THE PRUDENCE CONCEPT IN ACCOUNTING

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ABSTRACT

The Fourth Directive of the European Community was the direct cause of accounting principles being incorporated in UK company law. The concept of prudence and the concept of a realised profit now have a significance in statute although neither is comprehensively defined therein.

This project shows first that perceptions of conservatism, or prudence, have changed over time. It then traces the development of the realisation concept as a particular practical aspect of that conservatism.

Within the UK the role of prudence as an influence on UK standard setting is explored. The research brings out a picture of a lack of consistency in the application of the prudence concept but shows that it is certainly perceived by the standard-setters as being something more than is suggested by the narrow wording contained in SSAP 2 and now embodied in the Companies Act 1985. There is a strong theme of prudence as a reaction to uncertainty, where the nature of the uncertainty depends very much on the problem being considered.

Turning to analyse the international viewpoint, the project takes as its starting point the statement of international standard IAS 1 that prudence is to be seen as a reaction to uncertainty. The US, Australian and Canadian standard setters show evidence of this approach in their conceptual framework programmes. European viewpoints show stronger adherence to the conservative reaction, even when the Fourth Directive has been implemented. This international analysis provides a wider context against which to compare UK prudence.

It should be possible to quantify the potential prudence or lack of it in UK accounting standards by analysing published financial statements but each attempt at analysis was defeated by lack of data, even where SSAPs such as SSAP 1 or SSAP 15 prescribed disclosure which would have been adequate for the exercise.

An alternative source of data presented itself in Form 20-F, produced by UK companies reporting to the US Securities and Exchange Commission. This allowed quantification of the effect on profit of some of the more controversial UK accounting standards, particularly those on deferred taxation and amortisation of goodwill. The idea of an "index of conservatism", developed in earlier research by Gray (1980), was applied. It showed that on average over the period 1985-1987 inclusive, UK reported profits were some 6% or 8% higher than they would have been under US accounting practices. The main cause of the difference was the amortisation of goodwill, which affects the US profit but generally has no impact on UK profit. Items such as deferred taxation or foreign currency translation, which might be expected to have an impact, had very little effect overall, although they could be important in isolated cases.

The concept of realisation is closely linked to the recognition of income and hence to the recognition of assets and liabilities. Research into the extent to which there might be a pattern running through existing recognition practices showed a link by way of the concept of prudence, viewed as a reaction to uncertainty.

The project concludes by exploring some of the schemes which have been suggested for reporting the effects of uncertainty and considers the nature of uncertainty in financial reporting. The final remarks consider the implications for the realisation concept, the role of prudence in reporting as compared with decision making, the need to revise SSAP 2, the need to model uncertainty and the need to formulate a conceptual framework in a UK context.

CHAPTER ONE

INTRODUCTION

The Fourth Directive of the European Community brought a new dimension to UK accounting practice, namely that of incorporating accounting principles in statutory legislation. Those members of the UK accountancy profession who had been party to discussions in Brussels on the drafting of the Fourth Directive were proud that they had preserved some Anglo-Saxon flavour, in particular the over-riding requirement for a true and fair view. The subsequent legislation, initally the Companies Act 1981 but latterly the Companies Act 1985, incorporated wording on accounting principles which bore a strong resemblance to that of Statement of Standard Accounting Practice No 2 (SSAP 2). In particular the legislation made use of the principles of prudence and accruals. When SSAP 2 was drafted it was not designed to withstand the rigours of analysis by the legal mind. The concept of prudence was explained largely by reference to realisation of a profit but that left undefined the meaning of realisation and therefore created the unsatisfactory situation that one incompletely defined complex concept could only be defined by reference to another incompletely defined complex concept.

The legislation of 1981 and 1985 did not attempt to define a "realised profit" leaving it to generally accepted accounting principles to determine when a profit should be treated as realised. It soon became apparent that identifying comprehensive criteria for realisation would not be an easy task in practice and at the date of writing this thesis that comprehensive definition still eludes the standard setters.

This research project grew out of an interest in attempting to define the realisation concept for practical purposes of implementing the legislation. It is fairly clear that the realisation concept is primarily a practical working device of accountants which makes operational the underlying concept of conservatism or prudence. It seemed appropriate therefore to start with the prudence concept as a theme to be explored, having in mind the realisation concept as one major application of the prudence concept but also having regard to other aspects of prudence.

At the same time as having an interest in the realisation concept I was also developing strands of thought concerning prudence at a more general level as a reaction to uncertainty where the realisation concept was at one end of the spectrum of reactions but where improvements in measurement techniques ought in principle to mean that accounting statements could report uncertainty rather than trying to hide behind the safe curtain of understatement. If these thoughts about the prudence concept can be traced back to one paper, it must be that of Lothian (1982) which questioned the need for the prudence concept.

The work on this thesis began in September 1985 but took an unexpected turn when in January 1986 I was asked to join a small working party of the CCAB Accounting Standards Committee with a view to rewriting SSAP 2. In particular the concept of prudence and the realisation concept were to be considered by the working party. That review began in July 1986 and proceeded at the working party stage for some months before being suspended to await the report by Professor Solomons to the ICAEW and the ASC on a conceptual framework. The working party continued in existence but turned its attention to off-balance sheet finance. This at first disappointed me as my chief interest lay in prudence and realisation but it soon became clear that the off-balance sheet problem could only be dealt with in a satisfactory way by first of all identifying principles of accounting. One of those principles was that assets and liabilities should be recognised in accordance with generally accepted recognition criteria. The working party received strong expressions of doubt about the existence of such recognition criteria and I undertook to analyse existing practice, finding that the apparent diversity could to a large extent be reconciled if recognition is seen to depend strongly on prudence where prudence is viewed in its wider sense as a reaction to uncertainty.

The thesis presents a wide-ranging perspective of the development and influence of the prudence concept. It begins by tracing the changing perceptions of conservatism over time. It then moves on to focus specifically on the realisation concept as a particular practical aspect of that conservatism. Having set the scene in this way, the research then develops four strands of investigation:

1. The role of prudence in UK accounting standards including consideration of the meaning of realisation;
2. A comparative international study of the role of prudence;
3. An empirical analysis of relative conservatism in comparison of UK with US Generally Accepted Accounting Principles (GAAP);and
4. An investigation of recognition criteria applied in the UK to show the influence of the prudence concept.

Through all of these strands of investigation is found running the thread that prudence is a reaction to uncertainty. Traditionally the reaction has been to err on the side of caution, which explains the importance of the realisation concept. There is no reason why erring on the side of caution should be the only reaction if sufficiently reliable and informative alternatives could be found. The thesis therefore concludes by reviewing reactions to uncertainty which could provide supplementary or alternative information to the existing conventional reporting practices.

Prudence or conservatism?

This introduction has used the words prudence and conservatism together. That is partly for historical reasons. The literature on development of the subject is largely of US origin where the term "conservatism" has always been in use. In the UK the term "prudence" was not widely used before the early 1970's and the introduction of SSAP 2. Although there was a change of terminology in the UK there was no great change of meaning from the US "conservatism" although the use of "prudence" makes it clearer that deliberate understatement is not encouraged, particularly where it creates secret reserves. Thus in many instances where current practice is being described, the terms "prudence" and "conservatism" are interchangeable.

There is however a wider aspect to prudence which is the theme of this thesis. That wider aspect is that prudence is a reaction to uncertainty. This view is to be found in the International Acccounting Standards (IAS 1) and in more recent US works such as the concepts statements of the Financial Accounting Standards Board (FASB 1980) or the report by Professor Solomons (1989). It is that wider aspect which requires exclusive use of the term "prudence" where prudence is viewed as a reaction to uncertainty. Where the context may not be clear the wording of specific sections will state whether "prudence" is being taken as a synonym for "conventional conservatism" or whether it is being taken in the wider sense of a reaction to uncertainty.

The pronouncements of the accountancy profession have not gained any reputation for literary merit. For more elegant definitions of the word "prudence", Stevenson's Book of Quotations is an interesting source:

> "The greatest good is prudence; wherefore patience is a more precious thing even than philosophy; from it springs all other virtues" (Epicurus, 290 B.C.)
>
> "By prudence... we understand the practical knowledge of things to be sought, and things to be avoided" (Cicero, 45 B.C.)
>
> "One has no protecting power save prudence" (Juvenal, A.D.120)

"Prudence is God taking thought for oxen" (R.W.Emerson, Essay on Prudence,1841)

"That man is prudent who neither hopes nor fears anything from the uncertain events of the future" (Anatole France)

Two quotes which never reached the ears of Stevenson are:

"After all, prudence still has a lot going for it." (Partner in a medium-sized accountancy firm, introducing a discussion on 'Fair Value' in acquisition accounting, 1988)

"I've always regarded prudence as a motherhood statement which needs no explanation" (Senior partner in a Big Eight firm, 1989)

CHAPTER TWO

CHANGING PERCEPTIONS OF CONSERVATISM OVER TIME

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CHAPTER TWO

CHANGING PERCEPTIONS OF CONSERVATISM OVER TIME

Introduction

This chapter provides a review of historical accounts of the development of accounting thought and of contemporary comments on accounting principles in order to illustrate the changing nature of conservatism. The written material available originates mainly in the USA, although there is ample evidence that the USA and UK were very much linked in their accounting practice, at least in the early part of this century.

The discussion is followed by a summary and comments which seek to bring out the trends of thinking on conservatism.

Origins of conservatism: the balance sheet approach and divisible profits

Littleton (1933) attempted to identify the point in accounting history at which it first became necessary to distinguish realised from unrealised gains in computing profit. In his view, it was associated with the advent of the joint-stock corporation.

> "The central accounting issue in a corporation concerns the amount of profit available for dividends. This in turn is primarily a matter of preserving the proper distinction between capital and income. It is at this point that the corporation influences accounting most." (p. 206)

On this theme he contrasts writers of the eighteenth century and earlier, whose definition of profit was based on changes in net wealth, with law court decisions of the nineteenth century which were concerned with establishing divisible profits.

Littleton also showed, in his discussion of depreciation, (ch. 14) that the introduction of depreciation by American railroad companies was for the purpose of making prudent provision for maintenance and renewal and also to ensure that the prices charged covered all costs. The idea of depreciation as a measure of value consumed in a manufacturing process did not appear until later in the nineteenth century.

Conservatism in the late nineteenth century was seen as an attitude of management to financial planning, as exemplified by Distillers Co. Ltd:

> "The apparently conservative nature of the financial management of the time can be evidenced by the working capital ratios in 1881 and 1900, 2.5 and 2.2 respectively." (Lee 1979, p. 19)

> "...stocks had been accounted for at 'safe values'." (Lee 1979, p.22)

UK conservatism of the late nineteenth century was equated with understatement of assets:

> "In practice the exercise of accounting discretion or judgment was conditioned in general by an approved bias towards 'conservatism'. This meant, by and large, that it was better to err on the side of under-statement rather than of over-statement." (Yamey 1962, p.42)

In relation to the use of secret reserves, Yamey says:

> "It also reflected an attitude taken by company management towards the shareholders; it was deemed axiomatic that, provided they acted in good faith, the management should decide, within limits, what to tell the shareholders in accounting statements prepared for their information." (ibid., p.43)

Hatfield (1913) mentioned conservatism as a quality observable in accounting practitioners:

> "The general practice of conservative American accountants, especially in banks, insurance companies and other fiduciary institutions, is in line with German law, and favours marking down the investments when the market price is below the cost price, but opposes taking recognition, except in an explanatory footnote to the balance sheet, of the appreciation due to a rising market." (p.102)

Emergence of the profit and loss account

The growing significance of the profit and loss account in the USA is seen in a comment by Crandell (1938) on the use of the "lower of cost or market" rule for inventory valuation:

"(We)... have no objection to having the net income... reduced by the adjustment of a reserve to reduce the inventory to market value, for the purpose of stating the closing inventory on the balance-sheet on a conservative basis. We do not, however, see why the desire for a conservative balance-sheet justifies the taking, in its name, of so many liberties with the profit-and-loss statement."

At the same meeting, Paton said:

"I have been gratified to observe in the discussion today... that there has been a marked emphasis on the income sheet... This shift in emphasis from the balance sheet, it seems to me, is the most noteworthy feature of the trend of present-day examination of accounting principles and procedures." (Paton 1938, p.26)

Paton rejected a proposal that abnormal losses might be deferred until it was convenient to write them off. He said:

"It seems to me that we should not support this sort of doctrine... Referring to our old friend conservatism, it certainly is not conservative to talk about deferring abnormal losses, admitted losses, simply because it is not yet 'convenient' to write them off. The kind of conservatism we want is intelligent, coherent conservatism that we can follow all the way through our accounting problems, not the kind that we can drop wherever it seems to be 'convenient' to do so." (Paton, op.cit. p.28)

Hatfield's view of conservatism in 1939 was:

"The writing down to one dollar of intangibles, not long ago almost universally praised as an exhibition of conservatism, has since 1927 been not infrequently criticised. Do not take this as any intimation that valuations should not be carefully made, nor that, if there is any real doubt as to which of two valuations is more nearly correct, the lower should be used. But the recent intimations, faint perhaps but nevertheless significant, that accounts should represent the best possible guess is a real indication of progress in accounting." (Hatfield 1939, p.9)

The US Congress was persuaded in 1939 to accept for tax purposes the LIFO method as a basis for stock valuation. The advantage claimed was that use of LIFO would report only such profits as were actually realised during the accounting period for which tax was calculated. There had been objections to the taxing of unrealised stock appreciation using the FIFO system (Peloubet 1939). There was also concern that unsound financial policies could result from reliance on FIFO profits (excessive dividends and undue expansion) and that overvalued securities could result (Blough 1939).

It is apparent from reading the contemporary debate on the introduction of LIFO that it was justified primarily on the grounds of economic theory and financial prudence although the underlying motivation was to eliminate the taxation of unrealised gains. It is also apparent that conservatism was felt to be of sufficient importance that it had to be demonstrated that LIFO represented conservative áccounting practice:

> "The conservatism of the inventory, the conservatism of the computation of profit, and the relationship of the costs of goods to the sale which they directly affect, seem to justify, from an accounting standpoint, the use of the last-in, first-out method..." (Blough 1939, p.81)

Blough's assertion that the inventory valuation in the balance sheet was conservative seems to be based on the assumption that the LIFO process would start to operate during a depression and that the market value would not fall below cost in future years. The American Petroleum Institute had recommended in 1934 that when the02-14-86
LIFO plan was started, the prices of initial stock should be set at a "conservative or reasonable figure" (Webster 1939, p.91).

The demonstration of "conservatism" in LIFO involved a mixture of prudent financial management and the reporting of lower profits and lower balance sheet inventory values.

A firm advocate of conservatism was G.O. May:

> "To me, conservatism is still the first virtue of accounting, and I am wholly unable to agree with those who would bar it from the books of account and statements prepared therefrom and would relegate it to footnotes." (May 1943, p.44)

Overconservatism in accounting was cited as a practice that required attention in a speech to the AICPA in 1930 (Carey 1979, p.246) which led to the invitation to G.O. May to chair the Special Committee on Cooperation with Stock Exchanges of the American Institute of Accountants which in 1932 presented a report to the Committee on Stock List of the New York Stock Exchange. Appended to the report was a list of five "broad principles" which might be laid down for listed companies. These may be summarised as follows (see Grady 1962 pp 69-72 for full text):-

1. Unrealised profit should not be credited to income.
2. Capital surplus should not be used to relieve the income account of charges against income.
3. Pre-acquisition profits of a subsidiary should not be available for a dividend to the parent company.
4. A company should not take credit in its income account for dividend on its holdings of its own shares.
5. Amounts due from officers, employees and associates should be shown separately from other debtors.

These "broad principles" would appear to be closer to detailed rules to deal with particular matters of concern at the time, but it is clear that the first four are all expressions of "conservatism" or prudent accounting practice.

G.O. May identified the depression of the 1930's in the USA as creating the conditions which favoured strict adherence to historical cost values for fixed assets. This he saw as a reaction to the write-ups of the 1920's based on what was then regarded as a stable pattern/

stable pattern of price increases. He also pointed out that when profits were depressed there was an advantage in seeking the lowest asset value in order to minimise the depreciation charge (May 1943 Ch. 5).

Awareness of the distinction between conservatism and prudence may be seen in a speech given by Sir Josiah Stamp in 1921 at the Annual Conference of the Society of Incorporated Accountants and Auditors (quoted by Kitchen, 1979). Stamp referred to the conservatism of overstating no assets and understating no liabilities and then said:

> "...prudence is just as possible without departing from what a balance sheet ought to be - a faithful record of the employment of the total capital invested in the business."

The American Institute of Accountants held a panel discussion on accounting procedure and research in 1940. A member spoke on conservatism:

> "Recently it has been declared that the most important purpose of corporate financial statements is the indication of prospective earning power.
>
> The conservatism that, applied to a balance-sheet, shows the net assets at a low amount may be the reverse of conservatism in relation to the next fiscal period when realisation of those assets is effected...
>
> Conservatism does demand, when it is probable that part of the cost cannot be realised on sale, that such unrecoverable cost shall be charged off as a loss, but in my opinion there is no justification for using conservatism as an excuse for the writing down of assets to so low an amount that profits on realisation in future periods are assured."
> (Horne 1940 p.52)

The increasing significance of the profit and loss account compared to the balance sheet is cited by Edwards (1979 p.284) as creating growing disillusionment with secret reserves:

> "During the inter-war years, however, the profit and loss account replaced the balance sheet as the primary accounting report used to assess the progress and prospects of a firm. The significance of secret reserves for the information appearing in the profit and loss account is rather different from its impact upon balance sheet figures."

Edwards also quotes examples of the reporting of profit where secret reserves were in existence. He comments (ibid p.287):

> "The fact that the maintenance of secret reserves is not synonymous with conservatism in financial matters was not widely appreciated."

The Royal Mail case of 1931 (Hastings 1962) demonstrated publicly that secret reserves were not necessarily prudent financial practice:

> "The prudent solution to his (Lord Kylsant's) predicament would have been a reconstruction and reduction of capital." (Edwards 1979, p.288)

Edwards suggested that the effect of the case in the UK was to raise questions about the implicit assumption that secrecy in accounting was desirable and to reject the paternalistic conception of accounting. There were signs of moves towards disclosure in order to restore public confidence in the commercial world (Edwards, op.cit. p.290).

The realisation concept

Once it was apparent that conservatism in balance sheets did not necessarily serve the interests of the profit and loss account, a new concept, that of realisation, developed for purposes of reporting profit. Storey (1959) dates the realisation concept to the 1930's:

> "It (the realisation concept) probably did not exist at all before the First World War, and at least one writer states that the first official statement of the concept was made in 1932 in the correspondence between the Special Committee on Cooperation with Stock Exchanges of the American Institute of Accountants and the Stock List Committee of the New York Stock Exchange."

The development of the realisation concept is explored in Chapter Three where it will be shown that the idea existed long before the 1930's.

A reaction to uncertainty

The idea of regarding conservatism as a reaction to uncertainty has been attributed to Professor Robert L. Dixon of the University of Michigan (Moonitz 1961). Moonitz expressed conservatism as follows:-

> "'Conservatism' is a reaction to uncertainty and represents in essence merely a counsel of caution. The proper role of conservatism in accounting is to insure that the uncertainties and risks inherent in any given business situation are given adequate consideration. This 'principle' is in clear conflict with 'consistency' and probably also with 'disclosure'." (Moonitz, 1961 p.47)

Sprouse and Moonitz (1962) did not mention conservatism in their tentative set of accounting principles. They did think that:

> "...broad principles must transcend the historical limitations of profits 'available for dividends' or 'subject to income tax'".

They were looking for principles of accounting to be applied before consideration of taxes and dividend. While not mentioning conservatism/

conservatism, they did refer to realisation which they noted had a widespread although inconsistent use. Their opinion was:

> "...we cannot accept it as an essential feature of accounting because the concept lacks analytical precision." (Sprouse and Moonitz, 1962, p.15)

Blough warned against the approach of Sprouse and Moonitz:

> "Furthermore, the convention of anticipating losses but not profits is one of the oldest principles of accounting. It has evolved from, and been proven desirable by, the experience of businessmen for generations. Consistency has its place, and in some accounting matters it is of paramount importance, but there are limitations both to its usefulness and to its applicability. Experience has demonstrated that it is sound business policy to wait until profits are realised before they are reported while providing for losses as soon as they are apparent. Too many businesses have gone into bankruptcy for not observing such a principle to warrant brushing it aside merely because it seems not to be internally consistent." (Blough, 1962, p.61)

The general tone of the criticism of Sprouse and Moonitz was that they did not make adequate distinction between practices which had received general acceptance and those which they proposed as additions or changes to existing practice.

Grady, in comments on Sprouse and Moonitz (Grady 1963), criticised their speculative approach and expressed a preference for an inventory of existing accepted practices rather than a collection of speculations as to what might be best accounting principles. When he eventually produced his own inventory of generally accepted accounting principles, he did, however, agree with Moonitz that conservatism is a reaction to uncertainty:

> "Conservatism is not a justification for deliberate understatement. It is rather a quality of judgment to be exercised in evaluating the uncertainties and risks present in a business entity to assure that reasonable provisions are made for potential losses in the realisation of recorded assets and in the settlement of actual and contingent liabilities." (Grady 1965)

He dismissed the text-books which discuss conservatism in terms of deliberate understatement of assets, asserting that such a viewpoint had no applicability to widely held corporations although it might have some relevance to closely held corporations anxious to minimise income taxes.

Grady saw the concept of conservatism as comprehending the ideas that:

> "Sales, revenues and income are not to be anticipated. Recognition ordinarily requires consummation of sale and delivery, and all known liabilities and losses should be recorded regardless of whether the definite amounts are determinable".

Bedford (1965) took considerable steps to avoid mentioning conservatism by name but had to refer to the idea:

> "It is unfortunate that no objective criterion now exists for recognizing discovery gains or losses. In general, losses are recognized at the time management decides they exist; but extraordinary gains, except for certain types of oil discoveries and a few other special cases, are not recognised until the resource is sold." (p. 107)

(A 'discovery' is a sub-division of the operational income which is the theme of Bedford's text.)

The Accounting Principles Board of the AICPA, in APB Statement No. 4 (1970) followed Grady in describing accounting principles which the Board believed to be generally accepted at the time of publication. (Although dated 1970, APB Statement No. 4 was four years in the making and may be regarded as contemporaneous with Grady's inventory of accounting principles).

APB Statement No. 4 described conservatism as follows:

> "Conservatism. The uncertainties that surround the preparation of financial statements are reflected in a general tendency toward early recognition of unfavourable events and minimization of the amount of net assets and net income." (para. 35)

Conservatism was classified as one of the "modifying conventions" which might affect the application of the "pervasive measurement principles". Realisation was classified as a "pervasive measurement principle" (para. 28). The Statement's comment on conservatism mentions uncertainty and describes what is done to deal with this uncertainty:

> "Frequently, assets and liabilities are measured in a context of significant uncertainties. Historically, managers, investors and accountants have generally preferred that possible errors in measurement be in the direction of understatement rather than overstatement of net income and net assets. This has led to the convention of conservatism, which is expressed in the rules adopted by the profession as a whole such as the rules that inventory should be measured at the lower of cost and market and that accrued losses should be recognized on firm purchase commitments for goods for inventory. These rules may result in stating net income and net assets at amounts lower than would otherwise result from applying the pervasive measurement principles" (para. 171)

APB Statement No. 4 provided a description of practices existing at the time but it gave no prescription for future development. It was accepted by seventeen of the eighteen members of the Accounting Principles Board. The dissenting view was reported:

> "Mr. Catlett also believes that this Statement - by providing a conceptual basis for, and giving authoritative status to, current accounting practices - will represent an unfortunate deterrent to the achievement of improvements in practice. Thus, rather than setting forth effective guidelines for progress, this Statement creates a significant roadblock which will seriously impede the efforts of the business community and the accounting profession to establish sound principles for financial accounting and reporting." (page 105)

Opposition/

Opposition to conservatism

Blough (1962) attacked Sprouse and Moonitz for their lack of regard for conservatism. Sprouse did not agree with Blough's reasoning:

> "I should not dispute the assertion that conservatism is one of the oldest principles of accounting. I do dispute that conservatism in present day financial accounting is either desirable or justified. It is one thing to offer fatherly advice that it is not wise to spend money which is not on hand, or readily available. It is quite a different thing to assert that it is sound business policy to wait until profits are realised before they are reported. What kind of professional paternalism are we engaged in? Financial statements should report the economic facts in as forthright a manner and as accurately as objective measurements permit. Surely it is not the accountant's role to conceal economic facts on the grounds that businessmen are apt to act foolishly if they know what is really going on. Furthermore, in all due respect, I must say that my credulity is strained by the observation that many businesses have gone into bankruptcy because they reported unrealised gains as well as unrealised losses. As a matter of fact, it is much easier to visualise the bankrupt who is a victim of conservatism, having sold at $5 inventory which had cost $4 and then having spent what was reported to him as $1 profit only to find that it would cost him $6 to replace it." (Sprouse 1964)

Writing much earlier, MacNeal (1939) was scathing in his condemnation of:

> "that pernicious accounting rule for 'conservatism': 'Never anticipate a profit but provide for (i.e. anticipate) all losses".

His quarrel with conservatism was chiefly through the resulting non-reporting of unrealised gains and the possibility of increasing or suppressing reported profits by selecting the date of realisation of assets held. Probably it would be more accurate to describe his attack as being against the realisation concept rather than against the wider view of prudence in accounting.

The definition of conservatism provided by the Financial Accounting Standards Board in 1980 was little different from the wording used by Moonitz in 1961:

> "Conservatism is a prudent reaction to uncertainty to try to ensure that uncertainties and risks inherent in business situations are adequately considered. Thus, if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimate; however if two amounts are not equally likely, conservatism does not necessarily dictate using the more pessimistic amount rather than the more likely one. Conservatism no longer requires deferring recognition of income beyond the time that adequate evidence of its existence becomes available or justifies recognizing losses before there is adequate evidence that they have been incurred."
> (FASB 1980, SFAC2, para. 95)

The remedy suggested by the FASB goes further than Moonitz, by recommending disclosure:

> "The best way to avoid the injury to investors that imprudent reporting creates is to try to ensure that what is reported represents what it purports to represent. It has been pointed out in this Statement that the reliability of financial reporting may be enhanced by disclosing the nature and extent of the uncertainty surrounding events and transactions reported to stockholders and others." (ibid. para. 97)

That same opposition to conservatism is found in the report by Professor Solomons to the Institute of Chartered Accountants in England and Wales (Solomons 1989):

> "Traditionally, accountants have reacted to uncertainty by espousing a doctrine of prudence, and we have already noted that this is one of the 'fundamental accounting concepts' set out in SSAP 2. If prudence in accounting means that estimates, where they must be made, should be made with care, then of course it is an appropriate quality for accountants to display. But sometimes it has been interpreted as meaning that, if accounting numbers have to be estimated, liabilities, expenses and losses should be overestimated and assets, revenues and gains should be underestimated. Clearly, such an interpretation is incompatible with notions of representational faithfulness and consistency, which are essential characterstics of accounting information if it is to be useful."

Use of the word "prudence"

Although the word "prudence" has not been used in the US literature to the same extent as "conservatism", the notion is understood there. Meyer (1979) wrote:

> "The concept of accounting conservatism suggests that when and where uncertainty and risk exposure so warrant, accounting takes a watchful and wary stance, until the appearance of evidence to the contrary."

He then cited examples of the watchful and wary stance in the rules for the capitalisation of expenditure, provision for deferred taxes and reporting of earnings per share. He also cited under the same heading practices which lead to the acceleration of expenses or the deferral of income. It is not clear why he regarded these as "prudent" since they are much more closely related to the "conservatism" which understates profit.

The use of the term "prudence" in the UK received comment in the journal "Accountancy" in 1971:

> "It is interesting to compare these fundamental accounting concepts [in SSAP2] with the ten 'basic concepts' developed in ARS 7 by the AICPA. Perhaps the most obvious difference is that which the draft Accounting Standard refers to as the concept of 'prudence' the Americans term the concept of 'conservatism'. And historically, British Accountants (and accountants world-wide) have tended to refer to the attitude of 'conservatism' rather than what is now termed 'prudence' although admittedly there has been a steady development in the term 'conservative' as it is used in accounting terminology; so that it no longer means what it meant thirty or forty years ago, when secret reserves were not only permissible but thought to be desirable. Thus in explaining what it understands by conservatism, the AICPA makes it clear that 'conservatism is not a justification for deliberate understatement', but represents 'the enquiring mind and "show me" attitude'. The difference is not, therefore, as great as it at first sight seems." (Editorial, Accountancy, February 1971, p.55)

This would indicate that the use of the term "prudence" in the UK accounting standard was intended to convey the message that understatement of net assets or of profit was not approved, but careful reporting would continue to be expected.

More recent academic comments on the prudence concept in the UK may be found in Lothian (1982), Citron (1983) and Weetman (1983).

Summary and comments

The emergence of conservatism in accounting has been associated with the advent of the joint-stock company and the need to distinguish divisible profit (Littleton 1933). Conservatism was initially related to prudent financial management, evidenced by providing for depreciation (Littleton, ibid), preservation of adequate working capital, safe valuation of stock (Lee 1979) and exclusion of intra-group profits (Claire 1979). Understatement of assets was seen to be consistent with prudent reporting of asset values in a balance sheet (Yamey 1962). Conservatism was also seen as a quality of those who practised accounting (Hatfield 1913).

From the 1920's onwards the profit and loss account began to displace the balance sheet as the prime indicator of the relative success of a business (Paton 1938). It became apparent that continuing understatement of asset values in a balance sheet was storing up problems of mis-allocation of profit in relation to the period when profit was earned (Crandell 1938, Hatfield 1939). In 1932 the AIA Special Committee on Co-operation with Stock Exchanges proposed rules which emphasised a prudent attitude towards reporting profit. LIFO was permitted in the USA in the interests of producing a fairer measure of profit (Peloubet 1939) and pains were taken to show that using LIFO was consistent was conservatism.

An unfavourable view was taken of moving too far towards the accruals concept at the expense of conservatism. The asset revaluations of the 1920's had been proved by subsequent events to be unjustified (May 1943). Historical cost accounting was in favour but at the same time secret reserves, once thought a virtue of conservatism, were under attack (Stamp 1921 (in Kitchen 1979), Horne 1940, Carey 1979, Edwards 1979). The condemnation of secret reserves predated the Royal Mail case which served to confirm their unacceptability both in the UK and the USA (Hastings 1962).

A major thrust in the recording and development of accounting principles took place during the 1960's. The idea of conservatism as a reaction to uncertainty was expressed (Moonitz 1961, Grady 1965). There was a distinction between the approach of Moonitz, which was to avoid saying exactly how this uncertainty should be dealt with, and that of Grady who explained what accountants did at the time when faced with uncertainty.

Some writers on accounting principles managed to avoid mentioning conservatism at all (Sprouse and Moonitz 1962, Bedford 1965). At the same time the warning was given that conservatism was firmly enshrined in existing practices (Blough 1962, Grady 1965, AICPA 1970) and any attempts to lessen the hold of conservatism were very much a prescription for the future rather than a description of contemporary practices.

Those who did react strongly against conservatism did not always share the same reasons. MacNeal (1939) objected to the resulting nondisclosure of unrealised gains. Sprouse (1964) objected to the paternalist role imposed on the profession by conservatism.

The emergence of the profit and loss account (or income statement) also saw the emergence of the realisation concept which has been identified as having its first official mention in 1932 (Storey 1959). During the 1960's, in parallel with the attempts to relegate conservatism in the league of accounting principles, came a more earnest development of the realisation concept as a means of determining when uncertainty was reduced to an acceptable level for purposes of reporting profit. (This theme is developed further in the next chapter). The realisation concept largely took over from conservatism in dealing with uncertainty so far as profits were concerned.

The first official pronouncement on prudence in the UK, SSAP 2, is not dissimilar in its wording to that provided by Grady (1965), which is probably not surprising since Grady's inventory was relatively new when SSAP 2 was written.

Thinking in the US, as evidenced by the FASB (1980a) has now moved to the stage of repeating earlier views that conservatism is a reaction to uncertainty but taking a less prescriptive approach to how the problem is attacked. Disclosure also appears as a possible alternative to the more traditional solution of prescribing specific accounting policies for particular situations where uncertainty exists.

The International Accounting Standard IAS 1, published in 1975, appears to have favoured the Moonitz approach of saying that prudence is exercised to deal with uncertainty, but saying nothing on how such prudence should be exercised apart from the negative definition disapproving of secret reserves. (International Accounting Standards are dealt with in Chapter Six).

The development of the conservatism concept (and probably other concepts as well) in the USA has some link with the individuals who dominated the professional publications and pronouncements of the time. G.O. May chaired the Special Committee on Cooperation with Stock Exchanges of the American Institute of Accountants throughout the period of the 1930's when accounting principles were being formulated with a view to providing more useful information to investors. May himself was very much influenced by the events of the 1920's. He continued publishing his thoughts through to the early 1950's and clearly had a dominant influence on professional publications. R. Sprouse, although facing criticism in the 1960's as being too forward-looking in his writing on accounting principles, continued to have a significant influence on the development of those principles and was chairman of the FASB when its Statements on Financial Accounting Concepts were published in the 1980's.

It is almost easier to identify the development of US accounting concepts with the particular individuals who held sway at the time than it is to relate them to the events of the time.

One of the difficulties of explaining what prudence, or conservatism, means today is that as new ideas have been put forward by some authors, others have clung to the old ideas. There is probably general consensus that deliberate creation of secret reserves is a bad thing, but there is no universal condemnation of the hidden reserves which must result in times of rising prices when historical cost accounting is applied. The link with divisible profits has come full circle with the requirement of the UK Companies Act 1985 that only realised profits are available for distribution. That realisation is in turn linked with prudence in the Act.

Conservatism has also diversified over time to take on the profit and loss account as well as the balance sheet. The realisation concept, which must be seen as an application of a conservative or prudent attitude to profit, has developed its own role which is examined in the next chapter.

Finally, to finish on a note of despair that nothing has really changed in sixty or seventy years, the following extract is taken from the technical manual of one of the largest UK firms of accountants:

> "The straight line method of reporting the annual discount expense on a deep discount bond is prudent from the borrower's point of view in that the discount expense is overstated in the earlier years." (provided in 1989 by a partner who prefers his firm to remain anonymous)

CHAPTER THREE

THE REALISATION CONCEPT AS AN ASPECT OF PRUDENCE

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THE REALISATION CONCEPT AS AN ASPECT OF PRUDENCE

Introduction

It was mentioned in the previous chapter that Storey (1959) asserted that the realisation rule probably did not exist before the First World War. He based this assertion on the report of a Study Group of the American Institute of Accountants published in 1952, (see also May 1950) but the idea of realisation was being applied before the First World War, as is shown in the first section of this chapter which examines the origins of the realisation concept.

The second section of this chapter looks at attempts to distinguish realisation of profit from recognition of profit and the growing acknowledgement that realisation should not be a criterion for determining recognition.

The third section examines moves to use realisation as a means of achieving objectivity in accounting measurement while retaining a prudent approach to the reporting of profit in the presence of uncertainty.

The fourth section brings the analysis up to date by comparing recent UK and US approaches to the subject in theory and in practice. The chapter ends, chronologically, at the beginning of the 1980's by which time US academic interest in the subject of realisation had been subordinated to that of recognition. By way of contrast the UK accountancy profession had focussed on realisation and did not perceptibly distinguish realisation from recognition. The subject of recognition in accounting is taken up again in Chapter Nine, where it is examined in the context of reacting to uncertainty.

Origins of the realisation concept

The realisation concept appears to owe its existence to the formation of joint stock companies which rewarded investors with dividends declared out of profits. Yamey (1960) asserted that with the advent of joint stock companies, periodic profit became significant in setting an upper limit on distribution to shareholders, thus acquiring financial significance. Dividends required liquidity, so it was reasonable to link profit with changes in net assets which would lead to a flow of liquid assets. Yamey contrasted this with the practice of the eighteenth century and earlier of recording unrealised gains in asset value in the business ledgers, and gave examples of such practice in revaluing investments without any disposal taking place, or in buying debts at a discount and valuing them immediately at full face value. He attributed this to the desire to have as complete a record as possible of the assets of the business at a time when periodic estimation of profit was at best carried out haphazardly and at the whim of the owner of the business. By contrast, the nineteenth century need, in the case of joint stock companies, was for valuation of assets to become subservient to the calculation of periodic profit.

Dickinson (1913) was a firm advocate of application of the realisation principle:

> "In the widest possible view, profits may be stated as the realized increment in value of the whole amount invested in an undertaking; and, conversely, loss is the realized decrement in such value". (p.67)

Dickinson associated profit with declaration of dividend:

> "It is in the legal interpretation of the term 'profits of a corporation' (which has come to mean profits available for dividends), and in the distinction between the strictly legal and the conservative accounting view of the principles upon which they should be ascertained, that the difficulties of the subject chiefly lie." (p.68)

(Dickinson's/

(Dickinson's sceptical approach to the legal profession was due mainly to the early decisions of the English courts that there was no legal obligation to provide for wasting assets in determination of profits earned from operations, and he expressed relief (p.70) that these decisions had later been modified).

Earlier evidence of the association of profit with dividend is found in the testimony of a witness to a Select Committee on Joint Stock Companies in 1843 (Hein, 1978). The witness expressed the opinion that no dividends should be paid except out of "clear profits", which he defined as follows:

> "You take what has been expended within the half-year for the purposes of your trade, and you take your returns, and the clear profits arising from receipts above expenditures on those transactions is what ought to be divided, and no more." (page 248)

The definition provided by this witness shows that realisation of profit alone was not a sufficient condition for divisibility of profit; divisible profit related only to operations. This is confirmed by Yamey (1960), who suggested that for purposes of reporting periodic profit to shareholders, there was a need to distinguish unusual, non-recurrent, or irregular items of profit or loss. This would require separate recording of realised changes in the value of fixed assets. Dickinson (1913), pursuing the conservative approach, advocated the identification of realised gains on fixed assets as an extraordinary item in the profit and loss account (p.65).

Dickinson's "profit and loss account" was in fact a balance sheet reserve comprising appropriations of profit as well as the balance of undistributed profit and loss. His recommendation of taking realised gains on fixed assets to profit and loss account was thus an example of reserve accounting, bypassing the net income account which was his gathering place for the results of operations in the various/

in the various activities of the business (pp. 60-65). It seems clear from his general warnings on careful business practice that he took a different view of gains realised on operations from those realised on disposal of fixed assets.

It is clear from Dickinson's text that the phrase "realised profit" was established in the accounting vocabulary by the early years of the twentieth century, although it had not yet been accorded the title of a "concept" or a "principle". Dickinson regarded realisation as taking place at the point of sale:

> "Profits can only be made out of the sale or exchange of one commodity for another of a definite and realizable cash value." (page 93).

He thus accepted the accruals concept to the extent that debtors could be regarded as a commodity of a definite and realisable cash value, but his text is frequently punctuated with warnings on the need to provide for the possibility of losses.

Reference to realised profits can also be found in Hatfield (1909) who said:

> "Profits are in fact realized when once the transaction is completed." (page 227)

In support of this view of the desirability of valuing inventory at cost rather than at selling price, Hatfield (p.102) cited the German commercial code which, in attempting to prevent overvaluation, prescribed that merchandise should be valued at cost price except where a publicly quoted price was lower than the cost price.

Staunton (1973) analysed a series of articles written between 1906 and 1926 on the accounting treatment of discounts and premiums on bonds. One of the issues discussed was the amount of the income of the investor/

of the investor who had acquired bonds at a premium or at a discount. Was the premium or discount regarded as part of the income of the investor, as would be the case using an actuarial calculation based on the effective rate of interest implied in the transaction, or was the income of the investor the annual cash received in the form of interest payments? The question became significant in the case of a trustee dealing with a deceased's estate where income and capital were directed to different beneficiaries.

In this debate, G.O. May (1906) in particular invoked conservatism and the idea of a realised profit to justify amortisation of a premium over the life of the bond, on the grounds of making allowance for a known loss, but to regard a discount as a windfall gain in capital value which did not exist until the bond was sold. This meant that losses would be allocated to income over the life of the bond, but gains would be regarded as part of the capital value.

Staunton concluded that the writers of the time were attempting to allow practical problems concerned with the availability of cash to become questions of income determination, when really they were questions of asset composition. He suggested that the quality being considered was realisability of the asset, not the amount of the corresponding income.

It is perhaps interesting that G.O. May was applying the realisation concept on lines similar to those advocated by Dickinson. Both men worked for Price Waterhouse & Company in America, with May succeeding Dickinson as senior partner in America, and it is clear from May's own writing that he was very much influenced by Dickinson.

May believed/

May believed so much in conservatism, and the related concept of realisation, that he was opposed to accrual of interest and rents receivable despite the acceptability of this particular practice at the time:

> "Today there is much to be said for removing the exception to the rule of corporate accounting that income is realized gain that now exists with respect to interest and rents."
> (May 1943 p.219)

He did however weaken in his resolve when allowing that exceptions to the realisation rule could be permitted in the case of uncompleted contracts and of motion pictures (May 1943 pp. 186 and 187). In the latter case it had been demonstrated that the earnings of a picture followed a fairly well defined curve, tapering over about two years. Income (profit) was calculated by setting costs against revenue as determined by these curves, and the practice was acceptable for taxation purposes. In both cases May added his usual exhortation to constant watchfulness and the need for caution.

This section has produced evidence that realisation was a test imposed by those who sought to place limits on what could be reported as profit. It has not demonstrated what criteria were used to establish that realisation had occurred. The next section will consider some of the criteria which have been suggested.

Separation of realisation and recognition

It was suggested by Windal (1961) that the use of the term "realisation" had developed from a very narrow view, requiring the conversion of assets into cash (Finney and Miller, 1952) or relinquishment of merchandise for cash or near cash (Gilman, 1939) or the exchange of property for a current asset (Kohler, 1952) or the conversion of a product into cash or other valid assets (Paton & Littleton, 1940). All these required an exchange for a liquid asset before profit could be realised, and all regarded realisation as a necessary condition of recognition.

The American Accounting Association definition of 1957 was identified by Windal as a major departure from this view because, instead of specifying the receipt of a particular type of asset in the exchange process, it considered the objectivity of measurement of the change in an asset or liability. The AAA 1957 definition stated that:

> "The essential meaning of realisation is that a change in an asset or liability has become sufficiently definite and objective to warrant recognition in the accounts".

This definition was seen by Windal as implying that revenues, expenses and profit could be in existence prior to realisation, in contrast to earlier views that income which was not realised could not be regarded as income at all (Bowers, 1941), or that income emerges only when the revenue from which it is derived is realised (May, 1948).

Windal may have tried to read too much into the AAA 1957 definition. There is no evidence elsewhere in the 1957 paper to suggest that the AAA perceived recognition and realisation as separate notions. Even if Windal's interpretation is accepted, it would be too sweeping a generalisation to suggest that the 1957 AAA definition was the first to admit that profit could exist prior to realisation. Hatfield (1927), as quoted by Parker (1969), provided clear evidence of the view that recognition could precede realisation:

> "It is not always clear... whether a writer considers that there are unrealised as well as realised profits, the latter only being of interest to the accountant, or whether there is no such thing as unrealised profit. If the latter is true the phrase realised profit is evidently tautological. Much of the discussion of realised profits is confused by an uncertainty as to whether the writer... means that profits are not in existence until realised, or that profits are not available for distribution unless they have been realised."

In similar vein, Alexander (1948) discussed accrued versus realised gains and losses in contrasting the economists' view of accrued gains with the accountants' view that a gain could only exist when an asset had been exchanged for cash or a claim to cash.

Although the American Accounting Association definition implied that profit could exist prior to realisation, it did not admit that recognition through reporting in an accounting statement could precede realisation. At the time, its definition was criticised for being too vague. Vatter (1962) said:

> "There is a grave need for some more definite attempt to put meaning into the realisation concept, by specifying more clearly the tests that ought to be used to establish when an asset or liability has changed, or when a revenue or expense flow has occurred."

The 1957 AAA definition had achieved some degree of a break-through in acknowledging that revenue and profit could exist before realisation, and that some further tests were required to establish an acceptable level of uncertainty prior to realisation, but it failed in not discussing these tests.

A new attempt at definition of the realisation concept was made by a committee of the American Accounting Association reporting in 1965 (AAA 1965). Its report suggested that there could be recognition of revenue without realisation, and considered the specific example of holding gains and losses, which it suggested should be reported as unrealised profit.

Having accepted that revenue recognition could precede realisation, the Committee also specified that some crucial event in the revenue-earning process would be required as a signal for recognition. This idea rested heavily on Myers (1959) who was particularly concerned with the timing of income recognition. He assumed it was possible to recognise revenue, and hence profit, at one point in time, and that this point in time should be the most critical decision or most difficult task in the cycle of a complete transaction. He analysed existing practice in the recognition of revenue and profit, identifying the critical event in each case, but making no attempt to give an opinion on the realisation of profit.

Edwards and Bell (1961) provided further impetus for the separation of realised and unrealised gains with recognition of the latter as a component of business profit. Their emphasis on realisable cost savings rested on the view that one aspect of management performance which should be measured and recorded is the gain or loss arising from the timing of asset purchases. Their system provided, as a subcomponent, for the disclosure of realised cost savings and they acknowledged (p.114) that information on the conversion of a gain into a more liquid form should be provided although it should not be allowed to determine income.

Edwards and Bell were not alone in attempting to free revenue recognition from the condition of realisation. Philips (1963) proposed an accretion concept of income, defining income as:

> "an increase in economic power which can be measured with reasonable objectivity".

His purpose in proposing this definition was to retain the objectivity of measurement which earlier discussion had indicated to be desirable, but to omit the further condition requiring the presence of a market transaction, which he regarded as setting unnecessarily rigorous standards.

Chambers (1966), in his continuously contemporary accounting, introduced yet another income concept, based on one particular view of maintaining capital intact. Recogniton of revenue and hence of profit is dictated by the income concept and asset valuation base which he proposed, and he was not specifically concerned with proposing further tests of certainty in order to distinguish realisation from recognition.

The separable nature of recognition and realisation was acknowledged by Sprouse (1965), who seems to have doubted the value of realisation as an accounting concept:

> "My own view is that in establishing criteria for the recognition of revenue, the concept of realisation is awkward - causing confusion rather than creating clarity."

He indicated a view that if some test of realisation was required in addition to criteria for recognition, the presence of an exchange transaction involving objectively measurable assets might suffice.

Elsewhere, Sprouse had already expressed the view (Sprouse and Moonitz, 1962) that the realisation concept could not be accepted as an essential feature of accounting "because the concept lacks analytical precision". The remit of the 1972/73 Committee of the American Accounting Association on Concepts and Standards, set at a time when Sprouse was President of the Association, was:

> "To consider the circumstances that might determine when the sale of a firm's product, service, or property is and is not an appropriate event for the recognition of profit (or loss) and to propose a set of concepts or criteria to be applied in making that determination."

Although the word "realisation" was omitted from this charge, the committee found it could not answer the problem without considering realisation, and analysed several approaches to the problem, mainly through the theme of determining acceptable levels of uncertainty. It suggested the possibility of introducing dual uncertainty levels whereby initial recognition might be accorded to an event when the uncertainty level was still relatively high, but realisation might be deferred until a lower level of uncertainty was achieved. This extended the recommendations of the 1964 committee of the AAA, without specifying any particular method of establishing an acceptable level of uncertainty.

The trend towards breaking the link between realisation and recognition continued with publications on the subject of revenue recognition. The Accountants International Study Group (AISG 1978) formed its conclusions based on observation of accounting practice in the USA, Canada and UK. The word "realisation" did not appear in their conclusions, which were chiefly concerned with listing conditions permitting the recognition of revenue. These conditions were linked by the common theme of establishing that uncertainty has been reduced to an acceptable level. To this end they mentioned:

passing the benefits and risks of ownership;
performance of service;
establishing the right to receive payment;
use of enterprise resources. (para 51(1)).

The recognition criteria suggested were:

" Amounts billed or received should be deferred until all of the following conditions are met:

(a) The earnings process is complete and the amount of revenue is established.
(b) The seller retains no substantial risks of ownership.
(c) There are no significant uncertainties surrounding the amount of costs yet to be incurred by the seller". (para. 51(2))

There is no indication as to whether paragraph 51(2) is intended as a statement of the realisation concept.

The International Accounting Standard (IAS 18) on revenue recognition follows a similar pattern in specifying the conditions which, when satisfied, will establish that no significant uncertainty exists regarding the transactions. Again, while detailed conditions are set out, the word "realisation" is not used.

The Financial Accounting Standards Board Statement of Financial Accounting Concepts (SFAC 5, FASB 1984) sets out "fundamental" recognition criteria such as measurability, relevance and reliability. It then says:

> "Further guidance for recognition of revenues and gains is intended to provide an acceptable level of assurance of the existence and amounts of revenues and gains before they are recognized. Revenues and gains of an enterprise during a period are generally measured by the exchange values of the assets (goods or services) or liabilities involved, and recognition involves consideration of two factors, (a) being realized or realizable and (b) being earned, with sometimes one and sometimes the other being the more important consideration." (para 83)

The definition of realisation had already been provided in SFAC No. 3 (FASB 1980b) as follows:-

> "Realization in the most precise sense means the process of converting noncash resources and rights into money and is most precisely used in accounting and financial reporting to refer to sales of assets for cash or claims to cash." (para. 83) (now para 143 of SFAC 6, FASB 1985)

This was the meaning adopted in the Board's conceptual framework. If the FASB view of realisation were carried across to the UK, it would place considerable restrictions on what may be reported in a profit and loss account. There is a footnote to para 83 of SFAC 5, acknowledging that realisation may have a wider role elsewhere and this footnote probably reflects the comments of UK observers on the drafting of SFAC 5.

Table I summarises the range of views which have been expressed over time on the subject of recognition and realisation.

Explanation of Table I

For those names shown on the diagonal elements of the table, recognition and realisation occur at the same time. There are cases, such as AAA (1957) where it may be acknowledged that revenue exists prior to realisation, but it is not recorded in the accounting statements until the conditions for realisation are also satisfied.

Those elements off the diagonal indicate authors who have accepted that recognition may precede realisation, although acknowledgement of unrealised gains may be limited to some kind of balance sheet reserve rather than being accorded specific mention in the profit and loss account.

The table attempts to demonstrate a spectrum of opinion ranging from a strict view that there must be a market transaction involving cash before profit can be recognised or realised, to the extreme of economic income, where profit is recognised as existing when the conditions of a particular income concept have been satisfied, and further conditions for realisation are regarded as unnecessary or unwanted.

The table is over-simplified to the extent that it does not allow for different income concepts, so that Edwards and Bell and Chambers are being included with historical cost-based opinions. The table does, however, serve to show the evolution of recognition and realisation criteria over time, each becoming slightly more complex than the previous condition. It also serves to show that in practical situations it may be very difficult to separate realisation from recognition.

TABLE I: Summary of analysis on RECOGNITION AND REALISATION

TESTS OF RECOGNITION / TESTS OF REALISATION	Receipt of cash or a near-cash asset	Receipt of an adequately liquid asset	Objectivity of measurement of the asset received	Delivery of goods or services and reasonable certainty of receipt of cash	Earning process complete and an exchange has taken place	Production of goods or services and reasonable certainty of receipt of cash	Performance achieved and ultimate collection reasonably expected	Presence of an appropriate critical event	Presence of any suitable critical event and market transaction	Acceptable level of uncertainty measured statistically	A defined concept of income and asset valuation	A defi[...] concep[...] measurab[...] reliabil[...] and rele[...]
Receipt of cash or a near-cash asset	*GILMAN (1939)											SFAC 3 (SFAC 5 (
Receipt of an adequately liquid asset		*PATON & LITTLETON (1940)										
Objectivity of measurement of the asset received			*AAA (1957)									
Delivery of goods or services and reasonable certainty of receipt of cash				*SSAP 2 (1971) P.W. Survey# (1980) ARR 43 (1953) CCAB (1979)							SSAP 16 (balance sheet recognition only)	
Earning process complete and an exchange has taken place					*APB Statement No. 4 (1970)							
Production of goods or services and reasonable certainty of receipt of cash						*SSAP 9 on long-term contracts						
Presence of an appropriate critical event								*MYERS(1959) ARS No. 3 (1962) IJIRI(1975)				
Presence of any suitable critical event and market transaction											HORNGREN (1965) AAA (1964)	
Acceptable level of uncertainty measured statistically											AAA 1972/73 Committee	
Test of realisation not specifically considered							IAS 18 (1982) IASG (1978)				Edwards & Bell (1961) Philips(1963) Chambers (66	

*diagonal elements: recognition and realisation coincide

#Price Waterhouse survey of generally accepted

Resolution of uncertainty: realisation as an objective test

It has already been shown that early writers in the United States refused to permit any recognition of revenue until uncertainty was resolved at the point of realisation. The 1957 AAA committee moved away from this view to the extent of suggesting that a net asset change could exist prior to realisation, but did not advocate recognition until the change was sufficiently objective. Their definition failed to distinguish the degree of objectivity required for recognition from that required for realisation.

This failure was corrected by the 1964 AAA committee which considered three factors that could be regarded as significant in satisfying the test of realisation. These were:

1) the nature of the asset received;
2) the presence of a market transaction; and
3) the extent to which services had been performed.

The committee felt that the asset received should possess primarily the quality of measurability rather than liquidity, and that the entity under consideration should itself be a party to the relevant market transaction. If the entity were not required to be a party to the transaction, it would be possible to recognise and realise the profit deriving from an increase in the market value of an investment in shares of another company, or in government stock, even when the investment had not been sold, provided there existed an active market in the shares or stock.

The extent to which services have been performed is used as a criterion for realisation when a customer pays in advance for services. The payment in advance remains a liability and is only transferred to revenue as the seller completes his part of the contract. The 1964 AAA committee expressed a wish to supplant this condition with one that would emphasise the crucial event in the business' activity.

Taking the example of the sale of a magazine subscription in advance, for cash, the committee said:

> "This is a crucial event from the point of view of the seller and he should recognise some of the revenue at the time of the subscription and cash collection."

Here the committee was again mixing the use of realisation and recognition criteria. The sale of the subscription would be a critical or crucial event, but circumstances might be such that uncertainty could only be reduced to an acceptable level when the magazine had been delivered. This could be the case where the seller risked being unable to deliver the magazine through shortage of materials, or through strike action. In such a case, the crucial event of subscription sale might justify recognition of revenue, but residual uncertainty might preclude realisation of profit until delivery was assured.

Horngren (1965) also acknowledged the distinction between recognition and realisation, proposing a liberal recognition test, but a strict realisation test.

His proposed rules for realisation were:

"1. Recognition - Sufficiently definite, verifiable evidence to permit objective measurement of a value increase.
2. Market transaction - An event 'originated by the voluntary interaction between the accounting unit and some other unit.'
3. Goods or services rendered - The 'removal of restrictions against assets.'"

An example of all three conditions occurring simultaneously is seen in a cash sale. Recognition may precede realisation through a market sale, when inventories are revalued prior to sale because of increased costs. In such a case the unrealised gain in value may be transferred to a revaluation reserve rather than directly to the conventional profit and loss account. When a customer makes a payment in advance of provision of services, profit is again unrealised since the third condition is not satisfied, but there could be a case for recognition of an unrealised profit at that stage.

The 1972/73 Committee of the American Accounting Association (AAA 1974) wanted to see a distinction made between income concept and income measurement. They said:

> "Our initial, basic conclusion is that a distinction between income concept and income measurement is useful and worthy of maintenance. Further, the realization concept should be understood as a means of analyzing and reporting uncertainty. It pertains only to the measurement of income - more particularly to the problems of measurement which issue from uncertainty. Realization does not have a relevance to the definition or concept of income - i.e., what types of events and transactions result in income." (AAA 1974 p.204)

The overall conclusion of the Committee was that realisation should depend on reliable measurement. Although they acknowledged that in many instances of existing practice, income reporting was "binary" (i.e. recognition and realisation occurred simultaneously) they saw a possibility of a "polymeric" approach where recognition and realisation were separable.

The committee went on to illustrate the kind of probabilistic analysis which might be applied to incorporate the effects of uncertainty directly in calculation of profit. The example presented related to a finite investment in which it was possible to predict a range of cash flows and associated probabilities for future years. These predictions could be revised when a new perspective was taken at the end of each year. Assuming a suitable rate of return, the total net income over the project life could be split into that portion arising through changes in expected value of future cash flows, and that portion attributable to changes in present value reflecting the required rate of return.

The committee's views on the treatment of uncertainty are related to other studies of uncertainty in Chapter Ten.

Recent attitudes to the realisation concept

The realisation concept in practice

Observation of accounting in practice reveals a much narrower and far more categoric view of realisation than that expressed in academic discussion. This was evidenced in a Memorandum from the CCAB to the Department of Trade (CCAB 1979):

> "We welcome the intention to legislate on the lines of SSAP 2 to implement the requirement of Article 31.1 (c)(aa) (Fourth Directive) regarding the profits to be included in the accounts. This will mean broadly that profits will be recognised by inclusion in the profit and loss account only when realised in the form either of cash or of other assets, the ultimate cash realisation of which can be assessed with reasonable certainty."

In a survey of international reporting practice, carried out on behalf of Price Waterhouse International, Fitzgerald et al (1980) included among the broad accounting concepts reviewed, a realisation concept in which:

> "revenue is recognised when its realisation is reasonably assured".

Their survey revealed that in about one third of the countries surveyed, this concept was imposed by legislation or professional pronouncement, while in a further one third it was considered fundamental by the profession, although not the subject of a pronouncement. In the remaining one third it represented predominant practice. Such a concept indicates a wide divergence between professional practice and theoretical discussion. Their definition does not permit a separation of recognition and realisation, even if the economic processes creating revenue have taken place.

Turning to their survey of detailed practice and in particular aspects of asset valuation and income determination, very few deviations from this concept were encountered. The authors quoted, as authority for practice on revenue recognition in the United

States, Accounting Research Bulletin No. 43 which was issued in June 1953 codifying all earlier Accounting Research Bulletins. That document was published before most of the discussion papers reviewed in this chapter and sets a very conservative guide.

There have been departures from this prudent approach in the USA with, at times, unfortunate results through premature recognition of income (see for example Benis and Johnson, 1973, on real estate sales). In 1978, the SEC took the initiative in suggesting recognition of revenue before realisation in the case of oil exploration and production. Its announcement of a requirement for disclosure of current value information on resources of gas and oil, and a desire to have such information incorporated in the balance sheet and profit and loss account through 'reserve recognition accounting' meant anticipation of the value of proven reserves before oil was flowing from them or could be sold. Debate on such accounting practice was heated, (Adkerson, 1979, Cooper et al, 1979 and Connor, 1979) with argument on the one hand that such practices provide more relevant information for investors about the total wealth of the oil company, and on the other hand that the investor may not be aware of the greater risks attaching to the valuation of proven reserves which are not yet in full production, compared to those which have produced actual sales of oil. The outcome was withdrawal by the SEC of its proposals for reserve recognition accounting.

