

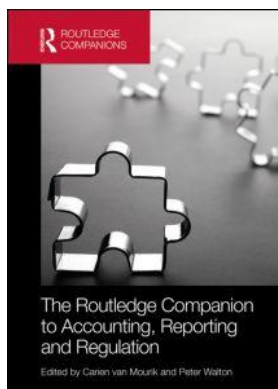
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Part 2

Reporting

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Recognition and Measurement

Peter Walton

1. Introduction

Decisions about recognition and measurement are fundamental to any comprehensive basis of accounting, and to how that is applied in the accounting records and the financial statements of a reporting entity. Above all, recognition and measurement are boundary decisions in financial reporting and determine what part of the economic, social and legal whole that is a business or other entity is reported in the financial statements and how it is represented. Put another way, recognition and measurement decisions have the effect of defining the reporting entity.

In this chapter, the aim is to introduce the key issues that need to be addressed in making recognition and measurement decisions. These issues are discussed in detail in related chapters, and therefore this chapter will direct you to a full discussion elsewhere in the book, if you wish to pursue the issue further. The chapter will consider defining the entity, the objectives of financial reporting, recognition issues, measurement using a monetary unit, primacy of orientation, measurement bases and inflation.

1.1 *Defining the reporting entity*

The first logical step in recognition is to define what is the essential nature of the reporting entity and the elements it comprises, since that fixes what you want to recognize, before considering what aspects you privilege and how you portray them. For example, one way to think about the entity is that it consists of a series of legal rights and obligations. The criterion for what would be identified would be rights and obligations which could give rise to litigation or to prosecution, in other words all legal rights and obligations, whether contractual or statutory in origin. You would need a sufficient working knowledge of the law to define this, and then you would have to say how you would convey the existence of these rights and obligations to someone else – in other words, what attribute of the legal rights and obligations would you try to measure?

Would this be an adequate way to define the entity? The disadvantage of this approach is that there will be areas of uncertainty as to whether a legal obligation exists or not. For example, if you sell a product with a warranty, until someone claims against the warranty you do not know

if there is a certain claim or not. Similarly there may be things to which the entity does not have a legal claim but which potentially can be used to advantage. The entity may have given good service in the past to a client, who is, as a consequence, predisposed to do more business with the entity. The entity may benefit from this but has no legal rights. The customer relationship has economic value to the entity but not legal value. Hence, there is a tension between seeing the reporting entity as either a legal or an economic entity.

We can say that there is a spectrum of certainty which applies to this, and probably any other, approach to defining the entity, and the more the way in which we convey this information can deal with uncertainty, the fuller will be the description. An economic assessment may incorporate more uncertainty than a legal assessment, but it is not clear whether this is useful or not. However, the possibility or otherwise of measurement is part of how the recognition and measurement process limits and defines what view of the entity can be presented.

The IASB Conceptual Framework provides a basis for the international standard-setter's recognition and measurement decisions, and we will review this as we proceed in this chapter. However, Chapter 14 of this book addresses the evolution and use of the IASB's Conceptual Framework, and includes a brief discussion about the reporting entity, which is not currently defined by that framework. The framework was written in a context where recognition and measurement rules for financial reporting already existed.

Another relevant chapter is Chapter 10, which considers the public interest in financial reporting. It asks what, if the objective of a standard-setter is to write standards 'in the public interest', does that imply for the decisions to be made about the nature of the reporting entity and the elements that should be recognized and measured?

Recognition and measurement asks: what are we going to define as within the entity, and how are we going to measure or otherwise describe that so as to provide useful information? Of course financial reporting is achieved by assigning a monetary value to everything, and so the portrayal decision is narrowed to 'how to assign a monetary value?' question, or measurement. Addressing uncertainty remains a major issue in monetary measurement, because of the need to assign a value.

For an interesting analysis of the question of border decisions in financial reporting, you should read Hines (1988) who fictionalizes the subject as a monk walking round the boundaries of a monastery with an acolyte and discussing how the boundaries have been drawn. Hine makes the point that in measuring reality, we define reality. This is generally the fundamental significance of recognition and measurement: it defines what is reported, and therefore fixes how people think about the entity.

2.1 Objective of financial reporting

Once you have identified the entity, the next stage is to determine what aspects of the entity you wish to report. This is a function of what you believe to be the objective of your financial reporting. How you define what characteristics you are using to determine the view of the entity affects both what goes in the accounting database and what goes in the financial statements. For the purposes of this chapter, however, we will just talk about the latter, not least because the literature, and certainly international financial reporting standards, is mostly written that way.

In deciding what characteristic you will use to define the entity, you need to have a view, consciously or not, of what is your objective in describing the entity. It could be because you want to buy the entity, or you want to sell it, or sell insurance to it, or decide whether you want to accept a job and so on. If you were selling insurance, you would want to know what risks the entity was exposed to, and what factors mitigated those. If you were thinking of working for it, you could be interested in the future sales possibilities and competition.

