

# Assets II

The main issues surrounding the treatment of assets have been introduced in the preceding chapter. In this chapter, we will focus on accounting for inventories and long-term contracts. While these are both covered in SSAP 9, FRED 28 proposes that this should be replaced by two standards. We will also cover accounting for research and development activities and accounting for government grants, both revenue and capital. Thus we will in this chapter discuss:

- SSAP 9 *Stocks and Long-term Contracts* (revised 1988)
- IAS 2 *Inventories* (revised 1993)
- IAS 11 *Construction Contracts* (revised 1993)
- FRED 28 *Inventories and Construction and Service Contracts* (2002)
- IAS 18 *Revenue* (revised 1993)
- SSAP 13 *Accounting for Research and Development* (revised 1989)
- SSAP 4 *Accounting for Government Grants* (revised 1990)

The treatment of long-term contracts requires us to address the question of when revenue should be recognised and, to this end, we will also refer to the appropriate part of the following:

- Discussion Paper, *Revenue recognition* (July 2001)

## Introduction

It used to be said in jest that in drawing up the annual accounts of an enterprise the first figure to be set down was that of profit, then all the ascertainable figures, until finally the value of stock emerged as a balancing item. This sentiment is certainly echoed in the introductory remarks to the original version of SSAP 9 *Stocks and Work in Progress*, issued in May 1975:

No area of accounting has produced wider differences in practice than the computation of the amount at which stocks and work in progress are stated in financial accounts. This statement of standard accounting practice seeks to define the practices, to narrow the differences and variation in those practices and to ensure adequate disclosure in the accounts.

SSAP 9, albeit revised in 1988, has survived for over a quarter of century but will soon be replaced as part of the convergence programme. This replacement is heralded by the issue of FRED 28 which, if implemented, would result in two Financial Reporting Standards, one *Inventories* which is based on the proposed revised text of the international standard with the same title, IAS 2; the other, *Construction and Service Contracts*, is based on IAS 11, *Construction Contracts* which, it is understood, the IASB is not likely to revise in the foreseeable future.

The fact that there are very few differences between the provisions of SSAP 9 and FRED 28 may be testimony to the absence of controversy surrounding the area of stock and work-in-progress, although some would argue that it provides evidence of the lack of theoretical work in the area. One interesting development is the recognition that long-term contracts are not confined to the construction industry. While SSAP 9 was drafted in terms of long-term contracts that related to the construction of tangible assets its principles have been applied to other types of contracts, notably those for services. This topic is the subject of IAS 18 *Revenue* but, as the ASB and other standard setters are working on the subject of revenue recognition at present, the ASB does not feel it appropriate to propose that the UK adopt the full text of IAS 18. Instead, to ensure that accounting for long-term service contracts continues to be addressed in UK standards, the relevant paragraphs of IAS 18 have been incorporated into the draft standard. We will discuss these paragraphs later in the chapter.

SSAP 13 *Accounting for Research and Development* and SSAP 4 *Accounting for Government Grants*, which we shall introduce in the second part of the chapter, have also been around for some time but are not presently slated for replacement. They contain few issues of principle but SSAP 13 brings us back to the often faced question of when does expenditure result in the creation of an asset?

## Stocks and long-term contracts

### SSAP 9

SSAP 9 differs from most other statements in that a large proportion of the document is devoted to appendices that deal with practical problems. The ASC was of the view that the problems that arise in this area are of a practical rather than of a theoretical nature. Appendix 1 deals with the relevant practical considerations but, as was always the case with appendices, it did not form part of the SSAP. There are two other appendices: Appendix 2, which consists of a glossary of terms, and Appendix 3, which is concerned with the presentation of information relating to long-term contracts.

We will assume that readers are familiar with the basic principles of stock valuation and the different methods employed in the historical cost system and, hence, we will concentrate on the few, but important, principles underlying SSAP 9.

### Stocks other than long-term contracts

**The amount at which stocks are stated in periodic financial statements should be the total of the lower of cost and net realisable value of the separate item of stock or of groups of similar items. (SSAP 9, Para. 26)**

A simple enough statement. Stock should normally be shown at cost but might sometimes be written down. But to state that stock should normally be stated at cost does not take us very far, for, as readers will be aware, the determination of the cost of stock and work-in-progress is by no means a simple task and much of the statement, including the appendices, is devoted to that subject. The basic principle is that the cost of stock and work-in-progress should comprise:

**that expenditure which has been incurred in the normal course of business in bringing the product or service to its present location and condition. Such costs will [our emphasis] include all related production overheads, even though these may accrue on a time basis. (SSAP 9, Paras 17–19)**

## Overheads

The cost of stock and work-in-progress is to include costs of production and conversion (as defined in the statement). The specification of the treatment of overheads reflects one way in which the standard fulfils its objective of narrowing variations in practice. There has been much debate on the extent to which production overheads should be included in the valuation of stock. At one extreme – the variable costing approach – is the view that overhead allocation is by its very nature arbitrary and that stock should be valued by reference to the costs (usually just direct material and labour) that can be directly related to the stock in question. A view that lies between this extreme and the ASC's position is that production overheads that relate to activity rather than time (e.g. cost of power) should be included in the cost of stock. These approaches are rejected by SSAP 9, which requires the inclusion of all production overheads, including those that accrue on a time basis. It appears that this alternative was adopted because the ASC felt that all production overheads, whether or not they arise on a time basis, are required to bring the stock to its 'present location and condition'.

Costs which include time-related production overheads will, all other things being equal, vary with the level of output; the lower the output the greater the cost of, say, rent per unit. Thus, the statement refers to the need to base the allocation of overheads on the company's normal level of activity,<sup>1</sup> so ensuring that the cost of unused capacity is written off in the current year. Appendix 1 of SSAP 9 provides some guidance on the question of how the normal level of activity should be determined, but it is clear that judgement will have to play a part in the resolution of this matter.

The ASC specifically rejected the argument that the omission of production overheads can be defended on the grounds of prudence. This emerges in Appendix 1, Para. 10, which states:

The adoption of a conservative approach to the valuation of stocks and long-term contracts has sometimes been used as one of the reasons for omitting selected production overheads. In so far as the circumstances of the business require an element of prudence in determining the amount at which stocks and long-term contracts are stated, this needs to be taken into account in the determination of net realisable value and not by the exclusion from cost of selected overheads.

## Stock valuation methods

The conventional methods of stock valuation (FIFO, LIFO, etc.) are described in the Statement's Appendix 2, the glossary of terms. The standard does not give any guidance about the methods that should be used; but the ASC's view of the principle that should be followed is given in Appendix 1, where it is stated that 'management must exercise judgment to ensure that the methods chosen provide the fairest practicable approximation to cost'.<sup>2</sup> It can be seen that the ASC placed emphasis on the need to show as accurately as possible the cost of stock and rejected those methods such as LIFO which are used, especially in the United States, to produce a profit figure which approximates to a current cost operating profit (see Chapter 20). It now appears that the IASB, when revising IAS 2 *Inventories*, will, at last, also outlaw the use of LIFO. When this is done, it will greatly help to ensure that accounting standards will converge in a sensible direction.

<sup>1</sup> SSAP 9, Appendix 1, Para. 8.

<sup>2</sup> SSAP 9, Appendix 1, Para. 12.

## The writing down of stock

We will now turn to the methods that must be adopted when stock is to be written down. We will not, however, at this stage refer to the problems of establishing the net realisable value, which has been dealt with in Chapter 4.

SSAP 9 requires that stock should be written down to its net realisable value. Prior to the publication of the standard, some companies stated stock at replacement cost where this was lower than net realisable value and cost. The use of replacement cost is rejected in SSAP 9 on the grounds that it may result in the recognition of 'a loss that is greater than that which is expected to be incurred' (SSAP 9, Para. 6).