It is clear that by 1980, interest in the UK was focussing on the meaning of "realisation" because of the requirement to implement the Fourth Directive, while interest in the USA was focussing on "recognition" as a result of the influence of the various AAA Committee reports, particularly that of 1974, the AISG report(1978) and the development of the FASB conceptual framework.

Present situation on realisation in the UK

In the UK the Accounting Standards Committee took up the subject of realisation and commissioned a report by Carsberg and Noke (1984) which received limited circulation but was never published. That report was largely a review of the literature but concluded with the authors' recommendations:

(i) the ASC should prepare a statement on realisation;
(ii) the ASC should explore a definition based on the concept of reliability of measurement;
(iii) the ASC should consider recommendations on other information such as a statement of total gains and losses, realised and unrealised; and
(iv) the ASC should consider expressing a view as to whether financial capital maintenance or physical capital maintenance is the preferable concept as a basis for measurement.

The fourth recommendation was very bold in the light of the remit to consider the realisation concept and may have contributed to the failure of the report to receive wider circulation. The report did not address in any great length the question of realisation of losses but tended to concentrate on the realisation of gains.

All that appeared from the accountancy profession was two Technical Releases issued by the CCAB; TR 481, "The determination of realised profits and disclosure of distributable profits in the context of the Companies Acts 1948 to 1981" (CCAB 1982a) and TR 482, "The determination of distributable profits in the context of the Companies Acts 1948 to 1981" (CCAB 1982b). These in fact provided little guidance beyond stating that current accounting practice would continue to hold good. There is a more detailed discussion of TR 481, together with the sceptical reaction of a company lawyer, in Chapter Five. From the academic side there was some discussion of realisation in accountancy journals (Weetman 1980, 1982) but little evidence of editorial interest from the major research journals.

Although the ASC established in 1986 a working party to consider the revision of SSAP 2 and the meaning of realisation and prudence, that work was suspended until a report was available from Professor Solomons on accounting concepts in a UK setting. His report appeared early in 1989 and reflected the US emphasis on recognition rather than the UK preoccupation with realisation. He did provide, in a glossary, a definition of a realisable gain (but not a realised gain or loss):

> "Realisable gain: An increase in the value of an asset the proceeds of sale or conversion of which can be determined with reasonable certainty."

Solomons chose from the outset to ignore legal constraints and to provide observations on the kind of standards which the ASC ought to draft if it were free to go its own way.

Another example of a free-thinking approach is to be found in the paper "Making Corporate Reports Valuable" (ICAS 1988). The ICAS Research Committee side-stepped the need to consider the meaning of realisation by specifying a different approach altogether:

> " A proper understanding of the state of an entity's liquidity over a period (cash flow position) and an appreciation of how and why its net quantifiable assets (financial wealth) position has altered during a financial period are, we believe, of far more practical use to managements than a statement showing how much 'profit' the company has made." (para 5.11)

Summary and comments

The realisation concept emerged as a response to the need to define distributable profits (Yamey 1960) and as a response to the increasing importance of the profit and loss account (Storey 1959). Evidence exists of the early application of a concept of realisation (Hein 1978, Hatfield 1909, Dickinson 1913, Staunton 1973) although it was not accorded the status of a principle until the 1930's. This was because principles as such were not developed earlier. They existed but were not seen as part of a theory of accounting.

It is clear that realisation and recognition were synonymous as far as early authors were concerned (Windal 1961). They were concerned chiefly with examining the quality of the assets obtained in the exchange process. Although not making a distinction between recognition and realisation, AAA (1957) provided a sign that objectivity in measurement, rather than the nature of the asset obtained in exchange, was a matter of concern. It now became possible, in theory at least, to have two stages to income reporting. Recognition could take place when a given level of objective measurement was attained, while realisation might have to wait until some different degree of objective measurement was possible.

The idea of recognition being separate from realisation had been expressed earlier (Hatfield 1927, Alexander 1948) but the 1957 AAA paper brought it closer to the realms of accounting practice.

Refinement of the recognition/realisation split came with the application of Myers' idea of the critical event (Myers 1959). Again, Myers' criteria were concerned with establishing the level of certainty at which it would be reasonable to recognise revenue.

Completion/

Completion of the split came with those (e.g. Philips 1963 and Chambers 1966) who did not even admit a place for the realisation concept in their models. Further evidence that recognition, rather than realisation, was of interest is seen in practice with the publication of IAS 18 (1982) and the preceding IASG Study (1978).

The FASB view of realisation (FASB 1980b), as narrowly related to obtaining cash or near-cash assets, takes the story almost full circle to the definitions of the early part of the century. The FASB outlook differed in having established a different set of criteria for recognition. Recognition, in the FASB model, is a term to be applied to all constituents of the accounting statements and not merely revenue (FASB 1984).

The stage was thus set by the late 1970's for applying prudence in accounting through consideration of the uncertainties surrounding a transaction. This was related to a search for objectivity in reporting and, in order to escape the close association with a near-cash view of wealth, realisation was largely supplanted by recognition as the significant concept. Attempts were being made to say, at least in qualitative terms, what conditions would be acceptable for the recognition of revenue and profit.

These developments took place largely in the USA, but were published in documents which were available in the UK to those who had an interest in the subject. This makes all the more surprising the CCAB's almost enthusiastic acceptance of the proposal to incorporate the realisation concept in Companies legislation (CCAB 1979). Their view effectively set the development of the realisation concept back to the position of the mid-1960's as set out in Grady's inventory or APB Statement No. 4. These in turn were fairly uncontroversial statements of views existing at the time and are probably well representative of the thinking of the late 1940's and the 1950's. ARB 43 in particular had its origins in those times.

We are now faced in the UK with a statutory realisation concept (more details are provided in Chapter Five) which has effectively barred any imaginative development of the profit and loss account and which may even limit the application of existing practices, such as the recommendations of SSAP 19. (A detailed consideration of the effect of UK company law on UK accounting practice is provided in Chapter Five). The realisation concept has become one of the most significant concepts in UK accounting practice at a time when it has almost disappeared from US accounting thought or has only the relatively limited role afforded it by SFAC 5.

If the narrow view of realisation, as obtaining cash or near-cash assets, is taken, then a very conservative profit and loss account must result in UK practice. If, on the other hand, it could be argued that the realisation concept is only one of several attempts to establish objectivity in accounting measurement then it is possible to see ways of developing such an objective approach to meet changing circumstances. Some of the tests of objectivity which have been proposed (AAA 1965, Horngren 1965, AAA 1974) leave some hope that a definition of realisation could be developed which would retain the basic attitude of prudence in financial reporting but would also permit flexibility in determining when a profit may be reported.

The summary of Chapter Two mentioned the individuals who dominated the development of accounting principles in the USA. These individuals are also very much present in the development of the realisation concept. In particular Dickinson, who gave the idea an early airing, May, who took up Dickinson's ideas with enthusiasm, Grady, who continued the tradition of May and Dickinson as a counter to the more revolutionary ideas of Sprouse and Moonitz, and finally Sprouse himself as vice-chairman of the FASB in the early 1980's. The history of the realisation concept is very much a history of the ideas of these and some other individual writers.

It has been said already that in the USA, from the late 1970's, realisation had largely been surpassed by recognition as the significant concept in the determination of profit. Jaenicke (1981b),in particular, provided a very thorough survey of practical aspects of revenue recognition. Although this chapter ends chronologically in the late 1970's, the theme of recognition will be taken up again in Chapter Nine where there are further references to the literature and in particular to three major research projects carried out for the Financial Accounting Standards Board, namely those of Ijiri (1980), Jaenicke (1981a) and Johnson and Storey (1982).

From 1980, the trend in the UK has been a halting progress towards explaining the meaning of realisation. This will be explored further in Chapter Five in the context of prudence in UK accounting standards. The emphasis in US academic work on recognition moved into the realms of dealing with recognition in the context of uncertainty, a topic to be explored further in Chapter Ten.

Taking one of the most recent comments available in the UK, the ICAS Research Committee (ICAS 1988) was critical of the restricting influence of the realisation concept:

> "The statutory (in UK) accounting principle that only realised gains can be brought into the profit and loss account has meant that a major part of a company's growth in wealth is not being reflected in that account but is either taken straight to reserves (which themselves are frequently meaningless to an external reader) or not accounted for at all. Unrealised losses on the other hand are brought to the profit and loss account and consequently an anomaly is created - only the downside is shown. Prudence in this case is a barrier to the truth, and the economic reality of the situation is not made apparent."

That somewhat despairing note on the undesirable conservatism of the realisation concept provides an appropriate stage to pause before moving on to develop the various lines of thought on prudence which emerge from these early chapters. Chapter Four will explain how those lines of thought are developed in the rest of the thesis.

CHAPTER FOUR

DIRECTIONS OF THE RESEARCH PROJECT

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Hypotheses to be tested 4.1

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CHAPTER FOUR

STRANDS OF THE RESEARCH PROJECT

Hypotheses to be tested

In preparing this thesis, Chapters Two and Three were developed first out of a desire to examine systematically the trend of thought which had developed over time. This examination suggested a number of directions for research into present-day aspects of the prudence concept. These directions developed from four hypotheses regarding the prudence concept:

1. The influence of the prudence concept has resulted in potentially diverging views of the accounting process when accounting standards are compared with the Companies Act 1985.

2. Perceptions of the prudence concept vary from country to country at the present time.

3. UK accounting practice is overall less prudent in its impact on profits than is US accounting practice.

4. The concept of prudence is central to established recognition criteria applied in UK accounting practice.

The first and second hypotheses may be tested by analytical review of the existing accounting standards and legislative requirements. Chapter Five reports the results with regard to UK accounting standards and UK company law while Chapter Six covers International Accounting Standards and a country-by-country analysis ranging over the USA, Canada, Australia, New Zealand, West Germany, France and the Netherlands.

The third hypothesis has been tested in this project by archival research using secondary data provided by UK companies which report to the US Securities and Exchange Commission on Form 20-F. This work is reported in Chapter Eight.

The fourth hypothesis has been tested in this project by archival research using secondary data from a range of sources. Recognition criteria were sought in existing SSAPs and also in examples provided by those who commented on the exposure draft ED 42 "Accounting for Special Purpose Transactions". The results of the attempt to classify existing recognition criteria and to trace the influence of the prudence concept are reported in Chapter Nine.

Contents of each chapter

Chapter Five presents the analysis of the extent to which the concept of prudence has influenced UK standard setting. It also explores the role of prudence. The chapter brings out a picture of a lack of consistency in the application of the prudence concept but shows that it is certainly perceived by the standard-setters as being something more than is suggested by the narrow definition contained in SSAP 2 and now embodied in the Companies Act 1985. There is a strong theme of prudence as a reaction to uncertainty, where the nature of the uncertainty depends very much on the problem being considered.

Chapter Six moves on to take an international viewpoint.The international standard IAS 1 states quite clearly that prudence is to be seen as a reaction to uncertainty. The US, Australian and Canadian standard setters show evidence of having taken this view in specific instances and of this approach in their conceptual framework programmes. European viewpoints show stronger adherence to the conservative reaction, even when the Fourth Directive has been implemented.

Chapter Seven presents an account of an initial abortive attempt at research using UK published annual reports as a source of data for quantifying the conservatism of UK accounting practices. The intention was to compare the reported profit using the generally accepted accounting practices with the profit which would have been reported under practices of different degrees of conservatism. Partial provision for deferred tax might be compared with full provision. Capitalising research and development expenditure might be compared with writing off as incurred. Equity accounting for an associated company might be compared with treatment as an investment producing dividend income. This last item in particular has relevance to prudent reporting of profit and should in theory be possible using information disclosed in accordance with SSAP 1. Each attempt at analysis was defeated by lack of data, even where SSAPs such as SSAP 1 or SSAP 15 prescribed disclosure which would have been adequate for the exercise.

The disappointment of Chapter Seven was lessened by the discovery of Form 20-F, little known but extremely informative. Form 20-F is produced by UK companies reporting to the US Securities and Exchange Commission on what their UK profits would have been under US Generally Accepted Accounting Principles. Although this restricted the analysis to those UK accounting practices which differed from US practice, it did allow quantification of the effect of some of the more controversial UK accounting standards, particularly those on deferred taxation and amortisation of goodwill. The analysis presented in Chapter Eight is based on the idea of an "index of conservatism" developed in earlier research by Gray (1980).

Chapter Nine had its genesis in the questions from those commenting on the exposure draft ED 42 "Accounting for Special Purpose Transactions" published by the Accounting Standards Committee. That document asserted that generally accepted recognition criteria already existed; commentators declined to accept the assertion and provided a range of illustrations of problems in accounting practice. This was clearly an area for analysis, not with a view to prescribing a conceptual framework ab initio, but with a view to identifying the extent to which there might be a pattern running through existing recognition practices. The link proved to be the concept of prudence, viewed as a reaction to uncertainty. The analysis was based on existing SSAPs as well as the illustrations provided by the commentators on ED 42.

Throughout the chapters Five to Nine runs the link that prudence in accounting must be viewed as a reaction to uncertainty. One way of reacting to uncertainty is to apply prudent policies which err on the safe side so far as either net assets or profit are concerned. There should be an alternative reaction, that of reporting the effects of uncertainty. Chapter Ten is based on the hypothesis that reporting the effects of uncertainty is an alternative to applying prudent policies. The chapter explores some of the schemes which have been suggested for reporting the effects of uncertainty and examines their practicability in the context of real world problems.

The final chapter, Chapter Eleven, presents some general conclusions and points directions for future research.

CHAPTER FIVE

THE CONCEPT OF PRUDENCE IN UK ACCOUNTING STANDARDS

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CHAPTER FIVE

THE CONCEPT OF PRUDENCE IN UK ACCOUNTING STANDARDS

Introduction

The influence of the prudence concept has resulted in potentially diverging views of the accounting process when accounting standards are compared with the Companies Act 1985. The standards have tended towards an accruals view at the expense, on occasions, of prudence. The statute has moved towards prudence at the potential expense of the accruals concept.

This issue will be examined by asking the following questions:

1. What is the wording of SSAP 2 and the Companies Act 1985 in relation to prudence?
2. How is the concept of prudence applied in U.K. accounting standards?
   - (i) To what extent does accruals take precedence over prudence?
   - (ii) How is prudence interpreted?
   - (iii) To what extent is prudence applied in determining distributable reserves?
   - (iv) To what extent are accruals and prudence in agreement?
3. To what extent is there a conflict between standards and statute?

The conclusion to the chapter will suggest potential remedies for the conflicts which are demonstrated to exist.

Wording of SSAP 2 and the Companies Act 1985

The concept of prudence is defined in SSAP 2 as follows:-

"revenue and profits are not anticipated, but are recognised by inclusion in the profit and loss account only when realised in the form either of cash or of other assets the ultimate cash realisation of which can be assessed with reasonable certainty; provision is made for all known liabilities (expenses and losses) whether the amount of these is known with certainty or is a best estimate in the light of the information available." (para. 14d)

The standard also provides that:

> "where the accruals concept is inconsistent with the prudence concept, the latter prevails." (para. 14b)

The effect of the wording of the definition is to equate prudence either with realisation, in the case of revenue and profits, or with providing for all known liabilities, expenses or losses.

Taking the definition as stated, the accruals concept could be said to conflict with the prudence concept whenever recognition of revenue or profit is not accompanied by realisation or reasonable certainty of realisation.

The wording of the Companies Act 1985 is:

> "The amount of any item shall be determined on a prudent basis, and in particular -
>
> (a) only profits realised at the balance sheet date shall be included in the profit and loss account; and
>
> (b) all liabilities and losses which have arisen or are likely to arise in respect of the financial year to which the accounts relate or a previous financial year shall be taken into account..."
>
> (Sch. 4 para. 12)

> "Without prejudice to -
>
> (a) the construction of any other expression (where appropriate) by reference to accepted accounting principles or practice, or
>
> (b) any specific provision for the treatment of profits of any desciption as realised,
>
> it is hereby declared for the avoidance of doubt that references in this Schedule to realised profits, in relation to a company's accounts, are to such profits of the company as fall to be treated as realised profits for the purposes of those accounts in accordance with principles generally accepted with respect to the determination for accounting purposes of realised profits at the time when those accounts are prepared."
>
> (Sch. 4 para. 91)

The Act does not equate prudence with realisation. It puts forward realisation as a particular instance of prudence. Reporting all liabilities which have arisen is another particular instance of the application of prudence.

The Act does however place a major restriction on accounting practice by stipulating that only realised profits may be included in the profit and loss account. It differs from SSAP 2 in not specifying how the realisation is to be evidenced. SSAP 2 requires evidence of realisation in the form of cash or other assets which will produce cash. The Act seems to leave open the possibility of viewing "realisation" as something more than obtaining cash.

The Act does not go so far as to allow generally accepted accounting principles to <u>define</u> realisation. They are only permitted to say what may be <u>treated</u> as a realised profit.

The concept of prudence applied in UK accounting standards

The accounting standards in which the prudence concept plays a part, either stated or implied, may be categorised as follows:

Accruals takes precedence over realisation
SSAPs 1, 4, 9, 19, 20, 21, 24

Prudence allowed precedence over accruals
SSAPs 9, 13, 20

Prudence interpreted by reference to reasonable certainty about outcome of events other than realisation
SSAPs 8, 9, 13, 15, 18, 21

Problems of distributable reserves
SSAPs 22, 23

Prudence and accruals in agreement
SSAPs 8, 12, 17, 18

The standards which are not primarily concerned with accruals/ prudence questions are:

Standard	Conceptual basis
SSAP 3	consistency of reporting
5	entity concept
6	concepts of profit
10	providing information relevant to user needs
14	entity concept
(7,11 and 16 have been withdrawn)	

Prudence in some form is relevant to 16 out of the 21 standards in existence, if SSAP 2 itself is included in the list.

The place of the prudence concept in each of the standards identified will now be analysed in detail, using the five categories listed above.

Accruals takes precedence over realisation

SSAP 1 Accounting for associated companies (1971, revised 1982)

Accrual of the relevant share of the profit of the associated company takes precedence over awaiting realisation of investment income from the associate and is justified by a mixture of the entity concept (para. 4) and the concept of relevance to users' decisions (para. 3).

SSAP 4 The accounting treatment of government grants (1974)

If realisation were the only criterion, a capital-based grant could be regarded as revenue and available for distribution on receipt of the cash. The recommended credit to profit and loss account over the asset's life is justified by reference to the matching concept (para. 5). Accruals accounting takes precedence over prudence if prudence is equated with realisation as SSAP 2 implies.

(Taking a wider view it could be argued that there is no conflict because spreading the grant results in a more prudent reporting of distributable profit, related to the life of the asset acquired. This wider view would not be justified by the present wording of SSAP 2.)

SSAP 4 requires something more than realisation for recognition of a profit. It requires the grant to be earned through using up the asset acquired.

(The more recent proposed revisions of SSAP 4, contained in ED 43, deal in more detail with problems of recognition and as such will be analysed in Chapter Nine.)

SSAP 9 Stocks and work in progress (1975, revised 1988)

Taking credit for ascertainable profit while long-term contracts are in progress is justified in terms of reflecting a fair view of the activity of the company during the year (para. 7). The accruals concept is thereby accorded precedence over the prudence concept. Prudence is mentioned in connection with expectation of a loss (para. 11), which is a different matter from the expectation of realisation. This idea of relating prudence to anticipation of an accounting loss is supported by TR 481 (CCAB 1982a) which states (Appendix para. 3) that "the relevant principles of recognising profits in SSAP 9 are based on the concept of 'reasonable certainty' as to the eventual outcome and are not in conflict with the statutory accounting principles".

Here the SSAP 2 prudence concept has been split and the concept of realisation distinguished from the concept of "reasonable certainty". SSAP 2 limited the application of "reasonable certainty" to ultimate cash realisation while TR 481 widened the application of "reasonable certainty" to the eventual outcome of a transaction.

The 1988 revision of SSAP 9 did not change the basic valuation principles with regard to work in progress but changed the category of asset from "stock" to "debtors" in order to comply with the Companies Act 1985. In the Note on Legal Requirements, para 44, the following statement is provided on the application of paragraph 91 of the Companies Act 1985:

> "It is a 'generally accepted principle' that it is appropriate to recognise profit on long-term contracts when the outcome can be assessed with 'reasonable certainty'. The principle of recognising profit on long-term contracts under this standard, therefore, does not contravene this parargraph[i.e. para 91]"

<u>SSAP 19 Accounting for investment properties</u> (1981)

This standard could be seen as taking an imprudent view in two ways. First it recommends no depreciation of the investment property, which could result in failure to anticipate a loss if the property does not appreciate as expected. Second, it records an unrealised gain in value. Allowing this gain to by-pass the profit and loss account avoids reporting an unrealised gain in profit and loss account but does not avoid a potentially imprudent increase in shareholders' funds.

The treatment is justified in terms of a "proper appreciation of the financial position" related to the purpose for which assets are held (para 2). In this case the purpose is to report holding gains which are distinct from the manufacturing or trading operations of the business.

<u>SSAP 20 Foreign currency translation</u> (1983)

In two instances SSAP 20 recommends the inclusion of an unrealised gain in profit and loss account.

Reporting a gain on unsettled short-term monetary items (para. 8) is justified on the grounds of reasonable certainty that exchange gains or losses on unsettled short-term monetary items will soon be reflected in cash flows. This could be taken as being in agreement with the SSAP 2 requirement for reasonable certainty as to realisation.

Reporting unrealised gains on long-term monetary items is justified on grounds of a true and fair view, objectivity of determination, fair measurement of performance and symmetry of treatment (para. 10). The role of prudence is acknowledged/

acknowledged only in suggesting restricting the reported profit where there are doubts as to the convertibility or marketability of the currency in question (para. 11).

It is more difficult to read into SSAP 20 the argument of "reasonable certainty" as to outcome because there is no certainty about future movements in foreign exchange rates between the balance sheet date and the date of settling the long-term monetary item. It could be argued that "assessment" of the exchange rate at the year end is reasonably certain.

SSAP 21 Accounting for leases and hire purchase contracts (1984)

Lessors are required (para. 39) to allocate gross earnings under a finance lease in such a way as to give a constant periodic rate of return on the lessor's net cash investment. The Guidance Notes on SSAP 21 identify (para. 85) factors about which there may be uncertainties when cash flows are being predicted for a number of years ahead. These uncertainties relate in part to expected realisation of cash flows but also relate to uncertainty about the lessor's ability to recover capital allowances, uncertainty about interest rates on borrowed funds and uncertainty concerning future tax treatment of leasing arrangements. This again indicates an attempt to relate the "reasonable certainty" of SSAP 2 to certainty as to the outcome of a transaction on a wider basis than merely reasonable certainty as to realisation.

The Guidance Notes avoid a potential conflict with SSAP 2 by suggesting that where the degree of uncertainty is high the lease should be classed as an operating lease rather than a finance lease, thereby altering the definitions given in SSAP 21 itself. This change of classification does not alter the fact that the recommended accounting practice allows the accruals concept to take precedence over realisation of cash flows, applying the justification of reasonable certainty as to outcome.

SSAP 24/

SSAP 24 Accounting for pension costs (1988)

The matching concept is clearly dominant throughout SSAP 24:

> "The accounting objective therefore requires the employer to recognise the cost of providing pensions on a systematic and rational basis over the period during which he benefits from the employee's services."(para 16)

The standard discusses the uncertainties found in a defined benefit scheme (para 4) but nevertheless recommends the smoothing of extra costs or reductions in cost except in specific circumstances. Prudence is specifically referred to in paras 24 and 28 and again in para 82:

> "In strictly limited circumstances prudence may require that a material deficit be recognised over a period shorter than the expected remaining service lives of current employees in the scheme."(para 82)

It is clear that in SSAP 24 prudence is seen as a marginal modification to the accruals concept. In no sense could it be said to prevail over accruals. The sense of prudence is linked to the idea of uncertainty over and above that which has been allowed for by the actuary:

> "Such circumstances are limited to those where a major event or transaction has occurred which has not been allowed for in the actuarial assumptions, is outside the normal scope of those assumptions, and has necessitated the payment of significant additional contributions to the pension scheme." (para 82)

Prudence allowed precedence over accruals

Despite the categorical statement of SSAP 2 regarding the precedence of prudence over accruals there are relatively few instances of this being confirmed by SSAPs. SSAP 9 limits the value of stocks to the lower of cost or net realisable value by reference to a reasonable expectation of sufficient future revenue to cover cost incurred. SSAP 13 gives precedence to prudence in the accounting treatment of research and of development costs which do not satisfy the criteria for carrying forward expenditure.

The exercise of prudence is mentioned in other standards such as SSAP 9 (para. 8) (long-term contracts) and SSAP 20 (para. 11), but only as a caveat after the general principle of taking accruals first.

Prudence interpreted by reference to "reasonable certainty"

SSAP 2 stipulates "reasonable certainty" in relation to ultimate cash realisation of assets. SSAP 20, for instance, applies the term "reasonable certainty" to the realisation in cash of short-term monetary assets and liabilities. As discussed above, there have been attempts to extend the concept of "reasonable certainty" to encompass the eventual outcome of a transaction. The "reasonable certainty" envisaged by SSAP 9 and TR 481 is concerned with the profitable outcome of a long-term contract. The "reasonable certainty" envisaged by the guidance notes on SSAP 21 related to taxation treatment and interest rates as well as realisation of cash flows.

Other standards have explored the "reasonable certainty" theme.

SSAP 8/

SSAP 8 The treatment of taxation under the imputation system in the accounts of companies (1974, amended 1978, 1988)

In discussing the reporting of recoverable ACT, the prudence concept is applied (para. 6) by reference to the timing of recoverability.

"Although the relief remains available indefinitely it will be prudent to have regard only to the immediate and foreseeable future: how long this future period should be will depend upon the circumstances of each case..." (para. 6)

Among the circumstances to be considered is the presence or lack of a deferred taxation account. The timescale is extended where a suitable deferred liability exists.

It appears that "reasonable certainty" has a time dimension which is variable dependent upon the circumstances.

SSAP 9 Stocks and work in progress (1975, revised 1988)

The application of the 'reasonable certainty' approach has already been mentioned in respect of long-term contract work in progress. It is also applied in justifying the "lower of cost or net realisable value" rule.

"If there is no reasonable expectation of sufficient future revenue to cover cost incurred.... the irrecoverable cost should be charged to revenue in the year under review." (para. 1)

Here the "reasonable expectation" refers to the revenue to be earned rather than to the nature of the asset receivable.

SSAP 13 Accounting for research and development (1978)

The elements of uncertainty as to the outcome of a project are listed (paras. 7, 8 and 9). The standard then states:-

"...where expenditure on development projects is judged on a prudent view of the available evidence to satisfy these criteria [paras 7-9], it may be carried forward and amortised over the period expected to benefit.(para. 11)

The/

The application of a prudent view is thus equated with applying the conditions of paragraphs 7 to 9 in evaluating the likely outcome of a risky project. In circumstances where uncertainty as to outcome has been reduced to an acceptable level the accruals concept may be allowed to overrule the more prudent view of reporting all losses.

<u>SSAP 15 Accounting for deferred tax</u> (1985)

The "partial provision" approach of SSAP 15 requires application of the accruals concept only to the extent that it is probable that a tax liability or asset will crystallise.

Where a tax liability is being considered, accruals and prudence would normally reinforce each other but the standard favours a less prudent approach of omitting to accrue liabilities where crystallisation is not probable. The justification is provision of "an assessment of what will actually be the position" (para 12).

Where a deferred asset is concerned the standard does in effect apply a prudent approach but the meaning of prudence is still related to certainty of outcome as regards crystallisation of the benefit within a specified time. This is distinct from realisation because there is certainty of realisation even if the realisation has to be deferred until the business is wound up.

<u>SSAP 18 Accounting for contingencies</u> (1980)

In recording contingent liabilities or losses, accruals and prudence concepts tend to work together. In dealing with a contingent gain they risk conflicting. Accrual of a contingent loss is related (para. 3) to the probability that a future event will confirm a loss. At this point the standard is applying "reasonable certainty" to the probable outcome of a transaction.

Problems of reserves

SSAP 22 Accounting for goodwill (1984)

An interesting point of SSAP 22 is the omission of any specific mention of the prudence concept. In the standard itself it is emphasised that the term "write-off" does not imply an equivalent actual loss of value. It is a matter of accounting policy and Appendix 2 to the standard (which is for guidance only) uses this argument to justify the possibility of initially writing off goodwill against unrealised reserves. A transfer from unrealised to realised reserves over the useful life of the asset would correspond to the realised loss arising as the asset loses value.

SSAP 2 requires provision to be made for "all known liabilities (expenses and losses)", relating prudence to the knowledge of a loss. Appendix 2 of SSAP 22 tries to place limits on the knowledge of the loss by equating realisation with the accrual of a loss in value over a given period of time. It could also be seen as attempting to define when there is reasonable certainty that the loss in value has taken place and its arguments would be consistent with a theme of establishing reasonable certainty as to the outcome of a transaction.

SSAP 23 Accounting for acquisitions and mergers (1985)

The Appendix to SSAP 23 attempts to discuss whether the merger reserve which might be established by a holding company qualifying for merger relief (Companies Act 1985 ss 131 to 134) would be realised or unrealised. There is no specific statement about this but the implication of paragraph 4 of the Appendix is that such a reserve would initially be regarded as unrealised. The exposure draft ED 31 (para. 18) was more explicit in stating that the excess of fair value over nominal value would be an unrealised amount.

The/

The Appendix to SSAP 23 touches on a problem of what is known when a dividend is paid from the subsidiary to the holding company out of pre-combination profits. Paragraph 3 says:-

> "Such a dividend received should be applied to reduce the carrying value of the investment to the extent that it is necessary to provide for a diminution in value of the investment in the subsidiary as stated in the accounts of the issuing company. To the extent that this is not necessary, it appears that the amount received will be a realised profit in the hands of the issuing company".

The problem here lies in knowing what diminution in value of the investment has taken place. Consider the following example:-

> H issues shares of nominal value £200 in exchange for shares in S of nominal value £50. S then pays up to H its entire profit and loss account balance of £350, leaving assets of book value £50 only. It is known to the management of S and H that the assets remaining in S have a current value of £110 but there is no requirement to record the fair value of the assets being acquired because merger accounting under SSAP 23 is permissible for the consolidated accounts.

What is the distributable profit of H as shown in its own profit and loss account? Two alternative views have been put forward in commentaries on SSAP 23.

<u>View I</u> In the accounting records of H,

Dr. Cash £350		
	Cr. Investment in S	£90
	Cr. P & L account	£260 realised

The investment in S is reduced from £200 to £110, being H's view of the value of the assets remaining in S. The assets of S are not revalued for consolidation purposes because a fair value is not required in merger accounting. The dividend is applied first in reducing the investment in S but after that is all regarded as realised for H.

<u>View II</u> In the accounting records of H,

Dr. Cash £350		
	Cr. Investment in S	£90
	Cr. Revaluation reserve	£60
	Cr. P & L account	£200 realised

The/

The investment in S is still valued at £110 but the element of unrealised gain in the value of the assets remaining in S is reported in a revaluation reserve in the balance sheet of H. This effectively freezes a portion of the pre-combination profit of S so far as the shareholders of H are concerned.

Of the two approaches, View II is clearly the more prudent in the everyday sense of the term but nothing in SSAP 2 would distinguish the alternatives. The professional advice on such matters usually concludes with the caveat that those seeking to apply View I should seek legal advice. This seems an inadequate response from the profession best able to deal with the problem.

Prudence and accruals in agreement

To the extent that liabilities and expenses or losses are being considered there is a greater likelihood that prudence and accruals will not conflict. SSAP 8 requires the accrual of ACT due for payment in respect of a proposed dividend. SSAP 9 requires provision to be made for a loss on a contract as a whole as soon as it is recognised, giving prudence as the reason (para.11). SSAP 12 recommends depreciation of assets of finite useful life. SSAP 17 requires accrual in respect of post balance sheet events which provide additional evidence of conditions that existed at the balance sheet date. SSAP 18 requires reporting of contingent losses and makes specific mention of the coincidence of the accruals and prudence concepts:

> "In addition to accruals under the fundamental concept of prudence in SSAP 2..." (para. 3)

Summary of the analysis

1. There is an inconsistency between SSAP 2 and the rest of the accounting standards to the extent that:-

(i) accruals takes precedence over prudence (or realisation);

(ii) the definition of prudence in terms of "reasonable certainty as to realisation" is extended to "reasonable certainty as to other matters". These two areas of inconsistency are summarised below:-

(i) Accruals takes precedence over realisation

Standard	Reason given
SSAP 1	entity concept; relevance to users' decisions
SSAP 4	matching concept;
SSAP 9	fair view of activity (long-term contracts)
SSAP 19	proper appreciation of the financial position
SSAP 20	true and fair view; objectivity; fair measurement of performance; symmetry of treatment
SSAP 21	constant rate of return on net cash investment
SSAP 24	systematic and rational basis

(ii) Prudence seen as "reasonable certainty" as to:-

timing of recovery (of ACT)	SSAP 8
future revenue (in relation to stocks held)	SSAP 9
profitable outcome of a long-term contract	SSAP 9
likely outcome of a development project	SSAP 13
crystallisation of a liability	SSAP 15
outcome of a contingency	SSAP 18
taxation, interest rates, realisation	SSAP 21

All of the above involve more than realisation; even the expectation of future revenue specified in SSAP 9 requires the expectation that the revenue will be earned as well as an expectation of realisation.

2. Although the Companies Act gives prudence a role both in determining the content of a profit and loss account (Schedule 4) and it determining the amount of distributable profit (s.263) the standards generally keep clear of the latter area. Even when it is touched on in Appendices to SSAPs 22 and 23, there are plenty of warnings about the need for legal advice.

3. In relation to losses, prudence is applied in the sense of reporting all known losses in SSAPs 9, 12, 17 and 18 but is not applied in SSAP 15 where the reporting of losses is less than the most prudent approach would require.

4. In all the standards where prudence is an issue, it is dealt with by prescribing specific accounting practices and the circumstances under which "reasonable certainty" is such that they may be applied. There is no standard which suggests that uncertainty might be dealt with by disclosing more about the uncertain transaction so that users of information may make their own assessment.

Conflicts between the Act, SSAP 2 and the standards which incorporate aspects of the prudence concept

It has been shown that the accounting standards, all written or revised after SSAP 2 appeared, have developed a more wide-ranging and liberal attitude to the prudence concept than is envisaged in the wording of SSAP 2. Any attempt to reconcile SSAP 2 with the other standards has to take this into account.

At the same time, the Companies Act has made a strong statement that only realised profits may be included in the profit and loss account. This creates an uncomfortable lack of harmony between some existing standards and the Act.

The Act allows a possible escape route by saying that it is open to generally accepted accounting principles to say when a profit may be treated as realised. TR 481 (CCAB 1982a) attempts to use this route by stating:-

> "A profit which is required by statements of standard accounting practice to be recognised in the profit and loss account should normally be treated as a realised profit, unless the SSAP specifically indicates that it should be treated as unrealised".(para. 10)

Instone (1985) has criticised this statement as begging the crucial question. He says:-

> "On what principle, generally recognised or not, can recognition be treated as synonymous with realisation? There is indeed such a principle; but it has hitherto proved acceptable only in the looking-glass world of Humpty-Dumpty. When I use a word it means just what I choose it to mean - neither more nor less".

That opinion from a barrister would seem to place considerable doubt on the practical effectiveness of the statement in TR 481. On the other hand, the criteria for recognition and realisation may coincide in many situations. That would not make them synonymous by definition but for all practical purposes they might be distinguishable only in a relatively few instances.

The specific standards whick are potentially in conflict with the Companies Act are SSAPs 1, 9, 19 and 20. To date there has been no challenge through the courts on any of these but the "Argyll Foods" case and the subsequent statement by the Department of Trade and Industry (Accountancy 1981 and 1982) appeared to show that the attitude of the Department is that in presenting a true and fair view companies must first of all comply with the Act (Tweedie 1983). SSAP 1 is for the moment largely outwith the scope of legislative control since equity accounting for associated companies is generally applied in consolidated accounts which still await legislation. Where there are no subsidiaries, a supplementary accounting statement is recommended by SSAP 1. SSAP 9 has been dealt with by the CCAB through TR 481(already discussed here) and subsequently revised to comply with the Act. An uncomfortable silence reigns on SSAP 19. Publication of SSAP 20 was held up for some time precisely because the DTI was concerned about the proposed reporting in profit and loss account of unrealised gains as well as losses on long-term monetary items (Accountancy, April, 1982, p. 4).

Conclusions

There are pressures in the accounting standard setting system because:

(i) SSAP 2 effectively equates prudence with realisation, so far as profits are concerned.

(ii) SSAP 2 gives prudence absolute precedence over accruals.

(iii) Subsequent SSAPs have tried to extend prudence beyond realisation of cash and have sought to give accruals limited precedence over prudence.

(iv) The Companies Act 1985 makes realisation a necessary condition for reporting profit.

In order to reconcile the conflicts which presently exist, three steps could be taken:-

1. The prudence concept of SSAP 2 could be reworded.
2. The statement in SSAP 2 that prudence takes precedence over accruals could be modified.
3. A statement could be produced showing when circumstances equivalent to realisation of a profit or loss may be said to have occurred.

The first two steps would make SSAP 2 consistent with the rest of the accounting standards so far as prudence is concerned.The third step would relate the standards to the requirements of the Companies Act.

Rewording the prudence concept of SSAP 2

McMonnies (1982) has described SSAP 2 as containing "an unguarded reference to the concept of prudence". The weakness of the present wording is that it effectively equates prudence with realisation and equates realisation with the receipt of cash or near-cash. This narrows the scope of the prudence concept and is one cause of inconsistency between SSAP 2 and the remaining standards. Its scope could be widened by -

(i) linking prudence to the problem of uncertainty in accounting measurement;

(ii) requiring the establishment of an acceptable level of confidence before a transaction is reported;

(iii) distinguishing the accounting role of prudence in determining reported profit(equated with realisation) from its financial role in determining distributable reserves;

(iv) making realisation only one instance of how prudence is applied in accounting practice.

Modification of the precedence of prudence

The arbitrary ruling, that where accruals and prudence conflict then prudence should take precedence, is a second source of inconsistency between SSAP 2 and the other standards. The problem could be overcome by changing SSAP 2 in one of the following ways:

(i) Invoke the "true and fair override" to stipulate that prudence should take precedence over accruals unless accruals is required in the interest of showing a true and fair view.

(ii) Establish two different levels of concepts, such that one is fundamental to accounting practice and the other is an important but secondary consideration in deciding how the fundamental concept should be applied.

Taking the first of these options, it is not clear to what extent the courts or the DTI would accept the "true and fair override" bearing in mind the DTI attitude to Argyll Foods (already mentioned).

Taking the second approach, accruals could be the fundamental concept, to be applied in a prudent manner, or prudence could be the fundamental concept, with accruals only applied where it was safe to do so. Of these two the former is more in line with the existing accounting standards which show a conflict between accruals and prudence. It will be shown in Chapter Six that elsewhere (Australia, New Zealand and the International Accounting Standards) accruals is a major concept, with prudence taking a secondary role of a modifying influence on accruals.

Either approach, the "true and fair" argument or the approach of regarding accruals as a fundamental concept, would justify SSAPs 1, 4, 9, 19, 20, 21 and 24 as discussed under those headings earlier in this chapter. In each case the "true and fair" argument is explicitly or implicitly part of the discussion in the standard, and in each case the application of the accruals concept is moderated by warnings of a need to exercise prudence where there is uncertainty about the transaction.

Allowing the accruals concept to take precedence does raise the possibility of reporting unrealised gains. SSAP 1 deals with this by recommending a supplementary accounting statement, SSAP 19 uses reserve accounting and SSAP 20 allows the unrealised gain to appear in profit and loss account. This all raises potential conflict with the Companies Act 1985 and for this reason a statement is also required on when a profit may be treated as realised.

If such a statement were to conclude that a realised profit was substantially more restricted than the profit accrued under a "true and fair" view or under a prudent application of the accruals concept, then there might be a case for producing a new accounting statement of accrued profit out of which realised profit could be extracted as one element.

Treating a profit as realised

Realisation must first of all take its dictionary definition if the profession is not be accused of rewriting the English language. From the Concise Oxford Dictionary, the definition is:-

> "realise: "Convert (securities, property) into money: amass (fortune, specified profit): fetch as price"

To stop at such a definition would be to leave the courts to equate realisation with the collection of cash.

The Shorter Oxford Dictionary (1980 revision) gives a greater number of subdivisions of meaning and some dates of origin:

> "To convert (securities, paper money etc) into cash, or (property of any kind) into money" 1727
>
> "To realize one's property; to sell out" 1781
>
> "To obtain or amass (a sum of money, a fortune etc) by sale, trade or similar means; to acquire for oneself or by one's own exertions; to make (so much) out of something" 1753
>
> "Of property or capital; to bring (a specified amount of money or interest; to fetch so much as a price or return" 1836

The first point to note here is the date of origin of each meaning. They all date from a time when assets were very much more restricted in range than they are in a business of the 1980's. The idea of converting paper money into cash would certainly not be appropriate today. While there is little scope for accounting principles in adopting the narrower view of conversion into money or cash, there may well be more flexibiity in the notion of "obtain or amass".

The Oxford English Dictionary is even more helpful by citing the origins of these differing nuances. J.S.Mill in his 'Political Economy'(1876) did not help the cause of liberal interpretation when he wrote:

> "When he retires from business it is into money that he converts the whole, and not until then does he deem himself to have realized his gains."

The "obtain or amass" version of "realize" cites two authorities. One is Mrs. Carlyle in 1847, writing of her success in "realizing so respectable a servant" and the other is McCulloch in his 'Taxation' of 1852 writing of "a tax on realized property, that is on lands, houses, the public funds, mortgages and such like securities".

Clearly in the view of McCulloch, realization was something closer to obtaining or gaining possession of an item. He does not equate realized property only with cash. Accounting standards or concepts must give some indication of what may be regarded as equivalent to realisation in cash or a near-cash asset.

It could be argued that a profit may be treated as realised if it is calculated in a prudent manner, i.e. with reasonable certainty as to outcome. "Reasonable certainty" is the criterion which establishes that the profit has been "obtained". The degree of risk attaching to such profits as, say, those on a partly completed long-term contract, would not be dissimilar to those on a credit sale. In one case the uncertainty is about making a profit, in the other it is about receiving cash. In the case of SSAP 20 (unrealised gains on monetary items) it could be argued that these may be treated as realised because there is reasonable certainty about the exchange rate movement which has taken place. The "outcome" here would not be the ultimate outcome when the asset or liability reaches maturity but the outcome of the accounting period based on the exchange rate movement, objectively determined.

The onus on those wanting to establish that a profit could be <u>treated</u> as realised would be to show that it was subject to risks of the same order of magnitude as found in profits presently accepted as realised.

Treating a loss as realised

The Companies Act 1985 makes no reference to any need to specify when a loss should be treated as realised. SSAP 2 appears to cover all situations by making clear that it is knowledge of the existence of the liability or loss which is the critical factor. The wording of SSAP 2 places no limits on that knowledge but attempts have been made elsewhere to limit that knowledge.

SSAP 15 attempts to limit knowledge to that of a probability of cystallisation in the short-term. It does not matter that there may be knowledge of a greater liability which may become payable in the longer term. It would seem from SSAP 15 that knowledge of a liability may have some finite time scale not mentioned in SSAP 2.

The problem mentioned in the Appendix to SSAP 23 regarding dividends paid out of pre-combination profits cannot be resolved without some ruling as to what is "known" in the circumstances. The prudent approach would be to consider each aspect of the calculation separately. A realised loss in value would be identified when the subsidiary passes up a cash dividend to the holding company. An unrealised revaluation of the asset would follow, based on a reconsideration of the value of the underlying net assets remaining in the subsidiary. The knowledge of the two separate changes in value should be dealt with in separate calculations.

These two questions raised by SSAPs suggest that any statement covering when a profit is to be treated as realised should also cover when a loss should be treated as realised and in particular should discuss in greater detail how "knowledge" of a loss may arise.

Further research within this project

Comparison with practice elsewhere

This chapter has attempted to analyse the problems which the prudence concept raises in the U.K. at the present time and to identify a number of possible ways of eliminating that conflict while retaining a concept of prudence in accounting.

Chapter Six will examine practice outside the U.K. in order to look at alternative views of the prudence concept and the extent to which such problems exist or do not exist elsewhere.

Quantitative analysis of UK financial statements

A quantitative analysis of prudence in UK accounting practice could be attempted if the effects of a particular accounting policy or asset valuation method could be compared with an alternative approach. Taking the example of research and development expenditure, comparison of the effects of immediate write-off with those of capitalisation could be achieved using published financial statements if all companies disclosed their annual expenditure on research and development. While this is a requirement of US reporting, it was not a UK requirement until SSAP 13 was revised in 1989. Thus so far as this research project is concerned, that particular piece of information was not available.
Taking another example of stock valuation under SSAP 9, the inclusion of an element of overheads is required. If the valuation of stock were analysed in sufficient detail, varying approaches to overhead recovery could be estimated. In annual reports the published information on stock valuation is very sparse and the note on accounting policies is generally an uninformative recital of the basic wording of SSAP 9.
Taking a third example, SSAP 15 allows only partial provision for deferred taxation. It would be interesting to compare the effect on

profit and loss account of full provision. That information is not present in sufficient cases, despite the disclosure requirements of SSAP 15. (The treatment of deferred taxation will be explored in detail in Chapter Eight.)

As a final example, SSAP 1 on associated companies ought to provide an opportunity for a partial assessment of relative prudence. There are three ways of dealing with an associated company. SSAP 1 recommends inclusion in profit and loss account of the proportionate share of the associate's profit and valuation in the balance sheet of the investment at the proportionate share of the equity interest. A second approach would be to value the investment at cost and include in the profit and loss account only dividend income received. The third approach would be to omit entirely the asset and its related income when evaluating the group (although this last option is obviously not an accounting solution, merely a device that might be employed by analysts).

SSAP 1 is the least prudent with regard to the profit and loss account of the group because it includes a profit which is unrealised so far as the group is concerned. Wilkins and Zimmer (1985) tested whether lenders, in making credit assessments, made adjustments for this unrealised income. It is a matter of relevance to a credit assessment because the share of the associate's profit does not necessarily produce a cash flow, unless there is also a dividend payment. They found that none of the participants in the exercise made comprehensive adjustments to equity financial statements despite the fact that half had been given cost-based information and the other half had been given equity-based information. Chapter Seven of this thesis describes an attempt to adjust from the equity method to the cost method for 50 companies as an assessment of the relative imprudence of SSAP 1 and describes the practical difficulties encountered in dealing with real-world information.

A quantitative analysis of some UK accounting policies, particularly those on deferred taxation and amortisation of goodwill, is achieved in Chapter Eight by comparing the profits reported by UK companies under UK law and practice with the profits reported by the same companies under SEC regulations in the USA.

CHAPTER SIX

COMPARATIVE INTERNATIONAL STUDY OF THE PRUDENCE CONCEPT

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Comparative international study of the prudence concept

Introduction

This chapter will examine accounting practice outside the United Kingdom with a view to answering the following questions:

1. How is the concept of prudence defined, either in accounting standards or in company law or in both?
2. How is the concept of prudence applied in accounting standards?
   - (i) To what extent does the concept of accruals take precedence over prudence?
   - (ii) How is prudence interpreted?
   - (iii) To what extent is prudence applied in determining distributable reserves?
3. To what extent is a requirement for prudence incorporated in legislation?

Conclusions will be drawn on possible advantages or disadvantages to the UK of attempting to incorporate in UK accounting practice the view of prudence which is taken elsewhere.

The chapter is subdivided into sections reflecting different geographical groupings. Firstly the International Accounting Standards are analysed. The chapter then moves on to those countries where English is the main language and where it might be expected that historical developments in accounting practice would show many similarities to those occurring in the United Kingdom. In view of the major impact on UK accounting of European Community directives, the chapter then turns to a review of the historical influence of prudence or conservatism in West Germany and France, as representing the European influence,and reviews the unique position of the Netherlands in Europe. The chapter concludes with a comparative analysis of prudence in a range of countries, making use of published survey information.

Recurring themes/

Recurring themes are identified, particularly that of the prudent reaction to uncertainty. The main emphasis of the chapter is on the analysis of accounting practice, but relevant authorities are quoted on the influences which may have led to those particular accounting practices.

International Accounting Standards

The meaning of prudence

Prudence is defined in IAS 1 as follows:-

> "Uncertainties inevitably surround many transactions. This should be recognised by exercising prudence in preparing financial statements. Prudence does not, however, justify the creation of secret reserves."

The Standard treats prudence as one of three considerations which should govern the selection and application by management of appropriate accounting policies. The other two considerations are materiality and substance over form. The "fundamental accounting assumptions" of going concern, consistency and accrual do not include prudence. There is no mention of the potential conflict between prudence and accruals and consequently there is no rule, as in SSAP 2, that where the two conflict, prudence should take precedence.

The most recent evidence of the views of the IASC on prudence is contained in the Framework for the preparation and presentation of financial statements (IASC 1989). The wording is as follows:

> "The preparers and users of financial statements do, however, have to contend with the uncertainties that inevitably surround many events and circumstances, such as the collectability of doubtful receivables, the probable useful life of plant and equipment and the number of warranty claims that may occur. Such uncertainties are recognised by the disclosure of their nature and extent and by the exercise of prudence in the preparation of the financial statements. Prudence is the inclusion of a degree of caution in the exercise of the judgments needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated. However, the exercise of prudence does not allow, for example, the creation of hidden reserves or excessive provisions, the deliberate understatement of assets or income, or the deliberate overstatement of liabilities or expenses, because the financial statements would not be neutral and, therefore, not have the quality of reliability." (para 37)

This confirms and enlarges on the IAS 1 definition, adding a warning on the undesirable consequences of conservatism which is similar to that given by the Financial Accounting Standards Board in SFAC No. 2 (see later section on the USA). It preserves the wider role of prudence as a reaction to uncertainty.

The wording of the IASC Framework may provide the best indication of the current thinking of the IASC but since it was written after all the individual standards to be reviewed in the following pages, they will be analysed in relation to the apparent influence of the definition contained in IAS 1. Each IAS which contains some aspect of prudence will be analysed. The analysis will then be summarised and conclusions presented.

Analysis of individual standards

Valuation and presentation of inventories in the context of the historical cost system (IAS 2) (cf. SSAP 9)

Prudence is applied to inventory valuation by reference to realisation.

> "The practice of writing inventories down below historical cost to net realisable value accords with the view that current assets should not be carried in excess of amounts expected to be realised". (para 16)

There is also a warning that writing down based on a class of inventory items rather than individual items may result in offsetting losses incurred against unrealised gains (para 16).

Arbitrary write-downs which result in creating secret reserves are deemed to produce inappropriate effects on financial statements (para 17).

Consolidated financial statements (IAS 3)

The equity method of accounting for an investment in an associated company is justified as being a more informative method of reporting the net assets and income of the investor (para 21). There is no mention of the prudence/accruals conflict in connection with the recommendation of the equity method, but there is a warning (para 24) that there should be appropriate recognition of any non-temporary decline in value of the investment below the carrying amount. There is a clear prohibition of aggregation of investment in associated companies for the purpose of determining a decline in value (para 42).

Depreciation accounting (IAS 4)

This standard is notable for its lack of reasoning as to why depreciation should be charged. In dealing with the argument that it is unnecessary to provide for depreciation of an asset whose value has increased over the amount at which it is carried, the standard says:-

"It is considered however, that depreciation should be charged in each accounting period on the basis of the depreciable amount irrespective of an increase in the value of the asset."

Since an expense is involved here, prudence and accruals concepts work in the same direction, but it would have been interesting to see which of the two concepts was uppermost in the minds of the authors of IAS 4.

Accounting for research and development activities (IAS 9) (cf. SSAP 13)

Uncertainty as to the amount of future benefits derivable from current research and development costs, and as to the period of benefit, is used to justify (para. 9) the charging of such costs to expenses in the period in which they are incurred. The criteria which permit deferral of development costs (paras 17 and 18) are broadly similar to those of SSAP 13 and are all concerned with establishing when the benefit of development costs is sufficiently certain to permit deferral.

Contingencies and events occurring after the balance sheet date (IAS 10) (cf. SSAPs 17 and 18)

The whole discussion of contingencies as related to uncertainty and prudence is mentioned specifically in para 8:-

"If it is probable that a contingency will result in a loss to the enterprise then it is prudent to accrue that loss in the financial statements".

The/

The standard shows some potential departure from prudence in para. 9 when recommending that where a range of estimates for a contingent loss exists and no amount within the range is a better estimate than any other amount, at least the minimum in the range is accrued.

Accounting for construction contracts (IAS 11) (cf. SSAP 9)

After explaining the various accounting methods available, the standard says:-

> "The selection of a method of accounting for a construction contract depends on the view taken by the contractor in respect of the uncertainties attached to the estimates of contract costs and revenues."

The standard sets out the conditions for application of the percentage of completion method, all concerned with establishing relative certainty as to outcome.

Accounting for taxes on income (IAS 12) (cf. SSAPs 8 and 15)

In dealing with tax losses the concept of realisation is applied (para 24) in relation to tax losses recoverable at a future time and the concept of prudence is mentioned (para 25) as follows:-

> "If a potential tax saving is to be dealt with in this manner," (included in net income for the period of the loss) "the consideration of prudence requires that there is assurance beyond any reasonable doubt that future taxable income will be sufficient to allow the benefit of the loss to be realised."

Examples are given of circumstances which would satisfy the condition of assurance beyond any reasonable doubt. In this case prudence goes further than "reasonable certainty" to "beyond any reasonable doubt".

Reporting financial information by segment (IAS 14)

Although prudence is not specifically applied, the idea of disclosing information as a means of assessing risk is mentioned (para. 5).

Accounting for property, plant and equipment (IAS 16)

The link between prudence and distributable profits is evidenced in para 27:-

An/

> "An increase in net carrying amount arising on revaluation of property, plant and equipment is normally credited directly to shareholders' interests under the heading of revaluation surplus and is usually regarded as not available for distribution."

The asymmetry resulting from application of the prudence concept is also seen here, where revaluation gains are credited to a revaluation reserve but revaluation losses are a charge against income.

<u>Accounting for leases</u> (IAS 17)

The consideration of prudence is mentioned in the standard itself (para. 49) in relation to recognition of income by the lessor on a finance lease. Uncertainties faced by the lessor are dealt with in greater detail in the introduction (paras. 16-22) and prudence is specifically mentioned in para 16:-

> "The longer the term of the lease the greater the risks involved and the consideration of prudence may require modification of the pattern of income recognition to reflect the circumstances."

<u>Revenue recognition</u> (IAS 18)

The term "realisation" is not mentioned in the discussion of revenue recognition, either in the introduction or in the standard itself. (It is only used in the list of exclusions from the definition of "revenue" given in para. 3 of the introduction). The application of prudence is consistently achieved by reference to the effect of uncertainties on revenue recognition. This results in potentially vague guidance such as:-

> "at the time of performance it is not unreasonable to expect ultimate collection" (para. 22).

> "no significant uncertainty exists" (paras 23 and 24).

In the face of such general terms the Appendix to IAS 18, which gives specific instances of how these ideas apply to specific instances, is perhaps more useful than the standard itself.

<u>Accounting for retirement benefits in the financial statements of employers</u> (IAS 19)

The recommended treatment is justified in terms of a matching of the cost of retirement benefits against revenue in the period during/

during which the employees' service is rendered, rather than in the period when the benefits are paid out (para. 12). This could also be regarded as a more prudent approach in reporting the cost to the business at the earliest opportunity, but is not discussed in terms of prudence.

Accounting for government grants and disclosure of government assistance (IAS 20)

The argument in favour of the spreading of grant income over a period of time is justified in terms of a capital versus income argument (paras 6-9) and a matching of grants with related costs (para 10). Mention is also made of the assumption of accrual accounting as further discouragement to applying a receipts basis of accounting (para 10). There appears to be an attempt to show clearly that realisation of the grant is not sufficient for recognition of revenue; the enterprise must also show that it has earned the grant by fulfilling the conditions attaching to it (para. 16).

Accounting for the effects of changes in foreign exchange rates (IAS 21)

The standard is mainly concerned with reconciling the different approaches to translation but does mention prudence in relation to gains and losses on long-term monetary items. It contrasts (para 9) the practice of recognising gains and losses in income as they are identified with the alternative of deferring gains "on the grounds of prudence" while recognising losses. The third alternative, of deferring both gains and losses and recognising in future income on a systematic basis over the remaining lives of the monetary items is also mentioned but not attributed to any particular accounting concept.

Accounting for investments (IAS 25)

This standard is not so much prescriptive of a particular accounting policy as descriptive of the range of accounting practices existing in different countries. It permits, as one of a number of alternatives, the carrying of current asset investments at market value and the inclusion of related

unrealised/

unrealised gains and losses in the income statement. The justification given in the discussion preceding the standard (para 34) is that such investments are a store of freely disposable wealth. It also recognises that in some countries such gains and losses are not permitted to be included in income and are credited direct to equity in the same way as a revaluation surplus on long-term investments.

Prudence is mentioned (para 16) as justification for carrying current investments at the lower of cost and market value. IAS 25 also acknowledges (para 18) that valuation of investments, even on the apparently prudent "lower of cost or market" rule, may result in losses being offset against unrealised gains where a portfolio basis is applied rather than an individual investment basis.

Summary

The standards analysed may be summarised in the following categories for comparison with UK practice:

Accruals takes precedence over prudence

Although there is no explicit mention of "conflict" in IAS 1, there are topics where a potential conflict exists and where the accruals or matching concept is the main justification for the accounting treatment proposed. These are IAS 3 (equity accounting) IAS 11 (construction contracts) IAS 17 (leases: lessor income) IAS 21 (foreign currency translation: treatment of long-term monetary items) and IAS 25 (valuing current investments at market value above cost).

To the extent that these are already the subject of UK standards, the recommended accounting treatment is broadly similar although the International Accounting Standards tend to be more permissive of a range of practices, presumably in order to accommodate the range of practices which already exists.

The reasons given for applying the accruals concept are varied:

IAS	Reason given
3	more informative method
11	matching (for percentage of completion method)
17	constant periodic rate of return
19	systematic allocation of cost
21	no clear reason - standard analyses options for dealing with long-term monetary items
25	store of freely disposable wealth

Accruals and prudence in agreement

Accruals and prudence work together where liabilities or expenses are being considered. IAS 4 (depreciation accounting), IAS 10 (contingencies) and IAS 12 (tax liabilities) all produce similar recommendations to those of the corresponding UK standards.