In the evolution of financial reporting, the objectives assigned to it have rarely been made clear. The earliest legal requirements date back to seventeenth-century France, and were introduced to try to combat frequent bankruptcies amongst businesses. The requirements were above all to carry out an annual inventory including details of payables and receivables. Presumably the idea was that the business would take stock of its 'wealth' at least once a year and would not carry on with a business that had more debts than assets. The focus could be seen to be legal rights and obligations, emphasizing the entity's relationship with the surrounding community, rather than individual trading transactions.

Richard (2004) argues that this orientation continued through the industrial revolution and imbued the financial reporting of nineteenth-century companies. This can be seen in UK legislation which called for a balance sheet only, and in Germany with the concept of 'static' accounting (see Chapter 4). Richard argues that only around the turn of the century did the focus start to move towards performance as measured by transactions. This can be seen in the UK with a slow movement towards supplementing the balance sheet with some sort of profit or loss account, and in Germany with Schmalenbach's 'dynamic' accounting theory. Richard argues that companies in France faced pressure from shareholders to pay dividends, and from the government to pay income tax, so the focus switched gradually to the wealth generated by that year's transactions, as opposed to looking at rights and obligations at a particular time.

2.2 Consensus model

Statute law does not usually specify what is the objective of financial reporting. The only formal approach to that is the US Conceptual Framework, which was an attempt to instil some consistency into standard-setting, and the related frameworks subsequently developed by other standard-setters (Chapter 14). Lawmakers probably have some idea as to what is the objective of financial reporting when they frame laws, but this is not explicit. Indeed laws are generally made piecemeal, by addressing a particular problem that has arisen, rather than by setting out to reassess the whole set of laws addressing accounting. Theorists suggest that change in accounting typically takes place on a contingent basis, as set out in [Figure 6.1](#).

An obvious example of this is the Enron collapse in the US that gave rise to the Sarbanes Oxley Act, which had many unintended consequences, including a rapid rise in audit fees, the Securities and Exchange Commission wanting to inspect the work of foreign auditors, etc. The contingent approach usually implies that there is no consistent underlying objective assigned to financial reporting. Indeed Hoarau (1995) discusses French standard-setting which is designed specifically to reach a social consensus between conflicting interests on an issue by issue basis.

This has not, of course, stopped people from theorizing about what the objectives should be. In the Anglophone literature this was much debated in the 1940s and 1950s. The entity school of thought is that the financial statements should focus on the entity as a whole. In such an approach, there is no particularly pressing need to distinguish between debt and equity, because both are obligations of the entity to outsiders. The competing proprietary approach suggests that the focus should be on the shareholders' interests, and there, of course, it is important to distinguish between claims from shareholders and claims from anyone else. There are many variants on these two approaches, and anyone wanting to explore this should read van Mourik (2010), who provides a definitive analysis.

2.3 Conceptual framework

Neither proprietary nor entity approaches have ever been formally adopted as an objective by a standard-setter. However, commentators such as Macve (1981: 22) have pointed out that people who are trying to reach agreement on an accounting issue must have an implicit framework on which those views are based. In the US there was a crisis in financial reporting in the late

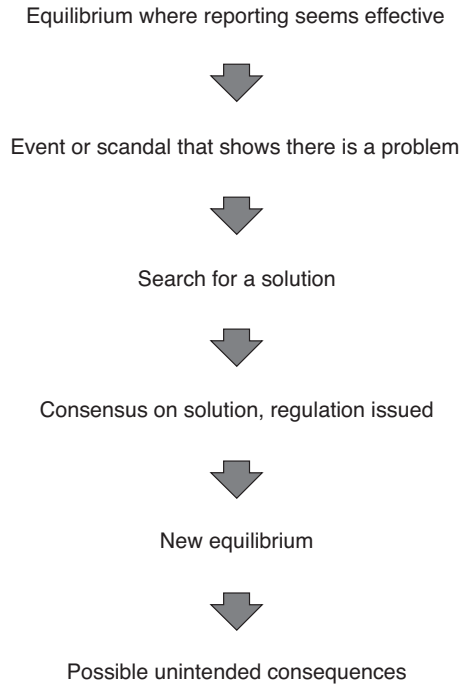


Figure 6.1 Changes in accounting on a contingent basis

1960s which drove people to review the inconsistencies inherent in the contingent approach to making accounting rules. In the US this gave rise to two sets of recommendations: the report of the Wheat committee (AICPA 1972) recommended the creation of an independent, professional standard-setter, the Financial Accounting Standards Board (FASB), and the report of the Trueblood committee (AICPA 1973) recommended that the FASB should introduce more consistency into rule-making through the use of a conceptual framework, the main lines of which were identified in the report. In the following years the FASB went on to elaborate the conceptual framework, which was later adapted by the International Accounting Standards Committee (IASC, the predecessor body to the IASB) and by many Anglophone standard-setters. (For a discussion of the role of conceptual frameworks see Chapter 14).