Our final comment on the provisions of SSAP 9, Para. 26, quoted at the beginning of this section, relates to the requirement that the comparison of cost and net realisable value should be on an item-by-item basis or by reference to groups of similar items. The reason for this is that this provision is given in Para. 2, where it is stated that 'to compare the total realisable value of stocks with the total cost could result in an unacceptable setting off of foreseeable losses against unrealised profits'. In other words, the practice contravenes the concept of prudence.

## The alternative accounting rules

The standard recognises that companies taking advantage of the alternative accounting rules set out in the Companies Act 1985 may show stock at the lower of current replacement cost and net realisable value (Para. 6). As we will see there is no equivalent statement in FRED 28.

## Long-term contracts

Long-term contracts merit separate consideration. Because of the time taken to complete such contracts, to defer recording turnover and the recognition of profit until completion might, in the words of the standard, 'result in the profit and loss account reflecting not so much a fair view of the activity of the company during the year but rather the results relating to contracts which have been completed by the year end' (SSAP 9, Para. 7).

Thus, SSAP 9 states that it is appropriate to (and by appropriate the ASC meant that companies should) take credit for ascertainable turnover and profit while contracts are in progress, subject to various conditions specified in the standard.

This may well be an eminently practical and sensible view, but it did seem to be in conflict with the attitude adopted in SSAP 2 *Disclosure of Accounting Policies*, which was only withdrawn with the issue of FRS 18 in December 2000, where it was stated that 'where the accruals concept is inconsistent with the prudence concept . . . , the latter prevails'.<sup>3</sup> The provision of SSAP 9 relating to long-term contracts does appear to suggest that the accruals concept should prevail over prudence. In that the ASB has now adopted a radically different stance whereby prudence is no longer seen to be, of itself, a desirable characteristic, it can be seen that SSAP 9 was the forerunner of what was to follow. The difference between the two standards reflects the lack of consistency that was a feature of the pioneering period of standard setting.

The provision that attributable profit should (not *might*) be recognised in the financial statements was perhaps the most controversial aspect of the original SSAP 9. A number of large companies had consistently eschewed the recognition of profit on uncompleted contracts and some continued this practice after the implementation of SSAP 9, accepting the consequential qualifications in their audit reports.

<sup>3</sup> SSAP 2, Para. 14(b).

In addition, there would appear to be a conflict between this requirement of SSAP 9 and the legal requirement that only realised profits may be credited to the profit and loss account (see Chapter 4). Even if attributable profit on long-term contract work-in-progress is not realised, it may, nonetheless, be included in the profit and loss account if this is necessary to give a true and fair view. The use of this true and fair view override on a number of occasions in the UK aroused considerable criticism from other members of the EU, who did not envisage that it would be used so often. This is an issue that will be addressed in the Companies Act which results from the publication of the recent White Paper, *Modernising Company Law*.<sup>4</sup> At present, it looks as if company law will delegate all matters relating to the form and content of company financial statements to a Standards Board and, as a consequence of this, the emphasis placed upon the distinction between realised and unrealised profits will disappear.

### Definition of long-term contracts

A long-term contract can relate to the design or construction of a single substantial asset or the provision of a service (or a combination of assets or services which constitute a single project) where the activity falls into different accounting periods. If a contract is to fall within the definition, it will normally have to last for more than a year, but shorter contracts may also be included if they are sufficiently material so that the failure to record turnover and attributable profit would distort the financial statements.

### Turnover, related costs and attributable profit

Long-term contracts should be assessed on a contract by contract basis and reflected in the profit and loss account by recording turnover and related costs as contract activity progresses. (SSAP 9, Para. 28)

Also:

Where it is considered that the outcome of a long-term contract can be assessed with reasonable certainty before its conclusion, the prudently calculated attributable profit should be recognised in the profit and loss account as the difference between the reported turnover and related costs for that contract. (SSAP 9, Para. 29)

So the accounting seems pretty straightforward and obvious:

$$\text{Reported turnover} - \text{Related costs} = \text{Attributable profit}$$

But how are the various elements determined? The standard does not help very much, although some guidance is given:

Turnover is ascertained in a manner appropriate to the stage of completion of the contract, the business and the industry in which it operates. (SSAP 9, Para. 28)

Some assistance is also provided in Appendix 1 (Para. 23) where it is stated that turnover may be ascertained by reference to valuation of the work carried out to date. Alternatively there may be specific points where separately ascertainable sales values and costs can be identified because, for example, delivery or customer acceptance has taken place. The

<sup>4</sup> Cm. 5553-I and Cm. 5553-II

paragraph goes on to state that the standard does not provide a definition of turnover because of the number of different possible approaches. It does, however, point out that the Standard does require disclosure of the means by which turnover is ascertained.

Neither the standard nor any of the appendices refer to the calculation of related cost, so we will now turn to this and the estimation of attributable profit. We will start with two conceptually simple cases.

If the outcome of a long-term contract cannot be ascertained with reasonable certainty, no profit should be reflected in the profit and loss account. However, if, despite the uncertainty, the contract is not expected to make a loss, 'it may be appropriate to show as turnover a proportion of the total contract value using a zero estimate of profit' (SSAP 9, Para. 10). In the latter situation in order to satisfy the relationship between turnover, cost and profit, the related costs would be made equal to the reported turnover. If, on this basis, related costs appeared to be greater than the actual costs incurred to date, the turnover would be reduced and made equal to the actual costs.

The second 'simple' case is where the contract is expected to make a loss. In that situation, in accordance with the prudence concept, the whole of the loss should be recorded as soon as it is foreseen. Turnover would be determined in the normal way and the related cost would be equal to the actual cost to date plus the provision for foreseeable future losses.

Now let us consider a case where it would be necessary to recognise some profit. Attributable profit is defined as:

**that part of the total profit currently estimated to arise over the duration of the contract, after allowing for estimated remedial and maintenance costs and increases in costs so far as not recoverable under the terms of the contract, that fairly reflect the profit attributable to that part of the work performed at the accounting date. (SSAP 9, Para. 23)**

Thus, it is first necessary to estimate the total profit and then decide how it should be allocated. The principles involved are illustrated in Example 6.1.

### Example 6.1

Suppose that Engineer Limited started a three-year contract at the beginning of year 1 with a total contract value of £180 000 and costs of £120 000 that it is anticipated will be incurred as follows:

Year 1	Year 2	Year 3	Total
£30 000	£60 000	£30 000	£120 000

The expected profit is thus £60 000.

#### Case 1

We will assume that both turnover and profit are to be recognised in proportion to the costs incurred. Hence, assuming all goes to plan, the contract would be reported in the profit and loss accounts as follows:

	Year 1 (25%) £	Year 2 (50%) £	Year 3 (25%) £
Reported turnover	45 000	90 000	45 500
Related costs	<u>30 000</u>	<u>60 000</u>	<u>30 000</u>
Attributable profit	<u>£15 000</u>	<u>£30 000</u>	<u>£15 000</u>

**Case 2**

Depending on the nature of the contract it might be deemed appropriate to record turnover on a different basis, perhaps on the values placed on the work completed to date by an independent consultant.

Assume that the value of the work certified is as follows:

	<i>Value of work certified</i>	<i>Value of work completed in year</i>	<i>Fraction</i>
	£	£	£
End of year 1	30 000	30 000	$\frac{1}{6}$
End of year 2	90 000	60 000	$\frac{1}{3}$
End of year 3	180 000	90 000	$\frac{1}{2}$

Profit might be based on cost (Case 2a) or turnover (Case 2b) that would result in the reporting of the following figures.