Prudence takes precedence over accruals

IAS 2 (valuation of stock), IAS 9 (Research and development), IAS 16 (property, land and equipment) all show prudence taking precedence over accruals. In IAS 2 and IAS 16 realisation is the determining factor while in IAS 9 it is the uncertainty surrounding research and development which is of concern. Prudence also takes precedence in IAS 10 and IAS 12 where contingent gains and recoverable tax losses are considered. The asymmetry of the UK SSAP 2 prudence concept is evidenced also in International Accounting Standards.

Prudence interpreted in terms of uncertainty

Since IAS 1 explains prudence by reference to uncertainty it might be expected that uncertainty would be discussed in the other standards where applicable. This does happen in IAS 2, IAS 3, IAS 9, IAS 10, IAS 11, IAS 12, IAS 17 and IAS 18. Uncertainty is found in relation to:-

realisation/

realisation	IAS 2
decline in the value of an investment	IAS 3
future benefits	IAS 9
potential loss	IAS 10
estimates of costs and revenues	IAS 11
future taxable income	IAS 12
risks faced by lessors	IAS 17
ultimate collection	IAS 18

Prudence related to distributable profits

The only standard to make specific mention of distributability in connection with the prudent approach is IAS 16.

Disclosure as a response to uncertainty

Prudence is viewed in IAS 1 as a response to uncertainty. There is an alternative response, that of disclosure so that the reader can assess the uncertain event. The alternative of disclosure is seen in IAS 14 on segment reporting where the idea of disclosing information as a means of assessing risk is mentioned.

Conclusions

1. The wording of the definition in IAS 1 is markedly different from that of SSAP 2.

The differences are:

a) Prudence is not defined as such in IAS 1. It is stated as an attitude to be shown in response to uncertainty.

b) Although there is no indication in the definition as to what a prudent response to uncertainty might be in any particular instance,/

instance, there is a statement of what is not prudence in the reference to not creating secret reserves.

c) Prudence and accruals are not given equal status. Accruals is a fundamental accounting concept while prudence is a consideration governing the selection and application of accounting policies.

d) As a consequence of this different ranking there is no immediate prospect of a conflict between accruals and prudence and there is no mention of any potential conflict.

e) There is no mention of realisation in connection with the prudence concept and no reference to the asymmetric treatment of gains and losses.

2. On the basis of IAS 1, prudence is a response to uncertainty. This reponse is evidenced in a number of standards where specific uncertainties pertaining to the subject of the standard are discussed. It is clear that uncertainty is seen as relating to a number of problems, of which realisation of cash is only one.

3. Prudence is exercised in the majority of International Accounting Standards by prescribing an accounting policy or practice and reciting the circumstances in which the policy or practice may be applied. This is one way of responding to uncertainty. An alternative approach is to disclose more information about the uncertainty in measurement so that users may form their own opinion as to the likely outcome. IAS 14 on disclosure of segment information makes specific reference to allowing an assessment of risk by providing more information.

4. Prudence takes two roles in UK accounting. It is a factor governing the contents of a profit and loss account and it is a determinant of distributable reserves. This diversity of roles does not have to be dealt with specifically in International Accounting Standards and the majority of those which apply the prudence concept do so in questions of profit reporting. Only one, IAS 16, specifically mentions distributability in connection with prudent accounting practice.

U.S.A.

Two problems arise when attempting to compare US with UK thought on the prudence concept. One is that there is no definitive US statement of the concept; the other is the proliferation of generally accepted accounting principles which may or may not apply the concept. The first problem will be dealt with by examining current opinions expressed on the subject; the second will be dealt with by comparing US practice with UK standards on a subject-by-subject basis rather than attempting a comprehensive analysis of all US pronouncements.

Definition of prudence

In US texts the term "conservatism" is more commonly encountered than "prudence". Explanations of "conservatism" show an attempt to move away from the historical connotation of conservatism as a deliberate understatement of net assets and net income (APB Statement No. 4 para 171).

The FASB definition in SFAC No. 2 (1980) is:-

"Conservatism: A prudent reaction to uncertainty to try to ensure that uncertainty and risks inherent in business situations are adequately considered." (Glossary)

The discussion contained in SFAC No. 2 (paras 91-97) is an attempt to discourage bias in estimating earnings and to move towards disclosing the nature and extent of the uncertainty surrounding events and transactions. Its warnings on the undesirable consequences of understatement are reflected in the IASC warning on excessive conservatism contained in the IASC draft conceptual framework (see earlier section).

Authors of text books are by no means unanimous on the meaning of conservatism. Examination of seventeen US accounting texts all published in the 1980's, revealed the following variety of explanations: (See Appendix A for list of textbooks used).

Reason/

Reason for requiring a concept of conservatism	Text book
Making a choice between alternative accounting methods	4,6,8,15,16
Making judgments or estimates	5,7,10,11,12,13
Significant uncertainty in business situations	2,3,9,13,14,17
Pressure from creditors Fear of consequences of bankruptcy Balance of risk of Type I and Type II errors (statistical)	1
Accounting practice in relation to net assets/income	
Tendency to understate	5,9
Pessimism	1
Lowest estimate	4,7
Least favourable view	3,6,7,15,16
Least optimistic	11
Least likely to overstate	8,12,13
Reduce probability of overstating	14
Be cautious	10
No statement (merely repeats FASB definition)	2
Provide for possible losses but don't anticipate gains	14,16,17
Warning provided on the dangers of deliberate understatement	
Warning given explicitly with the definition	1,4,5,7,9 10,12,13,16,17

The influence of FASB SFAC No. 2 (and its earlier exposure draft) could be detected only in books 1, 2, 14 and 17. Of these only Hendriksen went so far as to advocate the disclosure of sufficient information to allow a proper evaluation of the risk. The majority paid some attention to the dangers of understatement but still left the reader with the impression of a bias in practical accounting towards understatement of net assets and income.

When comparison is made with the U.K. concept of prudence, it is of particular note that no attempt is made to equate conservatism with the question of realisation. Realisation is dealt with as a separate issue in US texts. Because there is no agreement/

agreement on what 'conservatism' means in the US (apart from a consensus that deliberate understatement is undesirable), the contrast between the accruals concept and the concept of realisation will be used here to compare US with UK accounting practice.

The detailed practice of accounting in the US will be examined under four headings:-

(i) accruals takes precedence over realisation;
(ii) realisation takes precedence over accruals;
(iii) prudence related to "reasonable certainty"; and
(iv) major differences between UK and US practice.

<u>Accruals takes precedence over realisation</u>

This section will examine first the US practice in those areas comparable to the UK standards in which accruals takes precedence over realisation.

In the following analysis, reference is made chiefly to Miller's Comprehensive GAAP Guide (1986 edition) and to the FASB Current Text of accounting standards (1985/86 edition).

<u>Equity method of accounting</u> (Miller Ch. 14)(cf. SSAP 1)

Accrual of the relevant share of the profit of the investee (where the investor has the ability to exercise significant influence over the investee) is justified by reference to the matching of earnings to the proper time period and to reporting the economic substance of holding the investment (page 14.12).

<u>Investment tax credits</u> (Miller Ch. 25)(cf. SSAP 4)

A preference for amortisation of the investment credit to net income over the productive life of the acquired property is justified by reference to the matching concept (page 25.01).

Long/

Long-term construction contracts (Miller Ch. 27)(cf. SSAP 9)

The percentage-of-completion method is justified in terms of the matching concept and the evidence that the ultimated proceeds are available. The conditions imposed by ARB-45 (FASB Current Text p. 52607) are an application of the idea of "reasonable certainty as to outcome" without actually using that phrase.

Foreign operations and exchange (Miller Ch.16)(cf. SSAP 20)

Gains or losses from foreign currency transactions (such as those associated with monetary assets and liabilities) are recognised in net income (apart from some exceptions related to hedging). The effect of the exchange rate movement is reported when it arises rather than when the monetary transaction is settled. Justification of this approach relies chiefly on a desire to report the economic effect of the exchange (FASB-52 para 126). The extra justification provided in SSAP 20 would appear to be a direct consequence of trying to overcome the statutory restrictions imposed by the Companies Act 1985. FASB-52, not constrained in this way, regards the "economic substance" argument as sufficient to justify the accrual of unrealised gains and losses.

Leases (Miller Ch. 26)(cf. SSAP 21)

Direct financing leases, in the accounts of the lessor, are dealt with by amortising the unearned income to the income statement over the lease term in proportion to the net investment remaining. The conditions imposed are that collectibility is reasonably predictable and that no important uncertainties surround the amount of unreimbursable costs yet to be incurred by the lessor under the lease. This appears to be a similar approach to that of SSAP 21 in specifying the conditions which reduce uncertainty about the outcome of the lease to an acceptable level.

<u>Pension plans - employers</u> (Miller Ch. 31)(cf. SSAP 24)

In an attempt to eliminate unusual fluctuations in pension cost from year to year, unrealised gains and losses may effectively be reported by spreading the timing of actuarial gains and losses over ten to twenty years.

<u>Pension plan financial statements</u> (Miller Ch. 31)(cf.SORP 1)

Where a defined benefit pension plan publishes accounting information, it is permissible to report market values of assets accruing at the statement date. Justification is chiefly in terms of providing information relevant to users' needs. The split vote on FASB-35 (4-3) clearly demonstrates the conflict between attempting to provide information relevant to user needs and attempting to produce reliable information under conditions of uncertainty.

Precedence is also accorded to accruals accounting in cases which have no UK counterpart in SSAPs, such as capitalisation of interest:

<u>Interest costs capitalised</u> (Miller Ch. 22)

The capitalising of interest costs under specified conditions, usually related to time taken to complete the asset and prepare it for its intended use, are justified in terms of a better measure of acquisition cost and a better matching of revenue and costs in future periods (FASB-34).

<u>Realisation takes precedence over accruals</u>

<u>Marketable securities</u> (Miller Ch. 28)

Marketable securities, whether classified as current or non-current, are carried in the balance sheet at the lower of cost or market value. Specialised industries may have different views of what constitutes "market value" but the principle remains the same. On this basis SSAP 19 has no equivalent in US practice. The only situation in which an unrealised gain might be recorded is where an investment has been written down and subsequently recovers in value. The unrealised gain from the written down value is seen as an adjustment to the estimated loss rather than an unrealised gain.

Research/

Research and development (Miller Ch. 35)

The general rule of writing-off research and development as incurred may only be contravened in specific instances where a continuing benefit may be seen. Miller invokes "conservatism" to justify this approach (p. 35.02) in view of the high degree of uncertainty of any resulting future benefit.

Inventory pricing and methods (Miller Ch. 24)

The "lower of cost or market" rule is effectively the same as that of SSAP 9 with regard to stock valuation.

Prudence related to "reasonable certainty"

Although the concept of prudence receives little specific mention in US accounting standards, it is still possible to trace the theme of "reasonable certainty as to outcome" in a manner similar to that found in UK standards.

This effect has already been mentioned in relation to long-term construction contracts and leases. It is also identifiable in the following cases:

Contingent losses (Miller Ch. 6)(cf. SSAP 18)

The manner of reporting a contingent loss or liability depends upon its being classified as "probable", "reasonably certain" or "remote". The treatment moves from full accrual, through a note to the accounts, to total omission, depending partly on this classification and partly on the ability to quantify the loss.

The only part of the recommended practice which is difficult to reconcile with any accounting concept is the recommendation that, where two estimates of a probable loss are equally likely, the lower of the two should be selected.

Real/

Real Estate - recognition of sales (Miller Ch. 81)

In order for a seller to accrue the total profit on a sale of real estate, conditions are imposed (FASB-66) which attempt to establish reasonable certainty as to the outcome of the transaction. If any or all of the conditions are not met then alternative forms of accounting must be applied which move progressively closer to cash accounting as uncertainty increases.

Revenue recognition (Miller Ch. 36)

The conditions required for recognition of revenue are that the earnings process must be complete and an exchange must have taken place. In a particular instance, such as that of the sale of returnable merchandise, the discussion centres on establishing reasonable certainty that the earnings process is complete. Significantly, the word "realisation" is not used.

Differences between UK and US accounting practice

Nobes (1988) identified as a benchmark twelve matters of accounting policy for which US financial statements would require adjustment before they could be regarded as comparable to UK practice. These were (Nobes p.83):

Inventories	US use of LIFO may lead to lower reported profits.
Deferred tax	US use of full provision and full deferral (until 1987), now full liability method.
Translation	UK is more permissive with regard to profit and loss account translation.
Fixed assets	US does not permit revaluation.
Goodwill	US requires amortisation.
Subsidiaries	US now requires inclusion of all subsidiaries
Pooling	US rules differ from UK rules on merger accounting.
Dividends	US companies do not provide for undeclared dividends.
Extraordinary items	US is less liberal with regard to gains and losses on disposals of businesses.
Capitalisation of interest	US requires capitalisation (see earlier).
Oil and gas	US/UK rules are similar.
R & D	US insists on writing-off.

From the above list the only items which could be taken as indicating different attitudes to conservatism are inventory treatment (a consequence of US tax rules), deferred taxation, valuation of fixed assets, amortisation of goodwill, extraordinary items, interest capitalisation and research and development. Nobes suggested that the differences between UK and US practice are largely historical accidents and are not based on fundamental underlying differences such as culture.

Nobes' text was concerned with explaining how US financial statements may be adjusted to reflect UK practice. His text was largely descriptive and did not seek to quantify the relative magnitudes of the above-mentioned differences, other than in generalities (but see Nobes Ch. 8 for some quantification). The research for this thesis includes a quantified analysis of the differences between UK and US reporting practice from the opposite direction; that of adjusting UK financial statements to reflect US accounting practice. The empirical research is set out in Chapter Eight and is based on reports to the Securities and Exchange Commission submitted by UK companies which have their shares listed on US exchanges.

Summary

Accruals takes precedence over realisation

Accruals take precedence over realisation in the following subjects and for the reasons stated:-

Subject	Reasons
Equity accounting	matching, reporting economic substance of holding the investment
Investment tax credits	matching
Long-term contracts	matching
Foreign exchange transactions	economic effects of exchange
Pension costs to employer	eliminate unusual fluctuations
Pension plan financial statements	provide information relevant to users' needs
Interest costs capitalised	better measure, better matching

To the extent that the above subjects are dealt with in UK accounting standards the outcome is largely the same; it is the conceptual justification which differs.

Realisation takes precedence over accruals

In those situations where realisation takes precedence, the treatment of research and development expenditure and inventory valuation is in effect similar to that of the UK although the reasoning differs. There is no US practice corresponding to SSAP 19 and US accounting practice is more prudent in regard to asset valuation by not generally permitting the valuation of non-current assets at market value above cost. This could be seen either in terms of the precedence of the realisation concept or in terms of the precedence of the concept of historical cost. Both lead to the same conservative outcome so far as asset valuation is concerned.

Prudence seen as establishing "reasonable certainty"

The idea of "reasonable certainty" as to outcome is evident in the following cases:-

Reasonable certainty as to:-	Subject
ultimate proceeds	long-term contracts
collectibility and unreimbursable costs to be incurred	leases (lessor income)
crystallisation of a contingent loss	contingent losses
conditions of a real estate sale	real estate sales
completion of the earnings process, exchange having taken place	revenue recognition

Conclusions

The foregoing analysis, although not exhaustive, is adequate to support the following conclusions:

1. There is no US definition of the prudence concept which is as well established as the UK definition of SSAP 2.

2. Accruals accounting is allowed to take precedence over realisation with much the same effect as in UK practice. The approach is justified by a mixture of:

economic reality (or substance over form)
and matching of revenues and expenses

3. There are situations where the realisation concept is accorded clear precedence over accruals. Again these are similar to the UK practice.

4. The theme of prudence viewed as establishing "reasonable certainty" as to outcome may be traced through a number of the US standards, although not explicitly stated. "Outcome" includes realisation of cash proceeds but also looks at other events associated with the transaction.

5. Although the name "conservatism" is retained, the underlying principle is clearly being edged towards the more general idea of "prudence".

6. There are differences between UK and US accounting practice, probably mainly due to historical accidents, which may result in US profits overall being more conservative than US profits. These differences may be quantified by empirical analysis, as will be demonstrated in Chapter Eight.

Appendix A

List of text books examined

1. Hendriksen, E.S. Accounting Theory (Irwin 1982)
2. Giese, J.W. & Klammer, T.P.
   Intermediate Accounting: A Flow Approach (Prentice-Hall 1984)
3. Chasteen, L.G., Flaherty, R.E., O'Connor, M.C.
   Intermediate Accounting (Random House 1984)
4. Helmkamp, J.G., Imdieke, L.F., Smith, R.C.
   Principles of Accounting (Wiley 1983)
5. Hermanson, R.H., Edwards, J.D., Salmonson, R.F.
   Accounting Principles (Business Publications Inc. 1983)
6. Cooper, W.W. & Ijiri Y. (Eds)
   Kohler's Dictionary for Accountants (Prentice-Hall 1983)
7. Meigs W.B. & Meigs R.F.
   Accounting: The Basis for Business Decisions (McGraw-Hill 1981)
8. Solomon, L.M., Vargo, R.J., Walther, L.M.
   Accounting Principles (Harper & Row 1986)
9. Walgenbach, P.H., Dittrich, N.E., Hanson, E.I.
   Principles of Accounting (Harcourt Brace Jovanovich Inc. 1980)
10. Dupree D. & Marder, M. Principles of Accounting
    (Addison Wesley Publishing Coy. 1984)
11. Johnson, G.L. & Gentry J.A.
    Finney & Miller's Principles of Accounting (Prentice-Hall 1980)
12. Matulich, S. & Heitger, L.E. Financial Accounting
    (McGraw Hill 1980)
13. Needles, B.E., Anderson, H.R., Caldwell, J.C.,
    Principles of Accounting 1981
14. May, R.G., Mueller, G.G., Williams, T.H.,
    A New Introduction to Financial Accounting (Prentice-Hall 1980)
15. Slavin, A., Reynolds, I.N., Sanders, A.B.,
    Financial Accounting - A Basic Approach (Dryden Press 1980)
16. Mosich, A.N., Larsen, E.J. Intermediate Accounting
    (McGraw-Hill 1982)
17. Most, K.S. Accounting Theory (Grid Publishing Inc. 1982)

Australia

The concept of prudence is defined in the Australian professional accounting standard AAS 6, as follows:-

> "Uncertainties inevitably surround many of the measurements involved in the accounting process. This should be recognised by exercising prudence in preparing financial statements." (AAS 6, para. 5(e))

Prudence is listed as one of five "important considerations in determining and applying accounting policies" (para 5), the others being relevance, materiality, consistency and substance over form.

Two further quotes from the standard illustrate the role of prudence.

> "Considerations of relevance, materiality, consistency and prudence and of substance over form should govern the determination and application of accounting policies"(para 12)

> "In the absence of a statement to the contrary, it may be assumed that the general system of accounting underlying the financial statements encompasses the accruals basis and the going concern basis." (para 15)

The overall effect is to lessen the impact of the prudence concept as compared with the UK SSAP 2. There is no attempt to afford prudence precedence over accruals and whereas the UK standard identifies four underlying accounting concepts, including prudence, the Australian standard takes only two of these, going concern and accruals, as assumed underlying concepts. (AAS 6 bears a close resemblance to International Accounting Standard IAS 1, but is not identical - see the section on International Accounting Standards).

Unlike SSAP 2, the Australian standard does not identify a potential conflict between accruals and prudence. This apparent lack of conflict is observable throughout the Australian standards and the prudence concept is applied as a moderating influence on the application of the accruals concept.

Since the standards are framed in this spirit, it is convenient to analyse them under the following headings:-

(i) Prudence as a modifying influence on accruals;

(ii) Prudence applied by reference to "reasonable certainty".

Prudence/

Prudence as a modifying influence on accruals

Equity method of accounting (AAS 14) (cf. SSAP 1)

The recommended practice of applying equity accounting where there is a significant influence over the investee is justified in terms of the entity concept. There is a difference from SSAP 1 in that supplementary financial statements have to be used rather than combining equity accounting with full consolidation, but this is a result of an interpretation of statute regarding the contents of consolidated accounts, rather than a point of accounting principle. There is no concern expressed about any lack of prudence in applying equity accounting.

Construction contracts (AAS 11) (cf. SSAP 9)

The idea of prudence being interpreted as "reasonable certainty as to outcome" may be traced throughout AAS 11, evidenced by phrases such as -

"profit ought not to be recognised until its existence is reasonably assured" (para 4(b));

the percentage of completion method is limited to circumstances where "the outcome of a contract can be reliably estimated" (para 7);

"where current estimates indicate that a loss is probable..." (para 18);

and in the criteria for use of the percentage-of-completion method, detailed in para 8.

Foreign currency translation (AAS 20) (cf. SSAP 20)

The Australian standard reflects the UK standard in relation to exchange differences relating to short-term monetary items. These ought to be debited or credited to the profit and loss account in the period in which they arise. The justification applied is the matching of exchange gains and losses with the other results of obtaining, or providing, credit.

There is a difference in the recommended treatment of exchange gains and losses on long-term monetary items. Here a deferred foreign exchange gain account is recommended with amortisation to profit and loss account on a systematic basis over the lives of the monetary items. Justification for this income-smoothing approach is/

is not provided in the standard, but it does not appear to be related to prudence.

Revaluation of non-current assets (AAS 10)

There is no Australian standard corresponding to SSAP 19 but AAS 10 deals with revaluation of non-current assets. An increment should be credited to an asset revaluation reserve but a decrement should be charged against profit (unless reversing a previous increment in which case it may be charged against the revaluation reserve).

This appears to be a compromise between accruals and prudence since the gain in value may be accrued in the balance sheet from the asset viewpoint but may not be accrued in the profit and loss account.

Research and development costs (AAS 13) (cf. SSAP 13)

Application of the prudence concept takes a stronger role here than in the Australian standards already discussed. Costs incurred during the period on research and development projects should be deferred to future periods

> "only to the extent that future benefits are expected, beyond any reasonable doubt, to equal or exceed those costs, any previously deferred costs, and any future costs necessary to give rise to the future benefits." (para 32)

Unlike SSAP 13, AAS 13 does not specify a list of detailed conditions which would establish that these matters were beyond any reasonable doubt.

Prudence applied by reference to reasonable certainty

The idea of "reasonable certainty" has already been identified in AAS 11 (construction contracts) and AAS 13 (research and development costs). It is also observable in the following:-

Valuation and presentation of inventories in the context of the historical cost system (AAS 2) (cf. SSAP 9)

The matching concept is invoked (para 6) to justify carrying forward inventory cost, but prudence is applied with the provision that irrecoverable cost should be charged against revenue:-

"if there is no reasonable expectation of sufficient future revenue to cover the cost incurred"

Company income tax (AAS 3)(cf. SSAP 8 and SSAP 15)

A future income tax benefit may be carried forward as an asset only where "realisation of the benefit can be regarded as being assured beyond any reasonable doubt". Realisation itself is specified as depending on expectations as to the company's future assessable income, the company's continued compliance with conditions for the benefit to be allowed, and even expectations about changes in the legislation.

Accounting for the extractive industries (AAS 7)

The underlying concept of accruals, or matching, is restated in the standard (para 4). Because of the risk and uncertainty of the outcome of operations, considerations of prudence are also stated to have been a determining factor in selecting the accounting methods set forth as standard in the statement.

The standard also recommends (para 48) that a high standard of disclosure is required because of the risks and uncertainties involved in extractive operations.

Expenditure carried forward to subsequent accounting periods (AAS 9)

Four tests are applied in determining whether expenditure should be carried forward at the balance sheet date. The final of these four tests deals with uncertainty as follows:-

"(i) it is reasonably expected that the business will obtain future revenue sufficient to absorb the expense carried forward, or

(ii) the expenditure has given rise to an asset which may be reasonably expected to realise at least its book value." (para 9 (d)).

In both (i) and (ii) above the idea of "reasonable certainty" as to outcome is applied.

Conceptual framework

The most recent evidence of Australian thinking on the concept of prudence is contained in the series of draft concepts statements (AARF 1987) and in particular the "Qualitative Characteristics of Financial Information" which continues the theme of prudence as a reaction to uncertainty. In the concepts statements "Definition and Recognition of Assets" and "Definition and Recognition of Liabilities", recognition criteria are specified which depend on:

the probability that service potential or future economic benefits or losses will eventuate; and

the reliable measurement of the item.

The Australian concepts statements, by bringing uncertainty considerations into the recognition criteria rather than into the definition, are a major departure from the approach taken in the USA by FASB in SFAC No. 3 (later revised as No.6). That includes the probability of economic benefit or loss in the definition of an item, with the result that the ensuing US recognition statement SFAC No. 5 was generally unsatisfactory in attempting to specify recognition criteria (Solomons 1986). (The whole question of recognition criteria and the role of uncertainty is explored in greater depth in Chapter Nine).

The Australian concepts statements on assets and liabilities devote a considerable proportion of the total text to a discussion of the uncertainties which surround the likelihood of economic benefits or loss arising and the reliability of measurement.

The difficulty of establishing a national "attitude" to any accounting concept is usefully illustrated by Walker (1987) in his description of the "regulatory capture" of the Australian Accounting Standards Review Board (ASRB) and the arguments about the extent to which a mini-concepts statement issued by the ASRB might have pre-empted the rival work being carried out by the Australian Accounting Research Foundation (AARF).

Summary

Prudence as a modifying influence on accruals

The spirit of AAS 6 is to apply the accruals concept as a fundamental concept and then apply prudence to an extent commensurate with the uncertainties present. Accruals remains the dominant influence in the following cases:

Standard	Reason given
AAS 14 (equity accounting)	entity concept
AAS 11 (percentage of completion)	matching
AAS 20 (exchange gains on long-term monetary items)	none given
AAS 10 (non-current asset revaluation)	none given

Prudence is the dominant concept in AAS 3 (future tax benefits) and AAS 13 (research and development).

To the extent that these subjects are covered by UK standards the outcome is similar but the means of justifying the approach to the problem is not the same.

Prudence seen as establishing "reasonable certainty"

Prudence is seen as establishing "reasonable certainty" as to:

existence of profit, outcome of a contract, probable loss	AAS 11
future benefits exceeding costs	AAS 13
future revenue to cover costs	AAS 2
future revenue expected to absorb expenses, expectation of asset realisation	AAS 9
assessable income, compliance with tax law, future legislation	AAS 3

In the last case, AAS 3, for a tax benefit to be reported the condition is that realisation must be assured beyond all reasonable doubt. This is a much stronger condition than establishing "reasonable certainty."

Conclusions

1. The Australian standard AAS 6 is based on IAS 1 but the definition differs in the following respects:-

(a) AAS 6 specifically mentions uncertainty as to measurement, while IAS 1 is silent on the subject of the uncertainty.

(b) IAS 1 makes specific reference to not creating secret reserves.

This reference is omitted in AAS 6.

In applying prudence, AAS 6 makes it one of five considerations governing the application of accounting policies. In IAS 1 prudence is one of three considerations. AAS 6 adds relevance to the list and demotes consistency from a "fundamental accounting assumption" (IAS 1) to a "consideration" (AAS 6).

2. The potential for conflict between accruals and prudence is very much lessened (as compared with UK SSAP 2) by the role afforded to prudence in AAS 6.

3. In the Australian standards, the problem of measurement uncertainty is dealt with chiefly by prescribing accounting practices to be followed and specifying the circumstances where reasonable certainty as to outcome permits the accounting practices to be applied.

4. The alternative treatment, of dealing with measurement uncertainty by paying attention to the disclosure of information, is encountered in AAS 7 (the extractive industries).

5. The recommendations of the Australian standards, where they deal with comparable subjects to UK standards, are broadly similar although the reasoning from underlying concepts may differ.

6. The theme of prudence viewed as establishing "reasonable certainty" as to outcome is clearly identifiable in a number of Australian standards and is reinforced by the draft concepts statements published by the AARF.

Canada

The Handbook of the Canadian Institute of Chartered Accountants (CICA) contains more numerous and detailed accounting recommendations than those of the UK, Australia or New Zealand, although it is not of the length of US standards and pronouncements. The Topical Index to the CICA Handbook contains no reference to conservatism, prudence or realisation. There is no standard corresponding to UK SSAP 2 which would provide a statement of general accounting principles. Consequently a search for the application of prudence requires examination of specific recommendations in an attempt to analyse the reasons given for the recommendations made.

This approach does not solve the problem of discovering the Canadian view of prudence because the recommendations contained in the Handbook are very much prescriptions of what should or should not be done and are generally lacking in background discussion or reasoning. Where any reasoning is provided it is specific to the problem in hand and does not turn to accounting principles for justification. The following selection of extracts has been made in order to give some comparison with UK topics on which standards exist. (References are to sections and paragraphs in the Handbook).

Analysis of individual standards

Equity accounting

The approach to equity accounting for associated companies is to explain how, but not why, equity accounting is used(1600.74-82). A definition and explanation of equity accounting are provided (3050.03) but no reasons for using the approach. "Significant influence" is defined (3050.21-23) but without any further comment.

Accounting for government assistance

The "capital approach" is contrasted with the "income approach" and after setting out the arguments for and against (which do not encompass prudence) the conclusion is in favour of the "benefit" argument and thus an income approach to accounting for government assistance(3800.10). The argument of substance over form could perhaps be identified in the suggestion that the economic substance of the grant should be looked at (3800.11) in deciding the timing of the recognition of the benefits.

Tax losses carried forward

There is a requirement for "virtual certainty" (para 43) before accrual of a tax recovery associated with losses carried forward. "Virtual certainty" requires that the loss results from an identifiable and non-recurring cause; that records of profitability have been established; and that there are assurances beyond any reasonable doubt of achieving profit to offset the loss carried forward. In the absence of this virtual certainty, the tax recoverable should merely be disclosed.

Tax timing differences

Accounting for deferred taxes is seen as "the most satisfactory method of achieving the prime objective of a proper matching of costs and revenues in the case of tax timing differences"(3470.13). The Research Committee's preference for the deferral method rather than the liability method is stated without reason (3470.19).

Inventories

No explanation is given of why the "lower of cost and net realisable value" rule should be applied. The discussion of what is meant by "cost" is centred on finding the method which results in the "fairest matching" of costs against revenues(3030.01-13).

Research and development

Categorisation of expenditure under the two headings of "research" and "development" is made in terms of their relationship to the expected future benefits to be derived (3450.14). Phrases such as "reasonable expectation of commercial success" are perhaps indicative of a prudent approach. The only specific mention of realisation is in relation to development costs where the phrase "future benefits expected to be realized" appears(3450.31).

Provision for doubtful debts

The recommendation refers to estimating probable loss and the problems of estimation but gives no reason for making a provision. The requirement is that the provision should be the "best possible estimate of the probable loss on accounts then outstanding" (para 12).

Contingencies

There is a mention of uncertainty which will ultimately be resolved. Contingencies are classified as:

Likely (where the chance of occurrence is high);
Unlikely (where the chance of occurrence is lower);and
Not determinable.

If "likely" then the liability is accrued. If "unlikely" or "not determinable" then disclosure is the preferred route.

The Canadian recommendation is similar to that of the US in that where no amount within a range is a better estimate that any other, the minimum in the range should be accrued (3290.13). This leads to a possibly unconservative approach to some contingent liabilities.

Contingent gains are not accrued because this could result in recognition of revenue which might never be realised (3290.18). Care should be exercised in disclosure of contingent gains in order to avoid a misleading implication as to the likelihood of realisation (3290).

Fixed assets

"The writing-up of fixed assets should not occur in ordinary circumstances."(3060.01). No reason is given for this rule.

Pension costs and obligations

One of the more recent pronouncements of the Research Committee (April 1986), this publication is distinguished by a more forthcoming approach:

"The Committee has concluded that accrued benefit methods provide the best economic measure of the cost of pension benefits to be recognized in each period because-
(a) the purpose of defined benefit pension plans is to provide benefits in exchange for employees' services rendered; and
(b) accrued benefit methods allocate benefits in determining the cost of pension benefits and therefore provide a better matching in each period of the cost of services to be rendered." (3460.21)

Although this does not help in elucidating the attitude of the Research Committee towards prudence and realisation, it does confirm the importance attached to the matching concept.

Investment tax credits

Using the investment tax credit to reduce the cost of the asset acquired is justified in terms of timing (3805.08), but accruing the tax credit when the enterprise has made the qualifying expenditure is justified provided there is "reasonable assurance that the credits will be realized"(3805.16)

Conceptual framework

The most recent evidence of the Canadian attitude to prudence is contained in the draft concepts statement of 1988 (CICA 1988). Under the heading of "qualitative characteristics" is included "neutrality" which is defined as "freedom from bias". In the context of neutrality, conservatism is discussed as follows:

"The neutrality of financial statements is affected in an acceptable manner by the use of conservatism in making judgments when conditions of uncertainty exist. When uncertainty exists, estimates of a conservative nature attempt to ensure net assets or net income are not overstated. However, conservatism does not encompass the deliberate understatement of net assets or net income." (para 15(c)(iii)

This suggests a prescriptive approach to dealing with uncertainty, by prescribing valuation rules which will achieve the aim of ensuring no overstatement. It does not indicate a view that uncertainty might be dealt with by providing more information on the basis of a neutral valuation. That attitude is confirmed in the foregoing analysis of the wording of Canadian standards.

<u>Summary</u>

A phrase which reappears in several pronouncements in the CICA Handbook is "The Research Committee is of the opinion that...". The lack of stated reasons for these opinions and the lack of any clear statement of accounting principles on which the opinions were based makes it difficult to determine the role of prudence in Canadian standard-setting.

Where reasoning is provided, it is primarily by way of invoking the matching concept. There is some evidence of a prudent attitude modifying the matching process in circumstances of uncertainty. The following tabulations categorise the topics presented in this section.

<u>Accruals is the dominant concept - no reason given for its use</u>

Equity accounting
Tax timing differences

<u>Matching concept used</u>

<u>Topic</u>	<u>Matching process cited</u>
government assistance	benefits against income
tax timing differences	costs and revenues
inventory valuation	fairest matching of cost against revenue
research and development	benefits against income
pension costs and obligations	costs against services rendered

<u>Matching concept modified by a prudent attitude</u>

<u>Topic</u>	<u>Evidence of a prudent attitude</u>
tax losses carried forward	virtual certainty of recovery
research and development	reasonable expectation of
commercial success	
contingent gains	might never be realised
fixed assets: no write-up	none given
investment tax credits	reasonable assurance credits will be realised

<u>Reference to uncertainty in measurement</u>

provision for doubtful debts
contingencies

Conclusions

1. There is no Canadian standard directly comparable to the UK SSAP 2.

2. There is a lack of reasoning provided for recommended accounting practice, particularly in the earlier Canadian pronouncements. Consequently there is some difficulty for the researcher in establishing the role of prudence in Canadian standard-setting.

3. To the extent that reasoning is provided, it is primarily in terms of the matching concept. Prudence is an attitude modifying the matching concept.

4. The evidence that a prudent attitude is required is provided by different phrases such as "virtual certainty", "reasonable expectation" and "reasonable assurance".

5. The prudent attitude is associated with "realisation" of assets in the cases of the benefit of research and development expenditure, contingent gains and investment tax credits. No indication is provided of what "realisation" requires.

6. Uncertainty in measurement is identified as a problem in the case of provision for doubtful debts and in the case of contingencies. In the former case it is dealt with by requiring the best possible estimate. In the latter case it is dealt with by categorisation of levels of uncertainty followed by prescription of an accounting treatment for each.

7. From the draft conceptual framework it is clear that the attitude to uncertainty is one of prescribing recognition and measurement rules which keep to the side of caution, while condemning excessive understatement.

New Zealand

Definition of prudence

SSAP 1 (revised 1983) is entitled "Determination and Disclosure of Accounting Policies". It provides no definite set of accounting concepts within the document but concentrates rather on the disclosure of general policies and particular accounting policies applied by an organisation. General accounting policies relate to the measurement base and the matching of expenses and revenue. Particular accounting policies may be selected from a range of alternatives but in making the selection, certain "important criteria" should be considered (para. 4.8). These important criteria are substance over form, relevance, consistency and prudence.

"Prudence" is enlarged upon:-

> "The uncertainties which surround many business transactions should be recognised by the application of prudence in the selection of the particular accounting policies used."

The standard requires that users shall be made aware of general accounting policies and particular accounting policies followed, but does not require any specific statement that prudence has been applied.

The original version of SSAP 1 (1974) made no mention of prudence or conservatism. It did contain a list of General Accounting Principles appropriate for measurement and reporting of profit under historical cost accounting, but these did not include prudence. The individual Statements of Standard Accounting Principle will be summarised, in those cases where prudence has some role, and they will then be analysed under the headings:

(i) "Prudence" apparently taking second place to the accruals concept;

(ii) Prudence as a modifying influence on accruals;

(iii) Prudence applied by reference to "reasonable certainty".

Analysis of individual standards

SSAP 2 Accounting for Associated Companies (Equity Accounting)(1974)

The justification for applying equity accounting is given in terms of providing adequate information and of providing an earnings figure from which the most relevant earnings ratios may be calculated (para. 2.3). It is also used "to show more truly and fairly the return on total shareholders' funds" (para. 2.5)

Prudence is not mentioned and there are no specific warnings about the risks of applying equity accounting. The only point at which prudence perhaps plays a part is in the recommended treatment of losses made by an associate. It is recommended that the equity method should be discontinued while the associate is making exceptional losses and only resumed after the share of profits equals the share of losses not recognised during the suspension.

SSAP 3 Accounting for depreciation (1984)

The reasons given for recommending a depreciation charge is to "allocate as fairly as possible" to the period expected to benefit from use of the asset (para 5.2). Prudence is not mentioned.

SSAP 4 Valuation and presentation of inventories in the context of the Historical Cost system (1975)

The standard recommends application of the "lower of cost or net realisable value" rule but gives no reason. The standard is, however, under revision and ED33 (1985) is more forthcoming in explanation:-

> "If there is no reasonable expectation of sufficient future revenue to cover cost incurred (e.g. as a result of deterioration, obsolescence or a change in demand), the irrecoverable cost should be charged to revenue in the period under review (in accordance with SSAP 11 'Expenditures carried forward to future accounting periods'). Thus, inventories need to be stated at cost, or, if lower, at net realisable value." (para. 4.2)

Earlier in this same paragraph the matching concept is mentioned.

The write-down to net realisable value is justified in para. 4.3 in terms of the matching of cost and revenues. The "matching" relates the fall in value to the time period in which it occurred.

However paragraph 4.5 comes back to the prudence concept:

> "The concept of prudence requires losses to be recognised as they occur. Accordingly it is appropriate to write inventories down to net realisable value if lower than cost."

Further evidence of the application of prudence is seen in para. 4.8:

> "To compare the total realisable value of inventories with total cost could result in an unacceptable netting of losses incurred against unrealised profits."

and in para. 4.21:

> "The practice of writing inventories down below cost to net realisable value accords with the principle that current assets should not be carried in excess of amounts expected to be realised."

Para. 4.24 warns against excessive conservatism by expressing disapproval of the undisclosed reserves which result from writedowns below historical cost, such as those where an arbitrary percentage deduction is applied to historical cost.

<u>SSAP 5 Accounting for events subsequent to balance date</u> (1985)

The main requirement of presenting a "true and fair view" is emphasised in para. 1.2. The list of "adjustable events" provided in para. 5.1 could be said to include items which help to resolve uncertainty about information in the financial statements, but there is no specific mention of applying prudence.

<u>SSAP 11 Expenditure carried forward to future accounting periods</u> (1979)

Para. 3.1 sets out the problem of uncertainty which surrounds expenditures incurred in one time period with the intention of providing benefit to subsequent periods. Prudence is clearly a consideration here:

"Accounting policies to be followed in respect of such expenditures must have regard to fundamental accounting concepts, including:

(a) the matching concept by which expenses are accrued, matched with revenue and dealt with in the period to which they relate; and

(b) the prudence concept which requires that expenses should be charged in the period in which they arise, unless the relationship to future benefits can be established with reasonable certainty.

Where the matching concept is inconsistent with the prudence concept the latter will prevail." (para. 3.2)

Further reference to reasonable certainty is made in para. 3.4:

"In determining the deferral of expenditures it is necessary to consider
(a) whether it is reasonably certain that deferred expenditures will be covered by future related benefits; and if so
(b) the basis of allocation of the expenditures between accounting periods."

SSAP 12 Accounting for inter-period allocation of Income Tax (1980)

The main justification for reporting deferred tax timing differences is given as the matching concept (para 4.4). It is permitted to exclude timing differences for tax effects which can be demonstrated with reasonable probability to continue in the future (para. 4.10). The conditions which establish this "reasonable probability" are:

(a) that the going-concern concept applies;

(b) reasonable evidence that there will be no liability, for at least three to five years ahead; and

(c) no indication that the situation will change.

Prudence is applied to reporting debit balances:

"Accounting for timing differences may result in a debit balance in the deferred tax account. Prudence requires that such a debit balance should be retained only to the extent that there is reasonable certainty of its recovery in future periods." (para. 4.15)

SSAP 13 Accounting for research and development activities (1981)

The concept of comparability is invoked to justify separating research/

research and development costs from other costs and to justify distinguishing research cost from development cost (para. 4.2). Reference is made to expected future benefits (para. 4.6) which are usually too uncertain. This uncertainty will result in research and development costs being expensed as incurred. However the uncertainty may be significantly reduced if certain conditions are satisfied, in which case costs may be deferred to a future period (para. 4.7).

SSAP 14 Accounting for profit on construction contracts (1982)

"Calculation of profit to date by reference to the stage of completion reached is subject to a risk of error in making estimates. For this reason, profit should not be recognised in the financial statements unless the outcome of the contract can be reliably estimated." (para. 3.18)

How this required degree of reliability may be attained is explained in detail in paras. 3.19 to 3.21.

SSAP 15 Accounting for contingencies (1982)

Accrual of contingent gains is not permitted because to do so would recognise revenue which may never be realised (para. 4.11). A note of disclosure is permitted if there is a probability of realisation, but the disclosure should avoid misleading users as to the likelihood of realisation (para. 4.13). Where contingent losses are disclosed, information should be provided which includes the uncertain factors which may affect the outcome of the contingency (para. 5.4). The distinction between accruing a contingent loss and merely providing notes to the accounts is made in terms of expectation of future events confirming the loss and of ability to make a reasonable estimate of the amount of the resulting loss (para. 5.1).

SSAP 16 Accounting for government grants (1984)

The treatment recommended is similar to that of UK SSAP 4 and the reason for favouring the accruals approach is that it is desirable to give an indication of the extent to which the enterprise has benefited from such assistance during the reporting period (para. 4.1).

SSAP 17 Accounting for investment properties by property investment companies (1985)

This differs from UK SSAP 19 in two significant respects. It confines its attention to property investment companies, whereas UK SSAP 19 applies to any investment properties, and it permits inclusion in the profit and loss account of the unrealised appreciation in value of the investment properties.

Prudence is mentioned twice; once in relation to disclosure and once in relation to the objectivity of the valuation:

> "It is recognised that changes in value have not been realised, and therefore it is considered prudent to require such changes in value to be distinguished from realised gains and losses. Accordingly the standard in this Statement requires that the change in value should be disclosed in the profit and loss account following profit after extraordinary items, and clearly identified as unrealised." (para. 4.8)

In relation to objectivity of valuation, para 4.9 says:

> "This requirement is in recognition of the fact that unrealised gains and losses have not been tested in the market place and that prudence should be exercised in establishing amounts to be included in profit and loss account."

The Commentary issued with SSAP 17 shows how a prudent attitude was adopted first of all in ensuring safeguards against reporting different qualities of unrealised gains. These safeguards were: clear identification of unrealised gains; annual independent valuations; and a narrow category of enterprises allowed to apply this accounting practice. The exposure draft ED 29 applied to all investment properties, irrespective of who held them. SSAP 17 was said in the Commentary to have introduced "a greater degree of conservatism" than was shown in ED 29.

There is one exposure draft in existence at present which is not strictly classed as part of a scheme of Accounting Standards but will be included here because it raises the notion of disclosure as a means of dealing with uncertainty.

<u>Accounting for extractive industries</u> Technical Practice Aid No. 6 ED/TPA 6 (1986)

The high degree of risk and uncertainty which characterise the extractive industries is mentioned at the start of the document (para. 1.4) as dictating the need for prudence in accounting for the extractive industries. In the light of these risks and uncertainties it is considered that pre-production costs should be accounted for in a conservative and prudent manner (para. 3.10) and it is concluded that the successful efforts method is a conservative approach which achieves matching as well.

Because of the risks and uncertainties involved, a high standard of disclosure is also required in order to present a true and fair view (para. 3.38).

Summary

Accruals take precedence over prudence

The spirit of SSAP 1 is to apply the matching concept as a fundamental accounting concept and to be able to disclose how the matching concept has been applied. Reasoning in terms of the matching concept runs through many of the New Zealand SSAPs as the prime justification for the recommended accounting treatment and prudence comes in only at a second stage in selecting particular accounting policies to meet particular situations.

Matching, or accruals, remains the dominant influence in the following cases:-

Standard	Reason given
SSAP 2 (equity accounting)	adequate information, relevant earnings
SSAP 14 (construction contracts)	none given
SSAP 16 (government grants)	benefit of assistance
SSAP 17 (investment properties)	bring order where a variety of practices exists

Prudence as a modifying influence on accruals

Specific evidence that prudence is applied to modify the matching or accruals concept is seen in:-

ED 33 (inventory valuation)
SSAP 5 (post balance sheet events)
SSAP 12 (future tax benefits)
SSAP 13 (research and development expenditure)

Prudence seen as establishing "reasonable certainty"

Prudence is seen as establishing reasonable certainty as to:

expected realisation of assets, expected revenue	ED 33
outcome of events	SSAP 5
future related benefits	SSAP 11
going concern, no liability, no change in situation	SSAP 12
future benefits	SSAP 13
outcome of a contract	SSAP 14
probability of realisation)	
expectation of future events confirming a loss)	SSAP 15
valuation of assets	SSAP 17

Conclusions

1. The New Zealand standard SSAP 1, revised in 1983, is markedly different from its predecessor. It does not specify a set of accounting principles to be applied generally but it does mention prudence, which did not appear in the 1974 version. The standard also differs from the UK SSAP 2 and the Australian AAS 6. They both set out some general accounting principles although while UK SSAP 2 regards prudence as fundamental, AAS 6 regards it only as an "important consideration".

New Zealand SSAP 1 makes prudence an "important criterion" but applies prudence differently from AAS 6. SSAP 1 requires prudence to be used in selecting particular accounting policies. This implies that the policies already exist somewhere else and a selection is made applying the criteria specified. AAS 6 requires prudence to govern the determination and application of accounting policies. Although the end result of what happens in practice is largely similar, these standards do display a difference of emphasis. The Australian view would suggest that prudence comes in at an earlier stage, when policies are first determined, so that they could not exist unless they were prudent. Both these approaches differ from that of UK SSAP 2 where prudence is given a specific role of not anticipating profit but providing for all known losses.

2./

2. The detailed recommendations of the New Zealand standards, particularly those written in the 1970's, seem to mirror closely the recommendations of corresponding UK standards. Those which have been written or revised more recently do show a more independent attitude, particularly SSAP 1 and SSAP 17. The more recent standards and exposure drafts provide more attempted justification of the recommended practice and base this justification as far as possible on the application of the matching concept.

3. The only document which shows clear emphasis of prudence from the outset is ED/TR6 on the extractive industries. This resembles the Australian AAS 7 in recommending a high standard of disclosure as one means of dealing with uncertainty

4. The point at which the New Zealand approach does come close to UK SSAP 2 on prudence is in SSAP 11 where it is specifically stated that prudence prevails where there is any conflict of prudence with accruals.

5. "Conservatism" as such is not mentioned in SSAP 1 but does appear in the Commentary to SSAP 17 which makes reference to the degree of conservatism present in SSAP 17. Conservatism is also mentioned in ED/TR6 when the "successful efforts" method is justified in terms of conservatism and prudence. This implies that they are not the same in meaning, although there is no indication of how they differ. The reference to "excessive conservatism" in ED 33 is linked to disapproval of an unjustified bias towards low inventory valuation, which suggests that conservatism is associated with a bias to understatement.

6. The trend towards more explanation of recommended policies is useful in providing an insight as to the reasoning used, but also results in some confusion. In ED 33 the "lower of cost or net realisable value" rule is justified in at least three different ways in different places, using matching, prudence and realisation of assets.

West Germany

In 1985 the company law of West Germany was amended to enact the Fourth Directive. Although the "true and fair view" was established as an overriding principle, it has been suggested (Nobes 1986) that this would lead to little practical change from the situation under the 1965 legislation. Although accruals accounting was given some extra weight in allowing provisions for items such as deferred taxes and repairs, historical cost remains the basis of valuation. Lower valuations for tax purposes are still permitted.

The valuation rules to be applied by public companies in Germany under the Aktiengesetz 1965 ('Aktg 1965') made no mention of prudence but did include effective prohibition of secret reserves. Prior to 1965 undervaluation of assets and over-depreciation were permissible since the law imposed an upper limit but no lower limit to asset values. The statute of 1965 prescribed mandatory valuation rules for assets, such as valuing fixed assets at cost less depreciation, current assets at the lower of cost or market value, goodwill to be amortised over a specified period.

The profit and loss account of a public company shows the amount of profit available for distribution to stockholders. German law differs from UK law in that it is the stockholders who decide on the dividend distribution, based on the reported distributable profit. The management of the German public company has some ability to regulate distributions by making transfers to reserves prior to reporting distributable profit, but since a maximum of 50% of net earnings may be allocated to free reserves, 50% remains available to stockholders for distribution if they so decide.

It is interesting/

It is interesting to compare the history of statutory distribution rules in Germany with those of the UK. Prior to 1937, German stockholders adopted the financial statements and made the dividend decision. After 1937, management adopted the financial statements but stockholders retained the right to decide on dividend. The right was of limited value because management could transfer all profit to reserves leaving nil profit for distribution. The 1965 Act redressed the balance somewhat by limiting the extent of transfers to reserves by management. (Ercklentz 1979, Chapter X).

UK shareholders today are in a position closer to that of the German stockholders between 1937 and 1965. UK company directors adopt the financial statements and make a recommendation as to dividend. If they recommend no dividend they have in effect transferred all available profit to reserves. The shareholders cannot change such a decision by the directors.

The profit reported to German stockholders has an immediate relevance to the dividend policy of the company and management must leave the dividend decision to stockholders. In the UK, management retains control over distribution and the reported profit is primarily an indication of the performance of the company over the accounting period.

Beeny (1975) listed a number of theoretical concepts involved in the principles of proper accounting in Germany (page 14). These include:-

> "Realisationsprinzip (realisation principle). The principle that income must be realised before profit can be taken limits the accrual concept. An essential part of this principle is the concept of valuing at cost (Anschaffungswertprinzip) and never above.
>
> Imparitatsprinzip (inequality principle). While profits must not be anticipated, provision must be made in the accounts for any potential losses in the future.
>
> Vorsicht (prudence). This idea is especially emphasised in Germany and finds its expression in particular in very adequate provisions. 'According to the principle of prudence provisions are to be made too high rather than too low' says Heinen, author of one text book. An essential element of prudence is the oft-quoted Niederstwertprinzip (lowest value principle)."

Despite this expression of prudence in terms of adequate provisions, there were under the Aktg 1965 no provisions for deferred taxes or for items such as repairs and renewals. This probably reflects the influence of tax law on accounting practice.

The concept of prudence as expressed by Niehus (1973) is:
"The financial position shall not be presented too favourably."

The relative significance of the true and fair "override" in the German view is also given by Niehus (1979):

> "...one cannot deny that the Fourth Directive rules on the accounting provisions in such a detail that it is difficult to imagine an actual case where such a deviation would become necessary."

That view was confirmed by Busse von Colbe (1984) in holding that "true and fair" could have a different meaning in West Germany because of the different juridical tradition and because of a different socio-economic environment.

With this approach it would be difficult to justify in the UK any departure from the prudence concept as embodied in the Companies Act 1985. Niehus' view was a close parallel to that shown more recently by the UK Department of Trade in the Argyll Foods case (Accountancy 1981 and 1982) and is in contrast to Nobes' statement (1980) that:

> "The governments of the United Kingdom, the Netherlands and Ireland successfully proposed that the 'fair' presentation notion should predominate."

Although the principle of the "true and fair" override is established, the extent to which it may be applied is far from clear.

Machärzina (1981) expressed the opinion that:-

> "One might summarise the difference between German and Anglo-Saxon principles by saying that <u>conservatism</u> is stronger and <u>accruals</u> weaker in German accounting."

He also pointed out/

He also pointed out that it was still possible to create secret reserves, either by taking advantage of certain options in the valuation regulations, or simply by applying the legal requirements such as adherence to historical cost.
He commented:-

> "The possibility of creating secret reserves by using the whole range of ultra-conservative valuation is compensated for to a certain extent by the requirement to disclose valuation and depreciation methods in the management report."

Nobes (1984) illustrated the more stringent variety of conservatism in Germany by quoting from the accounting policies of AEG-Telefunken, which repeatedly emphasise the making of provisions and allowing for all risks in arriving at asset valuations.

The relative strength of the banks as financiers of companies and the relative lack of Stock Exchange reporting requirements are cited by Oldham (1987) as explaining the creditor-orientation of German accounting statements prior to the 1985 Act.

Implementation of the Fourth and Seventh Directives

From quotes already given on the meaning of "true and fair" it is clear that the implementation of the Fourth Directive in the 1985 legislation in West Germany is unlikely to have had a major change on the application of "true and fair" or of conservatism, beyond outlawing the more obvious examples of deliberate understatement. So far as the Seventh Directive is concerned, it will introduce the method of equity accounting for associated companies. Wysocki (1988) comments that until that time the use of the equity method had been rejected with the argument that it would lead to "a piercing of the historic cost principle". Wysocki further confirms the continuing conservatism of West German practice by pointing out that the legislation would allow for future incorporation of lower value adjustments for tax purposes in the group consolidated accounts, although neither reasons of tax law nor commercial law could be adduced for this (Art 29 para 5, section 308 para 3, Commercial Code).

Conclusions

German "conservatism" differs from UK "prudence" in the following respects:-

1. "Conservatism" in Germany means selecting the lowest value where alternatives exist. This selection generally results in the application of historical cost accounting, with additional provisions against asset values where deemed necessary.

2. The valuation rules specified by law in Germany preserve this kind of conservatism with regard to asset values. Although "secret reserves" as such are not permitted for public companies, the spirit of conservatism associated with secret reserves remains.

3. "Realisation" and the "inequality principle" are regarded as subdivisions of the conservatism principle.

4. While measurement rules are clearly conservative, German law seeks to ensure that there is adequate disclosure of asset valuation and depreciation methods. This is seen as compensating to some extent for the potential existence of secret reserves.

5. The greater strength of German conservatism has been attributed to a different financial system; the importance of the banks in particular means lack of interest in the "fair view" approach.

6. It is unlikely that implementation of the Fourth and Seventh Directives has had any significant impact on the underlying conservatism of West German accounting practice (Nobes 1986) partly because of different interpretation in the light of different traditions and partly because detailed implementation is regulated outwith the statute, as is the case with UK SSAPs.

France

The Fourth Directive was enacted in France through the Plan comptable general, adopted in 1982 and effective from 1984. The concept of "true and fair" introduced a criterion "completely alien to French jurisprudence" (Scheid and Standish 1986).

The close link between tax accounts and financial accounts, dating back to 1965, has a strong impact on the conservatism of French acounting practice. Accounting rules as described by Beeny (1976) instanced conservatism at every turn. The revaluations of fixed assets allowed under tax law and therefore tax free were the only revaluations evidenced because any other revaluations would have been taxed as trading profits. Stock valuation, although stated to be at cost or market price if lower, would not have included fixed production overheads as in UK practice. Provisions were found for risks and for charges to be spread over several accounting periods. Beeny instanced cases such as Compagnie Francaise and Roussel-Uclaf where provisions in the French domestic accounts would be transferred to shareholders' funds in the more internationally-oriented consolidated balance sheet. He again related the domestic practice to tax rules.

The 1982 Plan continued previous practice of ignoring deferred taxation and recognising tax liabilities only as assessed by the tax authorities, although some major French companies will now follow international standards on deferred tax. The Plan did not allow for capitalisation of leases and did not allow for full recognition of retirement obligations. This was attributed by Scheid and Standish to a fear on the part of the tax authorities as to the impact of charges against taxable income.

One area where the French authorities did show signs of moving away from a conservative approach was in permitting consolidation. This was not achieved through the Plan but by Directive of 1985. Because the law is outwith the Plan, French companies have more freedom in their consolidated accounts to use US generally accepted accounting principles. Scheid and Standish cite examples of capitalisation of leases, revaluation of fixed assets, taking potential exchange gains and losses to profit and loss account, and the use of LIFO. None of these is permissible for individual companies under the Plan. A possible area for research, although outwith the scope of this thesis, would be to examine the extent to which major French companies have adopted US or UK accounting policies in their consolidated accounts which are less conservative than those prescribed by the Plan.

Nobes (1988) emphasised the effect of tax legislation on accounting practice in France. Revaluation of fixed assets is not practised except when prescribed by the Finance Acts, as in 1978 and 1979. Even then, depreciation was effectively charged on a historical cost basis through making transfers from revaluation reserve to profit and loss account each year. The revaluation thus had a neutral effect on profit and tax. Nobes, in several of his commentaries, equates a reduction in the accruals concept with a reduction in fairness. That may indicate a preconceived notion of fairness. The French phrase is "image fidele" which may be closer in sentiment to the US "presents fairly" than to the UK "true and fair view". Nobes pointed out (1988 p.44) that the requirement to be fair has been met largely by further notes of disclosure, both in France and West Germany. Nobes, in the same work, cites the example of Total Oil which, in the 1979 UK version of its annual report, notes that the accounts contain a provision for contingencies which in the UK would be classed as a reserve. That is the type of anecdotal evidence which demonstrates the French conservatism.

Any commentary describing accounting practice in France (see for example Collins 1984 or Parker 1985) dwells predominantly on the presentation aspects.

Although the true and fair view has been introduced in the legislation (discussed by Pham 1984) it seems unlikely to have changed the strong level of conservatism identified by Gray (1980). He analysed accounting statements of the 1970's when the French accounting and valuation rules were highly conservative, as described by Beeny (1976). Pham identified two broad categories of interpretation of the concept of true and fair. The "extremists" would, if ultra-conservative, see the new true and fair as merely a change of wording, but not of meaning, from the previous "regular and sincere". There was scope within "sincere" for excessive conservatism as a result of diligent care. The moderates might on the one hand see the valuation rules as remaining substantially similar but the true and fair view provided by further note disclosure. They might on the other hand see some scope for extending true and fair from the notes into the financial statements. Pham ended with a quotation "You cannot change the society by decree" which suggested that he did not see any major departure from the traditional conservatism of the French approach.