The US (and IASB) Conceptual Framework in its current form specifies that the objective of financial reporting is to provide information that is useful to providers of capital in making investment decisions. This is very significant because it means that when making standard-setting decisions, the FASB and IASB look to the investing community and ask them what information they need. They do not routinely take account of any other users' needs, nor do they consider the practicality of the rule from the perspective of the entity or the auditor. Those aspects are considered in the context of aiming to set rules whose benefits (better investor information) are greater than the costs (preparation and audit of the financial statements), but that is all.

The current framework takes the view that:

- financial statements alone cannot provide all the information any stakeholder needs; and
- since investors take the greatest financial risks, information that is useful to them should be useful to other stakeholders.

This approach is often contested (in Chapter 10 of this book you will find a discussion of the public interest and financial reporting). The IASC considered that stewardship, generally defined as meaning being able to review, as a provider of capital, what management has done with your money, was also an important objective in financial reporting. This notion has somewhat disappeared from the current framework, not least because FASB members did not accept that it differed in any meaningful sense from information that was useful for investment decisions.

3. Recognition

Having an objective should then lead you to recognition decisions – what kind of aspects of the entity should you recognize in the financial statements? The conceptual framework answer is simple: you recognize everything that is a right to a possible future cash inflow, and everything that is an obligation to make a future cash outflow. The conceptual framework takes the view that investment decisions are based on a comparison of future cash inflows to the investor with the cost of the investment. This is of course drawn from financial economics. It implies that the financial statements either give an economic picture or contain enough information to enable the investor to make their own picture when combined with knowledge of the economic environment. From this comes the conceptual framework definitions of assets (probable future cash inflows controlled by the entity) and liabilities (probable future cash outflows that the entity is obligated to make).

You should notice that the asset definition contains significant boundary conditions. First, the cash inflows should be *probable*, and not just possible. The conceptual framework does not say what probable means in this context, although in US GAAP it is generally taken to be more than 75 per cent likely, whereas under IFRS it is usually considered to be more than 50 per cent likely. The second boundary condition is that the future cash flow must be *controlled* by the entity. These are very important conditions because without them the entity could potentially recognize all its expected future cash flows for ever into the future. You do not control future sales, even if you do control a product that is highly likely to generate those sales, so you only recognize the rights to the product (patents, trademark, brand etc.) and the equipment to produce it. This is a critical function of recognition criteria: they determine what is included in the financial statements and what is left out.

It may be useful to consider alternative recognition criteria, such as taxation. The tax authorities in most countries are not primarily interested in an economic assessment of the entity, they are interested in either measuring assets to levy a capital tax, or measuring profit to levy a profits tax, or both. Tax authorities, and their taxpayers, tend to want certainty in the taxation process. Uncertainty is bad for the authorities (many disputes make collection slow and expensive) and bad for the entity, 'more resources have to be devoted to liaising with the tax authorities and it is not clear how much profit is available for dividends or investment in growth'.

An efficient system provides certainty in the application of the law and does not concern itself with issues such as equitable treatment or economic evaluation. As a consequence, taxation is usually based on completed transactions. It requires sales to have been made (invoices issued, cash collected) and expenses incurred in making those sales (invoices received, cash paid out). The tax system only looks at realized transactions, and takes each year on its own merits (you're making a loss in the immediately following period, you still owe tax on the previous period, you cannot look ahead) and does not recognize unrealized gains or losses. Tax recognition is therefore based more on a legal approach with visible transactions than on an economic approach. The boundary condition is that a transaction must have been carried out by the entity and have been finalized. It is a legal question as to whether a particular transaction was carried out by the

entity (or for example by its management on their personal account). That transaction could be a trading transaction giving rise to profit or loss, or the purchase or sale of an asset which would affect the capital value of the entity.

4. Measurement issues

4.1 *Boundary issues*

Since the subject of this book is financial reporting, our measurement unit is monetary. There could be alternatives, but money is fundamental to a developed western economy. Basic economic texts describe it as a store of value, a medium of exchange, and a unit of account (Mankiw 2007) and it runs throughout economic activity. Its use for measurement enables comparisons to be made across widely different things. It plays a central role in everybody's life in the sense that we use it every day to make exchanges, and so we are also very familiar with monetary values. In theory we could perhaps derive some more meaningful approach, but in practice our familiarity with markets where money is the medium of exchange leads to the use of monetary values.