**Case 2a**

Profit related to cost

	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>
	£	£	£
Reported turnover	30 000	60 000	90 000
Related cost	<u>15 000</u>	<u>30 000</u>	<u>75 000</u>
Attributable profit	<u>£15 000</u> (25%)	<u>£30 000</u> (50%)	<u>£15 000</u> (25%)

**Case 2b**

Profit related to turnover

	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>
	£	£	£
Reported turnover	30 000	60 000	90 000
Related cost	<u>20 000</u>	<u>40 000</u>	<u>60 000</u>
Attributable profit	<u>£10 000</u> ( $\frac{1}{6}$ )	<u>£20 000</u> ( $\frac{1}{3}$ )	<u>£30 000</u> ( $\frac{1}{2}$ )

Thus, we can see that under the provisions of SSAP 9, even in this simple case, three different patterns of turnover, cost and profit might be reported, and in practice more variations are possible.

Now let us assume that all does not go to plan and the actual cost in year 2 was £80 000 rather than the expected £60 000, but that no further difficulties are expected and that the original estimate for the cost of year 3 of £30 000 still holds.

Consider the position as at the end of year 2; there are two possibilities which will be illustrated by reference to Case 2a above. Either the additional unexpected expenditure can be written off in year 2 reducing the profit for the year by £20 000 to £10 000, leaving the profit for year 3 at £15 000, or the revised profit less that already recognised in year 1 could be spread over years 2 and 3 on the basis of cost, i.e. in the ratio 8:3.

The revised profit is £40 000 and the profit recognised in year 1 was £15 000, hence the profits for the remaining two years would be:

Year 1	£18 182	(8/11)
Year 3	<u>£6 818</u>	(3/11)
	<u>£25 000</u>	

Thus, we have the paradox that the profit for year 3 is reduced because of difficulties experienced in year 2. This does not appear to be sensible, but the approach would be permissible under the terms of SSAP 9.

Example 6.1 illustrates the point that the related cost is normally a balancing figure derived from the relationship between reported turnover and attributable profit. The statement does not deal with the situation where related costs exceed actual costs. Suppose that we have the following for the first year of a contract:

	£
Turnover	200 000
Related cost	<u>160 000</u>
Attributable profit	<u>£40 000</u>
Actual cost to date	£130 000

In practice it is likely that the turnover figure would be reduced to £170 000 to make the equation balance.

### Long-term contracts and the balance sheet

Before moving to a discussion of the way in which long-term contract balances are shown in the balance sheet, we need to introduce another factor, payments on account, which is defined as 'all amounts received and receivable at the accounting date in respect of contracts in progress' (SSAP 9, Para. 25).

The relevant section of the standard reproduced below is perhaps unnecessarily complex.

Long-term contracts should be disclosed in the balance sheet as follows:

- (a) the amount by which recorded turnover is in excess of payments on account should be classified as 'amounts recoverable on contracts' and separately disclosed within debtors;
- (b) the balance of payments on account (in excess of amounts (i) matched with turnover; and (ii) offset against long-term contract balances) should be classified as payments on account and separately disclosed within creditors;
- (c) the amount of long-term contracts, at costs incurred, net of amounts transferred to cost of sales, after deducting foreseeable losses and payments on account not matched with turnover, should be classified as 'long-term contract balances' and separately disclosed within the balance sheet heading 'Stocks'. The balance sheet note should disclose separately the balances of:
  - (i) net cost less foreseeable losses; and
  - (ii) applicable payments on account;
- (d) the amount by which the provision or accrual for foreseeable losses exceeds the costs incurred (after transfers to cost of sales) should be included within either provisions for liabilities and charges or creditors as appropriate. (SSAP 9, Para. 30)

To unravel the above it is best to start by concentrating on the situation where there are no losses, either incurred or contemplated.

Let us start by looking at the costs.

If the actual costs incurred to date exceed the cumulative related costs (the total charged to cost of sales), there is an asset, long-term contract balances, which is separately disclosed within stocks.

As stated earlier the standard does not consider a situation where related costs exceed actual costs; in practice this will not arise because, in all probability, turnover would be adjusted.

Let us now consider the receipt of cash from the customer.

If the cumulative reported turnover exceeds cumulative payments on account there is an asset, amounts recoverable on contracts, which is separately disclosed within debtors.

If the reverse holds (more cash received on account than reported as turnover), the credit balance is set off against long-term contract balances. If the credit (payments less turnover)

is greater than the debit (long-term contract balances), the resulting credit is described as payments on account, which is separately disclosed within creditors.

Thus in respect of each contract, which has to be considered separately, the possible combinations of assets and liabilities are:

- (a) two assets: long-term contract balances and amounts recoverable on contract; or
- (b) a liability: payments on account.

The above points are illustrated in Example 6.2.

### Example 6.2 No losses

Assume that the position on three contracts at a year end is as follows:

	(1)	(2)	(3)
	£	£	£
Cumulative turnover	520	520	520
Cumulative actual cost	510	510	510
Cumulative related cost	450	450	450
Cumulative payments on account	440	555	630

The cumulative attributable profit for each of the contracts is £70, i.e. £520 – £450.

The relevant balance sheet items are shown below. Note that each contract will be considered on an individual basis, balances arising on one contract are not set off against balances on other contracts and hence the figures that will appear in the balance sheet are shown in the total column.

	Contract			Total
	(1)	(2)	(3)	
	£	£	£	£
Stock – long-term contract balances	60 <sup>(a)</sup>	25 <sup>(b)</sup>	NIL	85
Debtors – amount recoverable on contracts	80 <sup>(a)</sup>	NIL	NIL	80
Creditors – payments on account	NIL	NIL	50 <sup>(c)</sup>	50

#### Notes

(a) Actual costs less related costs; £510 – £450 = £60.

Cumulative turnover less cumulative payments on account; £520 – £440 = £80.

(b) Long-term contract balance as (a),	£60
less Excess of payments on account over turnover, £555 – £520	£35
	£25
(c) Long-term contract balance, as (a)	£60
less Excess of payments on account over turnover, £630 – £520	£110
	(£50)

### Foreseeable losses

All losses, as soon as they are foreseen, should be recognised in the financial statements. The estimate of future loss should be charged to the profit and loss as part of the related cost. The credit is first offset against the long-term contract balance (before any set-off for the excess of cumulative payments on account over cumulative reported turnover). If the long-term

contract balance is insufficient to cover the expected loss, the balance is included within either provisions for liabilities and charges or creditors, as appropriate, i.e. depending on the degree of certainty with which the estimate is made.

### Example 6.3

Consider the following two contracts:

	(1)	(2)
	£	£
Cumulative turnover	200	110
Cumulative actual costs	250	200
Cumulative related costs	250	110
Cumulative payments on account	180	160
Losses to date (£250 – £200)	50	–
Expected future losses	40	70

If we assume that this is the first year of each contract, the profit and loss account will include the following:

	(1)	(2)	Total
	£	£	£
Turnover	200	110	310
Related costs (cost of sales)	290	180	470
Gross loss	<u>90</u>	<u>70</u>	<u>160</u>

If the projects were in other than their first year, the amounts included would depend on what had been charged or credited in the previous years.

The various balance sheet figures are:

	(1)	(2)	Total
	£	£	£
Stock – long-term contract balances	NIL	NIL	NIL
Debtors – amounts recoverable on contracts	20(a)	NIL	20
Creditors – payments on account	NIL	30(b)	30
Provision/accrual for foreseeable losses	40	NIL	40

#### Notes

(a) Cumulative turnover less cumulative payments on account, £200 – £180 = £20.

(b) For contract 2, actual costs exceed related costs so we start with a long-term contract balance of £90, i.e. £200 – £110.

Expected future losses of £70 are set off against that balance, reducing it to £20.

But, there are excess payments on account, £50 since payments on account, £160, exceed turnover, £110. This credit balance, £50, is set off against the debit, £20, representing the long-term contract balance.

The net credit of £30 will appear in the balance sheet as a provision or accrual as appropriate.