The lack of progress in developing less conservative valuation practices is confirmed by a report prepared for the EC Commission (1986) which contains the following comment:

> "The Community has largely succeeded in its overall objective of providing the basis for reconciling some of the differences in approach, between the legal and accounting systems which allow flexibility and the exercise of judgment (mainly the UK and Netherlands), and the legalistic prescriptive systems which prevail in other member states. It had (sic) also achieved a considerable degree of standardisation of disclosure and format. This inevitably meant having to accept compromises of both a technical and an economic nature. Thus, many options and derogations are still available to the national legislators to give effect to the provisions of the Fourth Directive. In particular, standardisation with respect to valuation was not attempted - or was even deliberately avoided." (page 13)

Conclusions

French "conservatism" differs from UK "prudence" in the following respects:

1. "Conservatism" in France means selecting lower asset values and making provision for uncertainties in such a way as to reduce profit. This results in historical cost accounting with extra provisions against cost where deemed necessary.

2. The effect of the Fourth Directive has been to increase disclosure rather than make any fundamental change to the valuation rules.

3. The greater strength of French conservatism has been attributed to the close links between the tax system and financial statements.

4. The translation of "true and fair" as "image fidele" leaves considerable scope for interpretation which could lead to a continuation of conservative measurement policies.

6.9.1

Netherlands

The Act to implement the Fourth Directive was introduced in 1984. A full description in English is provided by Peat Marwick Nederland (1985) and the following information derives from that source.

Under the heading of "Valuation policies" are set out the fundamental principles of prudence, continuity, allocation to periods, consistency, separate disclosure of valuation and the independence principle.

The translation of the prudence concept is as follows:

> "In applying these policies, prudence shall be observed. Profits shall only be shown to the extent that they have been realized on the balance sheet date. Losses and risks originating prior to the end of the financial year shall be taken into account if they have become known prior to the drawing up of the annual accounts." (Article 384(2))

The Netherlands legislation is similar to that of the UK in not defining the term "realization" but leaving it to the accounting profession. The Peat Marwick guide does not report on any progress made by the accounting profession in providing a definition of realisation.

There is some evidence of greater conservatism in the Netherlands law. For example, goodwill must be written off over a maximum of five years, although it would appear that the write-off may be against reserves. Netherlands companies provide in full for deferred taxation, as opposed to the partial provision allowed in the UK.

Ashton (1981) in analysing major influences which had permitted the development of replacement cost accounting in the Netherlands, suggested that:

> "The information contained in the annual accounts has not been restricted to ensuring that management has not defrauded the shareholders but has taken a wider and possibly more important role, that of providing the means by which economic resources are allocated to the most efficient firms."(p.36)

However, in a commentary on the legislative position in the early 1980's, prior to implementation of the Fourth Directive, Ashton noted that, based on the principle of prudence, assets were undervalued in the balance sheet, or liabilities overvalued, and such valuations could be accepted as "goed koopmansgebruik" or generally accepted accounting principles. Thus the existence of secret reserves was still a possibility until the advent of the 1984 Act which contained principles more strongly disouraging.

Conclusions

1. The implementation of the Fourth Directive in the Netherlands has made use of wording describing the prudence concept which is similar to that of UK law.

2. Prior to the implementation of the Netherlands Act of 1984, secret reserves could still exist within the scope of generally accepted accounting principles. Thus despite the apparently liberal approach in permitting current cost accounting, Netherlands accounting practice did hitherto contain elements of Continental European conservatism.

3. The accounting principles of the Netherlands are quite clearly independent of taxation influences which would have a conservative influence.

Assessment of relative prudence

The following assessment of relative prudence is based on a comparison of accounting practice in the UK and eight other countries covering the European and UK/USA spheres of influence. The information is taken from a survey by Gray et al (1984) which provided a report on accounting practice, the statutory or professional requirements where those existed, and a survey of accounting practice based on published financial accounting statements. The assessment made here is based principally on the statutory and professional requirements but makes some use of the survey of practice where statutory or professional guidance was absent. Taking selected topics in accounting practice, the countries are ranked by an assessment of the prudence of their internal law or professional recommendations. The rankings are then added to give a total "prudence rating" across all the topics.

Countries selected

Australia	Belgium	France	Germany	Italy
New Zealand	Spain	United Kingdom	United States	

(Netherlands and Canada would also be useful inclusions but data was not available from the survey)

Accounting topics

A. Treatment of research and development expenditure
B. Reporting profits on long-term contract work-in-progress
C. Providing for losses on long-term contract work-in-progress
D. Pension costs
E. Deferred taxation
F. Valuation of fixed assets
G. Accounting for associated companies
H. Accounting for goodwill

The section concludes with analysis of the factors which lead to relatively different degrees of conservatism, again drawing on the survey by Gray et al but also referring to ideas suggested by Nobes and more recently by Gray.

Note/

Note on accounting topics selected for consideration

The topics selected are all matters of income and asset measurement which are included in the survey by Gray et al. It would be interesting to include depreciation policy which is cited by Nobes (1986) as a matter on which differing levels of conservatism may be observed. He cites the example of AEG-Telefunken where "special provisions" for depreciation are made. This particular effect cannot be tested using Gray et al because the question of special provision for depreciation was not covered.

The survey was carried out during 1982 and is based on returns by offices of Deloitte Haskins and Sells giving their interpretation of relevant current pronouncements as at 1 January 1982. Some of the findings are therefore to be modified in the light of subsequent legislation or accounting standards but the exercise remains a valid analysis of the situation at a point where the Fourth Directive was beginning to influence European accounting practice, or in some cases was being resisted.

Rankings

A. Treatment of research and development expenditure

Ranking	Country	Reason for ranking
1	(Germany	Write-off required by law in all cases
	(USA	Write-off required by FAS2 in all cases
2	France	Write-off recommended by law
3	(UK	(Circumstances of write-off/deferral specified,
	(New Zealand	(disclosure of deferred amount required
4	(Australia	(Circumstances of write-off/deferral specified
	(Belgium	(disclosure of deferred amount may be made
5	Italy	No regulation on write-off/deferral, but must disclose deferral
6	Spain	No clear regulations, no requirement for disclosure

Comment/

Comment The most conservative treatment is strict write-off. In practice the situation may be less clear, taking as an example the UK trend towards "off-balance sheet" companies carrying out the research activity of a group in order to convert an expense into a debtor.

B. Reporting profits on long-term contract work-in-progress

Ranking	Country	Reason for ranking
1	(Germany (Spain	(Dominant practice is to report profit on (completion of contract
2	(Australia (France	(Approximately equal distribution of (reporting on completion and accruing a (proportion of profit based on work done (to date
3	(USA (Belgium (Italy	(Dominant practice is to report profit on (the percentage-of-completion basis
4	UK	(Percentage-of-completion is the normal (requirement
5	New Zealand	(Awaiting completion not permitted, percentage-of-completion required.

Comment There is a clear conflict between the prudence concept and the accruals concept in dealing with profits on long-term contracts. From the viewpoint of establishing certainty of outcome, reporting profit on completion of the contract is a "safe" practice but it leaves understated or undisclosed asset values so far as the balance sheet is concerned. It also means that profit is not an indication of performance during the year.

USA could be ranked ahead of Belgium and Italy because ARB 45 does specify the circumstances in which each method may be applied.

C. Providing for losses on long-term contract work-in-progress

Ranking	Country	Reason for ranking
1	Australia, Belgium, France, Germany, Italy, New Zealand, UK, USA	Provision is required by statute or professional pronouncement
2	Spain	Provision is permitted but dominant practice is to make provision

Comment There is less divergence of practice here because providing for losses satisfies both the accruals and the prudence concepts. It would be interesting to know about possible over-provision but that matter is not covered by the Gray et al survey.

D. Pension costs

1	USA	Charge to income must include current contribution and shortfall. Disclosure of charge required, disclosure of liability recommended, disclosure of plan assets and liabilities required
2	UK, Germany	No requirement to charge shortfall but liability must be disclosed
3	Australia, Belgium, France, Italy, New Zealand, Spain	Dominant practice not clear. No disclosure of liability

Comment This classification is now superseded by the UK SSAP 24 and the USA position has also changed. Gray et al relied on the USA FAS 36 whereas the relevant US standard is now FAS 87. Cook and Ward (1988) found that although in the initial stages of development FAS 87 contained proposals which would have been more prudent than SSAP 24 the final modified views of the FASB reduced the volatility of reported profit by allowing some element of smoothing. From their analysis it would appear that the USA could still be ranked as marginally more prudent than the UK but that both should be clearly distinguished from the rest of the list.

E. Deferred taxation

Ranking	Country	Reason for ranking
1	(USA (Australia	(Full provision required
2	(UK (New Zealand	(Partial provision required, full provision (not permitted in UK
3	(Belgium (France (Italy (Spain	(No clear rules, but dominant practice (is to make no provision
4	Germany	Law prohibits provision

Comment The prohibition in provision in Germany is a result of tax law. The full provision in the USA is one of the major causes of difference between UK and USA reported profit for those companies which report in both countries (see Chapter Eight).

F. Valuation of fixed assets

1	(France (Germany (USA	(Valuation above cost not permitted
2	(Australia (Belgium (Italy (Spain (UK (New Zealand	((Valuation above cost permitted, dominant (practice unclear from survey (((

Comment Valuation above cost is not permitted in France but periodic revaluations under the law are prescribed. As these are infrequent and are not cited elsewhere as an example of French liberalism in asset valuation, they have not been taken into account here.

G. Accounting for associated companies

Ranking	Country	Reason for ranking
1	(Germany (Spain	Equity accounting not permitted
2	(Italy (Belgium (Australia	(Equity accounting permitted but (low levels of practice
3	France	(Equity accounting recommended, (and is highly dominant practice
4	(UK (New Zealand (USA	(Equity accounting required and (is the dominant practice

Comment

Equity accounting lacks prudence in allowing a group to report in its profit and loss account profits of associates which are not realised so far as the group is concerned. The profits of the associate only become realised by the group when received in the form of dividends. Wilkins (1987) has commented on some of the aspects of equity accounting for groups which could be regarded as lacking prudence. In the light of Wilkins' paper the classification of Australia in the above table is probably wrong. He clearly puts Australia in the class of what he calls "Anglo-American" practice.

H. Accounting for goodwill

1	USA	(Amortisation of goodwill is required and (is the dominant practice
2	(France (Italy (Australia (New Zealand (Belgium	(Amortisation is permitted and is the (dominant practice
3	UK	(Write-off to reserves is permitted (and is the dominant practice
4	Germany	(Goodwill is carried forward until the (subsidiary is disposed of
Not ranked	Spain	information not available

Comment Amortisation through profit and loss account is regarded as the more prudent action because it shows the cost of goodwill flowing through profit and loss account and also reduces the asset value in the balance sheet with the passage of time. The UK practice of writing off direct to reserves could be regarded as prudent from the balance sheet asset point of view but allows a cost to bypass the profit and loss account. This write-off, combined with the mis-use of the "fair value" approach to valuation has led to imprudent practice with regard to future profit reporting in the UK (see comment on SSAP 22, Chapter Five). The German practice, prescribed by regulation, is least prudent from both the balance sheet and the profit and loss account viewpoint.

Summary

The rankings may be summarised as follows:-

Table I

Accounting practice	A	B	C	D	E	F	G	Total	Overall ranking
Country									
Australia	4	2	1	3	1	2	2	15	3
Belgium	4	3	1	3	3	2	2	18	5
France	2	2	1	3	3	1	3	15	3
Germany	1	1	1	2	4	1	1	11	1
Italy	5	3	1	3	3	2	2	19	8
New Zealand	3	5	1	3	2	2	4	20	9
Spain	6	1	2	3	3	2	1	18	5
UK	3	4	1	2	2	2	4	18	5
USA	1	3	1	1	1	1	4	12	2

Note: (1) Amortisation of goodwill is not included because of the lack of data on Spain.

(2) Since deferred Tax hardly exists in Germany, it is probably misleading to give a "4" score for not accounting for it. The fact that the "4" score in column E is out of line with the other scores for Germany confirms this view. If a blank is inserted, then the ranking of Germany as the lowest score is confirmed more strongly.

Comment on Table 1

Nobes (1984) has pointed out the limitations of a classification exercise of this type. It is based on qualitative survey data which was not provided with such a classification exercise in mind. He also develops more sophisticated methods of quantifying the scores.

In the case of the survey used here, it is frequently difficult to reconcile the "dominant practice" data with the "required" or "permitted" treatment, so the survey data on dominant practices has been used only to a limited extent. As a result the classification of Italy and Spain is doubtful as there is a lack of prescribed rules and a lack of clarity as to what is done in practice.

The analysis would give a different order of ranking if prudence in relation to assets and income were to be separated from prudence in relation to liabilities and losses. Taking columns B, F and G only, the European countries would be placed as more prudent than the USA while UK and New Zealand would stand out as being relatively liberal with regard to prudent treatment of assets. The separation of UK and New Zealand increases if column H is added to B, F and G (ignoring Spain)

Nobes' own scoring of prudence is:-

Grade	
0 (Heavy conservatism)	Belgium, France, Germany, Italy, Japan, Spain and Sweden
1	-
2	Australia, Canada, New Zealand, Republic of Ireland, UK, USA
3 (Dominance of accruals)	Netherlands

The analysis presented in this section would confirm his "grade 0" grouping but would split "grade 2", separating Australia and the USA from New Zealand and the UK. One solution might be to class Australia and USA as the missing "grade 1" and leave UK and New Zealand as "Grade 2". Canada and the Republic of Ireland were not included in the Gray et al survey, but it is likely that Canada would fall in with the USA while the Republic or Ireland would fall in with the UK.

Nobes' classification is based on discussions with practitioners and observations on large and listed companies in the countries concerned. The Netherlands scores highest because of the strength of "fairness" in that country. This seems to imply a value judgment that conservatism must conflict with fairness, an opinion which would probably not be shared in Germany and France (see earlier sections on those two countries).

Nobes also points out that although prudence is not demanded by law (for example in France) that should not be taken to mean that accounting is less prudent in such a country.

Reasons for different approaches to conservatism

No account has been taken of the cultural, legal or economic differences between countries. For example, tax law rules the accounting practice of France, Belgium and Spain and has a considerable influence in Italy. It would not be surprising to find companies in those countries taking a conservative approach in order to minimise tax charges. Stock markets are weaker and bank finance stronger in continential Europe than in the UK.

Reasons cited by Nobes (1986) for the relatively conservative position in some European countries include the importance of taxation law and the importance of bankers. Conservatism is high in those countries where taxation law dictates financial reporting practice and is high where bankers dominate reporting with a view of "rock-bottom" safety being emphasised. Nobes identifies such influences as reducing the importance of the "fair" accruals convention which elsewhere would modify conservatism which he describes as a "traditional adversary of fairness."

Scoring of questions on possible reasons for conservatism

Gray et al, in their survey (1985) posed 12 questions relating to influences on accounting development. Some of these questions could be considered as explanatory factors in considering the relative conservatism of accounting practice in the countries surveyed. Taking a simple scoring system of the kind applied by Nobes (1984), the following table confirms his findings that there are two groups of countries; those which come under what he terms the "macro" approach and those which he terms the "micro" approach. The table has been constructed by setting the survey questions on the left-hand side and awarding a "score" on the right-hand side for the potential conservatism implied.

Questions/

Questions from Gray et al survey	Score awarded for this research project
1.1 In general, what is the attitude of business management to information disclosure and accounting standards?	1. Strongly against 2. Moderately against 3. Indifferent/moderately support
1.2 To what extent can it be said that the government keeps its intervention to a minimum, relying instead on self-regulation within the financial community?	1. High 2. Medium 3. Low (This classification is based on the presumption that government seeks to protect creditors and owners through conservatism)
1.3 Are different methods and rules applied to published financial reports compared to those required for tax purposes?	1. No 2. Yes
1.4 Do the professional accounting bodies set standards or guidelines relating to external financial reporting?	Not used. A professional body could set standards which are high in conservatism or it could set standards which emphasise accruals views.
1.5 To what extent does the profession advise the government on the subject of setting laws relating to external financial reporting?	Not used. See 1.4 above
1.6 Does the academic side of the profession influence the setting of standards relating to external financial reporting?	Not used. This would require some view as to whether or not academics are conservative
1.7 Is an audit required for private/ public/limited companies or government entities?	Not used. Auditors operate within predetermined rules. Their activities may lead to greater reliability but they would not be supporters or opponents of conservatism.

1.8	Are there any financial reporting requirements as a condition of listing on the Stock Exchange?	Not used. Stock Exchange requirements are primarily concerned with access to information rather than degree of conservatism
1.9	Are the country's external financial reporting practices influenced by any other particular country?	Not used. There clearly is a relative influence here and a refined ranking would incorporate a "cross-influence" factor.
1.10	Do any international accounting or non-accounting organisations influence external financial reporting?	1. EEC significant influence 2. No signficant influence
1.11	Assess the influence on external reporting practices of specific user groups as high/medium/low (list provided) - Tax authorities	1. High influence 2. Medium influence 3. Low influence
	- Banks and other lending agencies	1. High influence 2. Medium influence 3. Low influence (These are specific groups identified by Nobes(1986) as influencing conservatism. He contrasts equity investors as an influence for fairness but as their influence is generally classed as "low" by Gray et al they have not been included)
1.12	Is there a well-developed financial press, specifically commenting on reporting practices and qualified audit reports?	1. No 2. Yes (Conservatism might be expected to survive longer where there is less criticism. The press might be expected to encourage the "fair" approach.)

Table II Summary of scores

Question	1.1	1.2	1.3	1.11 tax	1.11 banks	1.12	Total
Australia	2	3	2	3	3	2	15
Belgium	1	1	2	1	2	1	8
France	2	1	2	1	2	1	9
Germany	3	1	1	2	2	1	10
Italy	1	1	1	1	3	2	9
New Zealand	3	3	2	3	3	1	15
Spain	2	2	2	1	3	1	11
United Kingdom	3	2	2	3	3	2	15
USA	3	2	2	3	3	2	15

Discussion

Although the ranking here is crude in the sense of applying no weightings to the relative factors, it accords with Nobes' major subdivisions of accounting systems into "macro" and "micro". There is a cluster of 4 countries (USA, UK, New Zealand and Australia) with a "score" of 15, indicating relatively less conservatism and these correspond to the "micro" grouping of Nobes (1984). The rest (Belgium, France, Italy, Germany and Spain) are clustered in the 8-11 range and also belong to the "macro" systems of Nobes.

Further research in this area would require exploration of the nature of conservatism in different cultures. Gray (1988) has set a framework for such an investigation, identifying conservatism as a value dimension having a strong positive relationship with uncertainty avoidance. He suggests possible correlations, positive and negative, with qualities such as power distance and a concern for order, uniformity, individualism and secrecy.

Conclusions on relative prudence of accounting practice

Of the eight accounting topics selected for detailed analysis in the first part of this section, one relates to profit measurement, two to valuation of fixed assets and five to losses and expenses. On this basis, as summarised in Table I, the USA appears the most prudent because it accrues liabilities to a greater extent than other countries. Germany and France are close in ranking to the USA because they are prudent with respect to assets and profit, but do not accrue the wides possible range of liabilities.

Australia is ranked as slightly less prudent because a more liberal attitude is show to profit but not all liabilties are accrued.

UK and New Zealand rank as less prudent again because they show a liberal attitude to asset valuation and profit reporting, but do not accrue all liabilities, in particular long-term deferred tax liabilities.

Belgium, Italy and Spain have less clearly defined accounting policies in some of these matters and there is greater scope for potential variation. It may be that a more detailed review of their accounting procedures in practice would not show lack of prudence.

Conclusions on factors which influence prudence or conservatism

Table II shows a cluster of high scores (USA, UK, Australia and New Zealand) where factors which have a bearing on situations of uncertainty give scope for relatively liberal approaches. These correspond to what Nobes has called "micro" accounting systems.

Table II is limited by the data available and lacks the "ab initio" selectivity used by Nobes (1984). It differs from his analysis in that he takes factors of this kind, along with conservatism, as criteria for ranking accounting measurement systems. This table takes some of those factors as criteria for ranking conservatism and arrives at similar groupings to Nobes. One conclusion which might be drawn is that his grouping of factors contains an element of double counting by including an assessment of relative conservatism as well as those factors which probably lead to conservatism.

The framework for analysis of cultural influences on accounting practice proposed by Gray (1988) clearly provides a basis for further research into the nature of conservatism, although that would be a major investigation beyond the scope of the present work.

Possible importation of ideas to the UK

In 1986 a reseach seminar on aspects of International Accounting was held in London under the joint sponsorship of Deloitte Haskins and Sells and the Institute of Chartered Accountants in England and Wales. One of the themes of that conference was the export and import of accounting ideas. From the ten preceding sections of this chapter ideas may be collected which could form a nucleus of views for import to the UK.

Definition of the concept

Nowhere in the countries surveyed, other than the Netherlands, was the wording of the UK prudence concept repeated. UK SSAP 2 is almost unique in linking prudence so closely and restrictively with realisation of profit. In other countries, apart from the Netherlands, there are two clearly identifiable views of prudence. One is the view which is better described as "conservatism". On this view, caution in net asset values and caution in reporting profits is commendable although, in general, deliberate understatement is not given official approval. That view emerges from the analyses of Canada, West Germany, France and from the USA so far as conventional accounting text books are concerned. The other view is that of prudence as a reaction to uncertainty. This is seen most clearly in the International Standards and in the Australian and New Zealand standards. It is also found in the US FASB concepts statements although these do not seem to have been adopted with enthusiasm by US text book authors.

Applying a prudent approach

One method of applying a prudent approach to the standard-setting process is to prescribe rules for asset valuation, liability recognition and profit reporting which err on the side of caution. The prescriptive rules have the advantage that all those who apply them are playing the same game, but they may conceal information which would have provided a more true and fair view.

Another method of applying a prudent approach to the standard-setting process is to allow more liberal rules for asset valuation, liability recognition and profit reporting but to require greater disclosure of the risks and uncertainties surrounding a transaction. That could be achieved by qualitative description or by quantifying the risks statistically. The reaction of standard setters stops at the qualitative stage, but is evident in some of the Australian and New Zealand standards. It is less evident in the USA despite the wording of the FASB concepts statements. Segment reporting is perhaps the most significant example of an attempt to reduce uncertainty so far as future predictions are concerned.

Meaning of a true and fair view

The UK view of true and fair tends to correlate with the application of the accruals concept. Nobes is so convinced that this correlation amounts to an equation that he affords a super-score of 3 to the Netherlands (Nobes 1984) while even the UK, Australia and New Zealand can only manage a score of 2 and most European countries score zero for their heavy conservatism.

The sections of this chapter discussing Germany and France, drawing on contributions from nationals of those countries, suggest that they do not accept that their conservatism is so far removed from a true and fair view. It is possible to argue that compliance with the strict wording of the law must by definition be true and is probably quite fair. That attitude would find a great deal of sympathy within the Law Society of England and Wales (as witnessed in that body's reaction to the accountancy profession's attempts to deal with off-balance sheet finance). It would also find some sympathy in the UK Department of Trade and Industry (as witnessed by the DTI reaction to the Argyll Foods case).

Prudence as a modifying influence on accruals

It has been shown in Chapter Five that the strong statement in UK SSAP 2 giving prudence precedence over accruals where the two are in conflict is not always adhered to in UK standard-setting. No other country makes such a strong statement. Australia and New Zealand follow the IASC example in making accruals the ruling concept and applying prudence at a secondary level as a modifying influence. The USA has an ambivalent attitude, taking a strong line on historical cost valuation of assets but allowing the accruals concept to take precedence through matching in the profit and loss account when this suits the purpose. Thus equity accounting is permitted, as is capitalisation of interest charges. Accrual of liabilities is strong in the USA, but here it is difficult to decide whether that reflects dominance of prudence or of accruals, as they work together.

Other countries, such as Germany and France, quite unashamedly give precedence to the concept of conservatism, so much so that they hardly see a need to justify it. Accruals accounting is something of an interloper, certainly on the asset and income side. On the liability side they may be inhibited by the tax regime from making full provision for losses and liabilities.

Realised profits and distribution rules

The UK is unfortunate in that legislation has now tied distribution of profits to realisation. This makes it necessary to define realisation, which clearly is a major subset of the prudence concept although not necessarily all of the prudence concept. Other countries do not have this problem and are even able in some cases to avoid using the term "realisation". It has already been shown in Chapters Two and Three that there have been times historically when "realisation" and "recognition" may have been synonymous and they may still be so today for a large number of transactions. However it is possible to analyse two different steps of recognition and realisation. The notion of prudence as a reaction to uncertanty may help in distinguishing those profits which are sufficiently certain to form the basis for a distribution. There is little guidance for the UK in accounting standards of other countries as they have not addressed the question of whether a profit will be deemed to be "realised" for purposes of distribution.

The need for explanation of accounting standards

The UK Dearing Report (Dearing 1988) on the standard setting process recommended that standards should set out more clearly the reasoning underlying the recommended standard. This comparative analysis of practices in different countries has shown how variable the quality of explanation is. In some cases the documentation speaks for itself but in other cases the researcher is forced to seek interpretations by those knowledgeable in the specific area. The Canadian standards are particularly disappointing in being highly prescriptive and lacking virtually any background explanation. The Australian and New Zealand standards, particularly those produced more recently, are more informative than most UK standards of the same time period.

Prudence as a reaction to uncertainty

Throughout almost all sections, examples have been cited of the view of prudence as a reaction to uncertainty. It has already been shown in Chapter Five that such an attitude is identifiable in some UK standards although not stated formally in the accounting principles of SSAP 2. The reaction to uncertainty is difficult to categorise because it depends on the nature of the transaction under consideration, whether the transaction involves an asset or a liability, and whether it is likely to create a profit or a loss.

There is not a consistent view as to what kinds of uncertainty is envisaged. The IASC says very little on the nature of uncertainty. The Australian standard specifically mentions uncertainty as to measurement, while the New Zealand definition is more general in referring to uncertainties which surround many business transactions. This whole theme of the types of uncertainty to be dealt with in accounting will be taken up in Chapter Ten. Before that, Chapter Eight will quantify the relative conservatism of UK and US reported profits for a group of UK companies which report their profits to the Securities and Exchange Commission under US generally accepted accounting practices. Chapter Nine will take up the theme of recognition of items in UK financial statements, continuing the theme of prudence as a reaction to uncertainty.

CHAPTER SEVEN

USE OF UK PUBLISHED ACCOUNTS IN ANALYSIS OF RELATIVE CONSERVATISM

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CHAPTER SEVEN

USE OF UK PUBLISHED ACCOUNTS IN ANALYSIS OF RELATIVE CONSREVATISM

Inadequacies of disclosure

One of the original intentions of this project was to examine the effect of UK statements of standard accounting practice on the reported profits of 50 UK companies over a ten-year time span. The 50 companies were randomly selected under the following constraints:-

1. They should be contained within the Times 1,000 list; and
2. A series for 1975-1985 should be available within the departmental archives at the University of Glasgow;and
3. They should represent an adequate spread across the FT-Actuaries Index classification.

The intention was to compare the profit reported under SSAPs with the potential profit which might be reported under a more or a less prudent alternative. Taking as an example SSAP 1, which recommends equity accounting for associated companies, it should be possible to compare that approach with the results of treating the associate as an investment at cost earning dividend income. The hypothesis would be that SSAP 1 leads to a higher return on capital employed than would be achieved in the absence of equity accounting and therefore SSAP 1 has had an effect of lessening the prudence of accounting reporting. There is evidence that when experts in credit evaluations were given the opportunity to try this exercise, few attempted to make the adjustment,in either direction, despite knowing that the inclusion of an unrealised profit in the group profit and loss account is to some extent imprudent (Wilkins and Zimmer 1985).

Take, as another example, SSAP 13 which recommends generally the expensing of research costs. If these costs were capitalised there would be a higher profit and a higher asset value reported. Provided adequate information were available it should be possible to quantify the effect of SSAP 13 as compared with capitalisation. In the further case of SSAP 15 which allows only partial provision for deferred taxation/

for deferred taxation, it should be possible to compare the effect on profits and net assets of full provision with that of partial provision.

It soon became clear that these intentions could not be achieved because of the lack of adequate data. A particular disappointment was the analysis of associated companies because if the spirit of SSAP 1 were to be followed in full, the information should have been available. The analysis in the following pages shows the failure of companies to provide full disclosure as prescribed in SSAP 1. This has implications beyond the scope of the present research study. It renders unlikely the proposition that experts such as professional analysts are able to make adjustments to published accounts for such problems as off-balance sheet finance, which casts doubt on views that the market is efficient in responding to information (Peasnell and Yaansah 1988).

The case of equity accounting for associated companies

With particular reference to SSAP 1, it should be possible to carry out the following reconciliation to explain what happened to the group's share of the profit of associated companies (Holmes and Sugden 1986):-

Share of:-	£
Taxation	x
Dividends	x
Extraordinary items	x
Retained earnings	x
Share of pre-tax profit of associates	x

SSAP 1/

SSAP 1 prescribes three of the four components shown above, but is silent on the treatment of dividends. Consequently failure to achieve this reconciliation is frequently, but not always, due to lack of information on dividends from the associated companies. Even when dividends are given, the reconciliation still sometimes fails with no obvious explanation.

More detailed information about the assets and liabilities of associated companies is required by SSAP 1 if the interests in the associated company are material in the context of the investing group. Materiality considerations should include the scale of operations of the associate in relation to those of the group. This is of particular importance in relation to situations of off-balance sheet financing where a 50:50 shareholding may be treated as an equity investment under present legislation but where full or partial consolidation might better present the true and fair view. Equity accounting can only be adjusted to full or partial consolidation if the full disclosure prescribed in SSAP 1 is given.

In the following tables 1 to 6 is set out a full analysis of the problems encountered when trying to analyse the associated company information contained in the sample of 50 annual reports.

Analysis of the reporting of associated/related companies in the published accounts of 50 listed companies.

(Note on terminology: For the sake of brevity the term "associated company" is used throughout this text. Companies differ in the descriptions used but none of those surveyed suggested that any entity might fall within one category but outwith the other. An associated company is by definition a related company. It is possible, but unlikely, that a related company is not an associated company).

Table 1 Number of companies reporting on associated companies

Information provided	39
Associates treated as immaterial	4
Apparently no associated companies	7
	50

It appears that the presence of associated companies within a group is widespread.

Table 2 Geographical location of associated companies where information was provided

1 or more associate in UK but also some overseas	26
None in UK, all overseas	11
Associates not listed in Report (appended to Annual Return)	2
	39

The presence of overseas associates raises further problems for the researcher. It would be possible to obtain, from the Registrar of Companies, the Annual Returns of UK associates, but obtaining information on overseas associates is a difficult exercise.

Table 3 Ability to reconcile information on the profit and loss accounts of the associated companies (in the manner described by Holmes and Sugden)

Full reconciliation provided in a separate note	6
Reconciliation possible by search of the notes	6
Information collected from various notes did not reconcile	26
No profit information given - results included in group turnover	1
	39

Out/

Out of 39 potential sources of data only 12 provided useable data for comparing the effect of including the results of associates on different bases. The most common omission was any reference to the dividends received by the group from the associate. In theory this information should be disclosed in the Statement of Source and Application of Funds but in practice it is treated as immaterial and a net adjustment is made for the associated company's profits. It may also be that foreign currency translation caused problems for the reconciliation but that was not clear from the information given. Not all companies analyse the transfer to reserves into the three separate components of parent, subsidiaries and associates.

Table 4 Materiality of the profits of associated companies in relation to the profit of the group

Pre-tax share of profit of associate as a percentage	No. of cases	Clarity of reconciliation Full note	possible	not possible
20% and above	4		1	3
15 - 19.9%	1	1		
10 - 14.9%	6	1		5
5 - 9.9%	5	1	1	3
less than 5%	17	2	3	12
Loss in associated coy	5	1	1	3
	38	6	6	26

Taking 10% of group profits as the lower limit for materiality, there are 11 cases where the contribution of the associate is clearly material to the group results. There are a further 5 cases in the "grey" area of 5-10%. Taking all 16 as meriting investigation for the effect of associated company results under different situations, there are only 3 cases where a clear reconciliation of profit is available and a further 2 cases where data is provided which does reconcile. Thus any conclusions about the effect of SSAP 1 on company profit reporting would have to be based on 5 reliable examples out of an original sample of 50. It is unlikely that the 5 would be representative in the light of the 11 cases where the associate is material but the profit figures do not reconcile.

Table 5 Materiality of the investment in the associated companies in relation to the net assets of the group

Equity investment in associated companies as a percentage of shareholders' funds in group balance sheet	No of cases	Further disclosure A	B	C	D	E
20% and above	2	1		1		
15 - 19.9%	3		1			
10 - 14.9%	4	1				
5 - 9.9%	12		2	1		1
Less than 5%	18	1		1	4	1
	39	3	3	3	4	1

Key to further disclosure

A Gross assets and liabilities of material associates disclosed

B Equity investment in associated companies analysed between UK and overseas

C Turnover of associated companies disclosed

D Contingent liability note on guarantees in respect of associated companies

E Short narrative report on associated companies

Out of the original sample of 50 companies, only 3 provided sufficient information on gross assets and liabilities to permit analysis of the effect on gearing and assets employed of applying proportional consolidation to the associates. Of these three, one admitted to retaining the right to substantially all the profits and assets of the associated company despite holding only 50% of the equity. The second of the three provided no profit and loss account information, having included income from management services in turnover, and the third provided profit and loss account information which could not be reconciled.

Table 6/

Table 6 Possibility of dependent non-subsidiaries in UK (for off-balance sheet purposes).

	no. of cases
Group holds 50% of one class of equity	6
Group holds 50% of equity, but class/classes not given	12
Group holds 50% of equity, but 100% of one class	4
Associate has "A" and "B" ordinary shares, of which group holds 50% overall but subdivision not disclosed	1
Group holding less than 50% of UK associate	3
	26

Where the group holds 50% of one class of equity there is likely to be a true partnership with sharing of voting rights and sharing of rights in distributions. Where the group holds 50% of the equity but 100% of one class of equity there is greater scope for avoidance of consolidation in a situation where the group has effective control (although it is not possible to tell whether or not the different classes of equity in the associate carry different rights without resorting to the Articles of Association of the associated company). Table 6 shows that there is scope for using associates as vehicles for off-balance sheet arrangements but in the category containing the largest number of associates the information about shareholdings is very vague.

Conclusion/

Comments and conclusions

From a sample of fifty leading UK companies which could reasonably be of interest to any analyst, only three could be used in a comparison of gearing and return on assets using equity accounting and the alternative of proportional consolidation. Only one could be used if a comparison of group profits under equity accounting and non-equity accounting were to be required in conjunction with the balance sheet analysis.

Although materiality has been assessed by reporting companies in relation to equity investment in the associated company it should more properly be assessed by reference to the gross assets and liabilities of the associates in relation to gross assets and liabilities of the group. Arrangements set up for the purpose of taking assets and liabilities off the balance sheet may have a negligible effect in terms of net assets but a material effect in relation to gross assets and liabilities. This is particularly significant where the group's interest in assets and profits of the associate is almost 100% despite having only a 50% nominal share in equity.

The overall conclusion for this research project is that information on associated companies is insufficient to test the hypothesis that SSAP 1 has the effect of decreasing prudence in accounting reports as compared with reporting associates as investments at cost. A wider conclusion is that disclosure of associated company information is inadequate for analytical purposes, with particular reference to the problem of off-balance sheet financing.

CHAPTER EIGHT

DIFFERENCES BETWEEN UK AND US PROFIT REPORTING: A QUANTIFICATION OF RELATIVE CONSERVATISM

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CHAPTER EIGHT

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CHAPTER EIGHT

DIFFERENCES BETWEEN UK AND US PROFIT REPORTING: A QUANTIFICATION OF RELATIVE CONSERVATISM

Introduction

Chapter Five contains a detailed analysis of the role of the prudence concept in UK Statements of Standard Accounting Practice. It shows that in some instances prudence is strictly applied, as in the case of SSAP 13 with regard to research and development expenditure, but in other instances the prudence concept takes second place, as in SSAP 15 with regard to the partial provision for deferred taxation.

It would be interesting to compare the effect on profit of applying UK SSAPs with the effect which would be observed if a more prudent or a less prudent policy were to be applied. This could only be achieved if the UK annual report contained adequate detailed information and it has been shown in Chapter Seven that the information is not present in sufficient numbers of cases.

An opportunity to compare profits resulting from UK accounting practices with those which would have resulted under different practices is afforded by those UK companies which are obliged to report to the Securities and Exchange Commission (SEC) in the USA. The report to the SEC is called "Form 20-F" and is typically longer and more complex than the financial sections of most UK company reports. Form 20-F contains additional disclosures required by the SEC but not by the UK regulations. In addition Form 20-F contains a reconciliation of UK profit with the profit which would have been reported under US Generally Accepted Accounting Principles (US GAAP). The effect of each accounting policy which differs in the two countries is quantified separately. In addition to the quantified difference, the accounting policies as they affect the company are explained by way of note which occasionally gives further insight into the differences between UK and US accounting practice.

These reconciliations in Form 20-F may be used to test the hypothesis that UK profit before extraordinary items is less conservative than it would be if US GAAP were applied. The term "conservative" is used rather than "prudent" because the test is concerned with whether a lower rather than a higher profit figure is produced. It is not concerned with an overall reaction to uncertainty.

An index to measure relative conservatism between two sets of profit figures has been developed in prior research by Gray (1980). This index has been adopted for the present research because it seems appropriate for the data available and it affords an opportunity for comparison with the results obtained by Gray.

Availability of Form 20-F

It proved to be a less than easy matter to establish exactly how many UK companies report to the SEC on Form 20-F. The obvious source of the information would be the SEC itself but an enquiry produced only a list of the search agencies in the USA which could obtain the information. As this would have been an expensive matter, the next line of enquiry was to approach the London offices of US banks which transact ADR business.

An ADR (American Depositary Receipt) is a negotiable certificate which represents ownership of shares in a non-US company. The US investor trades in the ADR certificates which are in turn based on actual holdings of the company's shares held by the London office of the depositary bank. In recent years there has been a considerable growth in the use of ADRs particularly where a UK company wishes to build up a base of US shareholders.

ADRs may be sponsored or unsponsored. An unsponsored ADR is issued by a US depositary bank with the consent of the company. The company has to do nothing more than add the SEC to its mailing list for all company information sent to shareholders. It will normally be granted/

be granted exemption from the requirement to report on Form 20-F. A sponsored ADR is issued by the depositary bank under a formal agreement with the UK company. It might be used where the company is planning moves into the USA, perhaps through an equity issue or through a takeover. If the sponsored ADR is traded "over-the-counter" (OTC) the UK company may request the SEC to grant exemption from the requirement to produce a 20-F. It appears that the exemption is quite general and therefore although there are many UK companies in respect of whose shares ADRs are being traded (of the order of 150) the majority of these companies are exempted from the requirement to report on Form 20-F. This was confirmed by sending a request to a sample of about 30 companies all having an ADR traded on the OTC market and all of which confirmed that they do not report on Form 20-F.

The SEC will however require a report on Form 20-F where the ADR is traded on one of the national stock exchanges such as the New York Stock Exchange (NYSE), the American Stock Exchange (AMEX) or the National Association of Securities Dealers Automated Quotations (NASDAQ). Appendix 2 to this chapter shows the UK companies which are believed to issue Form 20-F and gives the results of an approach to each with a view to obtaining a copy.

The depositary banks were very helpful in suggesting names of companies which might report on Form 20-F but could not distribute a 20-F outside the bank without the permission of the company concerned. Indeed one depositary bank suggested that some companies might regard the 20-F as "privileged information". It seems strange that a document which is publicly available to US citizens should be "privileged information" for UK residents. This may however explain the lack of total success in obtaining all the 20-F forms requested.

Data/

Data

From the probable maximum available number of thirty-four Forms 20-F, twenty-four samples of the Form were obtained, each containing reconciliations for some or all of the financial years ending in 1985, 1986 and 1987. One of these, Shell Transport and Trading, was rejected immediately because Royal Dutch Shell uses a mixture of US, Netherlands and UK accounting standards in such a way that the reconciliation envisaged was not possible.

That left twenty-three of which sixteen contained three years' figures and seven contained only two of the relevant years. (Full print-outs are provided in Appendix 1). The companies examined covered a wide range of business activity and are classified by main activity in Appendix 2.

Adjustment to a common basis

The published reconciliations were found to be non-uniform in their presentation. The starting point in some cases was profit before extraordinary items, but in others was profit after extraordinary items. There are items, chiefly those associated with discontinued operations, which are extraordinary in the UK but exceptional in the USA. Since in the UK profit before extraordinary items is the critical measure of profit for earnings per share and hence for investment performance indicators, it was decided to rebase all data to a starting point of UK profit before extraordinary items and to apply the US GAAP adjustments in such a way as to determine what that profit figure would have been had the US rules been applied.

Index of conservatism

An index of conservatism was calculated, following Gray (1980) using the formula:

$$1 - \left(\frac{\text{Profit}_{USA} - \text{Profit}_{UK}}{|\text{Profit}_{USA}|} \right)$$

An index value greater than 1 means that the UK profit is less conservative than the US measure would have been.

An index value less than 1 means that the UK profit is more conservative than the US measure would have been.

An index value exactly equal to 1 indicates neutrality between the two systems with respect to the effect of accounting standards.

The denominator has been taken as US profit to give a benchmark against which to compare not only UK profits but also the profits of other European companies which produce Form 20-F. An intended extension of this exercise is to compare the effects of conservatism in other European countries to that of the UK using the USA as a guide (although at present there are very few European companies reporting on Form 20-F).

To illustrate the effect of the index, take two examples,

Example 1 UK profit £110m

US profit £100m

Index

$$\text{Index } 1 - \left(\frac{100 - 110}{100} \right) = 1.1$$

Example 2 UK profit £90m

US profit £100m

$$\text{Index } 1 - \left(\frac{100 - 90}{100} \right) = 0.9$$

Partial indices of adjustment/

Partial indices of adjustment

Having established an overall index of conservatism it is then possible to establish the relative effect of the various adjustments using the formula:-

$$\text{Partial index of conservatism} = 1 - \left(\frac{\text{partial adjustment}}{|\text{profit}_{USA}|} \right)$$

For example:-

	£m
UK profit	120
Adjustments for US GAAP:	
Deferred taxation	(15)
Goodwill amortisation	(5)
Adjusted profit per US	100

Overall index of conservatism 1.2

Partial index for deferred taxation $1 - \left(\frac{-15}{100} \right) = 1.15$

Partial index for goodwill amortisation $1 - \left(\frac{-5}{100} \right) = 1.05$

Statistical analysis

The MINITAB package was used to manipulate data and carry out statistical tests. The overall index of conservatism was tested in each of the three years 1985, 1986 and 1987, taking each year separately (see Gray 1980). The tabulation of the data appears on page 10 of Appendix 1. As can be seen there are 23 values for each of 1986 and 1987 but only 16 for 1985. This was partly because one company provided only the current year and comparative figures for the previous year within the annual report as an extract from the form 20-F, and partly because some companies delayed replying until the 1988 results were available, thus removing 1985 from the three-year summary. It will also be noted that there are some outlying values which would adversely distort the results. Accordingly one value in the 1985 list/

the 1985 list, four values in the 1986 list and three values in the 1987 list were removed before carrying out statistical tests. The histograms were then plotted, allowing MINITAB to select the intervals. These give some confirmation that there is a spread about the mean which justifies the use of the t-test.

Test of significance of the index of conservatism

A single tailed t-score was calculated to the tabulated index values for each year separately. The results are shown on page 9 of Appendix 1 and are reproduced below. They show that for 1985 and 1986 the mean value was significantly greater than 1.0 at the 5% level of confidence but the 1987 mean value was not significantly greater than 1.0 at that confidence level.

T-statistic for index of total conservatism

Year	N	Mean	St dev	SE Mean	T	P value
1985	15	1.1444	0.2582	0.0667	2.17	0.024
1986	19	1.0892	0.1904	0.0437	2.04	0.028
1987	20	1.0318	0.1309	0.0293	1.08	0.150

Discussion of results on total index of conservatism

The table may be interpreted by saying that in 1985 the UK profit was, on average, 14.4% higher than it would have been had the relevant US GAAP applied. In 1986 the UK profit was 8.9% higher than the US figure would have been. At the 5% level the 1985 and 1986 index values were significantly greater than the neutral value of 1.0 which would have indicated no difference, so that the higher values of the UK profit figures are unlikely to have occurred by chance.

In contrast, the index value for 1987 is not significantly greater than 1.0 at a 10% level of confidence and although it shows that the UK profit for that year was on average 3.2% higher than the corresponding US value, this could well have been a matter of chance.

The remainder/

The remainder of this chapter is concerned with analysing further these total index values. First of all a partial analysis is attempted in order to discover and quantify the principal component policies which differ between UK and US accounting practice. In particular the analysis covers deferred taxation, amortisation of goodwill, foreign currency translation and the capitalisation of interest charges because these were the most frequently occurring adjustments and because it had been suggested by US ADR specialists, in informal discussions, that these were the significant items.

It may be that the comparison of UK with US profits on a year-by-year basis covers too short a timescale. The policy matters which give rise to the profit differences may have an impact over a longer period which is distorted when subject to the somewhat artificial break into annual periods. The chapter therefore concludes with an evaluation of the total UK profit over the three-year period compared with the total US profit over the three-year period and provides a quantification of the effect of GAAP differences over a three-year timescale.

Partial analysis of component adjustments

Deferred taxation

Twenty-two companies made the deferred taxation adjustment in at least one year. National Westminster Bank made no mention of deferred taxation adjustments and therefore a "missing value" has been recorded for that company using the asterisk in MINITAB. Where a company had made mention of the deferred taxation effect but no adjustment was made in a particular year the value 0 was recorded and an index of 1.0000 computed. Where no information was provided in respect of a particular year (e.g. British Airways did not provide data for 1985) a 'missing value' was recorded. The calculated index values are shown in the table on page 11 of Appendix 1. The lines of data are in the same order as are the company files shown in the earlier pages of Appendix 1. There are a further six 'missing values' in the 1985 column in respect of the other companies/

other companies which did not provide 1985 data. As will be explained later, Rodime disclosed deferred taxation effects but has been treated as a "missing value" (line 19) because of the massive effect of recoverable tax losses.

After making the adjustment for Rodime, the histograms on page 11 of Appendix 1 show no significant outliers and accordingly the single tailed t-test was applied to the data as recorded in the tables. The results are on page 9 of Appendix 1 are are reproduced below:-

Year	N	Mean	St dev	SE Mean	T	P value
1985	15	1.0537	0.1474	0.0381	1.41	0.090
1986	21	1.0428	0.0969	0.0212	2.02	0.028
1987	20	1.0142	0.1128	0.0252	0.56	0.290

Only for 1986 is there a mean value which is significantly greater than 1.0 at the 5% level of confidence. The 1985 result is significant at the 10% level. For 1987 the null hypothesis cannot be rejected. The effect of different policies on deferred taxation would appear to be complex and is discussed further in the following pages.

The initial interpretation of the table is that in 1985 the UK profit was 5.4% higher than the US profit because of deferred taxation effects while in 1986 the UK profit was 4.3% higher for the same reason. In 1987 the UK profit was 1.4% higher on average but this could well have arisen by chance.

Discussion of results on deferred taxation

Although SSAP 15 is mainly concerned with partial as opposed to full provision for deferred taxation, it also contains a further difference from US accounting practice. While SSAP 15 applies the liability method of dealing with reversals of timing differences, the US APB Opinion/

the US APB Opinion No.11 requires the deferral method to be applied. Thus in the empirical data two factors are at work:

(i) partial versus full deferral; and

(ii) liability versus deferral approach.

This is further complicated in some cases by the switch in US practice announced in December 1987. In future FAS 96 will be applied in the US and will require the full provision based on the liability method. Some of the companies tested have switched to FAS 96 in respect of some or all of the periods examined; others are still considering the effect of the change in policy. In the year of changeover there is a major adjustment which completely outweighs any other effects present.

The detailed analysis of each company is presented in the following pages of this chapter and deals more fully wth the extent to which the varying effects may be quantified in specific cases. From these detailed analyses it has been concluded that the difference in accounting policy can only be analysed as an overall effect so far as the index of conservatism is concerned because of the lack of distinction made by the companies regarding the full/partial provision effects. As a result of the detailed analysis some adjustments were made to the figures published in the Form 20-F before statistical testing. These adjustments are explained in the relevant sections and are reflected in the tables in pages 1 to 8 of Appendix 1.

Before moving on to the detailed analyses it is helpful to consider a simulation model developed here for the purpose of demonstrating the separate effects of partial versus full provision and of the liability versus the deferral method.

<u>Simulation model for deferred taxation/</u>

Simulation model for deferred taxation

Quantifying the effects of the different accounting policies is further complicated by the change in the UK tax system from 1984 with progressively reducing first year allowances and progressively reducing rates of corporation taxes. If these could be held constant it might be easier to assess the relative impact of the different components of the accounting policy changes. Since this cannot be achieved by using the actual company data it has been attempted by a simulation exercise using a spreadsheet. The simulation (contained in Appendix 3 to this chapter) assumes on page 1 a company which has reached a steady state of acquisitions and disposals and traces the relative effect of using full deferral versus full liability accounting. It establishes that under the actual conditions of falling first year allowances and falling tax rates the UK profit would require debit adjustments in 1985 and 1986 (Years 1 and 2 of the spreadsheet) but a credit adjustment in 1987 and 1988 (Years 3 and 4 of the printout). The actual amounts of the adjustments required are shown on page 2 of Appendix 3 at lines 110-113.

The detailed calculations contained in the first section of page 2 show, in the final column, how the differences are constituted and it is clear that the overwhelming effect derives from the change of rate adjustments at the start of 1985, 1986 and 1987. These affect the UK liability approach but not the US deferral approach. Of the reversing timing differences, those providing the major impact are the reversals in respect of assets acquired prior to 1985 when the 100% first year allowance was still in force. The impact of reversing differences in respect of later acquisitions is lessened as the first year allowance is reduced.

Since a pattern/

Since a pattern of steady state acquisitions and disposals is in reality unlikely, the simulation was repeated using what is probably a more realistic reflection of the circumstances. When it was announced in 1984 that first year allowances would be reduced there was a rush to carry out planned capital expenditure as soon as possible. The simulation on pages 3 and 5 is therefore based on a high level of capital outlay in 1985, decreasing thereafter. The simulation on page 3 was also used to demonstrate that, had the rate of corporation tax been held constant from 1985 to 1987, there would have been no net effect from using the liability as opposed to the deferral method. Pages 3 and 4 of Appendix 3 are the results of assuming a constant 50% rate of corporation tax and show that there is a nil adjustment, as would be expected. Pages 5 and 6 assume the same pattern of acquisitions but a falling corporation tax rate and show that there would again have been debit adjustments in 1985 and 1986 and credit adjustments in 1987 and 1988. The magnitude of the changes in tax rates combined with the falling first year allowances probably means that the difference between full liability and full deferral approaches swamped any effect of the UK partial provision as compared with US full provision so far as the disclosures in the 20-F forms are concerned.

The conclusion from the combination of analysis of actual data and the simulation exercise is that any hypothesis about the relative prudence or lack of prudence of UK deferred tax accounting policies cannot be separated from the tax regime operating at the time. If there had been a constant corporation tax rate the analysis of actual results would have been more informative regarding the effects of partial provision. If the US had not switched from the deferral to the liability method at the end of 1987 there would have been a clearer result from the actual data. The limited amount of specific data provided by some companies does permit a tentative quantification of the partial provision effect as will be shown in the following pages.

Analysis of the treatment of deferred taxation in each company case

Approach taken in the analysis

In each case the explanation provided by the company is quoted in full. A comment section notes any further relevant information which may be found in, or deduced from, other sections of the form 20-F and annual report, particularly the notes explaining the UK taxation charge for the year. (The reference immediately following each company name is to Appendix 1 to this chapter. All other references are to the company's form 20-F.)

British Gas plc (Appendix 1 column C9 of 'BGAS')

"UK GAAP requires provision for deferred income taxes on timing differences only to the extent that it is probable that these timing differences will reverse and will result in a payment or receipt of tax. In accordance with this requirement no provision has been necessary for deferred income taxes in the three years ended March 31, 1987.

This practice is not in accordance with US and Canadian GAAP, which requires provision in respect of all timing differences. Adjustment has been made in the reconciliation below to reflect full provision for deferred income taxes on the "gross change deferral methods" used in the US (which is equivalent to the "deferral method" adopted by Canadian GAAP). These methods result in the deferral of timing differences at the rates of taxation applicable to the periods in which those differences originated." (page F-18).

Comment. The result is a deduction from UK profit in all three years, but diminishing in magnitude. There is no explanation of the actual amounts of the deduction and the picture is further complicated by the company's practice of charging some replacement expenditure as an operating cost. In addition the policy on exploration accounting differs from the US practice. These further differences also have a taxation effect which is included in the overall deferred tax adjustment, but the relative effects are not quantified.

A reconciliation/

A reconciliation (on page F10) of the actual UK tax charge with the charge which would have applied at the statutory rate of UK corporation tax shows the following information:

	1985	1986	1987
Corporation tax at statutory rate on historic cost income	446	440	453
Effect of:			
Depreciation and other timing diffs	(228)	(86)	5
Prior year and other adjustments	(30)	26	29
Actual tax charge	188	380	487

The timing differences not provided for are a better indication of the impact of SSAP 15 taken in isolation because this table records such timing differences on the liability basis and not on the accruals basis. They give a basis for establishing an index of conservatism for the effect of SSAP 15 alone, providing a similar reconciliation is given by other companies.

Unilever plc (Appendix 1, column C13 of 'UNILEVER')

"Opinion Number 11 of the US Accounting Principles Board requires that inter-period tax allocation procedures should follow the deferral method. Unilever applies the liability method. In determining the divergences shown on page FS 9, Opinion Number 11 has been applied. Statement Number 96 of the US Financial Accounting Standards Board was issued in 1987 but will not be effective for Unilever, for the purposes of determining divergences, until 1989. In arriving at the divergences calculated under Opinion Number 11, recognition has been given to certain deferred tax benefits which may need to be reduced when Statement Number 96 becomes effective. The extent to which adoption may impact the divergences has not yet been quantified." (page FS 8).

Comment. The result in this case is an addition to UK profit in all years, increasing in magnitude from 1985 to 1987. The note as quoted above is not very helpful but there is more information on page FS 12 of the form where the current year's tax charge is explained in more detail. From these figures together with the note on Accounting Standards on page FS 2 it becomes apparent that Unilever plc conforms to Dutch law by making full provision for deferred taxation liabilities. It does not apply SSAP 15. Consequently the figures as extracted from the 20-F reconciliation are not a valid measure of the impact of SSAP 15. This is despite taking the Unilever plc figures separated from those of Unilever NV in the hope of eliminating problems of Dutch fiscal and accounting policy.

The relevant data/

The relevant data is as follows (per page FS 12 of the 20-F):-

	1987 £m	1986 £m	1985 £m
Reported profit on ordinary activities after taxation	283	252	280
SSAP 15 adjustments:			
Accelerated depreciation	18	23	1
Other	(3)	(12)	9
Profit on ordinary activities after taxation on a SSAP 15 basis would amount to:	298	263	290

Combining this with the information contained in the profit and loss account, the reconciliation of the UK and US GAAP versions of the Unilever plc profit should read as follows:-

Deduct minority interest from previous profit figure	(18)	(18)	(20)
Profit attributable to ordinary shareholders before extraordinary items	280	245	270
Deferred taxation adjustment:			
effect of SSAP 15	(15)	(11)	(10)
full deferral vs full liability	9	8	3
Other adjustments as disclosed	12	(17)	2
	286	225	265

For consistency of approach this version of the reconciliation has been used in all calculations in Appendix 1.Unilever also provides adequate information for the SSAP 15 effect to be isolated.

<u>Beecham</u> (Appendix 1 column C11 of 'BEECHAM')

"Under UK GAAP, provision is made for deferred tax under the liability method where it is probable that a tax liability will become payable within the foreseeable future. In the US, Accounting Principles Board Opinion No. 11 requires deferred tax to be provided in full on the deferral basis.

Under UK GAAP, Advance Corporation Tax ('ACT') which is not recoverable against current taxation liabilities is written off. However, if deferred taxation is provided, such ACT may be available for offset against the balance on the deferred taxation account. As deferred taxation is provided under US GAAP on all timing differences, the deferred tax account has been reduced by the appropriate amount of ACT written off". (page F-8).

Comment/

Comment. The 20-F reconciliation discloses two components of the deferred taxation adjustment. They are combined in the data analysed by MINITAB because of the lack of such separation in most other cases, but are reproduced below to demonstrate the effect to which ACT adjustments mask the effect of timing differences.

	1985	1986	1987
	£m	£m	£m
Due to timing differences and deferral/liability difference	(10.5)	3.6	36.3
Due to ACT	12.2	(3.2)	(29.7)
Net effect	1.7	0.4	6.6

There is no explanation of the transfer to deferred tax in 1985 but a large transfer from deferred tax in 1987 (which continues to be the pattern for 1988 as disclosed in the latest annual report). The large credit of 36.3 may be due to the lowering of the UK tax rate as shown in the simulation exercise earlier in this chapter.

Beecham also provides (page F-16), in percentage form, a reconciliation of the effective UK tax rate with the statutory rate. Applying the percentages to the pre-tax profit indicates that the effect of SSAP 15 timing differences is as follows:

	1985	1986	1987
	£m	£m	£m
UK deferred tax not provided for causes the actual charge to be (lower) or higher by	(5.1)	(2.7)	4.56

Glaxo Holdings plc (Appendix 1 column C7 of 'GLAXO')

"There are two principal differences between UK GAAP and US GAAP in respect of deferred taxes. First, under UK GAAP, deferred tax is only accounted for to the extent that it is probable that tax liabilities or benefits will crystallise; US GAAP requires that full provision be made for all deferred tax liabilities. Second, UK GAAP requires that deferred tax be provided for using the liability method, whereby tax is provided for at the rates at which timing differences are expected to reverse; under US GAAP, the deferral method is used, whereby deferred tax is provided for at the rates applicable to the period when provision is made." (page 42).

Comment/

Comment. The overall effect is a further deduction from UK profits in all years, increasing in magnitude from 1985 to 1987. The SSAP 15 effect is disclosed elsewhere in the 20-F (page 46) as:

1985	1986	1987
£m	£m	£m
(13)	(17)	(14)

<u>Cadbury Schweppes plc</u> (Appendix 1 column C11 of 'CADBURY')

"Under UK GAAP no provison is made for deferred taxation if there is reasonable evidence that such deferred taxation will not be payable in the foreseeable future. For US GAAP deferred taxation is provided in full on the liability method. Prior to 1987 the provision under US GAAP was calculated on the deferral method and, as a result of adopting SFAS No. 96, the 1987 adjustments for US GAAP include a credit of £16.4 million." (page F-9).