So this is another boundary condition: if you are using monetary values, you can only include in your financial reports those things to which you can attach a monetary value. Of course that leads to boundary disputes, particularly in the area of estimates and techniques that are acceptable in addressing uncertainty. For example, if you want to recognize a liability for (say) litigation, do you use a 'best estimate' (a single point figure representing management's judgement of the most likely outcome) or do you use a probability weighted expected value (a figure that takes account of a range of possibilities but will never be the exact figure)? Some people say that a large company with a number of estimations should use the expected value because it reflects all possible outcomes and the global figure is highly likely to be the real outcome, whereas the best estimates may be subject to systematic bias.

Equally there are many possible 'assets' and 'liabilities' that cannot be measured with a monetary value. Many management researchers would accept that the accumulated knowledge of your 'assembled workforce' (to use the jargon) is a valuable asset because they can and do run your business. However, there is no technique for valuing the availability of that collective knowledge, and of course you do not control it, if you are thinking of the conceptual framework. Some people suggest a usable proxy measurement is what you would have to pay to recruit and train new staff to an equivalent standard. To the extent that your business is affected by weather, the weather is an unquantifiable liability of some kind. Many potential assets and liabilities just cannot be measured in monetary terms.

Using monetary values is therefore a major constraint on both recognition and measurement, because you cannot recognize what you cannot measure. However, it does have the considerable benefit that all measurements become comparable to some degree, and everyone in the developed world at least is familiar with using money as a basis of exchange in transactions.

4.2 *Qualitative characteristics*

The issue of comparability is central to the idea of using a monetary measuring unit. You use a monetary unit precisely so that you can reflect items that are different in nature (for example a factory and a trade payable) using the same system. However, a problem with a monetary unit is that it is usually subject to inflation, and, depending on the degree of

inflation, comparability may be substantially impaired. Another issue is that some people suggest that not all items should be measured using the same attribute, but we will come to these points later.

The US/IFRS Conceptual Framework discusses the qualitative characteristics of financial information, and does not put comparability in first place. It says the primary characteristics are relevance and faithful representation. Comparability is an ‘enhancing’ characteristic, along with verifiability, timeliness and understandability. We would not necessarily agree with that order of priority, but it is worth noting that when using monetary measurement you have to decide what aspect of an asset or a liability you are going to measure.

The conceptual framework aims to provide guidance, saying that the ‘measurement attribute’ must be relevant to the view of the entity you are trying to show, and must give a faithful representation of that aspect – it must not be misleading. Indeed the conceptual framework illustrates the measurement decision process:

- what kind of view of the entity do you want? (a view that helps making economic decisions);
- the measurement must be relevant to an economic decision (capacity to generate cash inflows and outflows);
- it must be a faithful representation (it must focus on the cash flows that will most likely affect future value); and
- it would be better, but not essential, if measurements were comparable, verifiable, understandable and delivered in a timely manner.

The original US Conceptual Framework ran into difficulties when the FASB tried to develop the recognition and measurement chapter. As a result the IASB framework is also extremely vague about measurement, just noting that there are several possible measurement approaches. The FASB/IASB have worked in the last few years to revise the conceptual framework with the aim more of filling in gaps rather than significantly changing what is the accepted substance of the original framework. Measurement is one of these. Until the sub-prime financial crisis hit the standard-setters’ timetables, the FASB was working hard on producing a new measurement chapter, but this was not progressing very quickly, probably not least because different board members had quite different aspirations as to what could be achieved by such a chapter. That project has been set aside for the time being, although it will no doubt be revived in due course.

However, one idea that seemed well received at the time was the concept that there were at least two distinct types of asset that might have different measurement attributes. Staff suggested that entities owned two types of asset: one that generated cash inflows in its own right, and another that only generated cash inflows when used in conjunction with other assets, materials, staff inputs, etc.

Staff suggested that this might be the basis for using a different measurement attribute. An asset that was in itself a stand alone ‘cash generating unit’ (CGU) would offer more measurement alternatives because it had identifiable future cash flows. When an asset is part of a larger CGU, by definition it does not attract identifiable cash flows to itself. The identifiable cash flows are generated by the CGU as a whole and cannot be allocated on a meaningful basis to the individual parts of the unit. This might lead you to an analysis that market value gave the most relevant measure of the single asset CGU, but that measurement of an asset that was part of a bigger CGU should relate to the cost of making the asset available.

This is an example of the application of the conceptual framework where the measurement attribute is different, but is comparable in that the aim is to provide the most relevant information relating to cash flows, and also that the measurement unit is the same monetary unit (e.g. the US Dollar). Information relevance (for forecasting cash flows) gets preference over direct comparability of the measurement attribute (cost in one case, market value in another). In fact both the FASB and the IASB do use what they describe as a ‘mixed attribute’ model, where amortized historical cost is the basis for most measurements, but market value is used for some measurements, and also a series of alternative estimation approaches in specified other cases. Some people would argue that this is confusing, and a more helpful approach to reporting, if no single measurement basis is acceptable, would be to produce two financial reports, each consistent in itself, but using a different measurement basis.