## FRED 28

The most obvious difference between SSAP 9 and FRED 28 is of size: the former is a thick document while the exposure draft is a slim volume of only 49 pages. This is due to the absence of the technical appendices that were such a feature of the SSAP.

There are, with one possible exception, no major differences in principle between the standard and the exposure draft although the ASB<sup>5</sup> points out that the references to prudence included in the standard did not survive into the exposure draft where, in line with the ASB's *Statement of Principles* and FRS 18 *Accounting Policies*, reliability is emphasised at the expense of prudence. There are some relatively minor differences, one relating to the way in which the figures are derived, the other to the way in which they are presented.

The possible exception is the fact that the exposure draft, unlike the standard, makes no reference to the possibility of an entity showing reporting stock and work-in-progress at the lower of current replacement cost and net realisable value which is permitted under the alternative accounting rules.

FRED 28 allows for the principles to be applied not only to single contracts but also to separately identifiable components of a single contract and to groups of contracts so long as the group is made up of inter-related contracts that had been negotiated as a single package, whereas SSAP 9 has no such provision.

As we explained earlier (p. 140) SSAP 9 has quite complex disclosure requirements relating to the balance sheet presentation of long-term contracts. The disclosure requirements of the exposure draft are much simpler; all that is required is the presentation of:

- gross amount due from customers
- gross amount due to customers

The only complexity is that the gross amounts are actually net, the gross amount being the net amount of the costs incurred plus recognised profits less the sum of recognised losses and progress billings. If the resulting value is positive the amount is due from customers, if negative the amount is due to customers. Thus, other than the debtors figure arising from unpaid progress billings, there would be only one item, which could be a current asset or liability and which would incorporate stock and work-in-progress, on the balance sheet in relation to uncompleted long-term contracts.

### Revenue recognition

In 2001 the ASB published a major discussion paper, *Revenue Recognition*. There is, as yet, no accounting standard in the UK relating to the recognition and measurement of revenue with the result that different entities and industries sometimes adopt inconsistent practices. The purpose of this discussion paper was to stimulate debate that would assist in formulating an appropriate standard. A number of important issues are covered by the paper including the possible accounting treatments of sales that allow the purchaser the right of return, barter transactions and the effect of agency agreements.

At this stage we only need to draw on the view expressed in the document that full performance of a contract is only sometimes necessary for revenue to arise and that the general principle should be that revenue 'should be recognised to the extent that the seller has performed and the performance has resulted in benefit accruing to the customer'.<sup>6</sup> It is in this context that the provisions of FRED 28 need to be considered.

<sup>5</sup> FRED 28, Para. 6.

<sup>6</sup> ASB *Revenue Recognition* (July 2001) p. 3.

The preface to the exposure draft points out that while, in the main, the provisions of SSAP 9 were applied to long-term construction contracts they had also been applied to other types of contracts, in particular contracts for services. Accounting for such services is covered by IAS 18 *Revenue*. As the ASB and others are currently working on the subject of revenue recognition, the Board would not wish to propose that the UK adopted the whole of IAS 18. But in order to ensure that the topic is addressed in the UK, the ASB included the relevant parts of IAS 18 in the draft standard on construction and service contracts. These are included at Paras 45A to 45J of FRED 28. The key provision<sup>7</sup> is that, when the outcome of a transaction involving the rendering of services can be estimated reliably, the associated revenue should be recognised by reference to the stage of completion of the transaction at the balance sheet date. Reliability of estimation depends on *all* of the following conditions applying:

- the amount of the revenue can be measured reliably;
- it is probable that the economic benefits will flow to the enterprise;
- the stage of completion of the transaction at the balance sheet date can be measured reliably;
- the costs incurred to date and those required to complete the transaction can be measured reliably.

If the outcome of the transaction cannot be estimated reliably revenue should be recognised only to the extent that the expenses incurred to date are recoverable.<sup>8</sup> In such circumstances no profit should be recognised.

## Research and development

Many enterprises spend large sums of money on research and development in the hope that, by incurring such expenditure, future profits will be higher than they otherwise would be. In other words, they incur expenditure on research and development in the expectation of creating an intangible asset that will yield benefits in the future. By the very nature of the process, some research and development activities will be unsuccessful and hence no asset will be created. Any expenditure on such projects must certainly be written off against profits of the year in which it is incurred. Other research projects will be successful and will result in the creation of an asset. Under historical cost accounting, it would be reasonable to suggest that expenditure on unsuccessful projects should be written off against the profits of the year in which they were incurred, while expenditure on successful projects should be capitalised at an appropriate figure and written off against profits of the periods in which benefits are expected to arise.

The accounting treatment proposed above seems quite clear, but two major problems arise as soon as an attempt is made to apply it. First, even where a project appears to have been successful, the size and timing of future benefits are often very uncertain; if such is the case, the lack of a reliable evidence<sup>9</sup> would appear to require the expenditure to be written off. Second, the people who must make the decision on whether or not the research and development has been successful are not independent of the entity but are the directors who are interested in the outcome of the research and development. Because of their involvement, such directors may be susceptible to bias, either innocent or fraudulent, and, in view of the uncertainties involved, it may be extremely difficult for an auditor to challenge the views of the directors.

<sup>7</sup> FRED 28, Para. 45B.

<sup>8</sup> FRED 28, Para. 45H.

<sup>9</sup> In earlier editions we referred to the need to follow the prudence convention. However, although the prudence convention has been dethroned its influence continues.

## SSAP 13 *Accounting for Research and Development*

Accounting for research and development was the subject matter and title of SSAP 13, originally issued in 1977. A later version SSAP 13 (revised), which was issued in 1989, follows the same principles, although it increased the amount of disclosure required. We shall refer to SSAP 13 (revised) *Accounting for Research and Development* (January 1989). This version, like its predecessor, follows the definitions of research and development expenditure adopted by the Organisation for Economic Co-operation and Development (OECD), which divides such expenditure into three categories:

- 1 Pure (or basic) research: experimental or theoretical work undertaken primarily to acquire new scientific or technical knowledge for its own sake rather than directed towards any specific aim or application.
- 2 Applied research: original or critical investigation undertaken in order to gain new scientific or technical knowledge and directed towards a specific practical aim or objective.
- 3 Development: use of scientific or technical knowledge in order to produce new or substantially improved materials, devices, products or services, to install new processes or systems prior to the commencement of commercial production or commercial applications, or to improve substantially those already produced or installed.

Given the uncertainties surrounding the benefits from research and development expenditure and the requirement of SSAP 2, then still extant, that, in case of conflict, prudence should prevail over the accruals concept, one approach would have been to write off all such expenditure to the profit and loss account as incurred.<sup>10</sup>

Although this approach may be simply applied and removes the need for judgement on the part of directors and auditors, many people would argue that it makes little economic sense. To take an example, we may think of two similar companies that have spent an identical amount on research and development. The efforts of one company have been successful while the efforts of the other company have not. If both companies are required to write off all research and development expenditure as it is incurred, then this essential difference between the two companies is not apparent from an examination of their financial statements. An important element of business reality does not feature in those statements.

### Capitalisation of development expenditure

SSAP 13 takes a less conservative approach. Although it requires companies to write off all expenditure on pure and applied research as it is incurred, it permits, but does not require, the capitalisation of certain development expenditure which must then be matched against the revenues to which it relates.

The adoption of this permissive approach introduces the possibility of bias on the part of directors, who must decide whether or not an asset exists on a balance sheet date. In order to reduce this bias to a minimum, the standard lists the following conditions that must be satisfied before development expenditure may be carried forward:<sup>11</sup>

- (a) there is a clearly defined project; and
- (b) the related expenditure is separately identifiable; and

<sup>10</sup> This was, in fact, the approach proposed in the original exposure draft on the subject, ED 14 *Accounting for Research and Development*, issued in 1975.