Comment. The adjustments to UK profits in 1985 and 1986 are both deductions as would be expected from the effect of SSAP 15. The adjustment for 1987 is a credit of £13.9m but allowing for the credit of £16.4 explained in the note quoted above, a more representative indication of the GAAP difference might have been a net debit of £2.5m. Accordingly the separation has been made in the table in Appendix 1.

From page F-19 the unprovided excess of tax depreciation over book depreciation is given in terms of the effective tax rate. Applying this to the pre-tax profit gives the following SSAP 15 adjustment:

	1985	1986	1987
	£m	£m	£m
Adjust UK profits by	(4.2)	(6.5)	(1.9)

<u>English China Clays plc</u> (Appendix 1 column C17 of 'ECCLAY')

"There are two principal differences between UK GAAP and US GAAP in respect of deferred taxes. First, under UK GAAP, deferred tax is only accounted for to the extent that it is probable that tax liabilities or benefits will crystallise: US GAAP requires that full provision is made for all deferred tax liabilities. Secondly, UK GAAP requires that deferred tax is provided using the liability method whereby tax is provided at the rates at which timing differences are expected to reverse; under US GAAP, the deferral method is used whereby deferred tax is provided at the rates applicable to the period when provision is made." (page F-10).

Comment/

Comment. In this case there has not been a switch to the deferral method in 1987, as there was for Cadbury Schweppes. Nevertheless there is a debit adjustment in 1987 as compared with credits in 1985 and 1986. There is no indication of the reason for the change in sign. However, information on page F-19 shows an ACT element in the UK deferred tax provision and a net release to profit and loss account each year in respect of UK timing differences. The net release was due to the ACT set-off far outweighing the effect of accelerated capital allowances. The reconciliation of the UK statutory rate with the effective rate of tax also appears to net ACT against accelerated capital allowances and accordingly no separable SSAP 15 effect could be identified.

<u>British Telecommunications plc</u> (Appendix 1 column C9 of 'BTEL')

"Under UK GAAP, provision for deferred taxation is only made for timing differences which are expected to reverse, at the rate in effect when the taxes are expected to become payable. As a result of the substantial changes in the basic structure of UK corporation tax following the Finance Act 1984, in particular the staged reduction of allowances on eligible capital expenditure, the Group is providing for deferred tax on timing differences arising since April 1, 1984 in the financial statements prepared under UK GAAP. Timing differences arising prior to April 1, 1984 are not expected to reverse. In the US and Canada deferred taxation is provided on a full deferral basis." (page F-27).

Comment. The result is a significant debit adjustment to UK profit in 1985, a minor credit adjustment in 1986 and a significant credit adjustment in 1987, all unexplained in the note on accounting policy. The UK profit and loss account shows a deferred taxation charge to profit and loss account of £535m in 1985 and £214m in 1986, followed by a deferred tax credit of £207m in 1987. These appear to include the effect of tax losses brought forward in 1985 and 1986. There is insufficient information to provide a distinction between the effect of the tax losses and the effect of timing differences. Accordingly no SSAP 15 effect could be estimated.

British Petroleum Company plc (Appendix 1 column C7 of 'BP')

"Under the UK GAAP restricted liability method deferred taxation is only provided where timing differences are expected to reverse in the foreseeable future whereas under US and Canadian GAAP deferred taxation would be provided on a full deferral basis.

In December 1987 the Financial Accounting Standards Board issued Statement No. 96 "Accounting for Income Taxes" ("FAS 96") that supersedes APB Opinion No. 11. The BP Group has not yet completed the complex analyses required to determine the impact of adopting FAS 96 for US GAAP reporting nor has it determined whether it will adopt FAS 96 before 1989 or whether it will restate any prior-year US GAAP financial information. If prior year information is not restated the application of FAS 96 may result in a material change to US GAAP net income in the year of adoption." (page F-23).

Comment. The reported adjustments to UK profits are all debits, increasing in magnitude. This comment provides further confirmation that 1987 results will be difficult to interpret where companies have switched to the FAS 96 recommendations. From the taxation note on page F-11 which reconciles the statutory with the effective UK tax rate it is possible to estimate the following amounts of deferred tax due to timing differences which have not been provided for:

	1985	1986	1987
	£m	£m	£m
Provision is required for	(397)	(193)	(201)

Hanson plc (Appendix 1 column C5 of 'HANSON')

"Deferred taxation is not provided where, in the opinion of the directors, no liability is likely to arise in the foreseeable future. However, under US GAAP deferred taxation would be provided on a full deferral basis. UK GAAP permits the reduction of the tax charge by the use of tax losses available at the time of acquisition. However, US GAAP requires that the benefit of such losses is adjusted through goodwill." (page F-21).

Comment. The net effect is a debit adjustment to UK profit in all three years. There is no separate quantification of the two effects described above. Consequently the effect of SSAP 15 may be masked to an unknown extent by the effect of any adjustment for tax losses. The taxation rate reconciliation on page F-19 gives percentages which, when applied to the pre-tax profit, give the SSAP 15 effect as: 1985 £(2m); 1986 £(7m);and 1987 nil.

CH Beazer Holdings plc (Appendix 1 column C7 of 'BEAZER')

"Under UK GAAP, deferred taxation is provided on the liability method to the extent that there is a reasonable probability that a liability will arise in the foreseeable future. Deferred taxation provisions are adjusted for subsequent changes in tax rates and legislation. Under US GAAP, deferred taxation is provided in full on the deferral basis. Deferred taxes are determined on the basis of the tax rates in effect at the time the timing differences originate and are not adjusted for subsequent changes in tax rates.

Under UK GAAP, deferred taxation acquired with subsidiaries is carried forward as such, subject to any fair value adjustments. Under US GAAP estimated future tax effects are dealt with in arriving at the fair value of the assets of companies acquired, and no deferred tax account is carried forward in respect of these amounts." (page F-13).

Comment. The result is debit adjustments to UK profits in all years, decreasing in magnitude. From the information on page F 19 the excess of tax depreciation over book depreciation which has not been provided for would require adjustments of: 1985 £0.2m; 1986 £(0.1m); and 1987 nil.

Blue Arrow plc (Appendix 1 column C9 of 'BLUEARROW')

"Under UK GAAP, provision is made for deferred taxes on the liability method, except to the extent that there is a reasonable probability that a liability will not arise in the foreseeable future. US GAAP as promulgated by Statement of Financial Accounting Standards No 96 requires that deferred income taxes be provided fully under the liability method on all timing differences." (page F-9).

Comment. The result is a nil adjustment for 1985 and 1986 and a negligible credit for 1987. This is the first example encountered of a comparison which isolates the full provision/partial provision comparison from the complication of the deferral/liability method changes because FAS 96 has been applied throughout. The adjustments disclosed suggest that there is little difference between the effect of the partial provision and full provision. The note on taxes is helpful in this respect (page F-14) and shows that the company provides almost in full for the effect of timing differences on depreciation and other timing differences net of ACT effects. The only item not provided for under SSAP 15 is the potential tax liability on the property revaluation surplus, which is not significantly large.

United Newspapers plc (Appendix 1 column C15 of 'UNITNEWS')

"As permitted under UK GAAP, the company accounts for deferred income taxes using the liability method for all timing differences except to the extent that the liabilities are regarded as unlikely to crystallise in the foreseeable future.

Prior to the issuance of Statement of Financial Accounting Standards (SFAS) No. 96 'Accounting for Income Taxes' issued in December 1987, the deferral method of accounting was required. Under US GAAP, SFAS No. 96 provides for the use of the liability method and requires that provision be made for virtually all 'temporary' differences (between the income tax and financial reporting basis of assets and liabilities).

The company has adopted the liability method of accounting for deferred income taxes under US GAAP for the year beginning January 1, 1987 pursuant to SFAS No. 96. Accordingly, the reconciliation of net income and the supplemental consolidated statement of income under US GAAP reflect the adjustment of deferred income taxes as of January 1, 1987 to account for the changes in temporary differences based on the tax rates at which they are expected to be payable in future years. The cumulative effect of this change is to increase net income for the year ended December 31, 1987 and shareholders' equity as of that date by £5,230,000.

After the change, the deferred income tax amounts included in the reconciliation of shareholders' equity and in the consolidated balance sheets under US GAAP as of December 31, 1985 and 1986 reflect the additional amounts which would be provided if the company made full provision for all timing differences." (page F-31).

Comment. The adjustments disclosed in respect of deferred taxes are as shown in column C15 of 'UNITNEWS'. The cumulative effect is held in a separate column, C17, because of the clearly distorting effect it would have had. The deferred tax adjustment for 1987 has been treated as a "no data" entry and asterisked. The note on UK taxation (page F-23) reveals that if full deferred tax had been provided there would have been no material change to the total charge for the year.

BET plc (Appendix 1 column C11 of 'BET')

"Under UK GAAP, provision is made for deferred taxation using the liability method for timing differences to the extent that it is probable that the liability will crystallise in the foreseeable future. Under US and Canadian GAAP, deferred taxation has been provided in full on the deferral basis. BET has not yet adopted FAS No 96 "Accounting for Income Taxes" for US GAAP. This statement requires the provision of deferred taxes under the liability method using tax rates in force at the balance sheet date." (page F-11).

Comment. The result is a debit adjustment in 1986 and 1988 (not included in this analysis) and a credit adjustment for 1987. The explanatory notes on tax figures on page F-20 show that BET provides for about 75% of its full deferred taxes in relation to accelerated depreciation but the effect on a year-by-year basis is not disclosed. A further note on the same page relates the statutory corporation tax rate to the effective rate in each year and shows that timing differences not provided account for a reduction of about 4 percentage points in each year. This suggests that the 1987 credit adjustment overall is due to the lowering of the tax rates and masks the effect of partial vs. full provision. Using this table in conjunction with the profit and loss account the following subdivision of the deferred tax effect is obtained:-

	1985	1986	1987
Effect of SSAP 15	no data	(4.61)	(6.30)
Other effects (balancing)	no	1.40	9.80
Overall per page F-14	data	(3.20)	2.50

Dixons Group plc (Appendix 1 column C5 of 'DIXONS')

"Under UK GAAP, deferred taxation is provided at the rates at which the tax is expected to become payable. No provision is made for amounts which are not expected to become payable in the foreseeable future. Under US GAAP, deferred taxation is provided on all timing differences at the rates in effect for the fiscal years in which the timing differences arose." (page F-10)

Comment. The result is a credit adjustment for 1986 and a debit adjustment for 1987. A table on page F-14 explaining the effective rate of corporation tax permits the following estimate:

	1985	1986	1987
Effect of SSAP 15	no data	(2.34)	nil
Other effects (balancing)		4.44	(1.0)
Overall per page F-12		2.10	(1.0)

<u>Barclays plc</u> (Appendix 1 p. 5 column C9 of 'BARCLAYS')

"Two major factors underly the deferred tax adjustments to net income.

(a) Under the US GAAP deferral method of accounting, timing differences are carried at the rates of tax applicable at origination. During a period of falling tax rates, the reversal of these timing differences generates more income under US GAAP than is the case using UK GAAP where timing differences reverse at current tax rates.

(b) The deferred tax asset created under US GAAP in respect of the general allowance was substantially reduced in 1986 as a result of transfers from general to specific allowance." (page 81)

Comment. There are large credits in respect of deferred tax in 1985 and 1987 as explained by (a) above and there is a minor credit adjustment in 1986 as explained by (b) above. It is clear that in this case the effect of partial versus full adjustment is swamped by the effect of falling tax rates and the change in the deferred tax asset. There is insufficient data elsewhere in the notes on taxation to be able to deduce the effect of SSAP 15.

<u>British Airways plc</u> (Appendix 1 column C15 of 'BRITAIR')

"BA provides for deferred taxation on the liability method on all material timing differences to the extent that it is probable that the liabilities will crystallise. Under US GAAP, as set out in Statement of Financial Accounting Standards ('FAS') No. 96, deferred taxation is generally provided on a full liability basis. For the purposes of the reconciliation below, the cumulative effect on prior years of £18m resulting from the change in the method of accounting for deferred taxation from the deferral method, as required by Accounting Principles Board Opinion No. 11, to the liability method as required by FAS 96, has been reflected as a change in accounting principle in the year ended March 31, 1988. In addition to the prior year adjustment, the adoption of FAS 96 has had the effect of decreasing 1988 US GAAP net income by £2 million." (page F-28).

Comment. Although 1988 is not covered by this analysis, it is useful confirmation of the major impact of switching from full deferral to full liability. 1986 and 1987 showed sizeable debit adjustments to/

adjustments to UK profit. The note on taxation (page F 16) indicates that this may be due largely to the utilisation in the UK accounts of prior year losses. The same note discloses the following items:

Effect on tax charge of:	1986	1987
Excess of depreciation over capital allowances utilised		£38m
Excess of capital allowances over depreciation charged	£(4m)	

<u>Attwoods plc</u> (Appendix 1 column C7 of 'ATTWOODS')

"The Company accounts for deferred taxes using the liability method for all timing differences except where the directors consider that no liability will arise in the foreseeable future. Prior to the issuance of Statement of Financial Accounting Standards No. 96, "Accounting for Income Taxes," issued in December 1987, the deferral method of accounting was required under US GAAP. SFAS No. 96 provides for the use of the liability method and requires that provision be made for virtually all "temporary" differences (between the income tax and financial reporting basis of assets and liabilities).

The Company has adopted the liability method of accounting for income taxes for the year beginning August 1, 1985 pursuant to SFAS 96. The reconciliations to US GAAP as of and for the three years ended July 31, 1987 and the adjusted balance sheets as of July 31, 1986 and July 31, 1987 prepared under US GAAP have been retroactively restated to apply the new method. The Company previously presented this financial information using the deferral method. Accordingly, the deferred tax amounts included in the reconciliation are the additional amounts which would be provided if the Company made full provision for all timing differences.

The accounting change increased net income adjusted to conform with US GAAP by £352,000 and £493,000 for the years ended July 31, 1985 and 1987 and reduced net income adjusted to conform with US GAAP by £455,000 for the year ended July 31, 1986. The effect of the accounting change on opening retained earnings as of August 1, 1984 was an increase of £523,000."(page F-31)

Comment. From the first and second paragraphs this appears to provide an opportunity to observe the effects of SSAP 15 in isolation from the deferral/ liability differences. The adjustments for 1985 and 1986/

for 1985 and 1986 as reported in the 20-F are relatively insignificant at £26,000 and £27,000 respectively. There is a major debit adjustment of £751,000 in 1987 which is not explained in the document. Although there were substantial acquisitions of fixed assets in 1987 it is not obvious that these would have accounted for the entire adjustment. The final paragraph of explanation quoted above is apparently a reconciliation of US profit on the deferral basis with US profit on the liability basis. This is an example of a convoluted but poor explanation of how the differences in accounting policy actually affect the specific company. The reconciliation of the UK statutory and effective tax charges (page F 25) gives no clues as to the extent of the SSAP 15 effect.

Rodime plc (Appendix 1 column C6 of 'RODIME')

"...deferred income taxes are provided on timing differences which are expected to reverse in the foreseeable future at the rates expected to be in force at the time of reversal. US GAAP requires full provision for deferred taxes and the Company has applied the gross change method in determining the above estimated adjustments for deferred taxes. Under the gross change method deferred income taxes are provided using the tax rate in effect during the year in which each related timing difference originates. Amortization on reversals is then based on the amount provided when the related timing difference arose. The above estimated adjustments for deferred income taxes would have required the deferred tax liability in the Consolidated Balance Sheets as of September 30, 1986 and 1987 to have been increased to £2,968,000 and £232,000 respectively. An additional tax benefit is recognised relating to the tax losses utilised for financial reporting which resulted from the full provision for income taxes made under US GAAP."(page F-15)

Comment. The effects of SSAP 15 are completely swamped by the carry forward of losses. The company reports tax credits in the UK profit and loss account because operating losses are offset against deferred tax charges previously recorded. The deferred tax charges are thus being "written back" to the profit and loss account. Since the US charge would have been greater, the write-back is correspondingly greater. Thus the Rodime figures, while interesting in their illustration of the effect of large tax losses, are best omitted from the analysis of deferred tax effects and accordingly in the analysis of deferred tax in Appendix 1 the '*' missing value symbol has been entered against Rodime.

<u>Imperial Chemical Industries plc</u> (Appendix 1 column C6 of 'ICI')

"Under UK standard accounting practices, provision is made for taxation deferred by reliefs only if there is reasonable evidence that such deferred taxation will be payable in the future. When a provision is necessary it is made at the rates at which it will subsequently be paid. Under US GAAP deferred taxation is provided on all timing differences at the taxation rate prevailing in the period in which the timing difference arose." (page 43)

Comment. The note is a general statement of the difference in accounting policy but does not explain why there are debit adjustments in 1985 and 1987 but a credit adjustment in 1986. There is no further help in the reconciliation of UK statutory and effective tax charges (page 53) which makes no mention of unprovided deferred taxes. Accordingly no SSAP 15 effect has been identified.

<u>The Plessey Company plc</u> (Appendix 1 column C8 of 'PLESSEY')

"US GAAP requires comprehensive inter-period tax allocation by the deferred method on all significant timing differences. The Company accounts for deferred income taxes using the liability method, and only provides for certain timing differences where the directors consider that an asset or liability will arise. The UK tax rate was 35% for the period. (1987 - 35%, 1986 - 40%). In addition, changes in tax rates have occurred in both the US and Australia. This results in a difference in deferred taxes calculated under the deferred and liability methods. Accordingly, the deferred income tax amounts included on page 37, are the additional amounts which would be provided if the Company provided for all timing differences under the deferred method."(page 35)

Comment. The adjustments are debits in both 1986 and 1987. The reconciliation of the UK statutory tax rate with the effective tax rate (page 49) discloses only a "deferred tax adjustment due to movement in timing differences" which is nil for 1986 and has minimal impact in 1987. This would not help to explain the figures in the UK/US reconciliation and accordingly no SSAP 15 effect has been identified.

Ward White Group plc (Appendix 1 column C9 of 'WARDW')

"Under UK GAAP, provision is made for deferred taxes under the liability method and, accordingly, no provision is made for deferred income taxes if there is reasonable evidence that such deferred income taxes will not be payable in the foreseeable future. US GAAP requires that deferred income taxes be provided in full on all timing differences." (page F-10)

Comment. The disclosed adjustments to UK profit in 1986 and 1987 are both debits. The note on taxation (page F-17) shows:

	1986	1987
UK deferred income taxes not provided for	nil	£0.4m

which has been taken as a measure of the SSAP 15 effect.

The Cambridge Instrument Company plc (Appendix 1 column C7 of 'CAMBR')

"The Group provides for deferred taxation on the liability method on all material timing differences not expected to continue for the foreseeable future. Where a provision is required, it is calculated at the rate of UK corporation tax expected to apply in the year in which the timing differences are expected to reverse, currently 35%. Under US GAAP, as prescribed by Statement of Financial Accounting Standards No.96 ("FAS 96"), the tax effects of all temporary differences are accounted for on the liability method. For the purposes of the reconciliation below, the cumulative effect of the change in the method of accounting for deferred taxation from the deferral method, as required by Accounting Principles Board Opinion No.11 ("APB 11") to the liability method, as required by FAS 96, has been reflected as a change in accounting principle in the year ended March 31, 1988. The effect of this change on income before cumulative effect of change in accounting principle for the year ended March 31, 1988 is not significant."(page F-28)

Comment. It would appear that, since the cumulative adjustment has been made in 1988, the 1987 and 1986 adjustments are based on APB 11 and not on FAS 96. The figures for 1988 are excluded from this particular research project because of the general range of data available but it may be observed here that the 1988 results of Cambridge Instruments show a credit adjustment of £0.8m in respect of that year and a further credit of £0.8m in respect of prior years. There is no explanation as to why 1986 has a credit adjustment and 1987 a debit adjustment.

On page/

On page F-16 there is a reconciliation of the actual UK tax charge with the amount which would have been charged at the statutory corporation tax rate. It is clear that utilisation of prior year trading losses is a major component of that reconciliation, some 15 times greater than any SSAP 15 timing differences. Thus the adjustments made in the UK/US GAAP reconciliation could be due to a variety of factors, particularly utilisation of tax losses. Page F-16 includes the following information in the reconciliation of the statutory UK tax rate with the effective rate:

	1986	1987
Increase of tax charge due to:	£000	£000
Excess of depreciation over capital allowances utilised	-	180
Reduction of tax charge due to:		
Excess of capital allowances utilised over depreciation	(111)	(73)
	(111)	107

Thus the UK tax charge was £0.1m less than expected on a US basis in 1986 and £0.1m greater in 1987. This has been taken as the SSAP 15 effect for analysis purposes.

Summary of findings on deferred taxation

The treatment of deferred taxation is one of the reasons for the UK reported profit being higher than it would be under US GAAP. It became apparent in the course of this investigation that the explanation was complex but could be analysed under three main headings:

(i) the treatment of timing differences which are not expected to reverse in the foreseeable future;

(ii) the treatment of tax losses and recoverable ACT brought forward; and

(iii) the difference between the liability method and the deferral method.

One factor which does not vary is the tax regime. The profit is being adjusted for US GAAP but not for US fiscal regulations.

SSAP 15 allows partial provision for timing differences while US GAAP require full provision. SSAP 15 allows recoverable losses to be offset against the deferred tax liability to a greater extent than do US GAAP. This reflects a more liberal UK tax regime on time periods for loss recovery. This greater freedom over tax losses creates a further complication when the deferred tax liability is increased to comply with US GAAP. The increased liability is used as a basis for an increased set-off of deferred UK tax assets and thus it was not possible in most of the 20-Fs to distinguish these separate effects except in the relatively few cases where the separation was made. To all this is added the complication of the liability method being used in the UK while the deferral method was used in the US in the time periods under investigation.

The lack of detail in the 20-F reconciliation of UK and US profit would not have created an insurmountable problem if all the companies had complied fully with the disclosure requirements of SSAP 15 in their UK annual reports, which were also provided for the research project. The revised version of SSAP 15, which applies to accounting periods beginning on or after 1st April 1985, requires (para 35) disclosure of the amount of any unprovided deferred tax in respect of the period to be disclosed by way of note and analysed into its major components. The UK annual reports rarely made this disclosure in respect of profit and loss account items (although it is disclosed in respect of the full balance sheet provision). In only two cases out of the total sample was the disclosure adequate to provide clear information on the effect of timing differences separated from the set-off of tax losses. This is a further instance of the problem cited in Chapter Seven where it was shown that companies do not provide all the detailed information prescribed by SSAPs.

The only help in isolating the effect of SSAP 15 on provision for timing differences came from the SEC requirement for a reconciliation of the expected income tax expense at the statutory rate to the actual income tax expense in the financial statements. Since this reconciliation was all based on the UK tax regime, it provided a potential opportunity to isolate the effect of timing differences and the effect of tax losses without the complication of the change from liability to deferral methods. In practice the reconciliations were far from uniform in presentation. Some were in percentage form, others in absolute amounts of tax saved. The nature of the adjustments was not always clear from the wording used but sufficient information was available to permit a tentative estimate of the effect of SSAP 15 on provision for timing differences in fifteen cases.

On the next page/

On the next page the fifteen companies are listed and the adjustment to UK tax is shown under the heading "SSAP15". A negative figure means that the UK profit must be reduced by that amount to make full provision for timing differences. On the following page the partial index of conservatism is arranged in years and histograms are presented. After removal of one outlier in the 1986 data the results of a single-tailed t-test are:

Year	N	Mean	St dev	SE Mean	T	P value
1985	9	1.0645	0.1035	0.0345	1.87	0.049
1986	14	1.0342	0.0337	0.0090	3.80	0.001
1987	15	1.0038	0.0853	0.0220	0.17	0.430

The conclusion to be drawn from this table is that in 1985 the average UK profit was 6.5% higher than the US figure because of partial provision for timing differences, while in 1986 it was only 3.4% higher. Both values are significant at the 5% level. In 1987 the average UK profit was 0.4% higher but this could have been a matter of chance.

Later in this chapter an overall index of conservatism for the three-year period will be estimated and an overall deferred taxation effect computed, but without regard to the component elements of the deferred taxation provision, in view of the relatively limited amount of data available.

Adjustment to UK profit for full/partial liability ("SSAP 15")

```
      RETRIEVE 'BGAS'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985    -228  1.30728
   2   1986     -86  1.10723
   3   1987       5  0.99513
MTB > RETRIEVE 'UNILEVER'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985     -15  1.05660
   2   1986     -11  1.04889
   3   1987     -10  1.03496
MTB > RETRIEVE 'BEECHAM'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985    -5.1  1.03123
   2   1986    -2.7  1.01543
   3   1987     4.6  0.97564
MTB > RETRIEVE 'GLAXO'
MTB > PRINT C1 C28 C288
 ROW   YEAR  SSAP15      C28
   1   1985     -13  1.04762
   2   1986     -17  1.04359
   3   1987     -14  1.02911
MTB > RETRIEVE 'CADBURY'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985    -4.2  1.14737
   2   1986    -6.5  1.07271
   3   1987    -1.9  1.01540
      RETRIEVE 'BP'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985    -397  1.59789
   2   1986    -193  1.45626
   3   1987    -201  1.18306
MTB > RETRIEVE 'NANSON'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985      -2  1.01031
   2   1986      -7  1.02141
   3   1987       0  1.00000
MTB > RETRIEVE 'BEAZER'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985     0.2  0.97980
   2   1986    -0.1  1.00552
   3   1987     0.0  1.00000

MTB > RETRIEVE 'BLUEARROW'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985     0.0  1.00000
   2   1986     0.0  1.00000
   3   1987     0.1  0.98649
MTB > RETRIEVE 'UNITNEWS'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15   C28
   1   1985       0     1
   2   1986       0     1
   3   1987       0     1
MTB > RETRIEVE 'BET'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985       *        *
   2   1986    -4.6  1.07278
   3   1987    -6.3  1.07184
MTB > RETRIEVE 'DIXONS'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985       *        *
   2   1986    -2.3  1.05928
   3   1987     0.0  1.00000
MTB > RETRIEVE 'BRITAIR'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985       *        *
   2   1986      -4  1.02083
   3   1987      38  0.75484
MTB > RETRIEVE 'WARDW'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985       *        *
   2   1986     0.0  1.00000
   3   1987    -0.4  1.01613
MTB > RETRIEVE 'CAMBR'
MTB > PRINT C1 C27 C28
 ROW   YEAR  SSAP15      C28
   1   1985       *        *
   2   1986    -0.1  1.01149
   3   1987     0.1  0.99383
MTB >
```

Partial index of conservatism: full/partial liability adjustment

ROW	1985	1986	1987
1	1.30728	1.10723	0.99513
2	1.05660	1.04889	1.03496
3	1.03123	1.01543	0.97564
4	1.04762	1.04359	1.02911
5	1.14737	1.07271	1.01540
6	1.59789	1.45626	1.18306
7	1.01031	1.02141	1.00000
8	0.97980	1.00552	1.00000
9	1.00000	1.00000	0.98649
10	1.00000	1.00000	1.00000
11	*	1.07278	1.07184
12	*	1.05928	1.00000
13	*	1.02083	0.75484
14	*	1.00000	1.01613
15	*	1.01149	0.99383

NOTE REMOVING OUTLIER IN 1985 DATA

```
MTB > HISTOGRAM C3
Histogram of 1985   N = 9   N* = 6
Midpoint   Count
    1.00       4  ****
    1.05       3  ***
    1.10       0
    1.15       1  *
    1.20       0
    1.25       0
    1.30       1  *

Histogram of 1987   N = 15
Midpoint   Count
    0.75       1  *
    0.80       0
    0.85       0
    0.90       0
    0.95       0
    1.00      10  **********
    1.05       3  ***
    1.10       0
    1.15       0
    1.20       1  *
```

NOTE REMOVING OUTLIER IN 1986 DATA

```
MTB > HISTOGRAM C4
Histogram of 1986   N = 14   N* = 1
Midpoint   Count
    1.00       3  ***
    1.01       2  **
    1.02       3  ***
    1.03       0
    1.04       1  *
    1.05       1  *
    1.06       1  *
    1.07       2  **
    1.08       0
    1.09       0
    1.10       0
    1.11       1  *
```

```
      TTEST MU=1 ON C3;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
              N     MEAN    STDEV   SE MEAN      T   P VALUE
1985          9   1.0645   0.1035    0.0345   1.87     0.049
MTB > TTEST MU=1 ON C4;
SUBC> ALT 1.
TEST OF MU = 1.00000 VS MU G.T. 1.00000
              N     MEAN    STDEV   SE MEAN      T   P VALUE
1986         14  1.03423  0.03372   0.00901   3.80    0.0011
MTB > TTEST MU=1 ON C5;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
              N     MEAN    STDEV   SE MEAN      T   P VALUE
1987         15   1.0038   0.0853    0.0220   0.17      0.43
```

Conclusion on deferred taxation

The detailed analysis of deferred taxation provisions has shown that information presented by individual companies, while of a satisfactory standard within the context of the specific annual report, is of inadequate standard when a particular point of detail is being investigated and compared on a cross-sectional basis. The failure to comply fully with the requirements of SSAP 15 is disappointing. The resulting analytical effort was considerable and calls into question the amount of investigation which could feasibly be carried out by professional analysts on a routine basis.

The conclusions to be drawn are that UK profits are less conservative than US profits because SSAP 15 is more liberal in its treatment of timing differences and in its treatment of allowable losses. The effect of timing differences diminished over the three-year period because of the fall in UK corporation tax rates as was shown by the simulation model and confirmed by the statistical analysis. The effect of tax losses has not been quantified because it depends more on the circumstances of the individual company than on the difference in accounting policy. The overall result is that while deferred taxation had a significant impact in 1985 and 1986 it probably had little overall impact in 1987 except in unusual cases.

<u>Amortisation of goodwill</u>

US GAAP require amortisation of goodwill through profit and loss account as compared with the write-off against reserves permitted in UK SSAP 22. Nineteen of the companies made this adjustment. Of the nineteen, six did not provide data for 1985. Thus for 1985 there were only 13 data items, for 1986 there were 19 and for 1987 there were 18 after removing an outlier.

The full tabulation of the goodwill index values before and after the outlier removal is shown together with histograms on page 12 of Appendix 1. The histograms confirm that there are no extreme outlying values which would distort the average value unduly.

A single-tailed t-score was calculated. The results are shown on page 9 of Appendix 1 and reproduced below:

Year	N	Mean	St dev	SE Mean	T	P value
1985	13	1.0728	0.1469	0.0408	1.79	0.0500
1986	19	1.0662	0.0703	0.0161	4.10	0.0003
1987	18	1.1042	0.1782	0.0420	2.48	0.0120

The t-statistic shows that for 1986 and 1987 the mean value is significantly greater than 1.0 at the 5% confidence level. For 1985 the result is inconclusive at the 5% level but is significant at the 10% level.

The results may be interpreted by saying that in 1985 the profit under UK SSAPs was 7.3% higher than under US GAAP because of the effect of not amortising goodwill. In 1986 the UK profit was 6.6% higher on average and in 1987 it was 10.4% higher on average. It appears that as acquisitions are made and the annual amortisation increases, the amortisation charge is having an increasing relative impact on the US reported profit. Further discussion of the observed effect now follows.

<u>Discussion of results on amortisation of goodwill</u>

The statement of adjustment to UK profits provides a useful opportunity to gauge the effect of writing off to reserves as compared with amortisation through the profit and loss account. Nineteen of the companies surveyed made adjustments because they had followed the UK practice of writing off goodwill to reserves.

The direction of the adjustment was therefore uniform. All companies had to make further debits to UK profits to comply with US GAAP. The magnitude of such adjustments increases from year to year if the company is engaged in an active takeover policy but the value of the index of conservatism as computed in this thesis depends on the relationship between the adjustment and the US profit figure against which it is being compared. For convenience, the listings of goodwill adjustments are reproduced immediately following this discussion. It can be seen from British Telecom ('BTEL'), for example, that a tenfold increase in the absolute value of the goodwill adjustment, due to major acquisitions, does not create any excessive distortions in the value of the conservatism index. Nevertheless the overall results on the previous page show that the average effect is increasing from 1985 to 1987 as would be expected from companies which are active in the acquisition field.

One outlying value, that of 3.696 for United Newspapers in 1987, was removed prior to the statistical analysis. This was a reflection of rapid acquisitions and, while a valid measure of the effect of amortisation for that particular company, would have caused distortion in the calculation of a mean value for 1987.

The nineteen/

The nineteen companies were not uniform in their choice of asset life for amortisation of goodwill. Disclosure of the asset life was not always specific, with phrases such as "up to 40 years", "not to exceed 40 years" and "from 1 to 40 years" appearing. Thus the average index as calculated from the published information is dependent on two factors: the effect of the amortisation policy and the asset life chosen. If the companies had been more precise about the actual life chosen it would have been possible to apply a scale factor to bring all to a common length of life, but the non-specific disclosure made this impossible. The index of conservatism does give an indication of the effect which would have been experienced had these companies used US GAAP.

There are two main conclusions at this stage of the analysis so far as amortisation of goodwill is concerned. The first conclusion is that amortisation of goodwill is the single most significant item in the reconciliation of profit under UK practice with profit under US GAAP. The second conclusion is that the relative significance of amortisation increased from 7% of US profit in 1985 to over 10% of US profit in 1987.

Adjustment to UK profit for amortisation of goodwill

```
    RETRIEVE 'UNILEVER'
MTB > PRINT C7 C8
 ROW  GWILL        C8
   1    -10   1.03774
   2     -8   1.03556
   3     -7   1.02448
MTB > RETRIEVE 'BEECHAM'
MTB > PRINT C5C6
 ROW  GWILL        C6
   1   -4.3   1.02633
   2   -1.5   1.00857
   3  -17.0   1.09004
MTB > RETRIEVE 'GLAXO'
MTB > PRINT C9 C10
 ROW  GWILL       C10
   1     -4   1.01465
   2     -4   1.01026
   3     -4   1.00832
MTB > RETRIEVE 'CADBURY'
MTB > PRINT C7 C8
 ROW  GWILL        C8
   1   -1.3   1.04561
   2   -3.0   1.03356
   3   -3.6   1.02917
MTB > RETRIEVE 'ECCLAY'
MTB > PRINT C11 C12
 ROW  GWILL       C12
   1   -1.0   1.02079
   2   -1.0   1.02381
   3   -2.2   1.03094
MTB > RETRIEVE 'BTEL'
MTB > PRINT C7 C8
 ROW  GWILL        C8
   1      0   1.00000
   2     -2   1.00182
   3    -29   1.01997
MTB > RETRIEVE 'HANSON'
MTB > PRINT C9 C10
 ROW  GWILL       C10
   1     -9   1.04639
   2    -19   1.05810
   3    -36   1.06642
MTB > RETRIEVE 'BEAZER'
MTB > PRINT C9 C10
 ROW  GWILL       C10
   1   -0.3   1.03030
   2   -1.8   1.09945
   3   -4.2   1.09292
MTB > RETRIEVE 'BLUEARROW'
MTB > PRINT C5 C6
 ROW  GWILL        C6
   1    0.0   1.00000
   2   -0.6   1.17143
   3   -5.8   1.78378
MTB > RETRIEVE 'UNITNEWS'
MTB > PRINT C5 C6
 ROW  GWILLAM       C6
   1    -8191   1.55416
   2   -10659   1.21628
   3   -14316   3.69300
MTB > RETRIEVE 'BET'
MTB >PRINT C5 C6
 ROW  GWILL        C6
   1      *         *
   2  -12.9   1.20411
   3  -14.4   1.16420
MTB > RETRIEVE 'DIXONS'
MTB > PRINT C7 C8
 ROW  GWILL        C8
   1      *         *
   2   -2.0   1.05155
   3   -2.4   1.03234
MTB > RETRIEVE 'BARCLAYS'
MTB > PRINT C5 C6
 ROW  GWILL        C6
   1     -7   1.01268
   2    -14   1.02682
   3    -15   1.08065
MTB > RETRIEVE 'NATWEST'
MTB > PRINT C5C6
 ROW  GWILL        C6
   1      *         *
   2     -5   1.00835
   3    -13   1.03210
MTB > RETRIEVE 'ATTWOODS'
MTB > PRINT C5 C6
 ROW  GWILL        C6
   1   -276   1.09299
   2   -951   1.16734
   3  -1400   1.20465
MTB > RETRIEVE 'ICI'
MTB > PRINT C17 C18
 ROW  GWILL       C18
   1    -32   1.06531
   2    -26   1.04414
   3    -58   1.07902

    RETRIEVE 'PLESSEY'
MTB > PRINT C5 C6
 ROW  GWILL        C6
   1      *         *
   2   -3.9   1.04262
   3   -3.9   1.03442
MTB > RETRIEVE 'WARDW'
MTB > PRINT C5 C6
 ROW  GWILL        C6
   1      *         *
   2   -0.5   1.05494
   3   -2.7   1.10887
MTB > RETRIEVE 'CAMBR'
MTB > PRINT C13 C14
 ROW  GWILL       C14
   1      *         *
   2    0.0   1.00000
   3    0.1   0.99383
```

Discussion of foreign currency translation adjustments

Only six of the companies surveyed made an adjustment for foreign currency translation. This was insufficient for statistical analysis, but provides sufficient information for a case study analysis.

There are two causes of difference. First of all there is the translation of revenue and expense items. US rules require use of the average rate for the year. UK rules permit this but also permit use of year-end rates. Consequently companies which have used the year-end rate in their UK accounts may have to make an adjustment. This appears in all five cases. The direction of the effect is not uniform and is probably attributable also to the relationship between sterling and the other currency which is being translated into sterling.

The second cause of difference is the treatment of hyper-inflationary currencies. Unilever uses year-end rates of exchange rather than the historical rates required by US GAAP. Beecham records translation gains and losses in hyper-inflationary economies as adjustments to reserves for UK purposes. For US GAAP they must pass through the income statement.

Neither Unilever nor Beecham quantifies the separate effect of the hyper-inflationary currencies so that the overall index of conservatism combines this with the average rate/year-end rate adjustment.

Such lack of detailed breakdown of separate effects must increase the difficulty for the analyst in making future predictions of performance. It might be possible to make a guess at the future direction of exchange rate movements but it would be more difficult to relate these to different aspects of accounting policy if the separate effects of such policies are never quantified by the company itself.

The conclusion to be drawn with regard to foreign currency is that where there is a foreign currency effect it is more closely related to the relative currency movements than to a systematic effect imposed by a different accounting standard. The greater freedom under UK SSAP 20 to use a variety of methods in translating the profit and loss account makes comparability more difficult but is not related to matters of relative conservatism.

Adjustment to UK profit for foreign currency translation

```
      RETRIEVE 'UNILEVER'
MTB > PRINT C5 C6
 ROW  FCTRANS        C6
   1       11   0.95849
   2       -2   1.00889
   3        0   1.00000
MTB > RETRIEVE 'BEECHAM'
MTB > PRINT C9 C10
 ROW  FCTRANS       C10
   1     -1.4   1.00857
   2     -1.0   1.00571
   3     -3.4   1.01801
MTB > RETRIEVE 'GLAXO'
MTB > PRINT C5 C6
 ROW  FCTRANS        C6
   1       11  0.959707
   2        8  0.979487
   3        6  0.987526
MTB > RETRIEVE 'CADBURY'
MTB > PRINT C15 C16
 ROW  FCTRANS       C16
   1     -1.0   1.03509
   2     -0.3   1.00336
   3      2.4   0.98055
MTB > RETRIEVE 'HANSON'
MTB > PRINT C7 C8
 ROW  FCTRANS        C8
   1       16   0.91753
   2       -2   1.00612
   3       22   0.95941
MTB > RETRIEVE 'BRITAIR'
MTB > PRINT C7 C8 C9 C10
 ROW  EXCHGAIN          C8  EXCHLOSS        C10
   1         *           *         *          *
   2        50    0.739583        -1    1.00521
   3        16    0.896774        -8    1.05161
```

Capitalisation of interest

Although there is no UK accounting policy statement on capitalisation of interest, the difference from US practice allows an opportunity to quantify an effect in respect of which the US practice is less conservative so far as the profit and loss account is concerned.

Taking an extract from Cadbury Schweppes by way of illustration:

"Under UK GAAP the capitalisation of interest is not required and the Group does not capitalise interest in its financial statements. US GAAP require interest incurred as part of the cost of acquiring fixed assets to be capitalised and amortised over the life of the asset." (page F-8)

There are six companies within the sample which made this adjustment. They are:

1. Unilever plc
2. Beecham Group plc
3. Cadbury Schweppes plc
4. English China Clays plc
5. British Telecommunications plc
6. Imperial Chemical Industries plc

All make a credit adjustment to UK profit with the one exception of Cadbury Schweppes in 1987. No explanation is given, but it presumably reflects a gain on disposal due to over-amortisation in earlier years.

A single-tailed t-test was run, despite the small sample size, because the values were reasonably close in magnitude. The data is reproduced immediately after this discussion and is summarised below:

Year	N	Mean	St dev	SE Mean	T	P value
1985	6	0.9675	0.0412	0.0168	-1.93	0.056
1986	6	0.9786	0.0212	0.0086	-2.47	0.028
1987	6	0.9822	0.0147	0.0060	-2.97	0.016

Thus for/

Thus for 1986 and 1987 the mean value is significantly less than 1.0 at the 5% level. For 1985 the mean value is significantly less than 1.0 at the 10% level.

The conclusion to be drawn is that UK profits were, on average, 3.25%(1985), 2.14%(1986) and 1.78%(1987) lower than the US GAAP profit for those companies which had incurred interest charges on acquiring fixed assets.

The conclusion has to be treated with some caution because of the low sample size. The printout also shows the average total index for these six companies in each year and it is clear that the values are not significantly different from 1.0, which shows that they are not representative of the group as a whole.

Adjustment to UK profit for capitalisation of interest

ROW	85TOTIND	85INTIND	86TOTIND	86INTIND	87TOTIND	87INTIND
1	0.98113	0.99623	1.04000	0.986667	0.92657	0.98951
2	1.02449	1.00000	0.99714	0.985140	1.08263	0.98305
3	1.67719	0.96842	0.85123	0.995530	0.88574	1.00162
4	0.96466	0.98961	1.37381	0.983333	1.00141	0.98875
5	1.17843	0.88948	0.93364	0.936364	0.86570	0.96832
6	1.12653	0.96122	1.01868	0.984720	1.03542	0.96185

```
    TTEST MU=1 ON C4;
SUBC>ALT 1/
 TEST OF MU = 1.000 VS MU G.T. 1.000
             N      MEAN     STDEV   SE MEAN        T    P VALUE
85TOTIND     6     1.159     0.267     0.109     1.45       0.10
MTB > TTEST MU=1 ON C5;
SUBC> ALT -1.
TEST OF MU = 1.0000 VS MU L.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T    P VALUE
85INTIND     6    0.9675    0.0412    0.0168    -1.93      0.056
MTB > TTEST MU=1 ON C6;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T    P VALUE
86TOTIND     6    1.0358    0.1792    0.0732     0.49       0.32
MTB > TTEST MU=1 ON C7;
SUBC> ALT -1.
TEST OF MU = 1.00000 VS MU L.T. 1.00000
             N      MEAN     STDEV   SE MEAN        T    P VALUE
86INTIND     6   0.97863   0.02116   0.00864    -2.47      0.028
MTB > TTEST MU=1 ON C8;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T    P VALUE
87TOTIND     6    0.9662    0.0869    0.0355    -0.95       0.81
MTB > TTEST MU=1 ON C9;
SUBC> ALT -1.
TEST OF MU = 1.00000 VS MU L.T. 1.00000
             N      MEAN     STDEV   SE MEAN        T    P VALUE
87INTIND     6   0.98218   0.01470   0.00600    -2.97      0.016
```

Quantification of the average effect of US GAAP adjustments based on a three-year average

Using profit and loss accounts relating to one year only clearly runs a risk that there may be fluctuations in particular expense items which may cause relatively high profits in one year and relatively low profits the following year. The same could well apply to adjustments for matters such as deferred taxation, amortisation of goodwill and foreign currency translation. To attempt to iron out some of these potential fluctuations, a three-year total of UK profit was compared with a three-year total of US profit and a three-year total of each adjustment. As can be seen in the illustrative examples below, this in no way affects the order of magnitude of the index of conservatism but may smooth out peaks and troughs in separate years.

Illustration 1

	Year1	Year 2	Year 3	Total
	£	£	£	£
UK profit	106	106	106	318
Adjustment A	(4)	(4)	(4)	(12)
Adjustment B	(2)	(2)	(2)	(6)
US profit	100	100	100	100
Index of conservatism:	1.06	1.06	1.06	1.06

Illustration 2

	£	£	£	£
UK profit	102	109	107	318
Adjustment A	(2)	(3)	(7)	(12)
Adjustment B	(1)	(1)	(4)	(6)
	99	105	96	300
Index of conservatism	1.03	1.038	1.115	1.06

Allowing for/

Allowing for rounding errors, the average of the three separate years in Illustration 2 is 1.06, identical to the three-year total.

One further stage of calculation which will facilitate the evaluation of the average effect of the US GAAP adjustments is to convert each index value to decimal form and in turn convert the decimal to percentage form. Thus 1.06 becomes 0.06 in decimal form or 6% in percentage terms. This may be interpreted as showing that the UK profit is 6% higher than it would have been had US GAAP been applied.

Results from the data analysed

The printout on page 13 of Appendix 1 shows, in columns C1 and C2, the UK total and US total profit for each of the 23 companies over the total period for which data was available (three years in the case of sixteen and two years in the case of seven companies).

Columns C3, C4 and C5 record, respectively, the absolute values of the adjustments for deferred tax, for amortisation of goodwill and for other items grouped as one figure.

From these columns index values are calculated and converted to decimal fractions by subtracting 1.0 and the results are in columns C6 to C9.

If all/

If all 23 rows had all data items present it would be possible to calculate a mean value for each column in such a way that the sum of the means for each component would equal the mean for the total difference. However there are five cases where either deferred taxation or goodwill amortisation is not present. Removing these five gives the following result:

(Values which pass the 5% significance test are asterisked in each of the following tables)

Decimal index values

	Total	Deferred tax	Goodwill amortisation	Other
For 18 companies with data in all columns (Appendix 1 page 14)	0.1403	0.0057	0.1073*	0.0274

This can be interpreted as:

"The total adjustments for US GAAP represent 14.0% of the US profit figure. This may be subdivided into 10.7% due to the amortisation of goodwill, 0.6% due to the effect of the deferred taxation adjustment and 2.7% due to a miscellaneous collection of other adjustments."

Only the goodwill amortisation is significant at the 5% level.

If there is less concern about the arithmetic precision of having all the decimal index values summing exactly to the total it is possible to revert to the full table of 23 company data items:

Decimal index values

	Total	Deferred tax	Goodwill amortisation	Other
Using full table of data items (Appendix 1 page 15)	0.1119	0.0053	0.1026*	0.0274

It is clear from histograms that there are outlying values which are affecting the means despite the manner of calculating values/

values by dividing throughout by the US profit. Removing obvious outliers these values become:

<u>Decimal index values</u>

	Total	Deferred tax	Goodwill amortisation	Other
Using full table of data with outliers removed (Appendix 1 pp 15 and 16)	0.0633*	0.0352*	0.0546*	n/a

Finally the analysis could revert to the 18 companies for which data is available across the table and remove outliers from those. The result is:

<u>Decimal index values</u>

	Total	Deferred tax	Goodwill amortisation	Other
Total for 15 companies with data in all columns and outliers removed (Appendix 1 page 17)	0.0808*	0.0083	0.0610*	0.0115

<u>Conclusion on the analysis of three-year totals</u>

There are two clear groupings of these results. If outlying values are left in the analysis then the conclusion from either using all companies or from using only the 18 with data in all columns is that UK profit is between 11% and 14% higher than the US GAAP figure would be. If the outliers are removed then the UK profit is between 6% and 8% higher than the US GAAP figure would be. In both cases the amortisation of goodwill is by far the dominant adjustment.

Taking the results from the full table of data with outliers removed as probably the most representative of these calculations, the conclusion would be that over the three-year period under investigation, UK profit was some 6% higher than it would have been under US GAAP because of the net effect of different accounting policies. Of this 6%, around 5% was due to the lack of amortisation of goodwill in UK profit and loss accounts. The overall effect of deferred taxation was not great, probably because of the fall in the UK corporation tax rate and the reduction in first year capital allowances. The remaining adjustments were not present in sufficient quantities to permit statistical analysis although they have been discussed at earlier stages of this chapter.

Comparisons with previous research

This research project has applied a formula for the index of conservatism which was devised by Gray (1980) in a comparison of profit reporting in France, Germany and the United Kingdom. Gray used as a reference point the profit calculated by the standardised method of analysis developed by the European Federation of Financial Analysts Societies.

The present research work resembles that of Gray in terms of the sample size used for each country (Gray used 15 sets of accounts for France, 28 for Germany and 29 for the UK, each reporting four years data). It resembles Gray in that the analysis of the index of conservatism is carried out for each year separately. Gray's paper, however, quantified only the overall index of conservatism, using that quantity to test for significant differences in accounting practice. He found the France/UK and Germany/UK comparisons were significantly different but the France/Germany difference was not.

Gray itemised by description the main adjustments made by the analysts but did not develop quantitative measures for the effect of each adjustment. The present research has taken the analysis a stage further by showing that it is possible to derive partial indices of conservatism provided the particular adjustment occurs sufficiently frequently and is adequately decribed.

The present research has also moved a stage further in estimating an effect over a three-year period in order to eliminate possible fluctuations due to using the conventional accounting year.

The ability/

The ability to make full comparison with Gray is limited because the present research used the US reporting practice as a reference point. If the European analysts' method were such as to require no amendments for US practice then the reference point for both would effectively be the same. The following table compares the results from the two separate research works.

<u>Grouping of all results by size of index of conservatism for any year</u>

Reported profits classified using an index of conservatism		Number of disclosures Gray	This work
I	below 0.50	2	2
II	0.50-0.74	10	1
III	0.75-0.94	5	9
Pessimistic		17	12
IV	0.95-0.99	11	7
V	1.00	4	3
VI	1.01-1.05	17	13
Neutral		32	23
VII	1.06-1.25	37	11
VIII	1.26-1.50	20	6
IX	above 1.50	10	9
Optimistic		67	26
Total disclosures		116	61

It would appear that Gray found a considerably greater incidence of optimistic profit reporting than did the present research. An index of 1.26 implies that the reported profit is 26% higher than the reference measure and this is the point in the table at which the two sets of results diverge most dramatically. The present research found very few results with such a high degree of relative optimism in reporting.

The table above is not strictly comparable because Gray's figures include France, Germany and the UK while this work includes only the UK. It would not appear to help the comparison if France and Germany/

and Germany were to be removed because they should have been the more pessimistic in Gray's table and hence their removal would worsen the goodness of fit.

A chi square test on the above table confirms that there is no evidence of association between the two sets of data. The conclusion to be drawn is that probably the European analysts' method would not produce results comparable to US reporting practice and that to make the results compatible further estimates would have to be made on the extent to which the European method would modify the adjustments made to UK profits under US GAAP.

The statistical methods used in the two research works are different. Gray carried out a chi square test on the number of disclosures in each of a specified class of index values in order to find the goodness of fit between pairs of data. He carried out tha analysis on a year-by-year basis in order to avoid association between data of different years.

The present work has also been carried out on a year-by-year basis but has used a t-test which is suitable for the relatively small sample size and which permits a quantification of the average effect of the UK/US differences by testing the significance of the mean index value.

Gray concluded his paper by calling for further research into the impact of international differences in accounting practice. This research has attempted to make a contribution towards that aim. Gray has subsequently made proposals for relating such differences to cultural factors (Gray 1988) and there is clearly scope for such analysis in relation to the present work although that would be a major new area of investigation beyond the scope of this present work.

The following section concludes the chapter by considering the factors which may have influenced those areas of UK accounting practice which appear particularly different from US GAAP.

Conclusions and further research

The existence of Form 20-F reporting requirements provides an unusual opportunity to consider the results of a UK company in the context of how those results would be reported under US GAAP rather than under UK accounting practices.

The most frequently occurring adjustments were found to be those dealing with the amortisation of goodwill and with provision for deferred taxation. Of the two, the amortisation of goodwill is clearly the dominant effect when measured as a percentage of US reported profit. With up to 10% of the US profit being taken by a charge which is not found in UK profit and loss accounts, there is clearly an item of material effect on reported profit.

The differences between the UK and the US accounting practices show that in both cases the UK treatment is less conservative in its effect on the profit and loss account. Both subject areas are covered by UK accounting standards which have been subject to a considerable element of pressure during their development. It is interesting to consider how that pressure may have led to the reduced conservatism towards the profit and loss account.

The deferred taxation debate leading up to SSAP 15 is well chronicled by Hope and Briggs (1982). SSAP 11, requiring full provision, came into being at a time of 100% first year capital allowances and 52% rate of corporation tax. The effect was to create large provisions against liabilities which were unlikely ever to be repaid. Hope and Briggs identify the opposition to SSAP 11 as arising from industrialists, co-ordinated by the CBI. The arguments put forward were that the Government had created a regime which was intended to confer a permanent tax advantage to manufacturing industry, shareholders funds were unnecessarily restricted and the after-tax return on capital employed did not have proper regard to commercial reality (the argument emphasising the capital employed rather than the after-tax profit). The ASC bowed to this pressure despite the doubts expressed by the professional accountancy firms.

Particularly interesting in the context of a study of prudence is the comment by Hope and Briggs on paragraphs 244 and 249 of the Sandilands Report on Inflation Accounting which used the expressions "reasonable probability" and "foreseeable future" in relation to the deferred taxation provision. This reinforces the view that prudence should be viewed as a reaction to uncertainty.

Taylor and Turley (1986), in commenting on the deferred taxation debate, suggest that the ASC's change of direction in SSAP 15 was because the views of company management prevailed.

Are these same influences observable in the goodwill debate? The exposure draft ED 30 was equivocal in its view on the immediate write-off to reserves as compared with amortisation. The need to deal with goodwill in the UK arose partly because the advent of EC directives meant that goodwill could no longer sit indefinitely in the balance sheet of an individual company and probably under future legislation would no longer sit in the balance sheet of a group.
The criticism of ED 30 was that it gave two options equal weighting and did not narrow the areas of difference in accounting practice. Although the comments on the earlier discussion paper on goodwill had been fairly equally divided, it was clear that the prevailing practice was to write-off against reserves (Deloittes 1985).

Thus, required to make a choice, the ASC appears to have chosen the view that was most widely supported by companies in practice. The ASC approach has been described by Cooke (1985) as "codifying the majority practice without upsetting a minority". The management viewpoint again prevailed. At that time the immediate write-off appeared attractive because it enhanced return on capital employed by reducing the shareholders funds.

It was only subsequently that companies began to realise that a rapidly expanding business would soon reach the point of a negtive reserve through write-off. That, together with a greater emphasis on gearing, has led to demands for intangibles such as brand names to appear on the balance sheet although still without amortisation.

It should be noted that the US accounting standard (APB 17) is a general standard covering all intangible assets. It may be that the UK will have to move in that direction if goodwill is renamed in terms of brands or company names or reputations. This quantitative analysis has shown that any attempt to insist on amortisation of goodwill could have a significant effect on reported UK profits.

Taylor (1987) traces the development of the US preference for amortisation and shows that US policy has been consistently opposed to immediate write-off since the early 1950's. It would appear that the treatment of goodwill in the US is a long thought-out policy whereas in the UK its treatment is something of an instantaneous reaction to the advent of EC directives and a dislike for amortisation.

Nobes (1988) has provided a useful practical guide to adjusting US financial statements to a UK basis. He bases his analysis largely on the 20-F adjustments, reversing the process used there. Nobes suggests that the detailed differences between US and UK accounting practice, although important in terms of dollars, may not be based on major underlying differences and may prove to be short-lived. He suggests that the US move from full deferral to full liability was due to the substantial fall in US tax rates in 1987, showing that circumstances of the moment have an impact on US accounting policy in much the same way as they do in the UK. He finds that the different views on amortisation of goodwill cannot be explained in terms of any underlying theory of national differences. The present research adds to Nobes' work in that he has not quantified the relative magnitudes of the adjustments as this research has done. The present research has also shown that the adjustment for deferred taxation is very much more complex than would be allowed for in Nobes' simplified adjustment, which could be misleading for a company having substantial unrelieved tax losses.