4.3 Primacy of orientation

In discussing the historical evolution of measurement we did mention that, while in the nineteenth century the balance sheet was the focus, in the twentieth century this moved to the profit and loss account. While for most practitioners, the profit and loss account remains the prime focus, the FASB and IASB are visibly oriented more round a balance sheet approach. This comes from the conceptual framework which defines assets and liabilities while leaving equity as the residual owners’ interest. Standard-setters now typically carry out an analysis of what economic rights and obligations exist as part of a transaction and how they change as the transaction proceeds.

This is easily seen in the IASB/FASB revenue recognition project. A traditional approach would say you recognize a sale when the goods or services have been passed to the customer. Prior to that you accumulate costs relevant to that sale as assets, and expense them against the revenue you recognize on completing the sale. The new standard, however, says that as soon as you have a contract with the client you have an asset (the right to receive cash inflows from the contract) and a liability (the obligation to perform services or deliver goods).

However, although in their early analysis the boards were prepared to look at the liability being less than the asset and therefore some element of profit being recognized at inception (which would be logical, as the entity has incurred selling costs which it would expect to cover), in the end they recognized this would be seen as very controversial. They decided that the ‘performance obligation’ (the liability) should systematically be measured at the value of the asset, unless it was an onerous contract. The net effect is therefore nil, and revenue will still be recognized as goods and services are delivered. However, it illustrates the asset and liability orientation of the boards.

People have debated for well over a hundred years whether you should start with measuring the transaction and leave the assets and liabilities to be the residuals of the transaction measurement process, or whether you should start with measuring assets and liabilities and derive the transaction values from the movements in assets and liabilities. Under a strict historical cost basis (everything measured at cost, with long-lived assets amortized) you would end up with the same figures irrespective of whether you start with the asset or the expense, because the measurement attribute is allocated cost. However, if you used a mixed attribute model, you would get different figures.

To give a concrete example, supposing a company buys a delivery truck for €30,000. It expects to use it for four years, and sell it for €2,000 at the end of that period. Under the amortized

cost basis, the entity would depreciate the truck at $(30,000 - 2,000)/4 = 7,000$ a year, giving the following figures:

<i>Year</i>	<i>Expense</i>	<i>Carrying value</i>
1	7,000	23,000
2	7,000	16,000
3	7,000	9,000
4	7,000	2,000

However, if a balance sheet perspective was chosen, you would ask what would be a relevant attribute to measure – the main candidates would be either an entry value such as replacement cost (how much would it cost you to provide an asset in this condition?) or an exit value such as current sales value (how much can you sell the asset for?). Let's say we decide a selling value is not relevant because we need the van to enable the business to keep operating, and so an entry value would be better. If there is a market for used vans, it could be we could buy a similar van that was one year old for €20,000, two years' old €12,000, three years' old €6,000 and four years' old €2,000, our figures would now be:

<i>Year</i>	<i>Carrying value</i>	<i>Expense</i>
1	20,000	10,000
2	12,000	8,000
3	6,000	6,000
4	2,000	4,000

The carrying value is determined from the market, and the change becomes the expense for the year. We can draw a number of points from this. First, that over the life cycle of the asset, the cost to the business is exactly the same, so the measurement process is actually allocating costs to different years, but not fundamentally changing the cost of the asset to the business. Second, we should note that under amortized cost, the balance sheet value of the asset does not have any meaning beyond unexpensed future costs, whereas under the balance sheet measure the carrying value is replacement cost and the year on year change shows the consumption of value, rather than the allocation of cost. The different measurement bases give us different information. It is a matter of personal judgement whether you think one is better than the other.

The traditional argument is that the annual profit or loss is just a conventional way of measuring performance that necessarily involves lots of estimates because of the variety of life cycles of assets and liabilities. As such it is never going to be accurate and all that is required is an effective estimation system that is as easy as possible to apply and always comes back in the end to the actual cash flows. That could be summed up as profit is a rough estimate, that is all. The alternative view is that you are trying to measure each year's profit as accurately as possible and should incorporate current information.

Some members of the FASB and IASB argue that a completed transaction approach lacks a clear set of criteria for recognition, and results in deferrals of costs and revenues that do not meet the conceptual framework definition of an asset or a liability. They also argue that recognizing rights and obligations gives you a clear basis for identifying changes, and then you can classify

the changes as to whether they are operations giving rise to profits and losses or other value changes (which might be reported elsewhere). In effect they think a balance sheet orientation is closer to a wider economic appreciation of the entity than a transaction-based approach. That said, in practice companies measure transactions, and then are supposed to step back at every reporting date and ask themselves questions about carrying values.