<sup>11</sup> SSAP 13 (revised), Para. 25.

- (c) the outcome of such a project has been assessed with reasonable certainty as to:
  - (i) its technical feasibility; and
  - (ii) its ultimate commercial viability considered in the light of factors such as likely market conditions (including competing products), public opinion, consumer and environmental legislation; and
- (d) the aggregate of the deferred development costs, any further development costs, and related production, selling and administration costs is reasonably expected to be exceeded by related future sales or other revenues; and
- (e) adequate resources exist, or are reasonably expected to be available, to enable the project to be completed and to provide any consequential increases in working capital.

It will be seen that, unlike the position with most internally generated intangible fixed assets, development expenditure can be recognised in the absence of readily ascertainable market value but, instead, expenditure can only be capitalised if the above, reasonably stringent, conditions, are met.<sup>12</sup>

### Disclosure requirements

In order to facilitate interpretation, the standard requires that the notes to the accounts contain a clear explanation of the accounting policy followed, although this was, in any case, required under the provisions of SSAP 2, as it now is with FRS 18. It requires disclosure of the total amount of research and development expenditure charged in the profit and loss account, analysed between the current year's expenditure and the amortisation of deferred development expenditure. Finally, it requires disclosure of movements on the deferred development expenditure account each year. The Companies Act 1985 specifically requires that the directors explain why expenditure has been capitalised and state the period over which the costs are being written off.<sup>13</sup>

### Compliance with international standards

Research and development expenditure is covered by IAS 38, *Intangible Assets* which, as we described in Chapter 5, does not require an intangible asset to have a readily ascertainable market value for it to be recognised. While SSAP 13 is consistent with the general approach of IAS 38 there is one significant difference. While both standards set down similar criteria which must be satisfied before development expenditure may be capitalised the consequences differ. When the criteria are satisfied, IAS 38 requires capitalisation (IAS 38, Para. 45) while SSAP 13 permits capitalisation (SSAP 13, Para. 25).

## Government grants

It is appropriate to deal with the accounting treatment of government grants as a postscript to a chapter on assets because the topic is often closely related to the subject of fixed assets and depreciation. The topic is the subject matter of SSAP 4, *The Accounting Treatment of*

<sup>12</sup> The Companies Act 1985 requires that costs of research are charged to the profit and loss account (Schedule 4, Para. 3(2)(c)) but permits the carrying forward of development costs 'in special circumstances' (Schedule 4, Para. 20(1)). Satisfaction of the criteria for the carrying forward of development expenditure in SSAP 13 is generally accepted as providing the 'special circumstances' referred to in the Act.

<sup>13</sup> Companies Act 1985, Schedule 4, Para. 20(2).

*Government Grants*, which was originally issued in 1974. The standard proved to be inadequate, not only because it was itself poorly conceived but also because of other developments. Grants themselves became more complex than was envisaged when SSAP 4 was published, while the provisions of the standard proved to be inconsistent with those of the Companies Act 1985 and of IAS 20, *Accounting for Government Grants and Disclosure of Government Assistance* which was issued in 1982. Hence a revised standard, SSAP 4 (revised), *Accounting for Government Grants*, was issued in July 1990.

## ***SSAP 4 The Accounting Treatment of Government Grants***

The two accounting concepts on which SSAP 4 (revised) is based are accruals and prudence. The first implies that grants should be credited to the profit and loss account so as to match the expenditure towards which they are expected to contribute; the second that grants should not be recognised in the profit and loss account until the conditions for their receipt have been satisfied and that there is a reasonable assurance that the grants will be received.

Readers may feel that the reference in the standard to the accruals and prudence conventions would at the time have been unnecessary because they are two of the four fundamental accounting concepts specified in SSAP 2. However, by presenting the accruals concept in the way stated above, the ASC avoided a discussion of a fundamentally different alternative approach that all government grants should be regarded as a source of finance provided by government and hence retained in the balance sheet as a non-distributable reserve; including it as a reserve would imply that it is an element of owners' equity, but a part which has been provided by the government.

There are certain advantages of such an approach including clarity – it would describe clearly what has actually happened – and comparability in that it would assist comparisons between, for example, the two companies, one operating in an area where grants are available and the other not.

### **Revenue-related grants**

Revenue-related grants, according to the original SSAP 4, did not produce any accounting problems 'as they clearly should be credited to revenue in the same period in which the revenue expenditure to which they relate is charged' (SSAP 4, Para. 2).

This may have been a reasonable description of the situation in 1974, but subsequently grants took many different forms and were derived from different sources than was the case in 1974. In the latter context it is noteworthy that, in the original SSAP 4, the ASC did not see a need to define government; by implication government was the UK Central Government. In contrast, the revised SSAP 4 defines government as including 'government and intergovernmental agencies and similar bodies whether local, national or international' (SSAP 4, Para. 21); it thus includes the European Union.

The matching of grants received to expenditure is straightforward when the grant is made towards specified items of expenditure. However, certain grants might not be related to specific items of expenditure; they might, for example, be paid to encourage job creation. In such circumstances the recognition of the grant in the profit and loss account should be matched with the identifiable net costs of achieving the objective. As is pointed out in the explanatory note to the revised standard, this may not be straightforward, as account needs to be taken of the associated income generated by the activity in arriving at the net cost. If, for example, the grant is given on condition that jobs are created and sustained for a period

of, say, three years, the grant should be matched to the net cost of providing the jobs. Thus, if the revenue generated by the activity is higher in the third year, a higher proportion of the grant should be recognised in the earlier years.

In some cases the grant may be paid to support one activity – training, for instance – but will only become payable when the company incurs expenditure in another, usually related, area – perhaps the purchase of capital equipment. In other words, the grant will not be paid unless the company purchases the equipment, but the size of the grant depends on the company's training expenditure. SSAP 4 provides that where such a link is established the grant should be matched to the expenditure which it is intended to support, in this case training, but, as is the general rule under SSAP 4, nothing should be credited to the profit and loss account until the necessary conditions have been fulfilled – in this case until the equipment has been purchased.

The part of any revenue-related grant received but not yet recognised in the profit and loss account because the necessary conditions have not yet been satisfied should be included in the balance sheet as deferred income.<sup>14</sup>

### Capital-related grants

Two methods of dealing with capital-related grants are identified in SSAP 4 (revised):

- (a) Show the grant as deferred income that is credited to the profit and loss account over the life of the asset on a basis consistent with the depreciation policy adopted for the asset.
- (b) Reduce the cost of the asset and hence reduce the annual depreciation charges.

The other possible option of not crediting the grant at any stage to the profit and loss account but retaining it in the balance sheet as a source of funds is not considered for the reasons given earlier.

In choosing between the two alternatives, the ASC came to the surprising, if not astonishing, conclusion that 'both treatments are acceptable and capable of giving a true and fair view' (SSAP 4 (revised), Para. 15). It is difficult to see how showing in the balance sheet the cost of an asset at 100 per cent of its purchase price or, say, depending on the size of the grant, 80 per cent of the price, can both show a 'true and fair' view. It does seem the ASC had, on this occasion, distorted that splendidly elastic phrase too far.

The ASC's position appears even stranger in that it records that it had received Counsel's opinion that the second alternative, the reduction in cost, is illegal in the light of Paras 17 and 26 of Schedule 4 to the Companies Act 1985. However, the ASC stuck to its guns. Both alternatives are available to enterprises under the provisions of SSAP 4 (revised), but only the first can be used by enterprises whose financial statements are governed by the Companies Acts.

### Disclosure requirements

The disclosure requirements of SSAP 4 (revised) require the following information to be revealed:

- (a) The accounting policy adopted in respect of government grants (this in any case is required by FRS 18 *Accounting Policies*, and its predecessor SSAP 2 *Disclosure of Accounting Policies*).
- (b) The effects of government grants on the results of the period and the financial position of the enterprise.