Three areas of further research suggest themselves from this project on analysis of Form 20-Fs. The first is to look more closely at the deferred taxation effects and to attempt a more accurate subdivision. That would probably require the co-operation of the companies concerned in confirming the interpretation of the information they have supplied in the 20-F forms. The second is to extend the comparison to European countries as more 20-Fs become available (although at the present time there are very few). The third is to relate this analysis to the cultural influences explored by Gray (1988) and to distinguish such cultural influences from the transient effects identified by Nobes (1988).

```
        RETRIEVE 'BGAS'
  MTB > PRINT C1-C4
   ROW   YEAR   BGUK  BGUSA         C4
     1   1985    804    742    1.08356
     2   1986    720    802    0.89776
     3   1987    806   1027    0.78481
  MTB > PRINT C5-C10
   ROW     RE        IND   EXPL   INDEXPL   DEFTAX    INDDEFT
     1    238   0.679245     13   0.98248     -313    1.42183
     2    243   0.697007     18   0.97756     -179    1.22319
     3    237   0.769231     -3   1.00292      -13    1.01266
```

```
      RETRIEVE 'UNILEVER'
MTB > PRINT C1-C4
 ROW   YEAR  UNILUK  UNILUS A        C4
   1   1985     270       265   1.01887
   2   1986     245       225   1.08889
   3   1987     280       286   0.97902
MTB > PRINT C5-C16
 ROW  FCTRANS        C6  GWILL        C8  INTEREST        C10   INV       C12
   1       11   0.95849    -10   1.03774         1   0.996226     0   1.00000
   2       -2   1.00889     -8   1.03556         3   0.986667   -10   1.04444
   3        0   1.00000     -7   1.02448         3   0.989510    -1   1.00350
 ROW   DEFT       C14   DEPN       C16
   1     -7   1.02641      0   1.00000
   2     -3   1.01333      0   1.00000
   3     -6   1.02098     17   0.94056
MTB >
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        RETRIEVE 'BEECHAM'
  MTB > PRINT C1-C4
   ROW   YEAR    BEUK   BEUSA        C4
     1   1985   167.3   163.3   1.02449
     2   1986   174.5   175.0   0.99714
     3   1987   204.4   188.8   1.08263
  MTB > PRINT C5-C14
   ROW  GWILL        C6   INT        C8  FCTRANS       C10  DEFTAX        C12
     1   -4.3   1.02633   0.0   1.00000     -1.4   1.00857     1.7   0.989590
     2   -1.5   1.00857   2.6   0.98514     -1.0   1.00571     0.4   0.997714
     3  -17.0   1.09004   3.2   0.98305     -3.4   1.01801     6.6   0.965042
   ROW   EXTR       C14
     1      0   1.00000
     2      0   1.00000
     3     -5   1.02648
  MTB >
```

```
     RETRIEVE 'GLAXO'
MTB > PRINT C1-C4
 ROW   YEAR  GLUK  GLUSA        C4
   1   1985   277    273   1.01465
   2   1986   400    390   1.02564
   3   1987   496    481   1.03119
MTB > PRINT C1-C14
 ROW   YEAR  GLUK  GLUSA        C4  FCTRANS          C6  DEFT        C8  GWILL
   1   1985   277    273   1.01465       11    0.959707    -6   1.02198     -4
   2   1986   400    390   1.02564        8    0.979487   -13   1.03333     -4
   3   1987   496    481   1.03119        6    0.987526   -30   1.06237     -4
 ROW        C10   PENS        C12  EXTR        C14
   1    1.01465      8    0.97070   -13    1.04762
   2    1.01026     -1    1.00256     0    1.00000
   3    1.00832     -1    1.00208    14    0.97089
MTB >

     RETRIEVE 'CADBURY'
MTB >PRINT C1-C4
 ROW   YEAR  CADUK  CADUSA        C4
   1   1985   47.8    28.5   1.67719
   2   1986   76.1    89.4   0.85123
   3   1987  109.3   123.4   0.88574
MTB > PRINT C5-C18
 ROW   EXTR        C6  GWILL        C8   INT        C10  DEFT       C12  REVL
   1  -14.0   1.49123   -1.3   1.04561   0.9    0.96842  -4.6   1.16140   0.7
   2   22.0   0.75391   -3.0   1.03356   0.4    0.99553  -6.1   1.06823   0.3
   3    1.4   0.98865   -3.6   1.02917  -0.2    1.00162  -2.5   1.02026   0.2
 ROW        C14  FCTRANS        C16  PRIORYR        C18
   1   0.975439     -1.0    1.03509        *          *
   2   0.996644     -0.3    1.00336        *          *
   3   0.998379      2.4    0.98055     16.4   0.867099
MTB >

     RETRIEVE 'ECCLAY'
MTB > PRINT C1-C4
 ROW   YEAR    UK     US        C4
   1   1985  46.4   48.1   0.96466
   2   1986  57.7   42.0   1.37381
   3   1987  71.2   71.1   1.00141
MTB > PRINT C5-C18
 ROW   EXTR        C6   DEP        C8  INTCAP        C10  GWILL        C12
   1    0.0   1.00000   0.3   0.99376     0.5   0.989605   -1.0    1.02079
   2  -16.6   1.39524   0.0   1.00000     0.7   0.983333   -1.0    1.02381
   3    0.0   1.00000   0.9   0.98734     0.8   0.988748   -2.2    1.03094
 ROW  FCTRANS       C14  PREACQ       C16  DEFT        C18
   1      1.6   0.96674    -0.6   1.01247   0.9    0.98129
   2     -0.6   1.01429    -0.3   1.00714   2.1    0.95000
   3      0.5   0.99297     0.0   1.00000  -0.1    1.00141
MTB >
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      RETRIEVE 'BTEL'
MTB > PRINT C1-C4
 ROW     C1     C2     C3        C4
   1   1985    885    751   1.17843
   2   1986   1027   1100   0.93364
   3   1987   1257   1452   0.86570
MTB > PRINT C5-C10
 ROW  INTCAP        C6  GWILL        C8  DEFT       C10
   1      83  0.889481      0   1.00000  -217   1.28895
   2      70  0.936364     -2   1.00182     5   0.99545
   3      46  0.968320    -29   1.01997   178   0.87741
MTB >

      RETRIEVE 'BP'
MTB > PRINT C1-C4
 ROW   YEAR     UK    USA        C4
   1   1985   1598    664   2.40663
   2   1986    817    423   1.93144
   3   1987   1391   1098   1.26685
MTB > PRINT C5-C12
 ROW   EXTR       C6   DEFT       C8  PENS       C10  MININT        C12
   1   -929  2.39910    -44  1.06626     1  0.998494      38   0.942771
   2   -318  1.75177   -126  1.29787     6  0.985816      44   0.895981
   3      0  1.00000   -344  1.31330     3  0.997268      48   0.956284
MTB >

      RETRIEVE 'HANSON'
MTB > PRINT C1-C4
 ROW   YEAR     UK     US        C4
   1   1985    193    194   0.99485
   2   1986    360    327   1.10092
   3   1987    572    542   1.05535
MTB > PRINT C5-C10
 ROW   DEFT        C6  FCTRANS        C8  GWILL       C10
   1     -6   1.03093       16   0.91753     -9   1.04639
   2    -12   1.03670       -2   1.00612    -19   1.05810
   3    -16   1.02952       22   0.95941    -36   1.06642
MTB >

      RETRIEVE 'BEAZER'
MTB > PRINT C1-C4
 ROW   YEAR     UK     US        C4
   1   1985   10.0    9.9   1.01010
   2   1986   20.3   18.1   1.12155
   3   1987   46.0   45.2   1.01770
MTB > PRINT C5-C18
 ROW   EXTR        C6  DEFT        C8  GWILL       C10  MININT       C12
   1    1.0  0.898990  -0.3   1.03030   -0.3   1.03030     0.1   0.98990
   2    0.8  0.955801  -0.2   1.01105   -1.8   1.09945     0.3   0.98343
   3    6.1  0.865044  -0.1   1.00221   -4.2   1.09292     0.0   1.00000
 ROW  TAXLOSS       C14  DEFCR       C16   DEP       C18
   1     -0.8   1.08081    0.1   0.98990   0.1  0.989899
   2     -1.5   1.08287    0.1   0.99448   0.1  0.994475
   3     -2.7   1.05973    0.0   1.00000   0.1  0.997788
MTB >
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     RETRIEVE 'BLUEARROW'
MTB >PRINT C1-C4
 ROW   YEAR     UK    USA        C4
   1   1985    1.4    0.9   1.55556
   2   1986    5.3    3.5   1.51429
   3   1987   18.1    7.4   2.44595
MTB > PRINT C5-C16
 ROW  GWILL       C6   EXTR       C8  DEFT      C10  ACQCOST       C12
   1    0.0  1.00000   -0.4  1.44444   0.0  1.00000      0.0   1.00000
   2   -0.6  1.17143   -0.5  1.14286   0.0  1.00000     -0.1   1.02857
   3   -5.8  1.78378    0.0  1.00000   0.1  0.98649     -4.6   1.62162
 ROW MERGAC      C14  OTHER      C16
   1   -0.1  1.11111    0.0  1.00000
   2   -0.1  1.02857   -0.5  1.14286
   3    0.0  1.00000   -0.4  1.05405
MTB >


     RETRIEVE 'UNITNEWS'
MTB > PRINT C1-C4
 ROW   YEAR     UK    USA        C4
   1   1985  23682  14781    1.6022
   2   1986  37329  49284    0.7574
   3   1987  62385   5316   11.7353
MTB > PRINT C5-C18
 ROW GWILLAM       C6  GWILLDIS       C8  INTANG      C10  REVALDEP
   1   -8191  1.55416         0  1.00000   -1887  1.12766       500
   2  -10659  1.21628    -14362  1.29141   -3075  1.06239       424
   3  -14316  3.69300    -23341  5.39071   -3075  1.57844       520
 ROW       C12  REVALDIS      C14  DEFT      C16   CUM       C18
   1  0.966173         0  1.00000  2110  0.85725     0   1.00000
   2  0.991397     10174  0.79356  -854  1.01733     0   1.00000
   3  0.902182       940  0.82318     *        *  5230   0.01618
MTB > PRINT C19 C20
 ROW    EXTR      C20
   1   -1433  1.09695
   2   30307  0.38505
   3  -23027  5.33164
MTB >
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     RETRIEVE 'BET'
MTB > PRINT C1-C4
 ROW   YEAR     UK    USA        C4
   1   1985      *      *         *
   2   1986   85.3   63.2   1.34968
   3   1987  110.4   87.7   1.25884
MTB > PRINT C5-C10
 ROW  GWILL        C6  BUSCOM        C8  DEPN       C10
   1      *         *       *         *     *         *
   2  -12.9   1.20411    -7.0   1.11076  -0.4   1.00633
   3  -14.4   1.16420    -3.7   1.04219   0.2   0.99772
MTB > PRINT C11-C16
 ROW   DEFT       C12  LEASING       C14  DEFEXP       C16
   1      *         *        *         *       *         *
   2   -3.2   1.05063     -2.6   1.04114    -1.4   1.02215
   3    2.5   0.97149     -0.9   1.01026    -1.4   1.01596
MTB > PRINT C17-C22
 ROW  SALE/LB        C18  ASSOC       C20  DISPSUB       C22
   1        *          *      *         *        *         *
   2      7.4   0.882911    0.4   0.99367     -1.5   1.02373
   3      0.1   0.998860    0.1   0.99886      4.3   0.95097
MTB > PRINT C23-C26
 ROW  INVGAIN       C24   EXTR       C26
   1        *         *      *         *
   2      8.4   0.86709   -9.3   1.14715
   3      0.0   1.00000   -9.5   1.10832
MTB >

     RETRIEVE 'DIXONS'
MTB > PRINT C1-C4
 ROW   YEAR     UK    USA        C4
   1   1985      *      *         *
   2   1986   51.5   38.8   1.32732
   3   1987   72.0   74.2   0.97035
MTB > PRINT C5-C10
 ROW   DEFT        C6  GWILL        C8   EXTR       C10
   1      *         *      *         *      *         *
   2    2.1   0.94588   -2.0   1.05155  -12.8   1.32990
   3   -1.0   1.01348   -2.4   1.03234    5.6   0.92453
MTB >
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      RETRIEVE 'BARCLAYS'
MTB > PRINT C1-C4
 ROW   YEAR     UK    USA         C4
   1   1985    437    552    0.79167
   2   1986    612    522    1.17241
   3   1987    185    186    0.99462
MTB > PRINT C5-C14
 ROW  GWILL        C6  LEASING        C8   DEFT       C10  DISPINV       C12
   1     -7   1.01268       50   0.90942     88   0.84058      -16   1.02899
   2    -14   1.02682       10   0.98084     -4   1.00766      -82   1.15709
   3    -15   1.08065      -35   1.18817     57   0.69355        0   1.00000
 ROW   DEPN       C14
   1      0   1.00000
   2      0   1.00000
   3     -6   1.03226
MTB >

      RETRIEVE 'NATWEST'
MTB > PRINT C1-C4
 ROW     C1     C2     C3         C4
   1   1985      *      *          *
   2   1986    614    599    1.02504
   3   1987    429    405    1.05926
MTB > PRINT C5-C8
 ROW  GWILL         C6   DEPR         C8
   1      *          *      *          *
   2     -5    1.00835    -10    1.01669
   3    -13    1.03210    -11    1.02716
MTB >

      RETRIEVE 'BRITAIR'
MTB > PRINT C1-C4
 ROW   YEAR     UK    USA         C4
   1   1985      *      *          *
   2   1986    193    192    1.00521
   3   1987    148    155    0.95484
MTB > PRINT C5-C16
 ROW   DEPN          C6  EXCHGAIN          C8  EXCHLOSS        C10  DISP
   1      *           *         *           *         *          *     *
   2     10    0.947917        50    0.739583        -1    1.00521     3
   3      9    0.941935        16    0.896774        -8    1.05161     6
 ROW        C12   EXTR       C14   DEFT       C16
   1          *      *         *      *         *
   2   0.984375    -12   1.06250    -51   1.26562
   3   0.961290      4   0.97419    -20   1.12903
MTB >
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```
     RETRIEVE 'ATTWOODS'
MTB > PRINT C1-C4
 ROW   YEAR     UK    USA        C4
   1   1985   3335   2968   1.12365
   2   1986   5948   5683   1.04663
   3   1987   8736   6841   1.27701
MTB > PRINT C5 - C14
 ROW  GWILL         C6   DEFT        C8   DEPN       C10  BUSCOM       C12
   1   -276    1.09299    -26   1.00876      0   1.00000     -65   1.02190
   2   -951    1.16734    -27   1.00475     77   0.98645    -403   1.07091
   3  -1400    1.20465   -751   1.10978    192   0.97193      64   0.99064
 ROW   DISP        C14
   1      0    1.00000
   2   1039    0.81717
   3      0    1.00000
MTB >

     RETRIEVE 'RODIME'
MTB > PRINT C1-C4
 ROW   YEAR      UK     USA        C4
   1   1985    9005    9005   1.00000
   2   1986    -810    -470   0.27660
   3   1987  -11643  -10660   0.90779
MTB > PRINT C5 C6
 ROW   DEFT         C6
   1      0    1.00000
   2    340    0.27660
   3    983    0.90779
MTB >

     RETRIEVE 'ICI'
MTB > PRINT C1-C4
 ROW   YEAR     UK    USA        C4
   1   1985    552    490   1.12653
   2   1986    600    589   1.01868
   3   1987    760    734   1.03542
MTB > PRINT C5-C12
 ROW   DEFT         C6  CAPINT        C8  CAPLEAS       C10  TAXBEN       C12
   1    -39    1.07959      19  0.961224       -1   1.00204      -2   1.00408
   2     14    0.97623       9  0.984720        1   0.99830      -2   1.00340
   3    -19    1.02589      28  0.961853        0   1.00000       0   1.00000
MTB > PRINT C13-C20
 ROW  REVFA        C14   PENS        C16  GWILL       C18   EXTR       C20
   1      6   0.987755     27   0.944898    -32   1.06531    -40   1.08163
   2      5   0.991511     31   0.947368    -26   1.04414    -43   1.07301
   3      3   0.995913     20   0.972752    -58   1.07902      0   1.00000
MTB >
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```
     RETRIEVE 'PLESSEY'
MTB > PRINT C1-C4
 ROW   YEAR      UK     USA        C4
   1   1985       *       *         *
   2   1986    99.5    91.5   1.08743
   3   1987   119.8   113.3   1.05737
MTB > PRINT C5-C16
 ROW  GWILL        C6    DEFT        C8  FCTRANS       C10  LEASES       C12
   1      *         *       *         *        *         *       *         *
   2   -3.9   1.04262    -1.4   1.01530      0.1  0.998907     2.5   0.97268
   3   -3.9   1.03442    -0.2   1.00177      0.6  0.994704     0.0   1.00000
 ROW  REVASS       C14    EXTR       C16
   1       *         *       *         *
   2     2.2  0.975956    -7.5   1.08197
   3     0.5  0.995587    -3.5   1.03089
MTB >
```

```
     RETRIEVE 'WARDW'
MTB >PRINT C1-C4
 ROW   YEAR     UK     US        C4
   1   1985      *      *         *
   2   1986   17.4    9.1   1.91209
   3   1987   28.5   24.8   1.14919
MTB > PRINT C5-C16
 ROW  GWILL        C6    EXTR        C8    DEFT       C10  DEFPUR       C12
   1      *         *       *         *       *         *       *         *
   2   -0.5   1.05494    -3.5   1.38462    -0.1   1.01099    -0.7   1.07692
   3   -2.7   1.10887     0.5   0.97984    -0.7   1.02823    -0.1   1.00403
 ROW   DEPN       C14  SALELB       C16
   1      *         *       *         *
   2   -0.3   1.03297    -3.2   1.35165
   3   -0.8   1.03226     0.1   0.99597
MTB >
```

```
     RETRIEVE 'CAMBR'
MTB > PRINT C1-C4
 ROW   YEAR     UK     US         C4
   1   1985      *      *          *
   2   1986    4.4    8.7   0.505747
   3   1987    6.4   16.2   0.395062
MTB > PRINT C5-C18
 ROW  CURTAX        C6    DEFT        C8    EXTR       C10  PURCHAC       C12
   1       *         *       *         *       *         *        *         *
   2     0.0   1.00000     0.2   0.97701     4.1  0.528736      0.0   1.00000
   3    -0.6   1.03704    -0.3   1.01852    10.8  0.333333     -0.8   1.04938
 ROW  GWILL       C14   ASSOC   C16  PRIORYR       C18
   1      *         *       *     *        *         *
   2    0.0   1.00000       0     1      0.0   1.00000
   3    0.1   0.99383       0     1      0.6   0.96296
MTB >
```

```
     TTEST MU=1 ON C6;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
85TOTAL     15    1.1444    0.2582    0.0667     2.17       0.024
MTB > TTEST MU=1 ON C10;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
86TOTAL     19    1.0892    0.1904    0.0437     2.04       0.028
MTB > TTEST MU=1 ON C14;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
87TOTAL     20    1.0318    0.1309    0.0293     1.08        0.15
MTB >

     TTEST MU=1 ON C7;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
85DEFT      15    1.0537    0.1474    0.0381     1.41       0.090
MTB > TTEST MU=1 ON C11;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
86DEFT      21    1.0428    0.0969    0.0212     2.02       0.028
MTB > TTEST MU=1 ON C15;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
87DEFT      20    1.0142    0.1128    0.0252     0.56        0.29
MTB >

     TTEST MU=1 ON C8;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
85GWILL     13    1.0728    0.1469    0.0408     1.79       0.050
MTB > TTEST MU=1 ON C12;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
86GWILL     19    1.0662    0.0703    0.0161     4.10      0.0003
MTB > TTEST MU=1 ON C16;
SUBC> ALT 1.
TEST OF MU = 1.0000 VS MU G.T. 1.0000
             N      MEAN     STDEV   SE MEAN        T     P VALUE
87GWILL     18    1.1042    0.1782    0.0420     2.48       0.012
```

Total index of conservatism analysed by years

BEFORE OUTLIERS REMOVED

ROW	85TOTAL	86TOTAL	87TOTAL
1	1.08356	0.89776	0.7848
2	1.01887	1.08889	0.9790
3	1.02449	0.99714	1.0826
4	1.01465	1.02564	1.0312
5	1.67719	0.85123	0.8857
6	0.96466	1.37381	1.0014
7	1.17843	0.93364	0.8657
8	2.40663	1.93144	1.2668
9	0.99485	1.10092	1.0553
10	1.01010	1.12155	1.0177
11	1.55556	1.51429	2.4460
12	1.60220	0.75740	11.7353
13	*	1.34968	1.2588
14	*	1.32732	0.9703
15	0.79167	1.17241	0.9946
16	*	1.02504	1.0593
17	*	1.00521	0.9548
18	1.12365	1.04663	1.2770
19	1.00000	0.27660	0.9078
20	1.12653	1.01868	1.0354
21	*	1.08743	1.0574
22	*	1.91209	1.1492
23	*	0.50575	0.3951

AFTER OUTLIERS REMOVED

ROW	85TOTAL	86TOTAL	87TOTAL
1	1.0836	0.89776	0.78481
2	1.01887	1.08889	0.97902
3	1.02449	0.99714	1.08263
4	1.01465	1.02564	1.03119
5	1.67719	0.85123	0.88574
6	0.96466	1.37381	1.00141
7	1.17843	0.93364	0.86570
8	*	*	1.26685
9	0.99485	1.10092	1.05535
10	1.01010	1.12155	1.01770
11	1.55556	1.51429	*
12	1.60220	0.75740	*
13	*	1.34968	1.25884
14	*	1.32732	0.97035
15	0.79167	1.17241	0.99462
16	*	1.02504	1.05926
17	*	1.00521	0.95484
18	1.12365	1.04663	1.27701
19	1.00000	*	0.90780
20	1.12653	1.01868	1.03542
21	*	1.08743	1.05737
22	*	*	1.14919
23	*	*	*

Histogram of 85TOTAL N = 15 N* = 8

Midpoint	Count	
0.8	1	*
0.9	0	
1.0	7	*******
1.1	3	***
1.2	1	*
1.3	0	
1.4	0	
1.5	0	
1.6	2	**
1.7	1	*

Histogram of 86TOTAL N = 19 N* = 4

Midpoint	Count	
0.8	1	*
0.9	3	***
1.0	6	******
1.1	4	****
1.2	1	*
1.3	2	**
1.4	1	*
1.5	1	*

Histogram of 87TOTAL N = 20 N* = 3

Midpoint	Count	
0.80	1	*
0.85	1	*
0.90	2	**
0.95	2	**
1.00	4	****
1.05	5	*****
1.10	1	*
1.15	1	*
1.20	0	
1.25	2	**
1.30	1	*

MTB >

Partial index of deferred tax analysed by years

BEFORE OUTLIERS REMOVED

ROW	85DEFT	86DEFT	87DEFT
1	1.42183	1.22319	1.01266
2	1.02641	1.01333	1.02098
3	0.98959	0.99771	0.96504
4	1.02198	1.03333	1.06237
5	1.16140	1.06823	1.02026
6	0.98129	0.95000	1.00141
7	1.28895	0.99545	0.87741
8	1.06626	1.29787	1.31330
9	1.03093	1.03670	1.02952
10	1.03030	1.01105	1.00221
11	1.00000	1.00000	0.98649
12	0.85725	1.01733	*
13	*	1.05063	0.97149
14	*	0.94588	1.01348
15	0.84058	1.00766	0.69355
16	*	*	*
17	*	1.26562	1.12903
18	1.00876	1.00475	1.10978
19	1.00000	0.27660	0.90779
20	1.07959	0.97623	1.02589
21	*	1.01530	1.00177
22	*	1.01099	1.02823
23	*	0.97701	1.01852

AFTER OUTLIERS REMOVED

ROW	85DEFT	86DEFT	87DEFT
1	1.42183	1.22319	1.01266
2	1.02641	1.01333	1.02098
3	0.98959	0.99771	0.96504
4	1.02198	1.03333	1.06237
5	1.16140	1.06823	1.02026
6	0.98129	0.95000	1.00141
7	1.28895	0.99545	0.87741
8	1.06626	1.29787	1.31330
9	1.03093	1.03670	1.02952
10	1.03030	1.01105	1.00221
11	1.00000	1.00000	0.98649
12	0.85725	1.01733	*
13	*	1.05063	0.97149
14	*	0.94588	1.01348
15	0.84058	1.00766	0.69355
16	*	*	*
17	*	1.26562	1.12903
18	1.00876	1.00475	1.10978
19	*	*	*
20	1.07959	0.97623	1.02589
21	*	1.01530	1.00177
22	*	1.01099	1.02823
23	*	0.97701	1.01852

```
Histogram of 85DEFT   N = 15   N* = 8
Midpoint   Count
    0.85       2  **
    0.90       0
    0.95       0
    1.00       5  *****
    1.05       4  ****
    1.10       1  *
    1.15       1  *
    1.20       0
    1.25       0
    1.30       1  *
    1.35       0
    1.40       1  *
MTB >
```

```
Histogram of 86DEFT   N = 21   N* = 2
Midpoint   Count
    0.95       2  **
    1.00      12  ************
    1.05       4  ****
    1.10       0
    1.15       0
    1.20       1  *
    1.25       1  *
    1.30       1  *
MTB >
```

```
Histogram of 87DEFT   N = 20   N* = 3
Midpoint   Count
     0.7       1  *
     0.8       0
     0.9       1  *
     1.0      14  **************
     1.1       3  ***
     1.2       0
     1.3       1  *
MTB >
```

BEFORE OUTLIERS REMOVED

ROW	85GWILL	86GWILL	87GWILL
1	*	*	*
2	1.03774	1.03556	1.02448
3	1.02633	1.00857	1.09004
4	1.01465	1.01026	1.00832
5	1.04561	1.03356	1.02917
6	1.02079	1.02381	1.03094
7	1.00000	1.00182	1.01997
8	*	*	*
9	1.04639	1.05810	1.06642
10	1.03030	1.09945	1.09292
11	1.00000	1.17143	1.78378
12	1.55416	1.21628	3.69300
13	*	1.20411	1.16420
14	*	1.05155	1.03234
15	1.01268	1.02682	1.08065
16	*	1.00835	1.03210
17	*	*	*
18	1.09299	1.16734	1.20465
19	*	*	*
20	1.06531	1.04414	1.07902
21	*	1.04262	1.03442
22	*	1.05494	1.10887
23	*	1.00000	0.99383

AFTER OUTLIERS REMOVED

ROW	85GWILL	86GWILL	87GWILL
1	*	*	*
2	1.03774	1.03556	1.02448
3	1.02633	1.00857	1.09004
4	1.01465	1.01026	1.00832
5	1.04561	1.03356	1.02917
6	1.02079	1.02381	1.03094
7	1.00000	1.00182	1.01997
8	*	*	*
9	1.04639	1.05810	1.06642
10	1.03030	1.09945	1.09292
11	1.00000	1.17143	1.78378
12	1.55416	1.21628	*
13	*	1.20411	1.16420
14	*	1.05155	1.03234
15	1.01268	1.02682	1.08065
16	*	1.00835	1.03210
17	*	*	*
18	1.09299	1.16734	1.20465
19	*	*	*
20	1.06531	1.04414	1.07902
21	*	1.04262	1.03442
22	*	1.05494	1.10887
23	*	1.00000	0.99383

Histogram of 85GWILL N = 13 N* = 10

Midpoint	Count	
1.00	5	*****
1.05	6	******
1.10	1	*
1.15	0	
1.20	0	
1.25	0	
1.30	0	
1.35	0	
1.40	0	
1.45	0	
1.50	0	
1.55	1	*

MTB >

Histogram of 86GWILL N = 19 N* = 4

Midpoint	Count	
1.00	4	****
1.02	3	***
1.04	4	****
1.06	3	***
1.08	0	
1.10	1	*
1.12	0	
1.14	0	
1.16	1	*
1.18	1	*
1.20	1	*
1.22	1	*

Histogram of 87GWILL N = 18 N* = 5

Midpoint	Count	
1.0	9	*********
1.1	6	******
1.2	2	**
1.3	0	
1.4	0	
1.5	0	
1.6	0	
1.7	0	
1.8	1	*

```
MTB >RETRIEVE 'SUMTOT'
MTB > PRINT C1-C5
```

ROW	UKTOT	USTOT	DEFT	GWILL	REST
1	2330	2571.0	-505.0	*	*
2	795	776.0	-16.0	-25.0	22.0
3	546	527.1	8.7	-22.8	-5.0
4	1173	1144.0	-49.0	-12.0	32.0
5	233	241.3	-13.2	-7.9	29.2
6	175	161.2	2.9	-4.2	-12.8
7	3169	3303.0	-34.0	-31.0	199.0
8	3806	2185.0	-514.0	*	*
9	1125	1063.0	-34.0	-64.0	36.0
10	76	73.2	-0.6	-6.3	3.8
11	25	11.8	0.1	-6.4	-6.7
12	123396	69381.0	1256.0	-33166.0	-22105.0
13	196	150.9	-0.7	-27.3	-16.8
14	123	113.0	1.1	-4.4	-7.2
15	1234	1260.0	141.0	-36.0	-79.0
16	1043	1004.0	*	-18.0	*
17	341	347.0	-71.0	*	*
18	18019	15492.0	-804.0	-2627.0	904.0
19	-3448	-2125.0	1323.0	*	*
20	1912	1813.0	-44.0	-116.0	61.0
21	219	204.8	-1.6	-7.8	-5.1
CONTINUE?					
22	46	33.9	-0.8	-3.2	-8.0
23	11	24.9	-0.1	0.1	14.1

```
MTB > PRINT C6-C9
```

ROW	TOTIND	DEFTIND	GWILLIND	RESTIND
1	-0.09374	0.196422	*	*
2	0.02448	0.020619	0.032216	-0.028351
3	0.03624	-0.016505	0.043256	0.009486
4	0.02535	0.042832	0.010490	-0.027972
5	-0.03357	0.054704	0.032739	-0.121011
6	0.08747	-0.017990	0.026055	0.079404
7	-0.04057	0.010294	0.009385	-0.060248
8	0.74188	0.235240	*	*
9	0.05833	0.031985	0.060207	-0.033866
10	0.04235	0.008197	0.086066	-0.051913
11	1.10169	-0.008475	0.542373	0.567797
12	0.77853	-0.018103	0.478027	0.318603
13	0.29689	0.004639	0.180915	0.111332
14	0.09292	-0.009735	0.038938	0.063717
15	-0.02063	-0.111905	0.028571	0.062698
16	0.03884	*	0.017928	*
17	-0.01729	0.204611	*	*
18	0.16312	0.051898	0.169571	-0.058353
19	-0.62259	-0.622588	*	*
20	0.05461	0.024269	0.063982	-0.033646
21	0.07080	0.007813	0.038086	0.024902
CONTINUE?				
22	0.35398	0.023599	0.094395	0.235988
23	-0.56627	0.004016	-0.004016	-0.566265

```
     NOTE REMOVE ALL ROWS FOR WHICH THERE IS A MISSING ITEM
MTB > DELETE 1 8 16 17 19 OF C1-C9 C22
MTB > PRINT C1-C5
```

ROW	UKTOT	USTOT	DEFT	GWILL	REST
1	795	776.0	-16.0	-25.0	22.0
2	546	527.1	8.7	-22.8	-5.0
3	1173	1144.0	-49.0	-12.0	32.0
4	233	241.3	-13.2	-7.9	29.2
5	175	161.2	2.9	-4.2	-12.8
6	3169	3303.0	-34.0	-31.0	199.0
7	1125	1063.0	-34.0	-64.0	36.0
8	76	73.2	-0.6	-6.3	3.8
9	25	11.8	0.1	-6.4	-6.7
10	123396	69381.0	1256.0	-33166.0	-22105.0
11	196	150.9	-0.7	-27.3	-16.8
12	123	113.0	1.1	-4.4	-7.2
13	1234	1260.0	141.0	-36.0	-79.0
14	18019	15492.0	-804.0	-2627.0	904.0
15	1912	1813.0	-44.0	-116.0	61.0
16	219	204.8	-1.6	-7.8	-5.1
17	46	33.9	-0.8	-3.2	-8.0
18	11	24.9	-0.1	0.1	14.1

ROW	TOTIND	DEFTIND	GWILLIND	RESTIND	C22
1	0.02448	0.020619	0.032216	-0.028351	776.0
2	0.03624	-0.016505	0.043256	0.009486	527.1
3	0.02535	0.042832	0.010490	-0.027972	1144.0
4	-0.03357	0.054704	0.032739	-0.121011	241.3
5	0.08747	-0.017990	0.026055	0.079404	161.2
6	-0.04057	0.010294	0.009385	-0.060248	3303.0
7	0.05833	0.031985	0.060207	-0.033866	1063.0
8	0.04235	0.008197	0.086066	-0.051913	73.2
9	1.10169	-0.008475	0.542373	0.567797	11.8
10	0.77853	-0.018103	0.478027	0.318603	69381.0
11	0.29689	0.004639	0.180915	0.111332	150.9
12	0.09292	-0.009735	0.038938	0.063717	113.0
13	-0.02063	-0.111905	0.028571	0.062698	1260.0
14	0.16312	0.051898	0.169571	-0.058353	15492.0
15	0.05461	0.024269	0.063982	-0.033646	1813.0
16	0.07080	0.007813	0.038086	0.024902	204.8
17	0.35398	0.023599	0.094395	0.235988	33.9
18	-0.56627	0.004016	-0.004016	-0.566265	24.9

```
MTB > NOTE THE MEANS WILL NOW SUM EXACTLY
MTB > TTEST MU=0 ON C6
TEST OF MU = 0.0000 VS MU N.E. 0.0000
               N      MEAN     STDEV   SE MEAN       T    P VALUE
TOTIND        18    0.1403    0.3482    0.0821    1.71       0.11
MTB > TTEST MU=0 ON C7
TEST OF MU = 0.00000 VS MU N.E. 0.00000
               N      MEAN     STDEV   SE MEAN       T    P VALUE
DEFTIND       18   0.00568   0.03712   0.00875    0.65       0.53
MTB > TTEST MU=0 ON C8
TEST OF MU = 0.0000 VS MU N.E. 0.0000
               N      MEAN     STDEV   SE MEAN       T    P VALUE
GWILLIND      18    0.1073    0.1552    0.0366    2.93     0.0093
MTB > TTEST MU=0 ON C9
TEST OF MU = 0.0000 VS MU N.E. 0.0000
               N      MEAN     STDEV   SE MEAN       T    P VALUE
RESTIND       18    0.0274    0.2226    0.0525    0.52       0.61
```

```
MTB > NOTE CALCULATION OF MEANS FOR ALL DATA ITEMS
MTB > TTEST MU=0 ON C6
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
TOTIND       23    0.1119    0.3740    0.0780     1.43       0.17
MTB > TTEST MU=0 ON C7
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
DEFTIND      22    0.0053    0.1614    0.0344     0.15       0.88
MTB > TTEST MU=0 ON C8
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
GWILLIND     19    0.1026    0.1522    0.0349     2.94     0.0088
MTB > TTESTMU=0 ON C9
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
RESTIND      18    0.0274    0.2226    0.0525     0.52       0.61
MTB >

      LET C6(8)= '*'
MTB > LET C6(11) ='*'
MTB > LET C6(12) ='*'
MTB > LET C6(19) ='*'
MTB > LET C6(23) ='*'
MTB > NOTE FIVE OUTLIERS REMOVED
MTB > HISTOGRAM C6
Histogram of TOTIND   N = 18   N* = 5
Midpoint   Count
   -0.10       1  *
   -0.05       2  **
   -0.00       3  ***
    0.05       7  *******
    0.10       2  **
    0.15       1  *
    0.20       0
    0.25       0
    0.30       1  *
    0.35       1  *
MTB > TTEST MU=0 ON C6
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
TOTIND       18    0.0633    0.1121    0.0264     2.40      0.028
MTB >
```

```
     LET C7(19) = '*'
MTB > HISTOGRAM C7
Histogram of DEFTIND   N = 21   N* = 2
Midpoint   Count
  -0.10        1  *
  -0.05        0
  -0.00       13  *************
   0.05        4  ****
   0.10        0
   0.15        0
   0.20        2  **
   0.25        1  *
MTB > NOTE ONE OUTLIER REMOVED
MTB > TTEST MU=0 ON C7
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
DEFTIND      21    0.0352    0.0818    0.0178     1.97      0.063
MTB >
```

```
     LET C8(11) ='*'
MTB > LET C8(12) ='*'
MTB > HISTOGRAM C8
Histogram of GWILLIND   N = 17   N* = 6
Midpoint   Count
   0.00        2  **
   0.02        4  ****
   0.04        5  *****
   0.06        2  **
   0.08        1  *
   0.10        1  *
   0.12        0
   0.14        0
   0.16        1  *
   0.18        1  *
MTB > TTEST MU=0 ON C8
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
GWILLIND     17    0.0546    0.0523    0.0127     4.31     0.0005
MTB >
```

```
     RETRIEVE 'SUMTOT'
MTB > DELETE 1 8 16 17 19 OF C1-C9 C22
MTB > NOTE REMOVING ALL ROWS FOR WHICH THERE IS A MISSING ITEM
MTB > DELETE 9 10 18 OF C1-C9 C22
MTB > NOTE REMOVING OUTLIERS IN TOTAL INDEX
MTB > NOTE THIS ALSO TAKES THE OUTLIERS IN DEFT AND GWILL
MTB > PRINT C1-C5
 ROW     UKTOT     USTOT    DEFT    GWILL    REST
   1     795.0     776.0   -16.0    -25.0    22.0
   2     546.2     527.1     8.7    -22.8    -5.0
   3    1173.0    1144.0   -49.0    -12.0    32.0
   4     233.2     241.3   -13.2     -7.9    29.2
   5     175.3     161.2     2.9     -4.2   -12.8
   6    3169.0    3303.0   -34.0    -31.0   199.0
   7    1125.0    1063.0   -34.0    -64.0    36.0
   8      76.3      73.2    -0.6     -6.3     3.8
   9     195.7     150.9    -0.7    -27.3   -16.8
  10     123.5     113.0     1.1     -4.4    -7.2
  11    1234.0    1260.0   141.0    -36.0   -79.0
  12   18019.0   15492.0  -804.0  -2627.0   904.0
  13    1912.0    1813.0   -44.0   -116.0    61.0
  14     219.3     204.8    -1.6     -7.8    -5.1
  15      45.9      33.9    -0.8     -3.2    -8.0
MTB > PRINT C6-C9
 ROW     TOTIND     DEFTIND    GWILLIND    RESTIND
   1   0.024485    0.020619    0.032216  -0.028351
   2   0.036236   -0.016505    0.043256   0.009486
   3   0.025350    0.042832    0.010490  -0.027972
   4  -0.033568    0.054704    0.032739  -0.121011
   5   0.087469   -0.017990    0.026055   0.079404
   6  -0.040569    0.010294    0.009385  -0.060248
   7   0.058325    0.031985    0.060207  -0.033866
   8   0.042350    0.008197    0.086066  -0.051913
   9   0.296885    0.004639    0.180915   0.111332
  10   0.092920   -0.009735    0.038938   0.063717
  11  -0.020635   -0.111905    0.028571   0.062698
  12   0.163116    0.051898    0.169571  -0.058353
  13   0.054606    0.024269    0.063982  -0.033646
  14   0.070801    0.007813    0.038086   0.024902
  15   0.353982    0.023599    0.094395   0.235988
MTB > TTEST MU=0 ON C6
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
TOTIND       15    0.0808    0.1126    0.0291     2.78      0.015
MTB > TTEST MU=0 ON C7
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
DEFTIND      15    0.0083    0.0401    0.0104     0.80       0.44
MTB > TTEST MU=0 ON C8
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
GWILLIND     15    0.0610    0.0523    0.0135     4.51     0.0000
MTB > TTEST MU=0 ON C9
TEST OF MU = 0.0000 VS MU N.E. 0.0000
              N      MEAN     STDEV   SE MEAN        T    P VALUE
RESTIND      15    0.0115    0.0884    0.0228     0.50       0.62
```

List of companies to which requests for Form 20 F were sent

The following list is thought to represent all those UK companies which are likely to report to the Securities and Exchange Commission on Form 20-F. There is no single comprehensive source of this information and the list has been compiled from:

Information provided by Citibank's London office;
The New York Stock Exchange's list of UK share prices listed;
The NASDAQ list of ADRs quoted;
Names suggested by the London office of the Bank of New York;
Names suggested by Professor C. Nobes.

As indicated in the text of Chapter Eight, the most likely companies to report on 20-F are those which have ADRs listed on a national exchange and which sponsor the ADR. The list below shows that there are some sponsored ADRs listed on NADAQ which claim not to report on 20-F. It also shows that an unsponsored ADR listed on AMEX does not produce a 20-F.

Name of company(plc)	S/U	Exchange	Result of enquiry
Attwoods	S	NASDAQ	20 F obtained
Barclays	S	NYSE	20 F obtained
BAT Industries	U	AMEX	Do not report on 20 F
BET	S	OTC	20 F obtained
Beazer	S	NASDAQ	20 F obtained
Beecham Group	S	NASDAQ	20 F obtained
Blue Arrow	S	NYSE	20 F obtained
Bowater Corporation	S	NASDAQ	Do not report on 20 F
British Airways	S	NYSE	20 F obtained
British Gas	S	NYSE	20 F obtained
British Petroleum Co	S	NYSE	20 F obtained
British Telecom	S	NYSE	20 F obtained
Burmah Oil	S	NASDAQ	Do not report on 20 F
Cadbury Schweppes	S	NASDAQ	20 F obtained
Cambridge Instruments Co	S	NASDAQ	20 F obtained
Carlton Communications	S	NASDAQ	No reply
Dee Corporation	S	NYSE	Have not yet completed
Dixons Group	S	NYS	20 F obtained
English China Clays	S	NASDAQ	20 F obtained
Fisons	S	NASDAQ	Do not report on 20 F
Glaxo Holdings	S	NASDAQ	20 F obtained
Hanson	S	NYSE	20 F obtained
Huntingdon Int'l Hldgs	S	NASDAQ	No reply
Imperial Chemical Inds	S	NYSE	20 F obtained
Jaguar	S	NASDAQ	No reply but annual report indicates a 20 F exists
Lep Group	S	NASDAQ	No reply
National Westminster Bank	S	NYSE	No 20 F supplied but annual report gives relevant extracts

Plessey	S	NYSE	20 F obtained
Reuters Holdings	S	NASDAQ	No reply
Rodime	S	NASDAQ	20 F obtained
Saatchi and Saatchi	S	NYSE	No reply
Shell Transport & Trading	S	NYSE	20 F obtained
Tricentrol	S	NYSE	No reply
Unilever	S	NYSE	20 F obtained
United Newspapers	S	NASDAQ	20 F obtained
Virgin Group	S	NASDAQ	No reply
Ward White Group	S	NASDAQ	20 F obtained
WPP Group	S	NASDAQ	No reply

Summary:	In the list above	38
	Do not report	4
	Potential maximum available (b)	34
	Obtained (a)	24
	No reply	10
	Success rate (a/b)	71%

The 23 companies examined in this research project range over 16 subsections of the list of constituents of the FT-Actuaries equity indices:

Classification of companies analysed

	Name	Subsection
1.	British Gas	Oil and gas
2.	Unilever	Food manufacturing
3.	Beecham	Health and household products
4.	Glaxo	Health and household products
5.	Cadbury Schweppes	Food manufacturing
6.	English China Clay	Other industrial materials
7.	British Telecom	Telephone networks
8.	British Petroleum	Oil and gas
9.	Hanson	Conglomerate
10.	Beazer	Contracting and construction
11.	Blue Arrow	Agencies
12.	United Newspapers	Packaging and paper
13.	BET	Conglomerate
14.	Dixons	Stores
15.	Barclays	Banks
16.	National Westminster	Banks
17.	British Airways	Shipping and transport
18.	Attwoods	Miscellaneous
19.	Rodime	Not included (hard disk manufacture)
20.	ICI	Chemicals
21.	Plessey	Electronics
22.	Ward White	Stores
23.	Cambridge Instruments	Other industrial materials

Steady state acquisitions: falling first year allowances and falling tax rates

	A	B	C	D	E	F	G	H	I
......1									
......2	COST			400		FYA YR1	0.75		
......3	DEP STR			0.2		FYA YR2	0.5		
......4						FYA YR3	0.25		
......5			COSTYR1	400					
......6			COSTYR2	400					
......7			COSTYR3	400					
......8			COSTYR4	400					
......9						TIMING	DIFFERE	NCES (R	EV)IN()
.....10							YEARS		
.....11				NBV AT	TWDV AT	'1'	'2'	'3'	'4'
.....12	Y OF AC			ST YR 1	ST YR 1				
.....13	(4)			80	0	(80)			
.....14	(3)			160	0	(80)	(80)		
.....15	(2)			240	0	(80)	(80)	(80)	
.....16	(1)			320	0	(80)	(80)	(80)	(80)
.....17				800		(320)	(240)	(160)	(80)
.....18									
.....19	Y1 ADDN		ANN DEP	FYA	WDA				
.....20	YR 1		80	300		220			
.....21	YR 2		80		25		(55)		
.....22	YR 3		80		18			(62)	
.....23	YR 4		80		14				(66)
.....24									
.....25	Y2 ADDN								
.....26	YR 2		80	200			120		
.....27	YR 3		80		50			(30)	
.....28	YR 4		80		37				(43)
.....29									
.....30	Y3 ADDN								
.....31	YR 3		80	100				20	
.....32	YR 4		80		75				(5)
.....33									
.....34	Y4 ADDN								
.....35	YR 4		80	100					20
.....36									

	A	B	C
.....38			
.....39	TAX RATE FOR EARLIER YEARS		0.5
.....40	TAX RATE FOR YEAR 1		0.45
.....41	TAX RATE FOR YEAR 2		0.4
.....42	TAX RATE FOR YEAR 3		0.35
.....43	TAX RATE FOR YEAR 4		0.35
.....44			

Transfer to/from profit and loss account when full liability is adjusted to full deferral

Appendix 3
page 2

	A	B	C	D	E	F	G	H
.....69		LIAB'TY METHOD			DEF'RAL LMETHOD			DIFFNCE
.....70	TIMING DIFFS EARLIER YEARS D17*YR0 RATE			400			400	
.....71	YEAR 1							
.....72	CHANGE OF RATE ADJUSTMENT							
.....73	(800 AT YR1 RATE - 800 AT YR0 RATE)			(40)				(40)
.....74	ORIG TD YR 1 ADDNS F20*YR1 RATE	220	99			99		
.....75	REV TD EARLIER YEARS F17*YR1 RATE	(320)	(144)		F17*YR0	(160)		16
.....76	NET TIMING DIFFERENCES	(100)						
.....77	NET TIMING DIFFERENCES AT YR 1 RATE			(45)			(61)	
.....78	BALANCE AT END YR 1			315			339	
.....79	YEAR 2							
.....80	CHANGE OF RATE ADJUSTMENT							
.....81	(YR2 RATE*(D17+B76))-BAL END YR 1			(35)				(35)
.....82	ORIG TD YR 2 ADDNS G26*YR2 RATE	120	48			48		
.....83	REV TD EARLIER YEARS G17*YR2 RATE	(240)	(96)		G17*YR0	(120)		24
.....84	REV TD YEAR 1 ADDNS G21*YR2 RATE	(55)	(22)		G21*YR2	(24)		2
.....85	NET TIMING DIFFERENCES	(175)						
.....86	NET TIMING DIFFERENCES AT YR 2 RATE			(70)			(96)	
.....87	BALANCE AT END YR 2			210			243	
.....88	YEAR 3							
.....89	CHANGE OF RATE ADJUSTMENT							
.....90	(YR3 RATE*(D17+B76+B85))-BAL AT END YR 2			(27)				(27)
.....91	ORIG TD YR 3 ADDNS H31*YR3 RATE	20	7			7		
.....92	REV TD EARLIER YEARS H17*YR3 RATE	(160)	(56)		H17*YR0	(80)		24
.....93	REV TD YEAR 1 ADDNS H22*YR3 RATE	(62)	(21)		H22*YR1	(27)		6
.....94	REV TD YEAR 2 ADDNS H27*YR3 RATE	(30)	(10)		H27*YR2	(12)		2
.....95	NET TIMING DIFFERENCES	(232)						
.....96	NET TIMING DIFFERENCES AT YR 3 RATE			(80)			(112)	
.....97	BALANCE AT END YR 3			103			131	
.....98	YEAR 4							
.....99	ORIG TD YR 4 ADDNS I35*YR4 RATE	20	7			7		
....100	REV TD EARLIER YEARS I17*YR4 RATE	(80)	(28)		I17*YR0	(40)		12
....101	REV TD YEAR 1 ADDNS I23*YR4 RATE	(66)	(23)		I23*YR1	(29)		6
....102	REV TD YEAR 2 ADDNS I28*YR4 RATE	(43)	(15)		I28*YR2	(17)		2
....103	REV TD YEAR 3 ADDNS I32*YR4 RATE	(5)	(1)		I32*YR3	(1)		0
....104	NET TIMING DIFFERENCES	(174)						
....105	NET TIMING DIFFERENCES AT YR 4 RATE			(60)			(80)	
....106	BALANCE AT END YR 4			43			51	
....107								

	A	B	C	D	E
....108	P&L ACCOUNT TRANSFER FROM DEFTAX ACCOUNT				
....109		DEFERRAL	LIABILITY	DIFFERENCE	
....110	YEAR 1	61	85	(24)	
....111	YEAR 2	96	105	(9)	
....112	YEAR 3	112	107	5	
....113	YEAR 4	80	60	20	

High acquisitions in year 1(1985), falling first year allowances and constant tax rates

	A	B	C	D	E	F	G	H	I
1									
2	COST			400		FYA YR1	0.75		
3	DEP STR			0.2		FYA YR2	0.5		
4						FYA YR3	0.25		
5			COSTYR1	700					
6			COSTYR2	400					
7			COSTYR3	200					
8			COSTYR4	100					
9						TIMING	DIFFERE	NCES (R	EV)IN()
10							YEARS		
11				NBV AT	TWDV AT	'1'	'2'	'3'	'4'
12	Y OF AC			ST YR 1	ST YR 1				
13	(4)			80	0	(80)			
14	(3)			160	0	(80)	(80)		
15	(2)			240	0	(80)	(80)	(80)	
16	(1)			320	0	(80)	(80)	(80)	(80)
17				800		(320)	(240)	(160)	(80)
18									
19	Y1 ADDN		ANN DEP	FYA	WDA				
20	YR 1		140	525		385			
21	YR 2		140		43		(97)		
22	YR 3		140		33			(107)	
23	YR 4		140		24				(116)
24									
25	Y2 ADDN								
26	YR 2		80	200			120		
27	YR 3		80		50			(30)	
28	YR 4		80		37				(43)
29									
30	Y3 ADDN								
31	YR 3		40	50				10	
32	YR 4		40		37				(3)
33									
34	Y4 ADDN								
35	YR 4		20	25					5
36									

	A	B	C
38			
39	TAX RATE FOR EARLIER YEARS		0.5
40	TAX RATE FOR YEAR 1		0.5
41	TAX RATE FOR YEAR 2		0.5
42	TAX RATE FOR YEAR 3		0.5
43	TAX RATE FOR YEAR 4		0.5
44			

Confirmation of zero adjustment when full liability is adjusted to full deferral at constant tax rate

Appendix 3 page 4

	A	B	C	D	E	F	G	H
69		LIAB'TY METHOD			DEF'RAL LMETHOD			DIFFNCE
70	TIMING DIFFS EARLIER YEARS D17*YR0 RATE			400			400	
71	YEAR 1							
72	CHANGE OF RATE ADJUSTMENT							
73	(800 AT YR1 RATE - 800 AT YR0 RATE)			0				0
74	ORIG TD YR 1 ADDNS F20*YR1 RATE	385	192			192		
75	REV TD EARLIER YEARS F17*YR1 RATE	(320)	(160)		F17*YR0	(160)		0
76	NET TIMING DIFFERENCES	65						
77	NET TIMING DIFFERENCES AT YR 1 RATE			32			32	
78	BALANCE AT END YR 1			432			432	
79	YEAR 2							
80	CHANGE OF RATE ADJUSTMENT							
81	(YR2 RATE*(D17+B76))-BAL END YR 1			0				0
82	ORIG TD YR 2 ADDNS G26*YR2 RATE	120	60			60		
83	REV TD EARLIER YEARS G17*YR2 RATE	(240)	(120)		G17*YR0	(120)		0
84	REV TD YEAR 1 ADDNS G21*YR2 RATE	(97)	(48)		G21*YR2	(48)		0
85	NET TIMING DIFFERENCES	(217)						
86	NET TIMING DIFFERENCES AT YR 2 RATE			(108)			(108)	
87	BALANCE AT END YR 2			324			324	
88	YEAR 3							
89	CHANGE OF RATE ADJUSTMENT							
90	(YR3 RATE*(D17+B76+B85))-BAL AT END YR 2			0				0
91	ORIG TD YR 3 ADDNS H31*YR3 RATE	10	5			5		
92	REV TD EARLIER YEARS H17*YR3 RATE	(160)	(80)		H17*YR0	(80)		0
93	REV TD YEAR 1 ADDNS H22*YR3 RATE	(107)	(53)		H22*YR1	(53)		0
94	REV TD YEAR 2 ADDNS H27*YR3 RATE	(30)	(15)		H27*YR2	(15)		0
95	NET TIMING DIFFERENCES	(287)						
96	NET TIMING DIFFERENCES AT YR 3 RATE			(143)			(143)	
97	BALANCE AT END YR 3			181			181	
98	YEAR 4							
99	ORIG TD YR 4 ADDNS I35*YR4 RATE	5	2			2		
100	REV TD EARLIER YEARS I17*YR4 RATE	(80)	(40)		I17*YR0	(40)		0
101	REV TD YEAR 1 ADDNS I23*YR4 RATE	(116)	(58)		I23*YR1	(58)		0
102	REV TD YEAR 2 ADDNS I28*YR4 RATE	(43)	(21)		I28*YR2	(21)		0
103	REV TD YEAR 3 ADDNS I32*YR4 RATE	(3)	(1)		I32*YR3	(1)		0
104	NET TIMING DIFFERENCES	(237)						
105	NET TIMING DIFFERENCES AT YR 4 RATE			(118)			(118)	
106	BALANCE AT END YR 4			63			63	
107								

	A	B	C	D	E
108	P&L ACCOUNT TRANSFER FROM DEFTAX ACCOUNT				
109			DEFERRAL	LIABILITY	DIFFERENCE
110	YEAR 1		(32)	(32)	0
111	YEAR 2		108	108	0
112	YEAR 3		143	143	0
113	YEAR 4		118	118	0

	A	B	C	D	E	F	G	H	I
......1									
......2	COST			400		FYA YR1	0.75		
......3	DEP STR			0.2		FYA YR2	0.5		
......4						FYA YR3	0.25		
......5			COSTYR1	700					
......6			COSTYR2	400					
......7			COSTYR3	200					
......8			COSTYR4	100					
......9						TIMING	DIFFERE	NCES (R	EV)IN()
.....10							YEARS		
.....11				NBV AT	TWDV AT	'1'	'2'	'3'	'4'
.....12	Y OF AC			ST YR 1	ST YR 1				
.....13	(4)			80	0	(80)			
.....14	(3)			160	0	(80)	(80)		
.....15	(2)			240	0	(80)	(80)	(80)	
.....16	(1)			320	0	(80)	(80)	(80)	(80)
.....17				800		(320)	(240)	(160)	(80)
.....18									
.....19	Y1 ADDN		ANN DEP	FYA	WDA				
.....20	YR 1		140	525		385			
.....21	YR 2		140		43		(97)		
.....22	YR 3		140		33			(107)	
.....23	YR 4		140		24				(116)
.....24									
.....25	Y2 ADDN								
.....26	YR 2		80	200			120		
.....27	YR 3		80		50			(30)	
.....28	YR 4		80		37				(43)
.....29									
.....30	Y3 ADDN								
.....31	YR 3		40	50				10	
.....32	YR 4		40		37				(3)
.....33									
.....34	Y4 ADDN								
.....35	YR 4		20	25					5
.....36									

	A	B	C
.....38			
.....39	TAX RATE FOR EARLIER YEARS		0.5
.....40	TAX RATE FOR YEAR 1		0.45
.....41	TAX RATE FOR YEAR 2		0.4
.....42	TAX RATE FOR YEAR 3		0.35
.....43	TAX RATE FOR YEAR 4		0.35
.....44			

Transfer to/from profit and loss account when full liability is adjusted to full deferral

	A	B	C	D	E	F	G	H
69		LIAB'TY METHOD			DEF'RAL LMETHOD			DIFFNCE
70	TIMING DIFFS EARLIER YEARS D17*YR0 RATE			400			400	
71	YEAR 1							
72	CHANGE OF RATE ADJUSTMENT							
73	(800 AT YR1 RATE - 800 AT YR0 RATE)			(40)				(40)
74	ORIG TD YR 1 ADDNS F20*YR1 RATE	385	173			173		
75	REV TD EARLIER YEARS F17*YR1 RATE	(320)	(144)		F17*YR0	(160)		16
76	NET TIMING DIFFERENCES	65						
77	NET TIMING DIFFERENCES AT YR 1 RATE			29			13	
78	BALANCE AT END YR 1			389			413	
79	YEAR 2							
80	CHANGE OF RATE ADJUSTMENT							
81	(YR2 RATE*(D17+B76))-BAL END YR 1			(43)				(43)
82	ORIG TD YR 2 ADDNS G26*YR2 RATE	120	48			48		
83	REV TD EARLIER YEARS G17*YR2 RATE	(240)	(96)		G17*YR0	(120)		24
84	REV TD YEAR 1 ADDNS G21*YR2 RATE	(97)	(38)		G21*YR2	(43)		5
85	NET TIMING DIFFERENCES	(217)						
86	NET TIMING DIFFERENCES AT YR 2 RATE			(86)			(115)	
87	BALANCE AT END YR 2			260			298	
88	YEAR 3							
89	CHANGE OF RATE ADJUSTMENT							
90	(YR3 RATE*(D17+B76+B85))-BAL AT END YR 2			(34)				(34)
91	ORIG TD YR 3 ADDNS H31*YR3 RATE	10	3			3		
92	REV TD EARLIER YEARS H17*YR3 RATE	(160)	(56)		H17*YR0	(80)		24
93	REV TD YEAR 1 ADDNS H22*YR3 RATE	(107)	(37)		H22*YR1	(48)		11
94	REV TD YEAR 2 ADDNS H27*YR3 RATE	(30)	(10)		H27*YR2	(12)		2
95	NET TIMING DIFFERENCES	(287)						
96	NET TIMING DIFFERENCES AT YR 3 RATE			(100)			(137)	
97	BALANCE AT END YR 3			126			161	
98	YEAR 4							
99	ORIG TD YR 4 ADDNS I35*YR4 RATE	5	1			1		
100	REV TD EARLIER YEARS I17*YR4 RATE	(80)	(28)		I17*YR0	(40)		12
101	REV TD YEAR 1 ADDNS I23*YR4 RATE	(116)	(40)		I23*YR1	(52)		12
102	REV TD YEAR 2 ADDNS I28*YR4 RATE	(43)	(15)		I28*YR2	(17)		2
103	REV TD YEAR 3 ADDNS I32*YR4 RATE	(3)	(1)		I32*YR3	(1)		0
104	NET TIMING DIFFERENCES	(237)						
105	NET TIMING DIFFERENCES AT YR 4 RATE			(83)			(109)	
106	BALANCE AT END YR 4			43			52	
107								

	A	B	C	D	E
108	P&L ACCOUNT TRANSFER FROM DEFTAX ACCOUNT				
109			DEFERRAL	LIABILITY	DIFFERENCE
110	YEAR 1		(13)	11	(24)
111	YEAR 2		115	129	(14)
112	YEAR 3		137	134	3
113	YEAR 4		109	83	26

CHAPTER NINE

TESTS OF RECOGNITION CRITERIA IN UK ACCOUNTING PRACTICE AND THE ROLE OF THE PRUDENCE CONCEPT

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CHAPTER NINE

TESTS OF RECOGNITION CRITERIA IN UK ACCOUNTING PRACTICE AND THE ROLE OF THE PRUDENCE CONCEPT

Introduction

Chapter Three traced the development of the realisation concept as a practical rule for dealing with uncertainty and as a particular aspect of the prudence concept. The analysis showed that the discussion of realised profit has evolved, particularly in the US literature, into a discussion of recognition of revenues and profit. The change of emphasis from realisation to recogition has not altered the need to deal with uncertainty. The discussion of recognition of revenues or profits leads into questions of recognition of the assets and liabilities which, in changing, give rise to those revenues and profits. Again the problem of uncertainty is encountered in relation to recognition of assets and liabilities.

