uncertainty regarding the future of, and desirability of, the use of fair values. As a general and oversimplified comment, we suggest that the greater the emphasis by users of published financial reports on the estimation of long-run cash flows, and therefore on long-run profitability, the greater the support for fair values in some form is likely to be. It follows from the discussions on user needs in Chapter 1, and on international differences in Chapter 2, that those countries and traditions tending to take a common law economic focus are likely to be more receptive to fair values than those taking a code law legislation focus. It further follows within any given tradition that, other things equal, companies whose shares are actually traded are likely to be relatively favourable towards fair values, whereas companies where the only users in practice are creditors/bankers and taxation authorities are likely to be critical. The implications of these tensions and differences are nowhere near resolution amongst legal and regulatory authorities.

A further point of contention is the possible relationship between the use of fair value reporting and the financial crisis which began around 2008. In essence, fair value as applied to impairment of financial assets (of which bank receivables are a prime example) removes the possibility of income smoothing and secrecy about performance, and these are exactly the attributes which bankers, and banking regulators, wish to preserve. For consideration of this, and for other specific applications of the fair value concept in relation to particular standards, see the relevant chapters in Parts Two and Three of this book.

VALUATION AND INCOME MEASUREMENT – SOME OVERALL CONSIDERATIONS

We have spent a long time and many pages exploring a variety of bases for the evaluation of assets and liabilities, and therefore for different measures of performance over time. In Chapter 1 we revised and developed the traditional historical cost model. This is backwards looking and relatively objective (remember the relatively!). In Chapter 4 we considered the thinking of important economists in this area, the psychic theories of Fisher – unmeasurable in money terms by very definition but properly recognizing that only human beings take decisions and that they are the ultimate consumers – and the more quantifiable work of Hicks with its important capital maintenance implications. These economic-based ideas are properly forward looking and logically relevant to the decision-making process, but they are highly subjective. Current values lie in the middle of this spectrum, both in terms of their time relationship (in between past and future) and in terms of their degrees of objectivity/subjectivity. In this sense they are clearly worth exploring as a compromise between relevance and verifiability.

There are stronger claims that can be made, however. The usual financial reporting statements essentially claim to report on the position at a (current) date and on the results ending on that date. Current values can properly claim to provide information consistent with this approach. The question follows, of course, which current value? The discussions in this and previous chapters suggest that each of the suggested bases has particular merits. All provide useful information. All give good and relevant answers to some questions. One obvious suggestion to follow from this is that the preferable method in any situation depends on the particular situation itself – in other words, the abstract question ‘Which is the best method?’ has no answer and indeed is

simply a silly question. We should be prepared to use different valuation methods and different reporting methods for different purposes.

A second suggestion is an idea for you to take away and think about. The practice and application of double-entry channel us unthinkingly into the assumption that the balance sheet and the income statement are two elements in the same system and that they therefore have to be fully compatible with each other. But our basic purpose is to produce meaningful reports and there is no logical reason why they should be in any way constrained by data-recording systems. Perhaps we should consider producing smaller more ad hoc statements, using *combinations* of valuation bases depending on the purpose of each statement, or producing several different versions of a (loosely defined) income statement and a (loosely defined) statement of financial position, so that users can choose between them for their own particular purposes. Would the increased costs of preparation, and the increased complexity of published documents, be justified by the increased usefulness?

Here is an activity, deliberately in two major parts. We suggest you answer them quite independently of each other.

ACTIVITY 8.3

First, suggest, with reasons, which method (or methods) seems likely to produce the most useful measurement of performance (revenues and expenses and therefore income).

Second, suggest, with reasons, which method (or methods) seems likely to produce the most useful measurement of financial position (assets and liabilities and therefore equity).

If the answers are not compatible, consider the implications.

Activity feedback

In a sense, this is the ultimate accounting question. It can be approached in many different ways, and we make no attempt to suggest a definitive answer. It is in the end your own opinions that matter. The qualitative characteristics outlined in Chapter 1 could well point in different directions, depending on which characteristics are given more or less importance. But we suggest that the best starting point is the users and user needs. One argument which we find persuasive is derived from the Hicks emphasis on long-run repetitive performance, i.e. on the permanent maintenance of operating capability. This supports the removal of holding gains from the performance (earnings) measure, and therefore current replacement cost. This not only gives an important indicator for

management, and for government economic and taxation policy, but also gives current and potential investors a meaningful approximation to long-run cash flows.

But the resulting balance sheet numbers, for both carrying value of assets and for the reserves section of equity, are more difficult either to explain precisely, or to defend in terms of usefulness. If there are no global investors to consider, i.e. the main or only likely users of the financial statements are groups such as banking lenders, tax authorities and lawyers, then some kind of meaningful estimate of asset valuations seems particularly relevant, perhaps either net realizable value or fair value, logically an entity-specific figure being preferable. But of course these ideas taken together do indeed mean the usage of multiple bases, which is both relatively costly in preparation and relatively difficult in comprehension. Note also that our discussion takes no account at all of the issue of general inflation, of the decline in value over time of the currency measuring unit in terms of spending power, and the only reason for holding currency is for what it can be exchanged for in terms of further investment or for consumption.

As a general and perhaps evasive conclusion, user needs, and the relevant culture (whether national or international) are likely to significantly affect preferences and desirabilities.

SUMMARY

In this chapter we have explored the concept of fair value both in itself and through IFRS 13. We have considered its characteristics and usefulness, noting that there are uncertainties both conceptually and in terms of practical usage and application. We have also briefly considered the overall 'set' of valuation methods explored so far. It would be good to consider this appraisal again after reading and working through the rest of this book!



EXERCISES

Suggested answers to exercises marked ✓ are to be found on our dedicated CourseMate platform for students.

Suggested answers to the remaining exercises are to be found on the Instructor online support resources.

- ✓1 What is 'fair value'? Is it a good idea?
- 2 Investors need an up-to-date forward-looking indication of annual performance, implying a focus on the income statement, and lenders need an up-to-date indication of asset values, implying a focus on the balance sheet. Discuss.
- 3 In the end, for most practical purposes, historical cost is best. Discuss.
- 4 The following extract is taken from the 'Accounting Policies' section of the 31 December 2011 Consolidated Annual Report of the Dutch firm Philips.

'The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. The Company uses its judgment to select from a variety of common valuation methods including the discounted cash flow method and option valuation models and to make assumptions that are mainly based on market conditions existing at each balance sheet date.'

Does this policy seem likely to provide data which are sufficiently reliable to be useful?