<sup>14</sup> SSAP 4, Para. 15.

- (c) Information regarding any material effect on the results of the period from government assistance other than grants (for example, free consultancy or subsidised loans) including, if possible, quantitative estimates of the effect of the assistance.
- (d) Any potential liability to repay grants should, if necessary, be disclosed in accordance with SSAP 18 *Accounting for Contingencies*, which has now been replaced by FRS 12 *Provisions, Contingent Assets and Liabilities*.

### Compliance with international standards

The equivalent international standard is IAS 20 *Accounting for Government Grants and Disclosure of Government assistance*, the main provisions which are consistent with those of SSAP 4. In particular IAS 20 also allows asset-related grants either to be treated as deferred income or to be deducted immediately from the cost of the asset, but the difference is that the IASB does not, of course, have to concern itself with the provisions of the Companies Act, 1985.

## Summary

In this chapter we have discussed three veteran standards that have been around for over twenty years. One of them, SSAP 9, is likely to be replaced by two standards but these, although they will look very different and be less concerned with technical issues, will be based on virtually the same principles as SSAP 9. A seemingly important development over the life of the three standards has been the removal of the prudence convention from its previous dominant position. While its demotion is likely to discourage the making of excessive provisions, the absence of significant changes between SSAP 9 and FRED 28 suggests that, in other respects, the removal of prudence will not make very much difference.

SSAP 4 and 13 are not on the ASB's current programme so are likely to be with us for some time. This perhaps is reasonable in the case of SSAP 13 but it is unfortunate that the highly unsatisfactory SSAP 4 is not high on the list for review,

### Recommended reading

Excellent up-to-date and detailed reading on the subject matter of this chapter and on much of the contents of this book is provided by the most recent edition of:

*UK and International GAAP*, A. Wilson, M. Davies, M. Curtis and G. Wilkinson-Riddle (eds), Ernst & Young, Butterworths Tolley, London. At the time of writing the most recent edition is the 7th, published 2001.

## Questions

- 6.1** N Ltd is an independent company which manufactures clothing. For many years, N Ltd has worked exclusively for Store plc, a national group of department stores, manufacturing gloves. Store plc supplies the patterns for the gloves and specifies the fabric and colours that N Ltd must use. Store plc actively discourages its suppliers from manufacturing for other retailers and expressly forbids them from using its patterns or fabric colours for anything sold to another customer.

N Ltd manufactures gloves steadily throughout the year, building up stocks in advance of the major order that Store plc places every year in order to meet demand in the autumn and winter months.

Store plc used to order 500 000 pairs of gloves from N Ltd every year.

Store plc has suffered declining sales and has closed several of its stores. In April 2001, it warned N Ltd that it will reduce its annual purchases to 400 000 pairs of gloves. N Ltd took immediate steps to reduce its production capacity in response to this reduced order.

N Ltd has a year end of 30 September 2001. At that date, the company had 40 000 pairs of gloves in stock. It also had work-in-progress of 5 000 pairs of gloves that were 100% complete in terms of fabric and were 50% complete in terms of labour and overhead. Raw materials stocks comprised £10 000 of fabric in Store plc's colours. N Ltd actually completed a total of 430 000 pairs of gloves during the year ended 30 September 2001.

The fabric content of a pair of gloves costs N Ltd £1.00 per pair.

N Ltd has summarised expenses incurred during the year as follows:

	<i>Fixed overheads</i>	<i>Variable overheads</i>	<i>Labour</i>
	£	£	£
Manufacturing	20 000	40 000	400 000
Administrative	15 000	10 000	50 000
Distribution	8 000	6 000	12 000
	<u>43 000</u>	<u>56 000</u>	<u>462 000</u>

### Required

- (a) SSAP 9 – *Stocks and long-term contracts* requires that stocks be valued at the lower of cost and net realisable value.

Describe the problems associated with determining net realisable value for closing stocks. You should describe the particular problems associated with determining the net realisable value of N Ltd's closing stocks. (6 marks)

- (b) SSAP 9 defines the cost of stock as 'the expenditure which has been incurred in the normal course of business in bringing the product to its present location and condition'.

(i) Calculate the cost of N Ltd's closing stocks. (5 marks)

(ii) Identify the accounting issues associated with calculating the cost of closing stocks for N Ltd and explain how you have dealt with them. (5 marks)

- (c) Explain why the valuation of closing stock is particularly important in the preparation of financial statements. (4 marks)

CIMA, *Financial Accounting – UK Accounting Standards, November 2001* (20 marks)

**6.2** Wick plc has produced the following trial balance as at 31 August 2002 as a basis for the preparation of its published accounts:

	<i>Debit</i>	<i>Credit</i>
	£'000	£'000
Freehold property – at valuation	3500	
Freehold property – accumulated depreciation		100
Plant and machinery – at cost	1000	
Plant and machinery – accumulated depreciation		400
Plant held for rental income	400	
Fixtures and fittings – at cost	500	
Fixtures and fittings – accumulated depreciation		300
Stock as at 1 September 2001	200	
Debtors	650	
Provision for doubtful debts		50
Cash at bank	130	
Trade creditors		700
Bank loan		800
Deferred taxation		310
VAT payable		120
Ordinary share capital – shares of £1 each		2000
Share premium		500
Revaluation reserve		150
Profit and loss account as at 1 September 2001		300
Sales		3250
Purchases and direct labour costs	1600	
Distribution costs	400	
Administration costs	500	
Interim dividend paid	100	
<b>Total</b>	<u><u>8980</u></u>	<u><u>8980</u></u>

#### Additional information

- (1) As a new venture, the company started work on a long-term contract in October 2001 and the above trial balance includes transactions relating to this contract which was in progress as at 31 August 2002. The agreed total contract price is £600 000 and there was work certified of £250 000, included in Sales, as at 31 August 2002. Costs to 31 August 2002 amounted to £400 000, included in Purchases, with estimated costs to completion of £300 000. Progress payments received by 31 August 2002 amounted to £340 000; these have been debited to Cash at bank and credited to Debtors.
- (2) Stock at 31 August 2002 was valued at £300 000 and comprised finished goods of £50 000 and goods awaiting completion of £250 000. These amounts exclude the long-term contract.
- (3) Depreciation has yet to be provided for as follows:
  - Freehold property – 2.5% p.a. on valuation. The land element is £1.5 million.
  - Plant and machinery – 10% p.a. on cost.
  - Plant held for rental is for short-term hire and was acquired in the year ended 31 August 2002 – 20% p.a. on cost.
  - Fixtures and fittings – 20% p.a. on cost.

It is company policy to provide a full year's depreciation charge in the year of acquisition.

- (4) The bank loan was taken out on 1 September 2000 and is repayable in five equal annual instalments starting from 1 September 2001. Interest is charged at 7% p.a. on the balance owing on 1 September each year and has not yet been paid for the current year.
- (5) The company is proposing a final dividend of 10p per share.
- (6) Corporation tax of 30% of pre-tax profit is to be provided for, including an increase in the deferred taxation provision of £100 000.

#### Requirements

- (a) Prepare the profit and loss account for the year ended 31 August 2002 and a balance sheet as at that date for Wick plc in a form suitable for publication, providing the disclosure note for Stock. (20 marks)

NOTE: You are not required to prepare any other disclosure notes.