A conceptual framework in accounting might be expected to provide guidance on recognition criteria which would include a reference to uncertainty. As yet there is no UK framework but the Accounting Standards Committee has announced that it will support the Framework for the preparation and presentation of financial statements prepared by the International Accounting Standards Committee (IASC 1989). Momentum for the move towards a UK conceptual framework has been further provided by Professor Solomons, who has produced a research report for the Institute of Chartered Accountants in England and Wales (Solomons 1989).

In other places also, progress is being made. As mentioned in Chapter Six, the Financial Accounting Standards Board has produced a series of statements of financial accounting concepts dealing, among other matters, with definitions of elements (FASB 1985) and with recognition (FASB 1984). The Australian Accounting Research Foundation (AARF 1987) and the Canadian Institute of Chartered Accountants (CICA 1988) have produced drafts of first moves towards conceptual frameworks.

The conceptual frameworks or sections of frameworks referred to above are all based on a normative approach of stating what would be desirable in an ideal world based upon some notions of user needs and objectives of financial statements. They do not take an approach of attempting to rationalise and classify existing practice in relation to definitions and recognition criteria currently applied to items in financial statements.

This does not greatly matter to those who are prescribing a brave new world but it makes life more difficult for the standard setters who have to live in the real world of accounting practice and law when trying to make a conceptual framework workable. There has been criticism of the FASB for chosing to apply or reject its own conceptual framework as it sees fit (Walton 1988).

In the UK the problem of making a conceptual framework applicable to real situations has been confronted by the Accounting Standards Committee in its development of ED 42, "Accounting for Special Purpose Transactions" (ASC 1988). In the absence of a UK framework and having been drafted prior to the finalisation of the IASC Framework, ED 42 drew on the FASB concepts statements for definitions of assets and liabilities. It did not draw on the FASB statements of recognition criteria but asserted that "Statements of Standard Accounting Practice apply general principles of recognition and measurement criteria" (ED 42 para 33) and made repeated reference to these general principles elsewhere in the document.

The obvious challenge came back in the responses: "Tell us about these general principles of recognition and measurement". It was clear that a more convincing statement on recognition would be required and it was also clear that recognition should be dealt with separately from measurement questions. Commentators on ED 42 provided some useful examples of situations from their first-hand experience which raised further problems for recognition of assets and liabilities. Several suggested that the IASC conceptual Framework (at that time still in draft form) provided clear and understandable definitions of assets and liabilities and of recognition criteria.

This chapter therefore attempts to answer the questions "What are the established recognition criteria applied in UK accounting practice?" and "To what extent can the prudence concept be seen as explaining those criteria?" It takes as a starting point for analysis the IASC Framework, as suggested by commentators on ED 42, but it also takes into account the FASB recognition criteria. Its focus is quite deliberately on assets and liabilities, because they were the focus of ED 42 and the comments thereon, but it would be impossible to mention assets and liabilities without sometimes having to look also at expenses and revenues.

The exercise takes as its hypothesis the view that the IASC definitions and recognition criteria are inadequate to cover all existing practices in the UK. The hypothesis of inadequacy was taken in view of some very obvious problems such as deferred charges and deferred revenues being included under the headings of assets and liabilities (Paterson 1988). Associated with this initial hypothesis of inadequacy is a second hypothesis that the prudence concept, as envisaged by the IASC in IAS 1 and in the Framework, makes a major contribution towards overcoming the inadequacies of the stated recognition criteria.

The research project sets the scene by providing a checklist, devised for the purpose of this research, against which to test current recognition practice. The checklist is based on relevant definitions extracted from the IASC Framework but also draws on other sources. A checklist was chosen in order to bring some system to the examination but to leave flexibility in commenting on each example considered. The empirical testing is in two stages. First of all, each existing SSAP is examined for any recognition criteria which may be expressed therein. Additionally two general SORPs are examined (but not the industry-specific SORPs). Secondly, examples provided by those commenting on ED 42 are considered against the checklist. A concluding review brings together the various separate conclusions formed on each SSAP and specific example, and suggests a modified form of wording to make the IASC definitions and recognition criteria operational in a UK context.

Previous research

There have been three major research projects in the USA, prepared for the Financial Accounting Standards Board (FASB) as part of its accounting recognition criteria project. Ijiri (1980) studied contractual rights and obligations in order to establish the point in time at which contractual rights and obligations might be recognised as assets and liabilities in financial statements. That point in time could lie on a continuum extending from the date of the contract to the date of final execution of all aspects of the contract. It was not an empirical research study. Ijiri analysed alternative recognition points, illustrating their application by means of hypothetical examples. He then evaluated those alternatives against the qualitative characteristics and objectives of financial statements which had already been laid down by the FASB in Statements of Financial Accounting Concepts 1 and 2 (FASB 1978 and 1980). Ijiri's conclusion was that for contractual rights and obligations to be recognised as assets and liabilities they must meet the definitions of those items and the contractual right or obligation should be "firm". He illustrated "firmness" by reference to hypothetical situations. Ijiri's paper was entitled "an exploratory study" and did not claim to be empirical research. His ideas were not tested against real-world problems.

Jaènicke (1981) did carry out a survey of actual practice but confined his study to recognition of revenues, expenses, gains and losses. His methodology was to apply a case study approach, providing a description of the situation, a statement of the problem, the current solution to the problem and the rationale for that solution, concluding in each case with his evaluation of the recommended solution. That approach has been adopted in this research/

research in relation to UK accounting practice, but with particular emphasis on assets and liabilities. Jaenicke's study, despite its title, devoted little attention to recognition of expenses and in particular failed to deal with particular issues such as pension costs, depreciation, amortisation of goodwill and the charge for deferred taxation. This is unfortunate because recognition of expenses and the impact of the matching concept is critical to the decision on recognition of the asset or liability to which the expense relates. Jaenicke dismissed such matters as problems caused by the need to make systematic and rational allocations which in turn are due to the historical cost model and the realisation concept. He suggested exit value accounting as a means of overcoming the allocation problem for expenses, which is interesting but not greatly helpful in analysing current practices.

Johnson and Storey (1982) built on Ijiri and Jaenicke and addressed fundamental concepts involved in depicting in financial statements the assets, liabilities and equity of a business enterprise and the events that change them. Again this was not an empirical research study and although it provided illustrations of the principles enunciated, it did not test them rigorously against practical situations. It did however provide an extremely thorough analysis of the concepts that underlie recognition practices.

Thus the research carried out for the FASB was predominantly in the form of thorough exploratory analysis of the principles of recognition. Apart from the Jaenicke analysis there was little testing/

testing against existing practice. This may help to explain why SFAC 5 on recognition (FASB 1984) was not well received and was criticised as being the least satisfactory of the series of concepts statements. It did not relate to real world existing practice. That may not be a bad thing if real world existing practice is irrational or self-contradictory but there must be some means of showing that the principles set out do have general applicability. Illustrating by hypothetical examples has the great advantage of allowing the researcher to choose to play on home ground. Testing against examples provided by the members of the opposing team who basically doubt that accepted recognition criteria exist at all is a more demanding exercise which may leave some untidy corners to the theoretical framework. It is the approach which will be taken in this project.

Method of investigation

Data

Evidence of recognition criteria applied at present is available from two principal sources: practice as dictated by SSAPs and practice as described in real situations by practising accountants. Information on the latter source is normally scarce for the outsider because of the wish to protect professional confidentiality but an unusual situation presented itself in the course of the debate on ED 42, "Accounting for Special Purpose Transactions".

That document carried the assertion that established recognition criteria exist in the UK and the assertion was challenged by commentators. In support of their challenge the commentators cited specific instances of current recognition practice which did not easily fit within the generalised statements contained within ED 42. These comments, which are on the public record, provide valuable source material and unusual insight into the thinking of those who in practice have to decide how and when to recognise revenue.

Checklist

In order to examine the recognition practices systematically, a checklist was prepared. This checklist draws on the IASC recognition criteria and the FASB recognition criteria and also adds questions which emerged from the debate on ED 42. Because it is in practice difficult to separate <u>definition</u> of an asset or liability from <u>recognition</u> (for example the FASB definitions of these items contain elements which the IASC regards as recognition criteria) the checklist also covers the qualities which define assets or liabilities.

The exercise is deliberately confined to assets and liabilities and does not consider revenues and expenses other than to the extent that these arise as incidental matters. This reflects the primary concern of those commenting on ED 42, which was with off-balance sheet matters rather than off-profit and loss account matters.

The main headings of the checklists cover the separate elements of the IASC definitions and recognition criteria for assets and liabilities. Under each main heading there are questions subdividing the analysis. These questions are devised to help identify those situations which do <u>not</u> fall within the stated criteria. The questions not only check for confirmation that the definitions and criteria are valid for the enterprise; they also look for other enterprises which may have an interest in reporting the asset or liability in question.

Since the IASC framework claims that the recognition criteria hold for assets as for liabilities, that section of the questionnaire is identical for both.

In the first section of the research project, relating to the analysis of SSAPs, in the interest of brevity the checklist is not formally answered point by point but the salient features are covered in a comment on each SSAP. In the second section, relating to the analysis of specific accounting practices, the checklist is answered point by point but if any question appears to be irrelevant or inapplicable the answer is omitted in order to highlight the positive matters.

For ease of reference, the definitions and recognition criteria of the IASC, the FASB and Solomons are set out here, to be followed by the checklists used in the research. The Solomons Guidelines will be discussed in detail later in the chapter.

Extracts from IASC Framework

Definitions of items

"48 (a) An asset is a resource controlled by the enterprise as a result of past events and from which future economic benefits are expected to flow to the enterprise.

(b) A liability is a present obligation of the enterprise arising from past events, the settlement of which is expected to result in an outflow from the enterprise of resources embodying economic benefits."

Recognition criteria

"81. Recognition is the process of incorporating in the balance sheet or income statement an item that meets the definition of an element and satisfies the criteria for recognition set out in paragraph 82. It involves the depiction of the item in words and by a monetary amount and the inclusion of that amount in the balance sheet or income statement totals. Items that satisfy the recognition criteria should be recognised in the balance sheet or income statement. The failure to recognise such items is not rectified by disclosure of the accounting policies used nor by notes or explanatory material."

"82. An item that meets the definition of an element should be recognised if:

(a) it is probable that any future economic benefit associated with the item will flow to or from the enterprise; and

(b) the item has a cost or value that can be measured with reliability."

"83. In assessing whether an item meets these criteria and therefore qualifies for recognition in the financial statements, regard needs to be given to the materiality considerations discussed in paragraphs 29 and 30. The interrelationship between the elements means that an item that meets the definition and recognition criteria for a particular element, for example, an asset, automatically requires the recognition of another element, for example, income or a liability."

Extracts from FASB Concepts Statements

Definitions

"Assets are probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events." (SFAC 6 para 25)

"Liabilities are probable future sacrifices of economic benefits arising from present obligations of a particular entity to transfer assets or provide services to other entities in the future as a result of past transactions or events."(SFAC 6 para 35)

Recognition criteria

The FASB proposed the following criteria in the Statement of Financial Accounting Concepts No 5, para 63:

"63. An item and information about it should meet four fundamental recognition criteria to be recognized and should be recognized when the criteria are met, subject to a cost-benefit constraint and a materiality threshold. Those criteria are:

Definitions - The item meets the definition of an element of financial statements.
Measurability - It has a relevant attribute measurable with sufficient reliability.
Relevance - The information about it is capable of making a difference in user decisions.
Reliability - The information is representationally faithful, verifiable, and neutral."

Extracts from the Solomons Guidelines

Definitions

"Assets are resources or rights incontestably controlled by an entity at the accounting date that are expected to yield it future economic benefits." (page 20)

"Liabilities are obligations of an entity at the accounting date to make future transfers of assets or services (sometimes uncertain as to timing and amount) to other entities."(page 21)

Recognition criteria

"An item should be recognized in financial statements if:

(a) it conforms to the definition of an asset or liability or of one of the subelements derived therefrom; and

(b) its magnitude as specified by the accounting model being used can be measured and verified with reasonable certainty; and

(c) the magnitude so arrived at is material in amount.

Meaning of Prudence

The definition of Prudence provided by the International Accounting Standards Committee in IAS 1 was quoted in Chapter Six (section 6.2). That definition of prudence as a reaction to uncertainty is confirmed by the Framework of the IASC:

> "The preparers and users of financial statements do, however, have to contend with the uncertainties that inevitably surround many events and circumstances, such as the collectability of doubtful receivables, the probable useful life of plant and equipment and the number of warranty claims that may occur. Such uncertainties are recognised by the disclosure of their nature and extent and by the exercise of prudence in the preparation of the financial statements. Prudence is the inclusion of a degree of caution in the exercise of the judgments needed in making the estimates required under conditions of uncertainty, such that assets or income are not overstated and liabilities or expenses are not understated. However, the exercise of prudence does not allow, for example, the creation of hidden reserves or excessive provisions, the deliberate understatement of assets or income, or the deliberate overstatement of liabilities or expenses, because the financial statements would not be neutral and, therefore, not have the quality of reliability." (para 37)

It is disappointing that the IASC, while confirming that prudence is seen as a reaction to uncertainty, has maintained the asymmetrical treatment whereby overstatement of assets and understatement of liabilities are seen as the major problems. It is interesting to note the change of wording from an earlier draft of the Framework (May 1988) which referred to prudence as "the inclusion of a degree of conservatism in the exercise of the judgments needed in making the estimates required under conditions of uncertainty". To equate prudence with conservatism would have been a retrograde step in the development of new accounting practices to reflect uncertainty.

Checklist for assets

Source	Question
IASC definition	1. Resource 1a. Is there a resource? 1b. What is the resource?
	2. Control of resource 2a. Is there control of the resource by the enterprise? 2b. Is this 100% control to the exclusion of all others? 2c. Is the control shared with any other enterprise? 2d. Does the recognition practice reflect this shared control?
	3. Expected future economic benefits 3a. Is there an expectation of future economic benefit flowing to the enterprise? 3b. What form does this expected future economic benefit take? 3c. Is there an expectation of future economic benefit on the part of any other enterprise? 3d. What form does this expected future economic benefit take?
IASC recognition criteria	4. Probability 4a. Is it probable that any future economic benefit will flow to or from the enterprise? 4b. How is the acceptable level of probability evidenced or expressed?
	5. Measured with reliability 5a. Does the item have a cost or value that can be measured with reliability? 5b. If not historical cost, what system of value?
FASB recognition criteria	6. Relevance 6a. Is the concept of relevance to user needs seen as central to the recognition decision? 6b. How is the relevance expressed?
	7. Reliability Are any of the following specifically cited as recognition criteria: 7a. Representational faithfulness 7b. Verifiability 7c. Neutrality
This project	8. Alternative to recognition Is the alternative to recognition: 8a. No information provided in any form 8b. Disclosure by way of note 8c. A matter of profit and loss account versus balance sheet
	9. Prudence 9a. Is prudence specifically mentioned? 9b. Is a prudent attitude reflected in the choice of recognition criteria?

Checklist for liabilities

Source	Question
IASC definition	1. Present obligation 1a. Is there a present obligation? 1b. What is the present obligation?
	2. Past event 2a. Is there a past event? 2b. What is the past event?
	3. Settlement and Outflow of resources 3a. When is settlement likely to take place? 3b. Is there an expectation of future economic benefit flowing from the enterprise? 3c. What form does this expected outflow of future economic benefit take? 3d. Is there an expectation of future economic benefit flowing from any other enterprise? 3e. What form does this expected outflow of future economic benefit from another enterprise take?
IASC recognition criteria	4. Probability 4a. Is it probable that any future economic benefit will flow to or from the enterprise? 4b. How is the acceptable level of probability evidenced or expressed?
	5. Measured with reliability 5a. Does the item have a cost or value that can be measured with reliability? 5b. If not historical cost, what system of value?
FASB recognition criteria	6. Relevance 6a. Is the concept of relevance to user needs seen as central to the recognition decision? 6b. How is the relevance expressed?
	7. Reliability Are any of the following specifically cited as recognition criteria: 7a. Representational faithfulness 7b. Verifiability 7c. Neutrality
This project	8. Alternative to recognition Is the alternative to recognition: 8a. No information provided in any form 8b. Disclosure by way of note 8c. A matter of profit and loss account versus balance sheet
	9. Prudence 9a. Is prudence specifically mentioned? 9b. Is a prudent attitude reflected in the choice of recognition criteria?

Stage 1 of the research project: Analysis of SSAPS and general SORPS

Introduction

This section analyses each SSAP and general SORP which is in force at the present time. It also includes SSAPs 11 and 16, now withdrawn, because they provide further insight into recognition criteria applied in practice. (The franked SORPs produced by the Oil Industry Accounting Committee (OIAC) have not been considered here although they do address important questions of definition and recognition).

In each case the questions asked are: Does the SSAP deal with recognition as a major issue? If so, what points of interest may be extracted in relation to the checklist set out earlier?

For ease of reference a summary follows this introduction, showing which SSAPs contain recognition issues as a matter of significance and which are only marginally or not at all concerned with recognition. For those which deal with recognition there is a further grouping into those which do fall within the IASC recognition criteria and those which apply reasoning which is not explained by the IASC wording.

There follows a detailed discussion of each SSAP and SORP. It is perhaps important to note here that the analysis seeks only those recognition criteria which are explicitly stated within the published documents. There may be background reasoning available elsewhere, perhaps in contemporary journal articles commenting on the issues dealt with by standards. There may have been discussion within ASC which is not recorded in the published standard. There may be comments on the public record relating to exposure drafts which preceded the standards. These could provide further sources of material on recognition criteria in practice but this section deliberately focusses only on the published reasoning of the standard-setting body. Dearing (1988) made the point that accounting standards should contain more explanation of the reasoning on which they are based. If the reasoning is not clear then there can be no public acknowledgement that established recognition criteria do exist.

The section concludes with comments on the recognition criteria identified and the extent to which they support the IASC Framework.

<u>Summary of tests on SSAPs</u>

<u>SSAPs in which recognition is a significant matter of principle and is satisfied by the IASC recognition criteria</u>

SSAP 2 Disclosure of Accounting Policies
SSAP 8 The Treatment of Taxation under the Imputation System
SSAP 9 Stocks and Work in Progress
SSAP 13 Accounting for Research and Development
SSAP 15 Accounting for Deferred Taxes
SSAP 18 Accounting for Contingencies
SSAP 20 Foreign Currency Translation

<u>SSAPs etc in which recognition is a significant matter of principle and is NOT satisfied by the IASC recognition criteria</u>

SSAP 4 (and ED 43) The Accounting Treatment of Government Grants
SSAP 14 Group Accounts
SSAP 21 Accounting for Leases and Hire Purchase Contracts
SSAP 22 Accounting for Goodwill
SSAP 23 Accounting for Acquisitions and Mergers
SSAP 24 Accounting for Pension Costs
SORP 2 Accounting by Charities

<u>SSAPs etc which deal with recognition in passing and which are satisfied by the IASC recognition criteria</u>

SSAP 5 Accounting for Value Added Tax
SORP 1 Pension Scheme Accounts (apart from two exceptions)

<u>SSAPs which deal with recognition in passing and which are NOT satisfied by the IASC recognition criteria</u>

SSAP 12 Accounting for Depreciation

SSAPs which do not deal with recognition issues

SSAP 1 Accounting for Associated Companies
SSAP 3 Earnings per Share
SSAP 6 Extraordinary Items and Prior Year Adjustments
SSAP 10 Statements of Source and Application of Funds
[SSAP 11 Accounting for Deferred Taxation , withdrawn]
[SSAP 16 Current Cost Accounting, withdrawn]
(these two are interesting because they did not deal with recognition, see detailed discussion of each)
SSAP 17 Accounting for Post Balance Sheet Events
SSAP 19 Accounting for Investment Properties

Analysis of SSAPs and general SORPs

SSAP 1 Accounting for Associated Companies

This standard accepts that an investment in an associated company is an asset and accepts that it should be recognised. The standard is concerned with measurement issues, justifying equity accounting in terms of relevance to user needs.

SSAP 2 Disclosure of Accounting Policies

Although called a disclosure standard, SSAP 2 refers to recognition in the profit and loss account using the test of realisation of cash or a near-cash asset. This is equivalent to the "probability of economic benefits" test. Reliability of measurement is not mentioned but is strongly implied by the reference to cash. Recognition of liabilities is dealt with using a mixture of a probability criterion (certainty) and a measurement criterion (best estimate).

SSAP 2 also deals with recognition in the accruals concept ("recognised as they are earned or incurred") in a manner which could be interpreted as being a desire to indicate the probability of economic benefit flowing in or out.

SSAP 3 Earnings per share

This is a disclosure and measurement standard. It does not deal with recognition issues.

SSAP 4 The Accounting Treatment of Government Grants
(see also ED 43)
SSAP 4 is concerned with the recognition of revenue from a government grant. The choice is made on the grounds that:

> "Method (c) matches the application of the grant with the amortisation of the capital expenditure to which it relates and is therefore considered to be the most appropriate treatment."(para 5)

Invoking the matching concept in this way does not conform to the IASC recognition criteria.

ED 43 The Accounting Treatment of Government Grants
ED 43 inadvertently made a significant change to existing UK recognition criteria by misquoting SSAP 2. The wording should be "...recognised by inclusion in the profit and loss account only when realised" but ED 43 omitted the underlined words (para 4) thereby inadvertently ruling out any possibility of reporting unrealised gains anywhere at all. Hopefully this will be put right before it reaches the SSAP stage.

Throughout ED 43 the words "recognised " and "recognition" are used in two different senses. One sense is that of "recognition versus no recognition" and the other is "recognition in the profit and loss account versus recognition somewhere in the balance sheet".

The second sentence of para 4 deals with the first kind of recognition in saying "Government grants therefore should not be recognised until they have been received or until the conditions for their receipt have been complied with and there is reasonable assurance that the grant will be received, whichever is the earlier." This is reconcilable with the recognition criteria of the IASC Framework.

In the main, ED 43 is dealing with the second kind of recognition as the Preface makes clear. "The proposed statement adds to the list of items which may be taken direct to reserves rather than being passed through the profit and loss account." This second kind of recognition is tantamount to defining assets, liabilities, revenue and expenses (although the term "liability" is not used because the type of grant being considered is closer to share capital than to a liability). The criteria used here are a mixture of the matching concept and the conditions attaching to the grant. The approach taken in ED43 is one of careful analysis of the various types of grant. It could be justified on grounds of relevance to user needs, but would be very difficult to relate to the definitions and recognition criteria of the IASC Framework. The IASC criteria are necessary to establish recognition versus no recognition but they are not sufficient to explain the final recommendations.

SSAP 5 Accounting for Value Added Tax
Paragraph 1 of the Explanatory Note justifies not recognising VAT within income or expenditure. The explanation, based on the trader's role as a collector of tax, could be reconciled with the IASC recognition criteria by saying that no economic benefit flows to or from the enterprise as a result of VAT.

SSAP 6 Extraordinary items and prior year adjustments
SSAP 6 deals with disclosure, not recognition.

SSAP 8 The Treatment of Taxation under the Imputation System
Recoverable ACT (para 20) is to be recognised in conditions which may be regarded as setting allowable probabilities that the future economic benefit will flow to the enterprise. "Reasonable certainty" is also cited within explanatory paras 5 to 7.

In the Standard section, paras 22-25 are concerned with disclosure or measurement. Para 26 deals with recognition of the liability to ACT on the proposed dividend. No reason is given for recommending recognition at a point in time when the liability has not arisen (the legal liability only arises when the proposed dividend is paid). Para 15 mentions "payment within about three months of the dividend itself" which implies that the probability of a future sacrifice of economic benefits was in the minds of the authors of SSAP 8.

Appendix 3 to SSAP 8 (issued April 1988) shows that the probability of future sacrifice has a variable timescale dimension to accommodate fiscal regulations in the Republic of Ireland. "In the case of dividends proposed but not paid at the balance sheet date, the related ACT will become due for payment eighteen months after the end of the accounting period and should be shown as a separate non-current liability." (para 20)

SSAP 9 Stocks and Long-term Contracts
Para 1 contains a clear declaration in favour of the matching concept being the determining principle of stock valuation. In relation to stock, SSAP 9 is primarily concerned with the measurement of stock rather than its recognition as an asset. With regard to long-term contracts SSAP 9 deals with recognition of revenues as well as of profit. Para 9 refers to attributable profit "calculated on a prudent basis" and having explained the workings of the matching concept leads into para 10 "When the outcome of long-term contracts cannot be assessed with reasonable certainty" and a recommendation of no profit recognition in such circumstances. Para 11 refers to the situation where "it is expected that there will be a loss". Both of these paragraphs could be regarded as applying the notion of probability of future economic benefits flowing to or from the enterprise. Appendix 1 para 24 says "...the overriding principle being that there can be no attributable profit until the outcome of a contract can reasonably be foreseen". Paras 25 to 28 elaborate on that theme.

SSAP 10 Statements of Source and Application of Funds
SSAP 10 deals with disclosure.

SSAP 11 Accounting for Deferred Taxation (withdrawn)
Although withdrawn, SSAP 11 is interesting in its lack of use of recognition criteria in comparing the liability and deferral methods. The apparent willingness to permit either approach suggests that recognition criteria were not significant to the issue.

SSAP 12 Accounting for Depreciation
SSAP 12 defines fixed assets but the wording used does not in any way conflict with the IASC's general definition of an asset. The term "useful economic life" is used and is defined in relation to "economic benefits from its use" (para 11) which is in keeping with the general asset definition.

The standard requires recognition of an expense "by allocating the cost...as fairly as possible to the periods expected to benefit from their use". This could be regarded as a matching of economic benefits flowing to and from an enterprise but it is more difficult to see an application of the probability criteria.

SSAP 13 Accounting for Research and Development Expenditure
Development expenditure is distinguished by a "reasonable expectation of specific commercial success" (para 8). The phrase "potential future benefits" is used in para 10 and "The element of uncertainty" in para 13. Thus there is ample evidence that the probability of future economic benefits is a criterion used in SSAP 13.

What is not clear is whether this probability is a recognition criterion or an element of the definition of an asset and an expense. It did not matter to those drafting SSAP 13 since the issues of definition and recognition were blurred and there was no need to ask whether an unrecognised asset might exist.

SSAP 14 Group Accounts
SSAP 14 allows exclusion of subsidiaries from group accounts and from consolidation. The exclusion from consolidation on grounds of dissimilar activities means non-recognition in the main financial statements. There will be further information as prescribed in para 23, but that is not recognition. The exclusion is seen as justifiable on grounds that "consolidated financial statements would be misleading".
Since this exclusion probably does not have a long future in view of the DTI moves with regard to the Seventh Directive and the recent change of rules in the USA, it is perhaps not necessary to have undue concern at the lack of reconciliation with the IASC recognition criteria.

SSAP 15 Accounting for Deferred Taxation
Para 25 of the Standard section clearly links recognition to the probability that a liability or an asset will crystallise. Paras 26,27 and 28 develop that theme. The definition of a liability appears less important because para 15 opts for the liability method, having already made the value judgment that partial provision is the right answer on grounds of probability of future economic benefits flowing in or out.

SSAP 16 Current Cost Accounting

SSAP 16 is no longer with us but could be said to have touched on the question of recognition by creating four adjustments to profit and loss account. These were justified in terms of achieving an objective of providing more useful information than that available in historic cost accounts alone (para 5). Since these are accounting adjustments only, and would not appear if the accounts were full CCA rather than adjusted HCA, their recognition is not considered further here.

SSAP 17 Accounting for Post Balance Sheet Events

SSAP 17 provides guidance on the use of post-balance sheet events in improving on the measurement of events which took place on or before the balance sheet date. The post-balance sheet event may result in an adjustment of the probabilities attaching to an event but will be a factor determining questions of measurement rather than of recognition.

The statement of principle in para 1 has a bearing on reliability of measurement by referring to evidence of conditions that existed at the balance sheet date but that is not quite the same as the IASC wording "has a cost or value that can be measured with reliability".

SSAP 18 Accounting for Contingencies

The discussion hinges almost entirely on probabilities of future economic benefits or sacrifices of benefits. It demonstrates clearly that different probabilities are attached to assets from those attached to liabilities:

> "Existing conventions preclude contingent gains from being accrued in financial statements. The existence of a contingent gain should be disclosed only if it is probable that the gain will be realised. When the realisation of the gain becomes reasonably certain, then such a gain is not a contingency and accrual is appropriate." (para 4)

(Disclosure here means by way of note.)

Contrast this with the treatment of losses (para 3):

> "...contingent losses will be accrued in financial statements where it is probable that a future event will confirm a loss which can be estimated with reasonable accuracy..."

SSAP 19 Accounting for Investment Properties

SSAP 19 is concerned with the valuation of a specific class of asset. It could be taken as dealing also with non-recognition of depreciation, but the argument appears closer to the view that depreciation never even exists in such circumstances:

> "In such a case the current value of these investments, and changes in that current value, are of prime importance rather than a calculation of systematic annual depreciation." (para 2)

If the depreciation is non-existent by definition then the question of recognition or non-recognition does not arise.

SSAP 20 Foreign currency translation

There is a matter of recognition in dealing with exchange gains and losses (paras 49 and 50 of the Standard section). The reasoning is contained in paras 8 - 11 of the Explanatory Note. Para 8 refers to cash flows that have already taken place or will soon take place. That could be taken as a measure of probability of economic benefits arising, and therefore comparable to the IASC criteria.

Paras 9 - 11 dealing with the recognition of exchange gains and losses on long-term monetary items are more difficult to reconcile. They argue on the basis of objectivity and symmetry and use words like "illogical" and "inhibit fair measurement". There is a return to an element of probability at the end of para 11 to deal with cases where there are doubts as to the convertibility or marketability of the currency in question.

Para 27 deals with the special case of equity investment financed by foreign borrowings and gives rules on the location of recognition (profit and loss account versus reserves). That is probably something which does not need to be considered in relation to testing the IASC definition because it deals with where to recognise rather than whether to recognise.

SSAP 21 Accounting for Leases and Hire Purchase Contracts

Para 11 of the Explanatory Note refers to rights and obligations. It does not go so far as to equate these rights and obligations with the terms "asset" and "liability". It also refers to "rewards and risks" being substantially similar to those of an outright purchaser of an asset. Thus para 11 comes close to awarding an asset the characteristics of rewards and risks without actually saying so.

Para 15 gives more guidance on the transfer of risks and rewards.

> "It should be presumed that such a transfer of risks and rewards occurs if at the inception of a lease the present value of the minimum lease payments, including any initial payment, amounts to substantially all (normally 90 per cent or more) of the fair value of the leased asset."

The "90% test" could be regarded as a recognition criterion, although it is very much bound up with the definition in terms of risks and rewards. It does not sit well with the IASC criteria since the probability of a future economic benefit flowing to or from the enterprise is not greatly affected by the financing arrangements of the lease. The economic benefits flowing out of the enterprise will be the lease payments which may have a different time profile in a finance lease as compared with an operating lease, but the probability of occurrence will be high in both cases.

One way round the problem might be to argue that the "90% test" is a means of interpreting the definition of the asset in terms of risk and reward and is not a recognition criterion. That helps with recognition but leaves the question of definition unresolved since the IASC definition of an asset does not mention risks and rewards.

SSAP 22 Accounting for Goodwill

SSAP 22 devotes considerable energy to explaining why goodwill should not be recognised any longer than is absolutely necessary. The principal reason given is that of consistency with the accepted practice of not including non-purchased goodwill (para 6).

The write-off does not imply an equivalent actual loss of value (paras 6 and 7) so the IASC criteria cannot be invoked in terms of probable loss of future economic benefits.

Appendix 2 considers the effect on realised reserves. In this context the question of recognition of realised profit cannot be avoided. An actual diminution in value will affect realised reserves but a write-off by accounting policy only may be charged against an unrealised reserve. The question of probability of future economic benefit flowing out appears critical here.

SSAP 23 Accounting for Acquisitions and Mergers

Para 19 allows that in merger accounting the profit or loss of subsidiaries brought in for the first time should be included for the entire period. This is a recognition matter but no explanation is given. Para 2 states that this is one of two different methods which "have been developed". ED 31 provides little help: "ASC believes that such treatment is consistent with the concept of a merger" (ED 31 para 1.30).

SSAP 24 Accounting for Pension Costs

This is stated (in para 1) to be a standard accounting practice concerning the recognition of pension costs in the employer's financial statements. The accounting objective is stated as requiring the employer to recognise the cost of providing pensions on a systematic and rational basis over the period during which he benefits from the employees' services (para 16). This is quite clearly a reference to the matching concept. It is also clear that matching takes precedence over the prudence concept:

> "In strictly limited circumstances prudence may require that a material deficit be recognised over a period shorter than the expected remaining service life of current employees in the scheme." (para 82)

The word "recognised" is used in the sense of "recognised in the profit and loss account rather than in the balance sheet".

SORP 1 Pension Scheme Accounts

The net assets statement must include all the assets and liabilities of the scheme except for specified exceptions. Two of these are worth considering because one does not fit at all with the IASC criteria while the other does to a limited extent (the third is a matter of position of reporting rather than a fundamental recognition issue).

(a)One exception is the liabilities to pay pension and other benefits in the future. The reason given is that this is a responsibility of the actuary. To accommodate this the IASC definition would have to refer to those future economic benefits which are the reporting responsibility of the accountant. That could be reconciled with the notion of verifiability drawn from the FASB criteria. Since the liability is not verifiable by the accountant it should not be reported by him.

(b) A second exception is insurance policies purchased to match the pension obligations of specific individual members. The reason given here (para 61) is that the acquisition costs of the policy should be treated as the cost of discharging the obligations at the time of purchase. If this is seen as a netting-off of assets and liabilities it is not covered by the recognition criteria of the IASC. It could be regarded as a perfect matching of future economic benefits flowing in and out which does not require to be recognised, but that again is not covered by the IASC criteria.

SORP 2 Accounting by Charities

This contains all manner of interesting recognition practices, such as including unrealised gains and losses on investments in the income and expenditure account (para 48), omitting fixed assets from the balance sheet (para 51), and including in the income and expenditure account a "best estimate" of a grant yet to be received (para 44). The recognition criteria applied throughout SORP 2 can only be justified in terms of para 1 of the Explanatory Note which explains the purpose of a charity's annual report in terms of user needs.

Comments on SSAPs and SORPs

There are SSAPs which show evidence of recognition criteria which would fall within the IASC specifications because they all employ reasoning based on the probability of an event occurring. SSAP 2 uses the test of realisation of cash or a near-cash asset as a condition for recognising profits or gains. This is in effect a test ensuring a high probability that the transaction has been carried to a successful conclusion. SSAP 8 justifies recognition of a future liability for ACT through the argument of the probability of future sacrifice. SSAP 9 refers to reasonable certainty in relation to recognition of profit on long-term contracts. SSAP 13 allows capitalisation of development costs where there is a reasonable expectation of success. SSAP 15 allows partial provision for deferred tax in relation to the probability of crystallisation of the liability. SSAP 18 prescribes different treatments for classes of contingencies depending on the probability that future events will confirm a loss. SSAP 20 recognises gains and losses on short-term monetary items on the grounds of probability of future cash flows.

The words used in describing the probability of an event occurring vary from "reasonable certainty" to "probable" to "reasonable assurance" to "reasonable expectation of commercial success". These are very qualitative assessments of probability but they open the way to possibly quantifying probabilities which are acceptable in specific circumstances. In the longer term they could even open a route to reporting the probabilities or residual uncertainties attaching to items recognised in financial statements. To this extent the IASC recognition criteria offer a way forward in developing quantitative techniques to deal with the uncertainties of financial reporting.

There are, however, SSAPs applying recognition criteria which do not employ the recognition criteria set out in the IASC Framework and they are sufficient in number and significance to create concern about any attempt to implement the Framework.

SSAP 4 and ED 43 clearly rest the recognition of government grants on the matching concept. SSAP 9 chooses to argue the recognition of particular items of expense as being a part of stock valuation on the basis of the matching concept. SSAP 24 takes the route of the matching concept rather than emphasising recognition of assets and liabilities. SSAP 12 also relies on the matching concept, although it is primarily concerned with an expense item and not with the recognition of assets and liabilities. In all these cases recognition is driven by a need to match costs and revenues. Assets and liabilities are the residue from the matching proces. The reliability of measurement remains an overriding criterion for recognition but the probability of an economic benefit or a sacrifice of economic benefit is not considered.

There are other isolated examples of recognition practices which do not fit the IASC pattern. SSAP 22, in advocating non-recognition of purchased goodwill, relies on the concept of consistency rather than calling on principle as to the definition and recognition of an asset. SSAP 21, in arguing for recognition of assets and liabilities arising from finance leases, calls for assessment of the risks and rewards. This theme of risk and reward will be explored further in Stage 2 of the research project, when it will be found to occur in other instances and will be explained in terms of the prudence concept as a reaction to uncertainty. SSAP 14 and SSAP 23 show that the standard-setters may sometimes find it hard to find words to justify a chosen recognition practice. SORP 2 shows that recognition criteria may also depend on relevance to user needs, so that recognition practices used in relation to the financial statements of a charity may be very different from those used in relation to the accounts of a profit-making business enterprise.

The overall conclusion is that SSAPs do show ample evidence that general principles of recognition exist. To a considerable extent the principle is one of establishing reasonable certainty about items and events but there is also a strong theme of the matching principle. The matching principle leads to solutions which are largely driven by considerations of the profit and loss account, while the establishment of reasonable certainty about items is more likely to involve consideration of the assets and liabilities. If the IASC Framework were to be made operational in a UK context it would have to acknowledge that, in the interests of making accounting information relevant to the needs of users, the profit and loss account may, on occasions, take precedence over the balance sheet. If this were seen as weakening the Framework then it would have to be made clear that existing accounting practices in relation to standards such as SSAP 4 and SSAP 24 may in future have to be revised.

Stage 2 of the research project: Test of recognition criteria applied by or discussed by those commenting on ED 42 "Accounting for Special Purpose Transactions"

Approach taken in Stage 2

ED 42 considered a number of specific examples of transactions which at present are normally reported off-balance sheet but which could be seen as having characteristics which might bring them back on to the balance sheet. Comments on ED 42 included, in a number of cases, further analysis of those examples. Comments also requested more specific guidance as to how existing recognition practices were being applied in these complex situations. Stage 2 of this research project attempts to provide a more detailed analysis by taking a selection of the examples of ED 42, plus some others suggested by commentators on ED 42, and in each case producing a description of the situation, a statement of the problem so far as recognition is concerned, a rationale for the current treatment, analysis against the checklist devised for this research project and an evaluation of the definition and recognition issues.

The topics selected are: factoring of debts; securitised receivables; deferred costs and deferred credits. The choice of subjects is selective in order to illustrate the challenge of making conceptual definitions operational. It is not intended to cover all the issues raised in ED 42 or in the comments thereon.

The presentation of this section differs in that footnote explanations are given. This was found to be the most convenient way of referring to the authority for each item used while leaving the main text with some feeling of continuity for the reader. The footnote references are self-explanatory. The reference "(Comments p. n)" should be read as a reference to the Comments received by the Accounting Standards Committee of the Consultative Committee of Accountancy Bodies (CCAB). Those comments are on the public record and are available in the libraries of the CCAB member bodies. The page number reference is to the page numbers stamped on by the ASC secretariat.

Factoring

Description of the situation

Factoring of debts provides a range of client services[1]. The three principal categories are: sales ledger administration; credit management; and provision of finance tied to the level of a company's sales. The factor's client taking all three elements of service hands over control of his sales ledger to the factor. As soon as the client's invoice is sent to the customer, the factor makes available to his client up to 80% of the face value of the invoice. The client has the choice as to how much of this finance he draws. The balance, net of charges, is payable to the client either a number of days after the invoice date or when the customer makes payment of the invoice.

The cost of this service to the client comprises two elements; an administration charge and a finance charge linked to current interest rates. The risk depends on whether the factoring is with or without recourse. Even when the risk is carried by the factor on a "without recourse" basis, the client will suffer a financial penalty if the customer is a late payer.

Statement of the problem

ED 42[2] analysed factoring in terms of the risks of the arrangement. It distinguished the risk of recourse on bad debts from the risk of penalty in relation to slow payers, recommending that the risk of bad debts be dealt with by making provisions but that slow paying debtors remain on the original balance sheet matched by a corresponding liability for the amount due to the factor. Comments on ED 42 suggested that it would be equally valid to make provision for slow payers as to make provision for doubtful debts[3]. It was also emphasised[4] that in all cases ownership of the debts/

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1. The Factoring Report. Griffin Factors, 21 Farncombe Road, Worthing, West Sussex, 1988, 24 pp. (promotional material describing factoring)
2. ED 42 paras 37 and 38
3. JHT Russell (Comments p. 194)
4. The Association of British Factors (Comments p. 87)

debts vests in the factor and therefore any suggestion of a resemblance to a financing transaction would be misleading.

There is a lack of agreement as to how the seller of debts treats the cost of factoring. It could be labelled an interest charge or it could be labelled cost of goods sold[5].

Rationale for current treatment

The current treatment of factoring is to record a note to the account explaining debtors and explaining any contingent liability. The rationale seems to be that the asset has been sold and is now controlled by the factor. Any question of recourse is dealt with as a contingent liability.

In the USA the treatment of a transfer of receivables is dealt with in FAS 77[6]. To justify the off-balance sheet treatment (i) the transferor must surrender control of the future economic benefits in the receivable (ii) obligations under the recourse provisions should be capable of reasonable estimation and (iii) the transferee cannot require the transferor to repurchase except pursuant to the recourse provisions. A typical UK factoring agreement would probably meet these conditions[7] and therefore an off-balance sheet treatment would appear to be acceptable.

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5. British Petroleum Company plc. (Comments p. 10)
6. FAS 77 received favourable comment from Credit Suisse First Boston Limited (Comments p. 17)
7. Brindle, I. "Off-balance sheet financing" in Financial Reporting 1985-86 page 76

Analysis against checklist

1. There <u>was</u> a resource, the debtor, but it has been sold.
2. Control generally rests entirely with the factor, not with the enterprise.
3. There is no expectation that the asset will generate any further economic benefits to the enterprise. In adverse circumstances it could generate a loss of economic benefits due to slow or bad payers.
4. There is a risk of outflow of economic benefits which could be quantified based on previous experience with slow or bad payers.
5. Conventionally the asset is measured at historic cost selling price value but it does also have a present value which is not normally recorded.
8. The alternative is disclosure by way of note.
9. Prudence would have a role in relation to acknowledging the risks of economic outflows.

Evaluation

It is useful to pause and ask why <u>any</u> debtor is on a balance sheet. The expected future economic benefit is an exchange for cash but that is not similar to the type of benefit generated by fixed assets or trading stock where net worth is added when the asset is used in the operations of the business. The debtor, being valued at selling price, adds no apparent net worth when it is exchanged for cash.

If the debtor were valued at present value it might be clearer that there is a benefit in exchange for cash, particularly if the cash is received earlier than expected.

Take a debtor for £100 due one year hence when interest rates are 10% per annum. A present value approach would value the debtor at £91 today and its value would gradually rise over the year to maturity at £100. If the customer paid £100 before the end of the/

the year the enterprise would record a gain. If the customer paid £100 after the end of the year the enterprise would record a loss. But historical cost accounting ignores all this and records the debtor as £100 from the date of contract to date of maturity.

The debtor could be sold today for £91. The enterprise would have the use of £91 and would have foregone £9 for that use. The enterprise could equally well have borrowed £91 against the security of the debtor, would have the use of that £91 and would pay £9 interest cost at the end of one year. Thus factoring of debts is completely analogous to a financing arrangement (ignoring the administration aspects for the moment).

The balance sheet in the first situation (the sale) will record only an asset of cost £91. The balance sheet in the second situation (borrowing) will record the debtor £100, the cash £91 and the matching borrowing £91. Although the financial effects are the same the balance sheet appearance will be different. Should a company have to pretend it has carried out the borrowing arrangement when in reality it has made the sale? Since sale of a financial instrument is a valid commercial alternative to borrowing, it should be valid to report the sale as a sale.

The only real claim to continued recognition of the factored debt is that of the risks of loss arising on the asset. There is however an accounting treatment for such risk; namely to provide against the loss. There has to be some further argument for recognition of the asset when the concept of prudence could be satisfied by making provisions against losses.

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The argument in favour of recognition would have to rest on the probability of future loss of economic benefits due to the risks already identified[8]. The definition of an asset would be satisfied in respect of the debtor which used to belong to the enterprise and the argument would be that the asset had not departed from the enterprise. The recognition criteria would need to explain that once an asset is held by an enterprise it may remain a part of the enterprise when legal title has gone, if the enterprise is remaining at risk of future loss on the asset. The materiality threshold for such risk would be a subsequent consideration. It might be that lack of recourse and a low risk of slow payers would be adequate to establish that the recognition of the factored debt would be immaterial but a high risk of slow payers, even in the absence of recourse, might justify the asset remaining on-balance sheet.[9]

It would be necessary in such circumstances to establish the type of disclosure required in relation to the volume of debts factored, which should not be less than that prescribed by the FASB in FAS 77. Disclosure should indicate which variation of factoring methods was used[10 11].

The prudence concept would be a major influence in guiding the final decision as to whether the total risk associated with debtors had been adequately eliminated.

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8. The need to make more of the analysis of risk was pointed out by Arthur Andersen & Co. (Comments p. 35)

9. More specific discussion of recourse was requested by the Chartered Association of Certified Accountants (Comments p. 104)

10. British Petroleum Company Ltd. (Comments p. 10)

11. The Association of British Factors (Comments p. 87)

Securitised receivables

Description of the situation

"Securitising" any form of asset means funding the asset with debt and equity securities with the aim of producing the minimum equity interest[1]. The asset which is used as backing for the issue of securities could be any form of receivable. In the UK to date the asset has most commonly been a bundle of mortgages. Securitisation could be applied to credit card receivables or car hire purchase loans.

The originator of the mortgages creates a special purpose vehicle which issues securities and receives the package of mortgage loans. The intention of the arrangement is to remove into the special purpose vehicle as much risk on the assets as possible and all recourse in relation to the securities issued. The originator of the scheme continues to service the mortgages and takes its reward in the form of a service fee paid by the special purpose vehicle. Through such a scheme, the originator has succeeded in financing its assets using loan capital without increasing its gearing. It is then able to start over again creating new mortgages for a future securitisation scheme.

A typical securitisation arrangement[2] would be the issue by a special purpose vehicle of £200m Mortgage Backed Floating Rate Notes due 30 years hence, secured by charges over mortgage loans which themselves are secured on residential properties. The mortgages would have an unpaid principal balance of £200m. The mortgages would be originated by a mortgage business which would continue to service them. It would be quite explicit that there would be no recourse on the Notes to any party outside the special purpose plc. The parent of the originator could well have provided guarantees in respect of the bad debt risk.

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1. M. Fortier, Salomon Brothers International Ltd. at a Seminar on "Off-Balance Sheet Finance", November 1988
2. Offering Memorandum, TMC Mortgage Securities No. 10 PLC., October 1988

Although the originator quite clearly has no liability on the Notes, it may remain at risk in relation to the mortgage assets. Various types of risk have been identified. Five are listed in ED 42 as[3]: bad debt risk; delays in collecting repayments; basis risk; reinvestment risk; and administration risk. Basis risk and reinvestment risk refere to unpredicted changes in interest rates. Administration risk refers to the risk related to negligent administration and the 'moral' risk of pressures of public concern about borrowers who find themselves unable to keep up with repayments.

Statement of the problem

The question is whether the mortgage assets have really left the balance sheet of the originator. They have been transferred into another vehicle which does not meet the current definition of a subsidiary of the originator. The risk on the assets may have been wholly or partially transferred. The reward accrues initially to the vehicle but finds its way back to the originator in the form of payment for management services.

ED 42 recommended that the mortgages should remain on the balance sheet of the originator if a significant benefit or significant reward remained with the originator[4]. The meaning of the word "significant" was closely questioned by commentators. It was suggested that it would be wrong to require consolidation when the originator only provides a service function even where that servicing function takes out substantially all of the net income of the mortgage vehicle[5]. It was pointed out that the future economic benefit from the mortgage assets is controlled by the special purpose vehicle because it sets its own mortgage rate[6].

3. ED 42 para 44
4. ED 42 para 45
5. The Mortgage Corporation (Comments p. 162)
6. Credit Suisse First Boston (Comments p. 15)

The Bank of England has made several attempts to address the problem of securitisation. The most recent draft available at the time of writing accepts that if the originator is acting only as a servicing agent then the mortgage assets should be off-balance sheet for the originator. It then proposes a seventeen-point test, to establish the purely servicing nature of the operation. Failure to satisfy any one of the seventeen points would lead to on-balance sheet treatment for risk asset ratio purposes[7].

The question of recognition of shared risk has also been raised by commentators who thought it would be wrong for the originator to have to bring the full bundle of mortgages on-balance sheet when only a portion of the risk remained[8 9].

Rationale for the existing treatment

Because the mortgage loan is in form legally sold to the vehicle and in substance entirely controlled by the vehicle, it may be argued that it should be classified as an asset of the vehicle[6]. It is also possible to analyse the five classes of risk identified in ED 42 and to show that the special purpose vehicle absorbs all its own risk, usually by means of insurance[6]. It will not be dependent on the originator for support. In terms of the conditions stipulated in FAS 77 (see the section on factoring) there is further support for the case of off-balance sheet treatment[6].

Those who are responsible for securitisation schemes claim that they have a commercial purpose and that an unduly restrictive approach on the part of standard-setters would act to the commercial detriment of the business[10 11].

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6. Credit Suisse First Boston (Comments p. 15)
7. Loan Transfers and Securitisation. Revised paper, October 1988, Banking Supervision Division, Bank of England.
8. Association of British Insurers (Comments p. 85)
9. The Hundred Group of Chartered Accountans (Comments p. 188)
10. British Bankers Association (Comments p. 88)
11. Deloitte Haskins and Sells (Comments p. 55)

Analysis against the checklist

1. There __was__ a resource, the bundle of mortgages, but this has been sold to the special purpose vehicle.
2. Control is claimed to rest with the special purpose vehicle, not the originator.
3. The asset will generate future economic benefits for the special purpose vehicle, which will pass these on to the originator in the form of fees for services.
4. There is a risk to the originator of outflow of economic benefits although in a well-ordered scheme substantially all of the risks will have been insured against.
5. The measurement of present value is reflected in the mortgage valuation.
8. The alternative is disclosure by way of note.
9. Prudence would have a role in relation to the determination of the extent to which the originator remained at risk.

Evaluation

There are two routes by which securitised mortgages might find their way back onto the balance sheet of the originator. The first is through a general analysis of the existence of assets and liabilities and the location in which those assets and liabilities should be reported. The second is through a change in the definition of a subsidiary for group accounting purposes. Taking the subsidiary route first, at the present moment these special purpose vehicles are not being consolidated as subsidiaries of the originator although they may in fact be legal subsidiaries of another company within the group to which the originator belongs[12]. It is doubtful whether the proposed change in the legislation on group accounts would help in this respect. The legislation proposed by the DTI[13] would require the originator to hold a "participating interest" in the/

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12. The Offering Memorandum of TMC Mortgage Securities No. 10 Plc, referred to earlier, explains on p. 30 a complex relationship of companies within the Salomon Inc Group.

13. Department of Trade and Industry: open letter of August 1988.

the special purpose vehicle in terms of a shareholding or other rights in the capital. It would also require the actual exercise of a dominant influence by the originator. It appears from the situations described in the comments on ED 42 that neither of these tests would be satisfied.

The argument therefore reverts to the assets and liabilities question. The originator has no liability on the Notes secured on the mortgages, no control over the assets and apparently limited risk. But nevertheless there is still some risk and the Bank of England[14] has identified circumstances which it thinks leave some of the risk with the originator. The Building Societies Association[15] pointed out the importance of risks being properly reflected in the financial statements and also emphasised that a collection of risks which individually are judged insignificant may be significant when viewed collectively.

There is a strongly argued view that significant benefit in itself should not be critical to the recognition decision[17 18]. The fact that the originator receives most of the profit generated by the special purpose vehicle should not be invoked to bring the corresponding assets and liabilities on-balance sheet.

Prudence is central to the decision as to the level of risk which would dictate on-balance sheet presentation and to the recommendation as to the level of disclosure where presentation is off-balance sheet. There is a spectrum of risk situations[16] and there is some point on that spectrum at which off-balance sheet treatment gives way to the on-balance sheet approach. The risks are clearly understood in the industry and can be described in great/

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14. op. cit
15. The Building Societies Association (Comments p. 94)
16. Finance Houses Association (Comments p. 118)
17. The Mortgage Corporation (Comments p. 162)
18. Warburg Securities (Comments p. 30)

great detail. There is no doubt that they are quantifiable within an enterprise and it should be feasible for the enterprise and its auditors, on the facts of the case, to decide whether a prudent approach to risk requires accounting or disclosure.

In relation to prudence there is the question of how the significance of the risk carried by the originator should be tested. It could be considered in relation to the total risk of the transactions themselves or it could be considered in relation to the total assets of the group.[19] ED 42 suggested that the risk must be significant to the originator.[20] The Bank of England proposes to look at operational risks in relation to balance sheet items in the originator.[21] In the context of risk on the asset it is relevant to consider the exposure of the originator in relation to its own balance sheet.

ED 42 then also mentions the risk of changes in the profit generated for the originator by the special purpose vehicle, where the profit arises from matching a narrow interest rate margin against the cost of servicing the mortgages. Any assessment of the future profitability of the special purpose vehicle depends critically on interest rate margins and the asset base from which these are generated. Such an assessment could be carried out provided the notes to the accounts of the originator carried information on the total amount of securitised mortgages being serviced.

The prudence concept helps here in distinguishing the risk in relation to the asset, which should be reflected in an accounting treatment, from the risk in relation to assessment of future profitability of the operation, which could be assessed by reference to disclosure in notes.

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19. Deloitte Haskins and Sells (Comments p.55)

20. ED 42 para 45

21. Bank of England op. cit para 13

Deferred costs

Description of the situation

There are some deferred costs which are by custom included under the heading of "assets" in the balance sheet but when analysed do not so easily justify their position. Paterson (1988) provides the following examples:

1. A company has to top up its pension fund to meet an experience deficiency. In accordance with SSAP 24 it spreads the extra cost over a number of years. A deferred cost will appear under the "asset" section of the balance sheet, reducing gradually as the cost is matched against revenue.
2. The initial expenses of starting a new business are treated as a deferred cost, included in the "asset" section of a balance sheet, and are amortised against profit over a number of years.

Statement of the problem

Paterson describes these deferred costs as being "parked" in the balance sheet awaiting matching in the profit and loss account. The driving force is the matching concept. There is no resource identifiable, there is nothing specific for the entity to control, and the expectation of future economic benefits is indirect and extremely difficult to quantify. A conceptual framework, to be made operational, would either have to be worded in such a way as to acknowledge that such deferred costs are assets or have to state specifically that such deferred costs are not assets despite established custom and the formats of the Companies Act. One commentator on ED 42 suggested that a better description of existing accounting practice is that "an asset is a deferred cost"[1].

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1. Arthur Young (Comments p. 42)

Rationale for existing treatment

This problem is not a new one. Morison (1974) made a philosophical attempt to rationalise the treatment of deferred cost by suggesting that expenditure is carried forward only if:

it provides a positive future benefit

and either the future benefit is objectively quantifiable

or to write off the expenditure at once would distort profit

or both of these conditions apply.

Morison's analysis of "deferred revenue expenditure" is interesting in that he is only able to rationalise the practice by reference to the magnitude of the item in relation to annual profit. His explanation is based on what he describes as "an apparently basic human need - that of trying to make the trading profits look better than they otherwise would do".

Analysis against the checklist

1.}
2.} There is no resource and no control.

3. The expectation of future benefits is indirect in that expenditure has been incurred which is expected to benefit revenue of future periods.
4. The probability of future economic benefit is high, although quantification of the amount attributable to any specific item of expenditure or specific time period would be difficult.
5. Historic cost is measured with reliability.
6. Relevance may have a role in that the matching concept is seen as the best means of providing information rather than the distortion of a single year's profits which would arise through immediate write-off.
8. The alternative is immediate write-off through profit and loss account.
9. Prudence is not an issue since prudence would encourage immediate write-off.

Evaluation

The deferred costs are not so far removed from the definition of assets as might appear at first sight. It has already been shown in the discussion of factoring and securitised mortgages that the conditions of existence of a resource and control of the resource could not be imposed as necessary conditions for the existence of an asset. That only leaves as a necessary condition the expectation of future economic benefits. There is no doubt that the deferred cost does carry with it an expectation of future economic benefit but there is a problem of defining and quantifying that benefit. ED 42[2] instanced as an asset the cost of an advertising campaign expected to benefit future periods. A comment on this suggested that only rarely could benefits be identified with sufficient certainty to justify carry forward[3]. Although that comment was critical in its response to ED 42 it is helpful in confirming that practitioners do have regard to the expected future benefit arising from deferred costs.

Quantification of the benefit and allocation to specific accounting periods is a problem of measurement rather than of definition or recognition. Current practice on measurement is very unsatisfactory in that the cost is amortised or allocated to time periods on a somewhat arbitrary manner and therefore the residual item left in the balance sheet has little meaning in terms of value beyond indicating that there is some future benefit still expected.

Morison's explanation that such items are carried forward because to include them in profit and loss account would distort the results is probably close to the truth but is not helpful in linking the practice on deferred cost to the IASC recognition criteria. As Morison/

2. ED 42 para 18
3. Institute of Chartered Accountants of Scotland (Comments p 144)

Morison admits, it is something of a circular argument since until the item has been treated as an expense its effect on profit is not perceived. The isolation of expected economic benefit as the one necessary condition for definition of an asset leaves a link, albeit tenuous, to the IASC definition of an asset.

Recognition may then be justified in that the probability of economic benefit is high. This would apply to the pension costs example and the illustration of pre-incorporation expenses being treated as an asset. There is a measurable attribute, historic cost, which is a highly unsatisfactory measure but possibly no more unsatisfactory here than in its use elsewhere in the balance sheet.

Deferred credits

Description of the situation

Paterson (1988) has pointed out that there are items which are presently reported under the liabilities heading which would not meet the IASC or FASB definitions. These items he describes as credits awaiting recognition in the profit and loss account.

The two examples which he cites are deferred grants received, where the grant is credited to profit and loss account over a period of time, and the deferred effects of favourable variations from regular pension cost, spread over time as prescribed in SSAP 24.

Statement of the problem

The problem is similar to that in regard to deferred costs, which is to explore whether the deferred credits could be regarded as liabilities within the IASC definitions.

An opportunity to consider the accountant's view of deferred credits in respect of government grants is provided by the comments on ED 43, "The accounting treatment of government grants". Those comments were published in November 1988 and are on the public record. ED 43 argued that netting a grant received against the cost of an asset, as permitted by SSAP 4, was a contravention of the Companies Act 1985 which prohibits setting off a liability against an asset.