There is a considerable literature about income measurement. The classic economics text is Hicks (1939) whose basic proposition is that income is the amount a person can consume during a period and still be as well off at the end as at the beginning of that period. This leads to measurement of 'wealth' as the starting point, which Hicks develops into a series of alternative approaches to measuring wealth. Solomons (1961) contrasts Hicksian income with a tradition view of accounting income. He notes that the difficulty with Hicksian income is that it requires a measure of wealth. Accounting income is based on realization, and therefore the creation of cash asset or a near-cash financial instrument. It does not, under historical cost, consider the potential to generate future income and does not assess value changes in assets.

A detailed review of issues in income measurement is to be found in Lee (1985). Income measurement theory is discussed in Chapter 3 of this book and the historical evolution of approaches to recognition and measurement is addressed in Chapters 4 and 5.

4.4 *Executory contracts*

Perhaps a side issue, but related to the recognition boundary is the question of executory contracts. One of the very significant issues related to recognition is that a classical transactions-based approach measures revenues only when the transaction has been completed or realized, as Solomons (1961) notes. In entities that have a long transaction cycle, this means that significant economic information is not reflected in the financial statements. A contract that has been entered into by an entity but not yet performed is called an 'executory contract'. In a business with long transaction cycles, such as service contracts to provide computer maintenance, an executory contract represents upcoming sales.

Under a traditional transaction approach, the executory contract is not reported anywhere, and only gets recognized when the services are delivered to the client. The new IASB revenue approach in effect addresses this by recognizing an asset as soon as the contract is signed, so the point at which the contract is first recognized is earlier – the boundary has been moved.

The recognition boundary can also be moved by using market value. Using a market exit value – what you would receive if you sold an asset, or sold your contractual rights – can be taken as a simulation of realization. This tells you what you would have received had the transaction been realized at that point, and therefore brings the recognition forward through a simulated realization (Walton 2006).

5.1 *Measurement bases*

An exhaustive list of possible approaches to measurement will be found in Alexander (2007). It may be helpful to recognize that these approaches fall into two camps: entry values and exit values. The most widely used entry value is *historical cost*, which in its pure form retains the initial cost as the accounting value, but apportions it over periods if this is necessary because of the life cycle of the item. However, historical cost is typically modified not only for allocations but also for impairments. Historical cost fits easily into a stewardship objective for financial reporting: the manager is explaining what has happened from a historical perspective.

People dispute the usefulness of the historical cost basis for making investment decisions. The convention is that the historical record can be used to project forward when it is allied to the investor's perceptions of how the economics will evolve in the future. Financial analysts would say that their job is to take a view about the future, and blend that with the entity's factual report about the past. Research suggests that 'clean surplus' accounting (historical cost accounting with all expenses allocated against revenue) is the best predictor of future cash flows.

At the other extreme, people argue that financial economics tells us that the market price reflects the market's expectations of the discounted future cash flows for the entity. Consequently a valuation of the entity's assets and liabilities that is based on their expected future cash flows would give important information to investors. In theory you could divide the assets and liabilities into CGUs (under IFRS the smallest collection that is capable of generating cash flows independently of the rest of the entity), estimate the future cash flows of each CGU, discount them and aggregate them, and you have the value of the entity.

The discounted cash flows of each CGU represent the market price of each CGU, or in accounting, the *fair value*. IFRS 13 defines fair value as the price for which an entity could sell an asset or the price it would have to pay to transfer a liability to someone else. It is an exit value, and that value is what the market, not the entity, puts on the asset. A fair value represents the market's assessment and so its enthusiasts point out it is an objective value and gives comparability across entities. (The subject of fair value is explored in depth in Chapter 7 of this book.)

We can sum up the two extremes as being that historical cost is entity-specific (the values are not necessarily comparable across entities) and is a historical (backward-looking) entry value, but it is easily ascertained in most cases. Fair value is a market value, and as such is an objective measurement that is comparable across entities and is forward-looking (reflecting expected future cash flows). However, a major disadvantage is that in many cases observable market prices are not available, so in practice its use as an accounting measurement basis involves estimates which are not necessarily objective.

Another measurement basis recognized in the literature is *replacement cost*. This is a current value, like fair value, but it is an entry value and not an exit value. As in the example above, replacement cost is a market value and is used to show you what it would cost to replace an asset already in use. Just like fair value, it is objective, current and comparable, but replacement prices for used assets are not necessarily freely available for business-specific assets, and so it is not widely used in practice.