- (b) Identify and explain two areas in accounting for long-term contracts where judgement has to be exercised. (5 marks)

ICAEW, *Financial Reporting, September 2002* (25 marks)

- 6.3** G Ltd is a company specialising in the construction of sophisticated items of plant and machinery for clients in the engineering industry. Details of two contracts outstanding at 30 September 1995 (the balance sheet date) are as follows:

#### Contract with H Ltd

This contract was started on 1 January 1995 and is expected to be complete by 31 March 1996. The total contract price was fixed at £20 million and the total costs to be incurred originally estimated at £15 million, occurring evenly over the contract. The contract has been certified by experts as being 60% complete by 30 September 1995. Due to inefficiencies caused by industrial relations difficulties in the summer of 1995, the actual costs incurred on the contract in the period 1 January 1995 to 30 September 1995 were £10 million. However, the management is confident that these problems will not recur and that the remaining costs will be in line with the original estimate. In accordance with the payment terms laid down in the contract, G Ltd invoiced H Ltd for an interim payment of £10 million on 31 August 1995. The interim payment was received from H Ltd on 31 October 1995.

#### Contract with I Ltd

This contract was started on 1 April 1995 and was expected to be complete by 31 December 1995. The total contract price was fixed at £10 million and the total contract costs were originally estimated at £8 million. However, information received on 15 October 1995 suggested that the total contract costs would in fact be £11 million. The contract was certified by experts as being two-thirds complete by the year end and the costs actually incurred by G Ltd in respect of this contract in the period to 30 September 1995 were £7.5 million. No progress payments are yet due under the payment terms specified in the contract with I Ltd.

#### Requirements

- (a) Explain the principles which are used to establish the timing of recognition of profits/losses on long-term contracts.

You should assume that recognition of profits/losses takes place in accordance with the provisions of SSAP 9 *Stocks and long-term contracts*, and should refer to fundamental accounting concepts, where relevant. (10 marks)

- (b) Compute, separately for each of the contracts with H Ltd and I Ltd:
  - (i) The amount of turnover and cost of sales that will be recognised in the profit and loss account of G Ltd for the year ended 30 September 1995.

(ii) The contract balances (including nil balances, if appropriate) that will be shown at 30 September 1995 on the following accounts:

- long-term contract work-in-progress
- amounts recoverable on contracts
- provision for losses
- trade debtors. (10 marks)

*CIMA, Financial Reporting, November 1995* (20 marks)

**6.4** Lewis plc specialises in bridge construction and had two contracts in progress at its year end, 30 April 1999.

#### Stornoway Bridge

Construction on this contract started in May 1997. Contract details extracted from the company's costing records as at 30 April 1999 were:

	£m
Total contract selling price	350
Work certified to date	210
Costs to date	175
Estimated costs to completion	75
Progress payments received	250

Work certified to date as at 30 April 1998 was £140 million and the appropriate amount of profit was recognised for the year ended 30 April 1998. No changes to the above total estimated contract costs have occurred since 30 April 1998.

On 11 May 1999 the customer's surveyor notified Lewis plc of a fault in one of the bridge supports constructed during a severe frost in February 1999. This will require remedial work in June 1999 at an estimated cost of £20 million.

#### Harris Link Bridge

Construction on this contract started in July 1998. Contract details extracted from the company's costing records as at 30 April 1999 were:

	£m
Total contract selling price	400
Work certified to date	45
Costs to date	40
Estimated costs to completion	395
Progress payments received	25

The company calculates attributable profit on the basis of work certified for all contracts.

#### Requirements

- (a) Calculate the amounts to be included in the financial statements of Lewis plc for the year ended 30 April 1999, preparing all relevant extracts of the financial statements excluding accounting policies notes and any disclosures relating to cash flows. (15 marks)
- (b) Explain how the requirements of SSAP 9, Stocks and long-term contracts, apply the prudence and accruals concepts to accounting for long-term contracts. (5 marks)

*ICAEW, Financial Reporting, June 1999* (20 marks)

**6.5** S plc is a shipbuilder which is currently working on two contracts:

	<i>Deep sea fishing boat</i> £000	<i>Small passenger ferry</i> £000
	1 October 2000	1 October 2001
Contract price (fixed)	3000	5000
Date work commenced		
Proportion of work completed during year ended 30 September 2001	30%	Nil
	£000	£000
Invoiced to customer during year ended 30 September 2001	900	Nil
Cash received from customer during year ended 30 September 2001	800	Nil
Costs incurred during year ended 30 September 2001	650	Nil
Estimated cost to complete at 30 September 2001	1300	
Proportion of work completed during year ended 30 September 2002	25%	45%
	£000	£000
Invoiced to customer during year ended 30 September 2002	750	2250
Cash received from customer during year ended 30 September 2002	700	2250
Costs incurred during year ended 30 September 2002	580	1900
Estimated cost to complete at 30 September 2002	790	3400

S plc recognises turnover and profit on long-term contracts in relation to the proportion of work completed.

**Required**

- (a) Calculate the figures that will appear in S plc's profit and loss account for the year ended 30 September 2002 and its balance sheet at that date in respect of each of these contracts. (14 marks)

The Accounting Standards Board's *Statement of Principles for Financial Reporting* (SoP) effectively defines losses on individual transactions in such a way that they are associated with increases in liabilities or decreases in assets. Liabilities are defined as 'obligations of an entity to transfer economic benefits as a result of past transactions or events'.

**Required**

- (b) Explain how the definition of losses contained in the SoP could be used to justify the requirement of SSAP 9 – *Stocks and Long-term Contracts* to recognise losses in full on long-term contracts as soon as they can be foreseen. (6 marks)

CIMA, *Financial Accounting – UK Accounting Standards, November 2002* (20 marks)

**6.6** H plc is a major electronics company. It spends a substantial amount of money on research and development. The company has a policy of capitalising development expenditure, but writes off pure and applied research expenditure immediately in accordance with the requirements of SSAP 13 – *Research and Development*.

The company's latest annual report included a page of voluntary disclosures about the effectiveness of the company's research programme. This indicated that the company's prosperity depended on the development of new products and that this could be a very long process. In order to maintain its technical lead, the company often funded academic research studies into theoretical areas, some of which led to breakthroughs which H plc was able to patent and develop into new product ideas. The company claimed that the money spent in this way was a good investment because for every twenty unsuccessful projects there was usually at least one valuable discovery which generated enough profit to cover the whole cost of the research activities. Unfortunately, it was impossible to tell in advance which projects would succeed in this way.

A shareholder expressed dismay at H plc's policy of writing off research costs in this manner. He felt that this was unduly pessimistic given that the company earned a good return from its research activities. He felt that the company should invoke the Accounting Standards Board's true and fair override and capitalise all research costs.

#### Required

- (a) Explain why it might be justifiable for H plc to capitalise its research costs. (5 marks)
- (b) Explain why SSAP 13 imposes a rigid set of rules which prevent the capitalisation of all research expenditure and make it difficult to capitalise development expenditure. (5 marks)
- (c) Explain whether the requirements of SSAP 13 are likely to discourage companies such as H plc from investing in research activities. (5 marks)
- (d) Describe the advantages and disadvantages of offering companies the option of a true and fair override in preparing financial statements. (5 marks)

*CIMA, Financial Accounting – UK Accounting Standards, November 2001* (20 marks)

**6.7** MWT plc is a company involved in the design and manufacture of aircraft. During the year ended 31 March 1995, the company had commenced the following projects.

- A. **Project Alpha** involves research into the development of a lightweight material for use in the construction of aircraft. To date, costs of £175 000 have been incurred, but so far the material developed has proved too weak.
- B. **Project Beta** involves the construction of three aircraft for a major airline at a total contract price of £75 million. Costs incurred to 31 March 1995 amounted to £21 million, and payments on account received, relating to £20 million of those costs, amounted to £24 million. It is estimated that the contract will cost another £40 million to complete.
- C. **Project Gamma** involves the development of a new engine for an overseas customer for a total contract price of £7 million. The total cost of the project is estimated to be £5 million. Only £1.4 million had been incurred to 31 March 1995. Payments on account, relating to those costs, of £2.4 million have been received.
- D. **Project Delta** involves the refurbishment of a fleet of ten aircraft for another major airline. The total contract price is £30 million. To 31 March 1995, costs of £24 million have been incurred, and, because of materials shortage, it is estimated that it will cost another £12 million to complete. Although £20 million had been invoiced to 31 March 1995, relating to cost incurred to that date, only £19 million had been received at that date.
- E. **Project Epsilon** commenced in February 1995 involving the production of light aircraft for a flying school for a total contract price of £18.2 million. Costs incurred to 31 March 1995 amounted to £1 million of a total estimated contract cost of £17 million. Invoices raised to 31 March 1995 amounted to £3 million of which £2.6 million had been received by that date.