There was a strong body of response to the effect that a government grant received does not create a liability where recognition of revenue is deferred[1]. One of the few letters of support for ED 43 in its proposed prohibition of the "netting-off" approach came from the Department of Trade and Industry[2] but even that letter circumnavigated the specific question of whether there was a liability. One comment went so far as to support ED 42 which, perhaps embarassingly, had reasoned in favour of the deduction from asset cost and thus contradicted ED 43 which appeared shortly afterwards[3].

Thus despite the headings contained in formats prescribed in the Companies Act 1985, there is a strong body of opinion to the effect that there is generally no liability where a government grant is received and that if there is a remote liability to repay it should be dealt with as a contingent liability.

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1. The opinion that the deferred credit is not a liability is given by:
    Coopers and Lybrand (ED 43 comments p 5)
    Crescent Accountancy Group (ED 43 comments p 9)
    Ernst and Whinney (ED 43 comments p 12)
    KPMG Peat Marwick McLintock (ED 43 comments p 20)
    Price Waterhouse (ED 43 comments p 25)
    Touche Ross (ED 43 comments p 32)
    ICAEW (a request for Counsel's opinion) (ED 43 comments p 40)
    ICAI (enquiry about legal advice obtained) (ED 43 comments p 44)
    BAT Industries (ED 43 comments p 72)
    Cadbury Schweppes (ED 43 comments p 74)
    The International Stock Exchange (request for legal opinion) (ED 43 comments p 99)
    Arthur Young (ED 43 comments p 108)

2. Department of Trade and Industry (ED 43 comments p 96)

3. Deloittes (ED 43 comments p 116)

Rationale for existing treatment

The matching concept is cited in ED 43[4] and SSAP 4[5]. SSAP 24 cites "a systematic and rational basis" of recognition[6] and applies its version of the matching concept. It is clear that in all these cases the balance sheet is seen as the location for the residue after expenses or revenues of a period have been determined.

Analysis against the checklist

1. There is no present obligation in the case of the types of deferred credit instanced here. If the government grant does have repayment conditions attached to it, ED 43 recommends the reporting of a contingent liability. In the case of a variation from regular pension cost there is a revision of the "ultimate" liability of the employer but no suggestion of a present legal liability.
2. There is a past event, the receipt of the grant or the contract of service of the employee.
3. Settlement of the pension liability will not arise until the employee retires. The government grant may have no repayment condition or a contingent repayment condition. The cash from the grant has already flowed in.
5. The grant received is measured in terms of historic cost cash received. The measurement of the pension liability is probably closer to present value.
6. The concept of relevance to user needs in decision making is a strong theme underlying the invoking of the matching concept.
8. The alternative to recognition in the balance sheet is recognition in the profit and loss account.
9. Prudence is not an issue here and takes second place to the accruals concept.

4,5 & 6 See earlier section of this research

Evaluation

The FASB concepts statement[7] would say that the responsibility to pay a pension does create a liability under the definition.

> ".... that their amounts or times of settlement must be estimated, or that the identity of the specific entities to whom an entity is obligated is as yet unknown does not disqualify them under the definition..."[8]

This is partly because the FASB takes a wide view of a "present obligation" as a "legal, equitable or constructive obligation[9]". A similar wide view is taken by the IASC Framework, which includes as liabilities those obligations arising "from normal business practice, custom and a desire to maintain good business relations or act in an equitable manner" (Framework para 59).

By stretching the definition of a liability in this way it is possible even to reconcile the inclusion of deferred grant revenue under the heading of "a liability". The balance in the balance sheet must represent a claim by some party. If the enterprise were closed down immediately the grant would either be repayable to the grantor or it would become part of the equity shareholders' claim. There has been a past event and the probability of an obligation to somebody is high, although it may be harder to determine who that somebody is.

However, in the light of strong evidence that the deferred credit in respect of government grants is not regarded as a liability within present conventions, there is probably little value in trying to reconcile such an item with the conceptual definition of a liability. It may be preferable to develop a conceptual definition first and then find a place within it for government grants.

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7. Statement of Financial Accounting Concepts No. 6 FASB 1985
8. ibid. para 196
9. ibid. paras 36-40

Conclusions from tests

Definitions of items

At the outset of this project the intention was to concentrate only on recognition criteria and not to question the definitions of assets and liabilities provided by the IASC. It soon became apparent that it is often difficult to disentangle the definition of an asset or liability from its recognition. (There is even a fundamental question, not addressed here, as to whether an asset or liability can exist by definition but not be recognised[1]. This project assumes that the stages of definition and recognition are separable.)

Definition of an asset

The IASC definition of an asset contains three elements. There must be a resource, there must be control of that resource and there must be an expectation of future economic benefits from that resource. If all three conditions must be satisfied before any asset may appear on a balance sheet there would be difficulty in accepting current practice with regard to deferred costs. There would also be difficulty in justifying on-balance sheet reporting of some off-balance sheet schemes which on other grounds seem to merit returning to the balance sheet. There is, for example, no resource present when a debt has been factored or a pre-incorporation expense is included in a balance sheet. There may be a resource over which there is no control as in the case of assets put into a discretionary trust with the enterprise as sole beneficiary. The only necessary condition for identification of an asset appears to be the expectation of future economic benefits and even that may have to be qualified by the observation that such expectation may include the risk of loss of economic benefit through risks attaching to the assets.

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1. Arthur Andersen (ED 42 comments p 35) provide their definition of an asset as a "measurable probable future economic benefit obtained or controlled by a particular entity as a result of past transactions or events" which seems to combine definition and recognition in one step.

The FASB definition of an asset requires control of the economic benefits, not control of the resource. It turns out to be an important distinction. All off-balance sheet finance schemes retain effective control of cash flows although such control may be achieved by indirect routes.

The conclusion to be drawn from this research project is that the only necessary element of the asset definition is the expectation of future economic benefit. That benefit may be direct, in that the asset generates a cash flow, as in the case of an item of manufacturing plant. The benefit may be indirect, as where, for example, expenditure has been incurred on the formation of a company which is expected to benefit some future period of time although the exact allocation of that benefit to specific time periods may be difficult to specify.

The presence of a resource may help to identify that future economic benefit. Control of the resource may help even more in confirming that the benefit accrues to the enterprise. These conditions, although widespread, are not <u>necessary</u> conditions in the real world. In many cases they are <u>sufficient</u> evidence of an expectation of future benefit. Control may be shared and yet the entire asset may appear on the balance sheet of the enterprise (as in consolidation of a subsidiary owned less than 100 per cent.) Inclusion of the control condition in a definition of an asset creates practical problems in situations of shared control.

Relying only on the expectation of future economic benefit leaves some scope for including the deferred cost within the definition of an asset. Those who assert that assets are nothing more than deferred costs will usually concede that the deferred cost should not remain in the balance sheet unless there is some expectation of future economic benefit. It is true that the valuation of the deferred cost in the historical cost accounting system may bear little or no relationship to the expected benefit but that is a problem for measurement rules and not for recognition criteria. It illustrates the importance of segregating the criteria for recognition from the principles and rules of measurement.

Several comments on ED 42 objected to the FASB definition of an asset being used because, they claimed, it confused definition with measurement. To use a definition which equated the asset with the expected cash flows implied, in their view, that the asset must be valued in terms of those cash flows and therefore led naturally to present value calculations. The analysis contained in this project has shown that the asset can be identified in terms of expected cash flows. It does not necessarily have to be valued at that same moment and in terms of the same cash flows. If the concept of prudence dictates some alternative measurement such as historical cost or replacement cost or market value because of uncertainty about present value calculations then that is a matter for measurement, not for definition.

Returning to the notion of a resource, it may be that in an ideal-world conceptual framework the presence of a resource and control of that resource would be deemed essential conditions. If so it must be accepted that existing accounting practices in relation to matters such as deferred costs would have to be abandoned and also that an opportunity would exist to create off-balance sheet schemes by effectively controlling the expected benefit but not directly controlling the resource. Ultimately it might be found that equating an asset with a resource would merely shift the problem along one stage so that the need to define a resource would replace the need to define an asset.

Definition of a liability

The three conditions for the existence of a liability in the IASC definition are a present obligation, a past event, and an expectation of an outflow of economic benefit.

This is similar to the FASB definition except that the notion of a probable future sacrifice is in the recognition section of the IASC framework. The FASB concepts statement (SFAC 6) explains (footnote to para 35) that "obligations" are something broader than "legal obligations" and include duties imposed by social and moral responsibility. The IASC Framework (para 59) also extends the meaning of obligation beyond those which are legally enforceable by contract or through statute.

An addition to a list of obligations in practice could be the obligation to service a loan where, for example, the principal sum is off-balance sheet for reasons of non-recourse but the obligation to make payments which will service the loan interest remains with the enterprise. The obligation creates a continuing source of outflow of economic resources from the enterprise.

The difficulty of reconciling present practice with the IASC framework arises in the case of deferred income which is being held in the balance sheet. Format 1 of the Companies Act 1985 denotes deferred income as a "creditor", but allows a separate category, "J Accruals and deferred income". For category "J" there is no clear indication as to whether or not it is regarded as a liability because the heading "liabilities" is not used. Format 2 of the Act quite clearly requires every item in the balance sheet to be either an asset or a liability, the latter category to include accruals and deferred income. Since, however, share capital and reserves are also under the heading "liabilities" Format 2 may not give a great deal of guidance on the status of deferred income. SSAP 4 was very carefully worded in avoiding defining the deferred credit as a liability and the evidence from the comments on ED 43 is that such deferred credits are not regarded as liabilities. It does not seem fruitful therefore to pursue any attempt to bring such deferred credits within the framework of definition of liabilities. It must be accepted that such items would require a new treatment if a conceptual framework were derived.

<u>The meaning of "expectation" and "probability"</u>

The words "expectation" and "probability" both have an everyday meaning and a mathematically precise meaning.

The Oxford English Dictionary lists eight main significations of the word "expectation". In chronological order the connotation of "mathematical expectation" is the eighth and most recent. All earlier meanings which are still in use, are linked to the action of waiting, the state of waiting, or the action of mentally looking for something to come or to happen. Throughout this chapter the word "expectation" is used in the everyday sense of waiting for something to happen. The mathematical expectation or mean value connotation is not intended.

The word "probability" also has a general as opposed to a mathematical signification. In this case the Oxford English Dictionary lists three significations, including the "quality or fact of being probable" where "probable" means "that may in view of present evidence be reasonably expected to happen, or prove true". The use of the word "probable" in the IASC recognition criteria or the FASB definition may well be intended in the non-mathematical sense of "reasonably expected to happen", which is close to the "reasonable certainty" which has been found in earlier chapters to occur repeatedly in statements of standard accounting practice. However, this analysis has chosen to take the mathematical sense of the word "probability" in order to move away from the restrictions of "reasonable certainty" in considering situations where economic benefits, risks and rewards fall within a greater range of uncertainty.

The following discussion of recognition criteria is therefore based on the premise that an asset or liability may be <u>identified</u> qualitatively by a non-mathematical expectation in the sense of awaiting economic benefits or outflows but that <u>recognition</u> requires a more precise expression of the probability attaching to the item.

Recognition criteria

The IASC recognition criteria are necessary but not sufficient to describe the recognition criteria which have been applied or argued in existing SSAPs and SORPs. Reliability of measurement appears to be universally necessary although it is sometimes so obvious that the argument is not specifically stated. Probability of future benefits flowing in or out is specifically stated as being necessary in many cases and could be inferred from circumstances in all other cases, even where the matching concept is the driving force. Although the matching concept drives there is usually an overriding requirement to apply prudence in ensuring that there is a probability of future benefits flowing from any asset thereby arising as a residue.

These two criteria, probability of future benefits and reliability of measurement, are not sufficient because of the need, as demonstrated in the first stage of this research project, to invoke the matching concept (SSAP 4, 12 and 24), risks and rewards (SSAP 21), consistency (SSAP 22) and the ASC's collective wisdom (SSAP 23 and its prior exposure draft).

It has also been shown in the second stage of this research project that examination of the various risks attaching to an item is critical in deciding whether or not to recognise it as an asset.

It has been shown that the IASC criteria as worded are not adequate and that further recognition criteria are needed. Elaboration on the wording of the IASC criteria is also required.

It may be asked whether the further items proposed within the FASB concepts statement would encompass the recognition criteria of SSAPs 4, 12, 21, 22, 23 and 24. The following paragraphs consider each of the FASB criteria.

The FASB requires definitions and measurability, which are contained within the IASC Framework also and have already been found to be necessary although the actual wording of the definitions may require further consideration. FASB uses the "probability of future economic benefits" test as a part of the definition of an item rather than as a test of recognition. The more recent Australian and Canadian exposure drafts of concepts statements are similar to the IASC in using probability as a recognition criterion.

This research project has shown that the probability of economic benefits flowing in or out is an important test but that it is difficult to say whether in practice it is regarded as part of a definition or an aspect of recognition.

Reliability as defined by FASB contains three elements. Representational faithfulness is the US version of "true and fair". To invoke the true and fair view as a separate recognition criterion might be taken as implying that the other recognition criteria are in some way not true and fair. The question of recognition must be debated within some global assumption which is not questioned and that global assumption is the true and fair view. Representational faithfulness is an implied condition of any recognition practice and does not have to be stated specifically within a global framework. The other two elements, verifiability and neutrality, are qualities which were not found in practice to have significantly influenced established recognition practice.

Relevance would provide one explanation of the recognition criteria applied in UK SSAPs, since behind the arguments in SSAPs 4,12, 21, 22, 23 and 24 there is a strong sense of trying to be helpful to users. It is true that Relevance is already contained in the IASC framework as a qualitative characteristic of financial statements and therefore has a much wider role than being confined to questions of recognition.

The idea of relevance to user needs seems to come less strongly from the second stage of the project than it does from the analysis of SSAPs. Perhaps that is because there were not many comments on ED 42 from user representatives.

To incorporate the concept of relevance the recognition criteria of the IASC Framework could be amended by the following additional criterion:

> "Where recognition in financial statements is being weighed against disclosure by way of note, the relevance of recognition is an important consideration (see the IASC explanation of Relevance). It may be particularly relevant in a specific situation to allow the matching of costs and revenues to dictate the extent to which assets and liabilities are recognised. In such a case prudence must be exercised with regard to the resulting recognition of assets and liabilities."

Role of the prudence concept in relation to amplification of the IASC recognition criteria

It does appear that even adding this note on Relevance would be insufficient to deal fully with the recognition criteria in all UK SSAPs and general SORPs. In particular the criterion of risk and the varying probabilities applied in determining the acceptable probability level in relation to a specific expected economic inflow or outflow must be specified. These are both aspects of the application of the prudence concept seen as a reaction to uncertainty.

Risk

Risks associated with an asset are only mentioned in the case of SSAP 21 (risk and reward) but figure prominently in some of the examples given by respondents on ED 42 as discussed in stage 2 of the research project and in particular the discussions on factoring of debts and on securitised mortgages.

It could be argued that the risks associated with an asset are forms of probable outflow of economic benefits, in which case there is a need to add the following explanation of the recognition criteria:

> "When ownership of an asset is given up but the risks of ownership remain with the former owner, the asset must be recognised because these risks are equivalent to a probability that future economic benefits associated with the item will flow from the enterprise. The materiality threshold of risk would be determined from the facts of any specific case."

This would be an aspect of the prudence concept viewed as a reaction to uncertainty.

There is a need to answer the suggestions that where a portion of the risk has been eliminated only a portion of the asset should be recognised. That however is probably a matter of measurement rather than of recognition. Pursued to the ultimate in the case of an investment in another company, it would justify proportional consolidation rather than the present practice of full consolidation of a proportional holding.

Establishing recognition criteria should be a separate exercise from establishing <u>measurement criteria</u>. Several comments on ED42 were critical of para 32 linking recognition and measurement criteria. The prudence concept has a role to play in both respects and therefore in practical situations it may be difficult to distinguish prudence in recognition from prudence in measurement.

Varying probabilities

SSAP 18, Accounting for Contingencies, shows most clearly of all that the probability referred to in IASC Framework para 82(a) is not the same for an asset as it would be for a liability. This is a direct consequence of the prudence concept, either as described in IAS 1 or as described in SSAP 2. The following explanation of paragraph 82(a) is necessary:

> "Probabilities applied may depend on the nature of the item to be recognised. The prudence concept will be a significant consideration in determining acceptable probabilities."

Other aspects of the recognition problem not directly related to the prudence concept

Different meanings of "recognition"

The IASC Framework deals with recognition but does not explore fully the varying uses of the term in practice. It could be used in any of the following ways:

A "Recognition in the financial statements versus disclosure in notes"
B "Recognition in the financial statements versus no mention anywhere"
C "Recognition in the profit and loss account versus recognition in the balance sheet "

The analysis of ED 43 shows that there is some confusion in that document between use B and use C. Comments on ED 42 have made the observation that there is some confusion between uses A and B. It may be that use C is really a matter of definition rather than of recognition because it concerns questions such as when an asset should become an expense and when a deferred credit should become revenue. Nevertheless the term "recognition" has been applied and clarification would be helpful.

The prudence concept may have a role here in that in a practical situation the accountant might be relatively happy about disclosure as an alternative to recognition in the financial statements but might be more concerned if the alternative to recognition were no mention of any kind.

The IASC Framework appears mainly concerned with use B but it is not clear how far this is seen as being different from use A. The alternative course of action to recognition should be clarified as it may have a bearing on the recognition decision. Total omission as an alternative is probably viewed in a completely different light from disclosure as an alternative.

Non-recognition

In an earlier discussion of this research it was suggested by one commentator:

> "I think that you are trying unnecessarily to 'split hairs' in the attempt to separate definition and recognition. Since recognition, in all cases, requires that the asset should comply with both the definition of an asset and the recognition criteria, I am unconvinced that it would be important even if it were successfully demonstrated that FASB differs from the others in allocation of criteria between definition and recognition."

That comment may be valid where an item is being recognised, but the distinction does become important where an item is not being recognised. It is particularly relevant to the debate over off-balance sheet assets and liabilities where there are conflicting opinions as to what exists and what should be reported.

Consider an arrangement for the sale and repurchase of maturing stocks of whisky. A distillery has sold its stock to a bank and has recorded a sale. The asset of stock has been removed from the balance sheet. In the contract of sale there are options. One allows the distillery to buy back the stock at any time at a price based on the cost at date of sale plus interest for the period from the date of sale to the date of repurchase. Another allows the bank to force the distillery to repurchase on the same terms. In the normal course of events the distillery will repurchase on maturity and sell immediately. In the event of some disaster overtaking the price of whisky the bank could well exercise its option and force the distillery to take the loss.

Is there an asset? Someone has an expectation of a profit when the whisky matures and is sold. (Use of the term "expectation" here is in the usual sense of waiting for something. It does not refer to mathematical expectation.) That expectation remains with the distillery because of the option it has to repurchase. Thus although legal title is held by the bank, its only expectation is of a payment which looks very much like interest on a loan.

Is it probable that the distillery's expectations will be fulfilled? The probability of making a profit on the stock is very similar to that which would apply if the stock had remained in the ownership of the distillery and depends chiefly on future demand for whisky and the trend of retail prices for whisky. It is however also influenced by the likelihood of the options for repurchase being exercised. If the options were a formality and there was a greater likelihood of the bank selling the whisky for a profit then the whisky stock would be an asset of the bank. If the bank is only interested in using the whisky as security for a loan then the whisky remains an asset of the distillery and the bank has an asset of a secured loan.

Is the value of the stock measurable? It is no more difficult to value at cost a bottle of whisky owned by the bank than it is to value at cost a bottle of whisky owned by the distillery. Thus the uncertainty associated with measuring the value of the asset is different from the uncertainty associated with the expectation/awaiting of economic benefits.

In this example there may be little practical benefit in separating the probability of the event of the options being exercised from the probability of reliable measurement of the value of each bottle. It is also fairly clear that banks do not usually act as whisky traders. But in the place of whisky stocks substitute financial instruments in a complex series of "swaps" with a chain of options involved, the participants being two financial institutions. Then the probability of all the options being exercised becomes a separate matter from the reliable measurement of the value of the instruments involved in each stage. At the present time many such transactions have no impact on any balance sheet. Yet the instruments involved are the resources or rights from which profits are generated. If it can be argued that they represent assets and liabilities by definition, their existence can then be reported, if only by disclosure. The use of recognition criteria based on measurable probability of economic benefits arising helps in determining when those assets and liabilities should move on to the balance sheet.

Brand names are a further instance of the existence of an asset which can be identified by definition but about which there is considerable dispute over recognition. A set of definitions distinguished from recognition criteria helps in that debate by focussing on the point at which the probability of economic benefit arising is sufficiently great for inclusion in the balance sheet. If that probability is not attained it could be said that the brand name should be disclosed by way of note but should not be incorporated in the balance sheet.

Thus it is necessary to consider why some items are <u>not</u> recognised at the present time (for example employee service contracts and non-purchased goodwill) and whether that is compatible with the stated recognition criteria. Any conceptual statement on recognition should also make clear how the recognition criteria will exclude items which otherwise would satisfy the definitions of items. This is particularly relevant to the debate on the inclusion of brand names in a company's balance sheet.

The need to be able to deal with non-recognition supports the inclusion of the probability of economic benefits in recognition criteria rather than in the definition of an item. The prudence concept is an operational rule for dealing with uncertainty. The identification of satisfactory probability levels is similarly an operational matter. If sufficiently sophisticated measurement techniques could be developed, some off-balance sheet items might come on-balance sheet through a change in the level of uncertainty attached.

A comment on Solomons

The chief point of interest in relation to this research work is Professor Solomons' definitions of assets and liabilities and his statement of recognition criteria.

It has already been mentioned (section 3.2) that there is a problem in deciding where definitions end and recognition criteria begin, particularly in relation to an asset. The FASB definition is:

> "Assets are probable economic benefits obtained or controlled by a particular entity as a result of past transactions or events."

The IASC definition, already quoted (section 3.3), differs in two significant respects. First, the IASC equates the asset with a resource rather than with the future economic benefits. Respondents on ED 42 criticised the exposure draft for adopting the FASB definition because it appears to imply an economic-value view of the asset and could be seen as incompatible with historic cost accounting conventions. Second, the probability of the economic benefit arising is not mentioned in the IASC definition. Instead the probability of occurrence is applied in the recognition criteria. The expectation of economic benefit is sufficient to identify the asset by the IASC definition, while the probability of the economic benefit arising leads to the second stage of the decision on recognition.

One reason for choosing the IASC definitions and recognition criteria for this research project was that the IASC approach confirmed the view taken by the Australian Accounting Research Foundation and the Canadian Institute of Chartered Accountants in their draft conceptual frameworks (AARF 1987 and CICA 1988). It appeared that consensus might be emerging on the recognition criteria to be applied.

Solomons has put a potential halt to that apparent move towards consensus but unfortunately has not left a clear message of his own views. On page 20 of his report he defines assets as follows:

> "Assets are resources or rights incontestably controlled by an entity at the accounting date that are expected to yield it future economic benefits".

This is helpful in its use of the "resources or rights" phrase which helps in dealing with the comments on ED 42 regarding the FASB definition's implied inclusion of an economic value concept. The phrase "incontestably controlled" is Solomons' way of avoiding using legal ownership as a test of an asset and of also covering the requirement that a transaction must have taken place. Although it may be a useful economy in wording, the phrase "incontestably controlled" would cause great difficulty in practice because of the situations where there is shared control or perhaps even a blurring of the edges of shared control. There is also a difficulty with the final phrase "that are expected to yield it future economic benefits", in knowing what level of expectation is envisaged.

Solomons explanation (on page 20) is:

> "All assets, even cash itself sometimes, exhibit some degree of uncertainty that the future economic benefits will in fact accrue. So long as there is some expectation of future benefit, the resource or right satisifies the definition of an asset. However, the uncertainty that the benefit will accrue may be so great or the likely benefit may be so small as to raise doubts about the asset's recognition. We shall later discuss situations where a resource or right satisfies the definition of an asset but does not merit recognition."

This paragraph by Solomons seems to be allowing that an asset may exist provided the expectation is there, but that the probability attaching to the benefit may preclude recognition. If this is the view taken by Solomons then it confirms the IASC/AARF/CICA approach separating definition and recognition and allowing probabilities to govern recognition rather than definition.

However, on page 43 Solomons appears to have a change of view:

> " An item should be recognized in financial statements if:
> (a) it conforms to the definition of an asset or liability or one of the subelements derived therefrom; and
> (b) its magnitude as specified by the accounting model being used can be measured and verified with reasonable accuracy; and
> (c) the magnitude so arrived at is material in amount."

> " Nothing needs to be said in the criteria for recognition about the probability that, if the item is an asset, it will yield economic benefits or, if the item is a liability, there will be a future transfer of assets or services to others, for if the probability of a yield or a transfer of future benefits is zero or very small, the items will not conform to the definitions, and the first criterion will not be satisfied; whilst great uncertainty as to the yield or transfer of the benefits will either make verifiable measurement of the item impossible, leaving the second criterion unsatisfied, or it will be taken into account in the measurement of the item."

This is unfortunate because it leaves confusion over one of the significant aspects of this research paper, namely the role of probability in determining the point of recognition of an asset or a liability. It has been shown that in practice the probability of the economic benefit arising is critical to many recognition decisions and the concept of prudence helps explain the range of probabilities applied in different situations, where prudence is viewed as a reaction to uncertainty.

The difficulty arises because on page 43 of his report Solomons has switched from uncertainty about the economic benefit arising to uncertainty about its measurement. There could be a situation where it is, say, 88% certain that an economic benefit will arise but the measurement of the item can be stated with a 95% chance of being correct. The overall probability is the combined effect of these two but there are nevertheless the two separate probabilities which Solomons fails to address. He quite rightly goes on to say that recognition and measurement issues are typically not separable in practice. Nevertheless it does help in a statement of concepts if the separate stages are identified.

Solomons' report is very useful in containing an Appendix of "illustrative material on recognition and measurement" in which he deals specifically with matters of interest in the UK context. He points out that SSAP 15 used criteria for recognition which are unlike anything found anywhere else. In commenting on SSAP 24 he concludes that the standard should have been based on considerations of assets and liabilities rather than being driven by the matching concept and a desire for income-smoothing. These discussions are detailed and useful. Solomons has avoided the deferred expenditure problem referred to in this research work and has not looked at the question of whether the balance of government grants not transferred to profit and loss account should be regarded as a liability. With regard to the provision for deferred taxation, he does not specifically discuss the question of whether the balance sheet amount should be regarded as a liability or whether it is closer to some form of capital reserve.

It is clear from reading the Solomons report in the context of this research into recognition criteria applied in practice that there is still some way to go before an operational conceptual framework exists in the UK. The report shows that Solomons is aware of the need to explain how his ideas fit in with current practice, if only to reject that practice on a reasoned basis.

Summary of conclusions

1. The expectation of future economic benefit is the only necessary condition for the definition of an asset. The presence of a resource and the control of that resource may be sufficient evidence of the expectation but they are not necessary conditions in all cases.

2. The expectation of an outflow of economic benefits is a necessary condition for the definition of a liability. The present obligation, if construed narrowly as equating to an enforceable legal liability, would not be a necessary condition although it would be a sufficient condition to identify a liability.

3. The probability of economic benefit flowing and the existence of a measurable attribute are necessary conditions for all existing recognition practices.

4. IASC recognition criteria require amendment to allow for the impact of the prudence concept in accounting. This impact is evidenced in two respects:

(i) the balance of risks and rewards;

(ii) the unequal probabilities attached to asset recognition as compared with liability recognition.

5. IASC recognition criteria require amendment to allow for the influence of the concept of relevance in specific situations, particularly where the matching concept gives precedence to the profit and loss account over the balance sheet.

6. IASC recognition criteria require amendment to include an explanation of the alternatives to recognition and to show that the criteria are also capable of sustaining situations of non-recognition of items satisfying the definitions of elements.

CHAPTER TEN
REPORTING THE EFFECTS OF UNCERTAINTY

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CHAPTER TEN

REPORTING THE EFFECTS OF UNCERTAINTY

Introduction

Prudence has been described as a reaction to uncertainty (IAS 1, FASB Concepts statements). In his report to the research board of the ICAEW, Professor Solomons (1989) defines prudence as:

"A cautious approach to uncertainty" (Glossary p.75)

In the main body of his report, Solomons makes the statement that faithful representation requires the depiction of uncertainty (p.39) but denies that "prudence" is a fundamental accounting concept. He allows a place for prudence in financial management but fears that its use in accounting has been associated with underestimates of assets and profit. He also take the view that prudence is a characteristic of persons, not of information.

To accept Solomons' view would make it difficult to draw this thesis to a conclusion. Hence the view of this chapter will be that the word "prudence" in accounting is a code word for "dealing with uncertainty".If it turns out that "prudence" is the wrong code word, the chapter will still be valid as a collection of views on how to deal with uncertainty.

Uncertainty pervades many aspects of accounting. This chapter explores the nature of uncertainty in accounting and the responses which have been proposed. It considers whether there are alternative ways of dealing with uncertainty when reporting accounting information. The approaches taken in research studies in this area are extremely diverse and consequently difficult to categorise. Accordingly, a selection of research works is first of all summarised, showing in each case what uncertainties were thought to exist and the recommendations made on dealing with those uncertainties. From this selection, common threads of thought are identified and then used as general headings to categorise further works in the area. The chapter concludes with suggestions for further work on techniques for investigating and reporting uncertainties.

Two very detailed analyses of uncertainty in accounting have been provided by the American Accounting Association (AAA 1974) and Johnson and Storey (1982). This chapter does not attempt to reproduce or match the detail of their work but rather to illustrate the breadth of discussion of uncertainty which has taken place in recent years. It also seeks to illustrate the lack of cohesion and the isolated nature of the different research works which have been undertaken.

Selected research works

Johnson and Storey (1982)

Nature of uncertainty

Johnson and Storey identified two types of uncertainty. "Element uncertainty" is the name they gave to uncertainty about whether an asset or liability exists or an event has occurred that affects an asset or a liability. "Measurement uncertainty" is the name they gave to the uncertainty involved in ascertaining the magnitude of the asset or liability and any change in the magnitude. The view of Johnson and Storey was that both uncertainties must be adequately overcome if items are to be recognised as assets or liabilities. Fissenden and McCulloch (1987) identified the same two categories of uncertainty in a New Zealand study.

Reaction to uncertainty

Johnson and Storey identified a range of reactions to situations where uncertainty cannot be adequately overcome. These are:

a) nonrecognition

b) the use of conventions

c) the use of estimates and approximations.

Nonrecognition is an extreme solution to the problem. The use of conventions such as the realisation concept may lead to delay in reporting an item until there appears to be some degree of safety in making the disclosure. The convention of conservatism has resulted in understated asset values and understated profits. The use of estimates is illustrated by the making of provisions.

In the view of Johnson and Storey, the consequences of this mixture of approaches to dealing with uncertainty are detrimental because timeliness may be lost if conventions are applied to defer recognition. Conventions are also likely to reduce reliability if information is incomplete because recognition is incomplete. Reliability will be reduced still further if assets and profits are consistently understated.

In an attempt to narrow down the areas where uncertainty leads to recognition delay, Johnson and Storey explored what they described as "alternative recognition procedures":

a. Recognition on occurrence of the "critical event"

Sale basis

Cash-receipts basis

Completed outputs basis

b. Recognition through the productive process

Percentage of completion basis

Present value of future cash flows

Exchange price basis

Their conclusion was that the latter three are underutilised in present practice and their recommendation was for greater use of such approaches. Analyses similar to that of Johnson and Storey are to be found in Coombes and Martin (1982) and Eisener and McCulloch (1987).

Albrecht (1975)

Nature of uncertainty

Albrecht identified "measurement error" as synonymous with "counting error" where for example a stock valuation might be incorrect because the total quantity of a batch of small items was estimated rather than being counted one by one. "Forecasting error" is the term he applied to a situation where the assessment of past events or attainments is heavily dependent on uncertain future events. An example would be the provision for doubtful debts or the estimation of net book value of an asset based on estimated useful life. He subdivided forecasting error into that concerning the amount at which an item is stated and that concerning the timing of reporting, as with the estimate of asset life.

Reaction to uncertainty

Albrecht applied techniques of probabilistic financial statements to the financial statements of a school offering a range of courses. The risks were largely in the profit and loss account since the enterprise had little in the way of fixed assets. He quantified risks of cancellations on the revenue side, and risks of expenses such as bad debts and depreciation. The result was an overall estimate of profit with a statement of variance in the total profit arrived at by combining the variances on the separate items. The resulting standard deviation, almost three times the mean estimate of loss, suggests that there were some methodological errors in the determination of variances, but the research exercise is interesting because it showed that subjective probabilities can be applied in determining a range of outcomes for a practical situation. The probabilities were determined by asking those in charge of the business to estimate the likelihood of each variable being within specified ranges, such as $\pm$ 1 standard deviation, $\pm$ 2 standard deviations, etc. Again, this may have created a methodological weakness in predetermining a normal distribution.

Thornton (1983)

Nature of uncertainty

A major research project on uncertainty was carried out in Canada by Thornton. He maintained that the reporting problems faced by accountants in dealing with uncertainty could be grouped into nine broad classes:

1. Contingencies arising in the normal course of business;
2. Guarantees, options and commitments;
3. How to select an accounting method as a proxy for measurement of uncertainty;
4. Uncertainty regarding the recovery of cost;
5. Questions of estimation and valuation;
6. Forecasts, subsequent events and contingent bankruptcy;
7. Litigation;
8. Uncertainties arising from government regulations;
9. Contingencies with other than financial implications.

Reaction to uncertainty

Thornton surveyed existing reporting practice in Canada under each of the headings listed above and then made recommendations on reporting uncertainty. His recommendations on each were:

1. Probably nothing should be reported since there are many risks arising in the normal course of business which are not reported. Particular practices, such as recognising sales to dealers when there is a probability of having to repurchase the inventory, should be explained and could be an area for exploring statistical methods of quantifying the risk.
2. Accounting practice needs to make up some ground in catching up on finance theory of option pricing. At the same time option pricing theory, because it echoes market conditions, would, if applied in accounting statements, be telling the market what it already knows.
3. The approach of "Let-the-Handbook-do-the-talking" may give an illusion of uniformity in financial statements but may not be useful in terms of conveying to readers the underlying uncertainty in the affairs of an enterprise.

4.Research and development costs, exploration costs of oil companies and amortisation of goodwill are examples of what Thornton sees as dealing with uncertainty by using cost as a proxy. The prescribed accounting practice filters the uncertainty so that readers of financial statements do not look through the costs to the underlying uncertainties.

5.After a lengthy discussion of uncertainty over valuation, Thornton recommends experimentation in developing new techniques of forecasting and estimation. He sees uncertainty as a valid source of new financial reporting principles.

6.The present training of accountants in relation to profit forecasts is to attest the reasonableness, freedom from bias and external validity of the particular set of assumptions made by management. In forecasting there is a requirement for the elicitation of subjective probabilities. Thornton would wish to see accountants trained in probability elicitation techniques.

7.Thornton admits that litigation is a difficult contingency to report in financial statements but sees room for improvement without specifying any particular form of improvement.

8.Thornton recommends emphasis in notes to the accounts of the total impact of a new government regulation on the operation of the enterprise.

9.Here Thornton makes a general observation about the accountability of large corporations for more than their financial results but does not form any firm conclusions.

American Institute of Certified Public Accountants- Report of the Task Force on Risks and Uncertainties (1987)

Nature of uncertainty

The uncertainties perceived as requiring attention are:

1.Those that stem from the necessary use of estimates in the preparation of financial statements;

2.Those that stem from sigificant concentrations in aspects of the entity's operations.

The uncertainties which are specifically excluded are:

1.Risks associated with the quality of management or of the business enterprise;

2.Acts of God and sudden catastrophes.

Reaction to uncertainty

The recommended reaction is one of disclosure. Chapter 1 explains:

"The central feature is selectivity. The proposed criteria serve to screen the hosts of risks and uncertainties that affect each business so that recommended disclosures can be limited to significant matters".

The recommended disclosures include:

1. The nature of the operations
2. An explanation that use is made of management's estimates
3. A discussion of significant estimates which are particularly susceptible to changes
4. Information about current vulnerability to risk due to concentrations.

It is explained that:

"Because of the nature and complexity of the risks and uncertainties involved, the task force has not recommended quantitative criteria. The task force believes that the application of professional judgment to the qualitative criteria recommended would result in meaningful disclosures that are reasonably comparable in comparable circumstances"

Examples are given of the type of disclosure envisaged. One such is:

"The provision for restructuring reflects management's estimates of the amounts that can be realized on the disposition of certain facilities. The estimates are based on an analysis of the facilities, including valuations by independent appraisers and investment bankers. The amounts the company will ultimately realize, however, depend on the outcome of negotiations with prospective buyers and, accordingly, they could differ materially from the amounts assumed in arriving at the provision for restructuring."

Solomons (1989)

Nature of uncertainty

Solomons (1989) thought that users of financial statements might be presumed to know, from the nature of the entity's business, the general nature of the risks that such a business runs. He thought that assets dependent on contractual rights, such as debts, leases, franchises and equity investments, were particularly hazardous. He did not categorise risks but instanced risks from concentration, default by debtors and maturity dates of financial instruments. He also instanced the self-insurance practised by companies which carry some or all of their own risks.

Reaction to uncertainty

Solomons advocated the following means of depicting uncertainty:

More informative disclosure, as in notes on geographical or industrial concentration, debts in default, maturity dates of investments, extent of self-insurance;
Sensitivity analysis to indicate the nature and magnitude of an uncertainty;
Stating a limit or range for an expected value; and
Stating the most likely value within a range.

Comment on the foregoing proposals for reacting to uncertainty

Nature of approach

The approach of Johnson and Storey is one of extending the conventions which are used in practice. It is not clear why they regarded Present value and Exchange price basis as "recognition procedures" since these are alternative measurement bases to historical cost. Percentage of completion is a "critical event" approach to recognition. It would appear that they were trying to find ways of reporting profit as a transaction goes along, and suggesting valuation methods which might be more informative on a periodic basis.

Albrecht provided a practical illustration of the way in which conventional profit and loss accounts, using single-value estimates for each item, could be extended to give a range of values and thus a range of estimated profit. His results, with a standard deviation almost three times the mean profit, lacked credibility and the method used would appear to have some fundamental problems concerning additions of variances but his work is of value in showing that the exercise is feasible and that it would create a considerable amount of extra work. The cost of providing the information on uncertainty of estimates could well exceed its value. Albrecht used the terms "measurement error" and "forecasting error", both referring to items in ex post accounting statements. This might be confusing in the context of Ijiri's use (1975) of "forecast error" to mean what it says, namely errors in ex ante forecasts of future profits. Ijiri pointed out, in a theoretical model, the problems of estimating the cumulative effect of forecast errors in different items. A percentage error in the forecast gross profit might be multiplied ten or twenty times in the forecast net profit because of the operating leverage effect of fixed costs.

Thornton's contribution to the debate was to provide a detailed list of types of uncertainty and an equally detailed list of how to deal with each. This was a useful research project in its detailed analysis but does not clarify the overall picture of uncertainty.

It provides a checklist of detail against which to test a classification of types of uncertainty and reactions to uncertainty. His list of recommendations for dealing with uncertainty cover both qualitative and quantitative approaches.

Th AICPA document, produced by the Task Force on Risks and Uncertainties, takes a very tame approach. It is highly paternalistic in its views on selectivity of presenting information. Use of the term "screen" could be a noble aim of ensuring that only the important matters are reported, but it could equally well have the effect of ensuring that significant uncertainties are not reported. Its suggestions are for qualitative, but not quantitative, improvements. The illustration quoted from the document is a very watered down statement which tells the reader there is uncertainty in the subject, but gives no clues as to the quantification of that uncertainty.

Solomons makes a useful contribution in bringing the discussion of uncertainties into a UK setting through his report to the ICAEW Research Board. He did not analyse the nature of risk but made suggestions for dealing with risk which were both qualitative and quantitative.

None of the research studies quoted here considered error in forecasting future events. There has been a great deal of research into the success or otherwise of accounting forecasts (see for example Foster(1986) chapter 8 and Ijiri (1975) chapter 9). The nature of uncertainties about forecasting future events will not be considered further here because this thesis has been concerned with analysing prudence in the context of reporting on events and transactions which have taken place.

Distinction of approach

Five different research papers have been cited as instances of two distinct approaches to the identification of risk. Johnson and Storey distinguished element risk from measurement risk. That same distinction was seen in the recognition criteria, explored in Chapter Nine, as defined by the IASC (1988) the AARF (1987) and the CICA (1988). All those draft conceptual statements specified two criteria for recognition, namely the probability of an event arising and the reliable measurement of the item. The summary of Johnson and Storey which is contained in this chapter does less than full justice to their research study, which devotes most of its 260 pages to exploring the themes of risk and uncertainty.

Albrecht isolated the "element risk" in his empirical research exercise although he gave it a different name of "forecasting error". By questioning those running the business he established statistical distributions of the likely outcome of each revenue-creating event and of certain items of expense.

Thornton, the AICPA and Solomons took a different approach of listing the types of events which give rise to uncertainty. Here the element uncertainty and measurement uncertainty were not distinguished as separate categories although they were discussed within the context of each type of event. Thornton claimed to have found nine categories of events giving rise to uncertainty. The AICPA claimed two categories while Solomons did not claim to have categorised risky events, but listed examples which were within the ranges covered by Thornton and the AICPA.

The classification of risks is important because it determines the manner of suggesting solutions to the problem of reporting on the effects of risk. The approach of Johnson and Storey or of Albrecht leads more directly into statistical methods which might have general applicability in quantifying risk. If there are two categories of risk, element and measurement, there are two opportunities for determining a statistical distribution in respect of any transaction or event.

The approach of Thornton, the AICPA and Solomons leads more naturally into suggesting solutions for each situation or group of situations taken separately. Thus Thornton tailored nine different solutions to his nine categories of transaction, while the AICPA proposed four items of disclosure which would cover the two types of risk identified, while Solomons suggested a number of quantified disclosures which would provide useful information on the types of risk situation he instanced.

There appear, then, to be two major differences of approach in developing practice with regard to risk. One is to take the Johnson and Storey approach of suggesting categories of risk and then exploring transactions in the context of those categories. The other, which is probably intuitively more appealing, is to consider specific problems and find a way of dealing with them. That will probably produce a greater feeling of satisfaction in the short-term but will lead to a growing profusion of apparently diverse ideas in the longer term.

The attraction of the Johnson and Storey approach is that it would encourage research into statistical distributions of the range of outcomes of events and into separate problems of the measurement of those events. The rest of this chapter is given to citing further examples of the different ways in which uncertainty has been dealt with in accounting practice and in research papers. The chapter concludes with some views on future directions for research in this area.

Uncertainty as analysed in this thesis

Throughout the earlier chapters of this work, examples have been cited of prudence being linked to items where there is an element of uncertainty and a need to determine when "reasonable certainty" has been achieved.

From Chapter Five:

"reasonable certainty as to":

profitable outcome of a long-term contract	SSAP 9
taxation, interest rates, realisation	SSAP 21
timing of recovery of ACT	SSAP 8
future revenues (in relation to stocks held)	SSAP 9
likely outcome of a development project	SSAP 13
crystallisation of a liability	SSAP 15
outcome of a contingency	SSAP 18

All of these have within them a combination of element uncertainty and measurement uncertainty in varying proportions.

From Chapter Six, section 1:

uncertainty is discussed in relation to:

realisation	IAS 2
decline in the value of an investment	IAS 3
future benefits	IAS 9
potential loss	IAS 10
estimates of cost and revenues	IAS 11
future taxable income	IAS 12
risks faced by lessors	IAS 17
ultimate collection	IAS 18

Again these all have a mixture of element uncertainty and measurement uncertainty, although to different degrees in different cases. The risk of decline in the value of an investment is almost entirely a matter of measurement while the risk faced by lessors is far more a matter concerned with element uncertainty.

There are similar lists of items where uncertainty is discussed in the accounting standards of the USA (Chapter 6 section 3), Australia (Chapter 6 section 4) and New Zealand (Chapter 6 section 6). All have the mix of element and measurement uncertainty. Chapter Nine relates these uncertainties, in a UK context, to established recognition practices and argues that the transaction or item will only be recognised whan an acceptable probability exists with regard to both element and measurement types of uncertainty.

There is thus little evidence in accounting standard-setting of any interest in dealing with risk and uncertainty as a subject area in its own right, although there is plenty of evidence of awareness of the need to deal with risk and uncertainty in specific situations. The next section explores ways in which risk and uncertainty has been approached in other theoretical and practical researches.

Reporting risk and uncertainty

Alternative valuation systems

One approach to dealing with the inadequacies of historical cost accounting is to suggest an alternative valuation system. A recent example is "Making Corporate Reports Valuable" (ICAS 1988). Taking another example from the work reviewed in this chapter, Johnson and Storey advocate greater use of present value measurement. Since alternative valuation systems have been proposed to remedy a multiplicity of defects of historical cost accounting, and since their use would introduce a whole new spectrum of risks and uncertainties, they will not be explored further here. This thesis is primarily concerned with conventional reporting within the historical cost system as used in published financial statements.

Prescribe accounting rules for each situation as it arises

Chapters Five, Six and Nine have examined the existing prescriptions of rules to deal with uncertainty, in a UK setting and in a wider field. The prescriptions may allow conservatism to come to the fore, with recommendations on the cautious side of asset valuation and income determination. They may allow the accruals concept to dominate, tempered by prudence. The prescriptive approach is the strongest traditional reaction to dealing with uncertainty.

Provide more information

In some cases accounting standards do require provision of more information. The most striking examples are those standards which deal with segmental reporting, based on which, in countries outside the UK, a great deal of information about potential risks may be disclosed. Apart from that instance, examples of requirements to provide information specifically related to uncertainties are fairly sparse. For that reason the recommendations of the AICPA Task Force could be seen as a major improvement if they were not couched in terms of protecting the user of financial statements from knowing the full story.

This provision of further information could be purely descriptive, or could be predominantly descriptive with some quantification in the note. In either event the principal financial statements (profit and loss account and balance sheet) would remain unaltered.

Incorporate quantitative methods within the primary financial statements

Counting errors

Johnson, Leitch and Neter (1981) reported skewed non-normal distributions in actual audit samples of accounts receivable and inventory.

Knechel (1985) presented a model of the error generation process inherent in accounting systems and demonstrated that a normal distribution of errors in account balances could be possible under conditions of independence of errors. The accounts would need to consist of large numbers of homogeneous and independent transactions.

This is more closely related to an auditing problem than to an accounting problem. It is unlikely that an enterprise would want to admit processing errors in its debtors ledger. It will be aware that processing errors exist and will endeavour to keep them to a level below any threshold of materiality. Even so, it is clear from the research papers cited that relatively little is known about processing, or counting, errors in an accounting system.

Estimation: Suggestions for quantitative/statistical methods

Quantitative information could be based on point estimates or on measures of statistical distribution. The following papers have been selected as instancing the variety of suggestions available, although they are all suggestions and are not backed up by empirical field work.

Morgenstern (1963) proposed a probabilistic balance sheet. He would have four columns for each asset category. The first column would give the stated conventional value. The second would disclose the marginal probability of that value arising. The third column would give the mathematically expected value and the fourth would give the standard errors. The expected values in the third column would be comparable and could be subjected to normal arithmetic operations. The balance sheet might well no longer balance and thus would need renaming. His discussion of error and uncertainty in accounting is not clear because it moves without clear distinction from errors in counting to subjectivity in valuation and thence to deliberate falsification such as "window dressing".

A recommendation of reporting a range of values using estimation techniques was made by Tucker (1973) in very simplistic proposals for reporting estimates as a mean value plus or minus a range dependent on the significance level required. However he assumed without question that the normal distribution is an appropriate representation of the range of values for an asset, which seems unlikely in practice.

"Forecast reporting" as described by Ijiri (1975, Ch9) is strictly a discussion of how to deal with measurement uncertainty in relation to profit forecasts but the discussion contained therein, about combinations of errors, could usefully be applied to a model of uncertainty in reporting past events.

Lothian (1982) proposed assessment of the uncertainty involved in the ultimate realisation of cash, and an indication of the extent to which the outcome of future events may be controlled. Grading individual items of information to indicate variability, or else quantifying the variability of significant items such as profit, all supplemented by explanatory notes, was proposed by Weetman (1983a).

Willett (1988) hinted at the idea of intepreting accounting calculations as stochastic variables but did not appear to have reached the stage of practical implementation.

Solomons (1989) proposed the use of sensitivity analysis, reporting the range of values and the most likely value.

Statistical methods applied in a practical situation

In a Christmas tree nursery it is possible to estimate the likely loss of trees each year through disease or other causes and to estimate the likely price when they are ultimately sold. Shank (1971) applied the method of Markov Chains to estimate an element of profit in each year of the trees' growth rather than wait until maturity.

As mentioned in Chapter Three, the American Accounting Association (1974) suggested a practical scheme for reporting on uncertainty, based on net present value. It was essentially a scheme which made an estimate of outcome at the start of a three-year project and then revised the estimate as each year of the project expired.

In relation to depreciation, Ijiri and Kaplan (1974) formulated a model for a probabilistic approach to depreciation. Friberg (1974) took the model further by applying a probability distribution to salvage value as well as to asset life. Neither of these models was implemented in a practical situation, but both show that an item of accounting information may be subjected to probabilistic analysis.

Westwick (1982) carried out a very simplistic assessment of subjectivity in stock valuation and depreciation estimation by asking 68 Arthur Andersen partners for their opinions on the range of pessimism and optimism in estimation of these items. His conclusion was that more informative disclosure on these areas of subjectivity would be useful to users of financial statements and might sharpen the estimates made by companies.

In the field of management accounting, Gee (1986) has provided fully worked examples of statistical methods which could be used in a management accounting context. Most are concerned with ex-ante decision making, such as stochastic process costing, stochastic cost-volume-profit analysis and estimating the outcome of short-term investment of cash balances. He does also provide examples which could be applied to the ex-post estimation of provisions for doubtful debts. Credit management may be analysed by the method of Markov chains in order to estimate future cash flows from the age of debtor balances. In presenting his practical illustrations, Gee drew on the research papers of Corcoran (1978), Cyert et al (1962) and van Keulen et al (1981).

This somewhat unstructured list has been provided as illustration of the range of material available and the lack of any cohesive pattern in practical work carried out.

Conclusions

There is as yet no systematic analysis of the nature of uncertainty in accounting reporting, although there is ample evidence of acknowledgement that the problem exists.

Analysis of the nature of uncertainty generally focusses on specific items and events. Johnson and Storey (1982) have pointed out that uncertainty has two aspects, namely element uncertainty and measurement uncertainty. They have also pointed out that events cannot be measured directly and therefore any uncertainty about the event must be considered separately from any uncertainty relating to the measurement of items resulting from that event. As has been discussed at greater length in Chapter Nine, Solomons (1989) does not accept that the "element uncertainty" is significant as a separate criterion of the recognition decision. He sees only measurement uncertainty as being critical.

In terms of practical accounting, Solomons may well be correct since no professional accountant would report an item until he was reasonably certain of its measurement and therefore any other considerations would be secondary in his mind. However, if the analysis of uncertainty is to make progress then there must be a subdivision of the types of risk in order to allow statistical analysis of the nature of uncertainty. The investigation of statistical distributions of uncertainties has taken place to some extent in the context of auditing and in the context of finding errors in accounting data. The analysis of uncertainty in relation to costs has also been explored in the context of management accounting.

Financial accounting reporting practice has reacted to uncertainty chiefly by applying rules which limit the downside risk. This thesis has demonstrated that such rules abound in the UK and elsewhere. Those who seek alternatives to this "conservative" side of prudence have made suggestions which are mainly theoretical rather than practical implementations. Such suggestions include more narrative information, semi-quantitative descriptions, and full statistical quantifications of means and variances. Isolated practical implementations of statistical methods have been reported but the practical work has been greater on the management accounting side in relation to cost estimation.

This thesis has produced repeated evidence from different sources that "prudence" in its widest sense is indicative of a need to react to uncertainty. That reaction could be expanded beyond the bounds of present conventions as applied in practice, but the framework of analysis of uncertainty within financial reporting is not yet available.

Philipson (1982), writing on assessment of the probability of undesirable or catastrophic events, divides risk assessment into "risk estimation" and "risk evaluation". The term "risk estimation" refers to assessing the probability of the event occurring and the term "risk evaluation" refers to assessing the acceptability of a risk and the cost-justification for reducing it. Issues of this nature would have to be explored by the accountancy profession if a reporting system incorporating risk measures were to be adopted. There does however seem some scope for analogy with accounting, where accounting reporting is dealing with "risk estimation" and financial decision-making must take into account "risk evaluation". It should not be the role of the accounting information system to carry out "risk evaluation" but it may be doing precisely that if it applies techniques which limit the downside risk only, or if it suppresses some information which would be relevant to users' decisions.

CHAPTER ELEVEN

CONCLUDING REMARKS

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CHAPTER ELEVEN

CONCLUDING REMARKS

The conclusions within each chapter and each section have been presented in detail and will not be repeated here. This chapter focusses on those issues which are particularly relevant at the present time and which provide material for further research and development.

Prudence and the Realisation Concept

The realisation concept now has a strong hold on UK accounting practice because it has been incorporated in statute as a result of implementing the Fourth Directive. Watts and Zimmerman have shown (1979) that accounting theory may often play a role of justifying preconceived notions of what should happen:

> "The predominant function of accounting theories is now to supply excuses which satisfy the demand created by the political process."

Their hypothesis may find confirmation in the realisation concept. It has been incorporated in statute as a result of political influences. Any statement by a standard-setting body which merely sought to satisfy the wishes of the legislators would be providing an excuse for the existence of the concept. Any statement which clearly went against the wishes of the legislators would be unlikely to make a great deal of practical progress. Yet realisation must not be allowed to become a significant determinant of the nature of income. Its role must be restricted to that of specifying the measurement of income within acceptable bounds of probability.

In the longer run there would be no need for a realisation concept if measurement techniques could be refined, applying a statistical approach to measurement under uncertainty. Mathematical and statistical methods are commonplace in business finance where the consequences of uncertainty are analysed in a theoretical framework. Statistical methods have found limited practical applications in auditing and in management accounting. They have not made inroads into the practical side of financial accounting measurement. Until this happens there is likely to be a continuing tendency to understate net assets and profit and to omit information on the grounds of caution.

Perhaps of greater concern, the development of accounting ideas may be inhibited if they cannot be tried out in practice. The reporting of unrealised gains in wealth, particularly important to the value-based companies such as property companies and investment trust companies, have to be reported in terms of movements on reserves because they cannot appear in a conventional profit and loss account. Any current-value based accounting system incorporates some element of reporting unrealised changes in wealth. Exploration of such systems is inhibited within a legal framework dominated by the realisation concept. It would not be so inhibited within a legal framework limited by prudence if prudence were to be taken to mean a cautious reaction to uncertainty.

<u>Prudence for reporting events or for decision making</u>?

Professor Solomons has already been quoted as expressing doubts about the usefulness of the prudence concept in accounting (see Chapter Two). He regards prudence as a financial virtue rather than an accounting virtue:

> "...the task of accounting is to provide information for financial managers (and others) so that they may exercise their own judgment as to how prudent their behaviour should be. It is unnecessary and inappropriate for accountants to shoulder that task for them." (Solomons 1989)

The Corporate Report (ASC 1975) gave an opinion on prudence:

"The application of the concept of prudence is clearly useful to those users concerned with assessing economic stability and vulnerability (for example loan creditors). It is likely to be less useful to those users concerned with the measure of performance (for instance equity investors) although this will depend on the nature of the entity."(para 7.13)

The concept of prudence may have a role to play in making business decisions but not in reporting the effect of those decisions or in providing reports on which decisions will be based. One of the major financial decisions is that of dividend policy. The concept of prudence may have an important role in the determination of distributions, and the availability of distributable profits is one factor to be considered. It would be unfortunate if preoccupation with the dividend decision and distributable profits had a restricting influence on the reporting of accounting profit. In keeping with the theme of prudence as a reaction to uncertainty it should be possible to distinguish the level of certainty required for reporting an accounting profit from that required for reporting a distributable profit.

The need to revise SSAP 2

The wording of SSAP 2 is inadequate to reflect all that prudence means in existing accounting practice. It links prudence almost directly with realisation and thus takes account of only one of the many uncertainties of business operations. Why should the uncertainty of realisation be singled out? There are other uncertainties, in particular the going-concern nature of the business, the value of the money unit, the outcome of events which have begun but are not yet completed, and even the risk after realisation of cash that some outside person may raise a legal action for recovery of the cash. These are the types of uncertainties dealt with in other accounting standards and which have been identified in Chapters Five, Six, Nine and Ten. The prudence concept has two roles here. First of all there must be an acknowledgement that such risks exist and need to be reported. Second there must be more work towards developing quantitative techniques in order to carry out that reporting.

Modelling uncertainty

As has been shown in Chapter Ten, there is no clear model of uncertainty in financial accounting. Any model developed would have to distinguish between uncertainty in ex post reporting and uncertainty in ex ante forecasting. There is some area of overlap because periodic reporting of events which have taken place will always be subject to uncertainty about subsequent matters which may be related to those past events. It has been shown in the field of auditing that sampling theory can be applied in practical situations, although care is needed to ensure that the conclusions drawn are valid in the circumstances. It now requires to be shown that statistical estimation techniques can be applied to those areas of valuation, in particular of assets and liabilities, where subjectivity is high.

Exploration of the meaning of "prudence" and "conservatism"

The different understanding of the meaning of prudence and conservatism in the UK as compared with other countries has been explored qualitatively in Chapter Six. The relative lack of conservatism in profit reporting has been examined quantitatively in Chapter Eight. The changing perceptions of the meaning of the words themselves has been discussed in Chapter Two. Harmonisation of UK accounting standards and practice within EC directives means very little if words are used without an agreed understanding. There is scope for greater understanding of the cultural differences which underlie the different perceptions, particularly if such understanding can be achieved by working with nationals of different countries, rather than taking the perspective of an outsider analysing a "strange" approach.

The quantification of relative conservatism could also be taken further, either by more work on the 20-Fs or by similar analysis of documents produced within the home country when compared with documents prepared for the international markets. In the case of European companies which have not ventured into US markets and therefore do not report on Form 20-F, there is the possibility of using the Euro-prospectuses issued when the companies come to other European exchanges, particularly London.

Conceptual framework

In the context of developing a conceptual framework for UK accounting standard setting, the way forward is not clear at the date of writing, but it is clear that the standard-setters are looking for ways of making concepts operational. The realisation concept, as mentioned earlier, still has to be defined operationally. Definitions of assets and liabilities and statements of recognition criteria become increasingly needed as a base for dealing with new transactions and accounting practices. The concept of prudence has a central role in moulding theoretical concepts into practical principles.

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