A variant on this is the concept of *deprival value*. Some standard-setters argue that deprival value is not itself a measurement basis but is rather an algorithm for determining which basis to use in a mixed-attribute model. The idea of deprival value is that the most relevant valuation of an asset from an investor's point of view is that which reflects the management's view of how to maximize utility of that asset. Deprival value says you should use a measurement basis that reflects the most advantageous cash flows from the asset. If the entity would get more cash from selling the asset as opposed to operating it, it should be measured at fair value. If, however, the entity would generate more net inflows by operating the asset as part of a cash generating unit, then it should be valued at replacement cost (on the basis that though it will generate more than its cost, the asset cannot be worth more than replacement cost). The approach is called deprival value because it measures what value would be lost to the entity if the asset were lost.

5.2 The effects of inflation

An obvious disadvantage of converting everything to a monetary unit is that the intrinsic value of that unit is not stable. In practice, accounting measurement can tolerate a low level of inflation (for example less than 10 per cent per annum) without being significantly damaged from an operational perspective. However even a 10 per cent annual rate does distort the relationship between long-lived (non-current in IFRS jargon) assets and current assets, and long-lived liabilities are having value transferred from the creditor to the debtor in such circumstances.

Experience would suggest that there are three rough bands within which the accounting reaction to inflation is different. We think that past behaviour suggests that where inflation is less than 10 per cent, standard-setters and investors largely ignore it. Where inflation is more than 30 per cent per annum, usually referred to as ‘hyper-inflation’ financial statements are routinely restated. IAS 29 *Financial Reporting in Hyperinflationary Economies* calls for the financial statements to be restated by using inflation indices so that the monetary unit is adjusted to current values.

The most problematical area is between these two, i.e. in the 10–30 per cent range. Many countries in the developed world suffered inflation of 15–25 per cent in the 1970s as a result of a severe increase in the price of oil. This gave rise to a revisiting of the literature on inflation accounting which had been developed in the 1920s, which was the last time severe inflation had occurred in Europe.

While adjusting your measuring unit for its loss of value is a simple solution, it has a number of hidden problems. In the first place, how do you measure the loss of value? This is typically done using a price index, but that is sensitive to the composition of the index: what prices do you use to monitor the general state of inflation in the economy? The second point is that reflecting the price index is believed to install inflation systematically in the economy. The anecdotal evidence is that in highly inflationary economies, people put prices up and employees seek pay increases to compensate for perceived inflation. In other words, if the government says inflation in the economy was 20 per cent last year, employees will feel they need a pay increase of at least 20 per cent and businesses will also put prices up by at least 20 per cent. Governments therefore are not enthusiastic about index-linked adjustments. In Germany the government even passed a law forbidding indexation adjustments after the 1920s bout of inflation.

In the 1970s and 1980s there was therefore renewed debate about inflation accounting. Much of this started with the notion of capital maintenance. This asks what is your objective in adjusting for inflation: are you trying to preserve the purchasing power of equity (financial capital maintenance) or your operating capacity (physical capital maintenance). The central idea is that, in inflationary times, a historical cost measurement means you are overstating profits, because you are not recognizing that replacing your assets and raw materials will cost much more than what you are charging in the profit or loss account. Broadly, if your aim was financial capital maintenance, you measured profit at historical cost and then made a charge against earnings for the loss of purchasing power of equity. If your aim was physical capital maintenance you charged depreciation based on the replacement cost of your productive capacity, and raw material costs were adjusted to their replacement cost from historical cost.

Standard-setters in both the US and the UK responded to inflation but in different ways. The US required selected supplementary disclosures on both a ‘constant dollar’ basis (i.e. by indexing the monetary unit) and a current cost basis. The UK required a full set of financial statements drawn up using what was called current cost accounting. These measures were highly controversial at the time, and were withdrawn as general inflation levels dropped away dramatically later in the 1980s (see for example Tweedie and Whittington 1997).

5.3 Measurement under IFRS

This final section of the chapter reviews IFRS and the different measurement bases used in its mixed attribute model. (Chapter 7 of this book is devoted to a detailed analysis of the IASB's measurement bases and the use of fair value in particular, the section in this chapter is a brief overview only.)

Even if some commentators would have one believe otherwise, the fundamental approach of IFRS is to use historical cost as the measurement basis (indexed in the special case of hyper-inflationary economies) and certainly not fair value. However, fair value is used in a number of cases. In particular IFRS use fair value for most financial instruments, even if in practice only the financial sector tends to have a significant involvement in financial instruments.

A form of fair value is a requirement for biological assets in IAS 41 *Agriculture*, and fair value is used as an allocation device when making the first consolidation of a newly-acquired subsidiary under IFRS 3 *Business Combinations*. When a significant business within an entity is to be disposed of, the fair value of its net assets is shown as a 'disposal group' in the balance sheet, after deduction of expected selling costs (IFRS 5 *Non-current Assets Held for Sale and Discontinued Items*). IAS 2 *Inventories* has the requirement that stocks should be held at the lower of cost or net realizable value. Net realizable is fair value less costs to sell.