**Requirement**

- (a) Explain, with appropriate figures, how each of the above projects should be treated in the financial statements of MWT plc. (15 marks)
- (b) Show the relevant extracts from MWT plc's profit and loss account and balance sheet for the year ended 31 March 1995. (5 marks)

*CIMA Financial Reporting, May 1995* (20 marks)

- 6.8** Forfar plc is an innovative engineering company with a substantial research and development budget. It is company policy to capitalise all expenditure relevant to development work wherever possible and the following projects were in progress at the year end, 30 November 1998:

**Project A100**

The company incurred costs of £200 000 in the year ended 30 November 1998 to exploit research into the production of engineering equipment with reduced energy requirements. The company has produced a prototype model but commercial production is not expected for several years.

No other feasibility studies have been carried out. The company also incurred expenditure of £100 000 on computer equipment to assist in testing and analysis and this is expected to have a useful economic life of five years.

**Project A401**

The company incurred technical research costs of £50 000 in November 1998 on behalf of a customer who commissioned Forfar plc to investigate the feasibility of high-energy battery cells. Forfar plc expects to recover the costs incurred plus a mark-up of 20% from their customer for this work. Market research costs of £20 000 have also been incurred by Forfar plc in November 1998 but these will be reimbursed at cost by the customer and an invoice was raised for this in December 1998. None of the technical research work has yet been invoiced though the project is successful and the work will be completed by January 1999.

**Project C900**

The company had capitalised development expenditure of £500 000 by 30 November 1997 on this project and incurred a further £70 000 during the year ended 30 November 1998. Commercial production of the new product started on 1 June 1998 and the company anticipates sales as follows:

Year ended	£
30 November 1998	250 000 actual
30 November 1999	300 000 budget
30 November 2000	500 000 budget
each year thereafter	600 000 budget

The company expects competitors will move into this market by 30 November 2002 and the product will no longer be profitable after that date.

In addition to the above costs, the company spent £150 000 on plant in December 1995 to assist with this project and has been depreciating this over five years to date. The plant has no further use once the product is developed.

**Project G150**

The company's technical director considers that there is the possibility of producing new generation computer-controlled engineering equipment. £400 000 was spent in the year ended 30 November 1998 to investigate the likelihood of a viable research project. In addition, technical staff costs on this project amounted to £55 000 in the year.

**Project B105**

This project was started in December 1994 to develop a new generation solar power panel. Costs capitalised to 30 November 1997 amounted to £550 000. Market research carried out in July 1998 at a cost of £25 000 indicated demand would reach 5000 panels per annum; the company's finance director has calculated 7500 panels per annum would need to be sold in order to break even.

**Requirements**

- (a) Briefly identify and explain the appropriate accounting treatment required for the year ended 30 November 1998 for each of the above projects. (6 marks)
- (b) Calculate and disclose the appropriate amounts for the financial statements of Forfar plc for the year ended 30 November 1998. (14 marks)

*Note:* You are not required to produce any information for the directors' report, accounting policies or cash flow statement.

ICAEW, *Financial Reporting, December 1998* (20 marks)

**6.9** Amesbury plc produces and distributes computer-controlled machinery. As accountant for the company, you have been provided with the following information regarding the company's activities in researching and developing products in the year ended 31 October 1993:

- (1) Expenditure on developing a new computerised tool for a long-established customer has amounted to £150 000. The work is now well advanced and the customer is likely to authorise the start of commercial production within the next 12 months. The customer is reimbursing Amesbury plc's costs plus a 10% mark-up. To date the company has received £70 000 having invoiced £100 000 for agreed work done.
- (2) A review of the company's quality control procedures has been carried out at a cost of £100 000. It is considered that the new procedures will save a considerable amount of money in the testing and analysis of existing and new products.
- (3) The development of Product M479 has reached an advanced stage. Costs in the year ended 31 October 1993 amounted to £400 000. In addition there has been expenditure on fixed assets required for the development of this product amounting to £120 000 of which £60 000 was incurred in the year ended 31 October 1992. The fixed assets have a five-year life with no residual value and are depreciated on the straight-line basis with a full year's depreciation in the year of acquisition.

Market research, costing £20 000, has been carried out and this indicates the product will be commercially viable although commercial production is unlikely to start until April 1994. The company expects that Product M479 will make a significant contribution to profit.

- (4) Commercial production started on 1 June 1993 for Product A174. The costs of developing this product had been capitalised as follows:

	£
Development expenditure capitalised as on 31 October 1992	200 000
Expenditure incurred in the year ended 31 October 1993	50 000
	<u>250 000</u>

The company has taken out a patent which will last for ten years. The associated legal and administrative expenses amounted to £10 000.

Actual and estimated sales for Product A174:

<i>Year ended 31 October</i>	£
1993	250 000
1994	750 000
1995	1 000 000
1996	500 000
1997	250 000

After 31 October 1996 the company's market share and profitability from the product are expected to diminish significantly due to the introduction of rival products by competitors.

- (5) It is company policy to capitalise development expenditure wherever possible.

#### Requirement

Prepare all relevant extracts of the published financial statements for the year ended 31 October 1993 in accordance with current accounting standards and legislation, explaining your treatment of items (1) to (4).

*Note:* You are not required to prepare extracts of the cash flow statement or the directors' report.

ICAEW, *Financial Reporting, November 1993*

(15 marks)

- 6.10** Global plc, which prepares accounts to 31 January each year, operates in several different countries and has recently obtained government financial assistance both in the UK and abroad:

- (1) A foreign government has granted £4m to cover the establishment of a new factory. The factory and associated plant installation were completed in November 1992 at a cost of £10m for the land and buildings (land element – £2m) and £5m for the plant. Asset lives were estimated at 50 years for the premises and 10 years for the plant; a full year's depreciation is charged in the year of acquisition.

The grant was dependent on an inspection by government officials and the company retaining ownership of the factory for the next five years. The grant was released by the foreign government on 27 March 1993 following their inspection in January 1993.

The country in which the factory is situated has had a turbulent history with frequent changes of government but has enjoyed a period of relative stability over the past three years. No previous governments have granted assistance to foreign companies.

- (2) A local authority in the UK has provided a grant of £130 000 which covers the total initial establishment costs of a new training programme for company staff. The grant is dependent on the company expanding its existing training unit and increasing the number of trainees in direct production areas within the local factory by 20 per cent. The increased number of trainees would have to be sustained for at least three years.

The grant was received in January 1993. Expected costs of the complete programme are £300 000 of which £100 000, relating to initial establishment costs, has been incurred to date.

Actual and projected trainee numbers provided by the production director are:

	<i>Years ending 31 January</i>			
	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>
Welding shop	9	10	9	10
Lathe area	7	9	11	11
Computer-controlled machinery	11	14	13	14
Trainee general managers	<u>3</u>	<u>2</u>	<u>2</u>	<u>2</u>
	<u>30</u>	<u>35</u>	<u>35</u>	<u>37</u>

**Requirement**

Calculate the amounts which should be included in the financial statements for the year ended 31 January 1993, preparing all relevant notes in accordance with SSAP 4, Government grants.

*ICAEW, Financial Reporting II, May 1993*

(8 marks)