IFRS allow optional use of fair value for investment property (IAS 40) and for property, plant and equipment (IAS 16). In practice, fair value is widely used by investment property companies, and its use is likely to increase when the FASB introduces compulsory use of fair value for that industry in the US. In some countries (such as the UK), holding property plant and equipment at current value was a widespread practice before IFRS, not least to compensate for inflation. However, where the option is used under IAS 16, the standard requires that values be regularly updated. This is quite costly because companies usually use a professional valuer whose fees are not negligible, so few companies make use of the option.

The IASB also has in development an option to report investments in subsidiaries at fair value in the consolidated accounts of investment companies. The exception will allow that where an investment is managed on a fair value basis and is held for investment purposes rather than operational ones, it need not be consolidated line by line by the investor, but can be shown at fair value.

Outside the straight use of fair value and historical cost, IFRS contain a number of measures to address special situations. A significant case is that of impairment (IAS 36) where the general rule is that an asset cannot be carried in the balance sheet at more than its 'recoverable amount'. The recoverable amount is the higher of (a) fair value less costs to sell, and (b) 'value in use' which is the discounted net cash flows expected to be gained from continuing to operate the asset. (You can see this has links to the concept of deprival value). An impaired asset will be held at something other than historical cost or fair value as such.

A controversial measurement issue arises in IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*. The standard says (paragraphs 36, 37) that

The amount recognised as a provision shall be the best estimate of the expenditure required to settle the present obligation at the end of the reporting period. The best estimate of the expenditure required to settle the present obligation is the amount that an entity would rationally pay to settle the obligation at the end of the reporting period or to transfer it to a third party at that time.

The IASB has extensively debated this question and has a thwarted an attempt to amend the standard, which is now parked off the current agenda. The phrase referring to what the company would pay to transfer to a third party means a fair value measurement – a market price.

The IASB considers that this would obviously include compensation to the transferee for taking the risk. Preparers respond that that is unrealistic as generally liabilities of this nature are settled directly, not passed on to someone else. If you were planning to settle directly, why would you value it differently?

The second issue is whether the estimate in either case should be a single point estimate (the most likely case) or a probability weighted estimate (expected value). Constituents say that the expected value may be significant statistically over a range of transactions, but for the individual transaction it represents a hybrid number which is by definition not likely to be the settlement number. The responses to the IASB proposals suggest that current practice is to measure provisions at a number which the management think they are likely to have to pay. This will be a current exit value but specific to the entity, not a market value.

This standard addresses a range of contingencies. A provision is made if an estimate can be made that is sufficiently reliable to be used in the financial statements. There is therefore a boundary condition of being able to make a reliable estimate (and many companies use that condition not to put a number on continuing litigation provisions). If the entity cannot make a sufficiently reliable estimate, the solution is a disclosure, which the entity makes if it thinks it is more likely than not for the contingency to crystallize in the future.

In looking at how to reflect existing contingencies in an acquired company, the IASB came up with the idea that the on/off switch of the 50 per cent probability threshold was too crude, and decided that in a business combination a contingent liability or asset should be valued based on the probability of it occurring. If you thought you had a 20 per cent chance of having to pay €100,000, you showed a liability of €20,000. The analysis was that (a) you decided whether you had a liability (or an asset) – i.e. was there something to recognize? – and then (b) if so, you decided what measurement to use based on probability. This analysis fits in with how the IASB applies the asset and liability definitions as discussed above.

The IASB liked this solution to what it believed was a particularly opaque area in financial reporting. It decided that it would amend IAS 37 as well, so that this new approach would be applied generally and there would be no more discontinuities in recognition of liabilities. All non-financial liabilities would be measured at their expected value. Unfortunately constituents did not like the idea, and it remains stalled, awaiting a period when the IASB is no longer fire-fighting nor converging.

6. Conclusion

In reviewing the issues related to recognition and measurement this chapter has pointed out that no reporting system gives a complete view of the economic entity, but rather any recognition and measurement system sets boundary rules that determine what can be included in the portrait of the entity and what is left out – the recognition and measurement rules fix what is identified as the entity.

These rules must be informed by some idea, explicit or implicit of what is the objective of financial reporting, and they must fix a measurement convention, which in financial reporting involves the assignment of a monetary amount to all items reported. We noted that under the IASB/FASB Conceptual Framework the objective of financial reporting is to provide information to help providers of capital make investment decisions, and this led to reporting information that was related to expected future cash flows, encapsulated in assets and liabilities.

Having decided what is recognized, the next step is how to measure them. The chapter discussed the differences between historical cost and fair value, as well as between entry and exit values. It reviewed the effect of inflation on the measurement unit. Finally the chapter reviewed the different measurement approaches in the IASB's mixed attribute model.

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