LEARNING OBJECTIVES

After studying this chapter, you should be able to:

1.1 reflect on the nature of accounting and the role of accountants
1.2 define ‘theory’
1.3 reflect on why theory is needed and appreciate the need to evaluate theories
1.4 understand the nature of research and its relationship to theory
1.5 identify some of the research areas in accounting
1.6 understand the case study approach and the steps to take in answering case study questions.
Nature of accounting

Consider
- GAAP not absolute — derived from political process
- No black/white rules — principles-based standards
- Lags behind changes in real world
- Impact of technology

Accounting problem or issue

Professional judgement

Critical analysis

Output — information for decisions

Theory

Technical knowledge

Research
This text, as its title indicates, considers some of the contemporary issues in accounting. Its key focus is on issues in financial accounting. Financial accounting can be defined as the regular reporting of the financial position and performance of an entity through financial statements issued to external users. This definition is relatively straightforward but financial accounting is neither straightforward nor simple. As this text shows, the influences on financial accounting are many and complex, and often the application of financial accounting principles and practices in specific contexts brings unique challenges.

Accounting is often cited as the ‘language of business’ and financial accounting provides much of the public information about business (and non-business) entities that people rely on to make decisions. If the financial accounting information provided is not ‘right’, this can have significant adverse consequences for not only shareholders but also the public, the managers of businesses and accountants themselves. Even a brief look at well-known business failures (such as Enron, WorldCom, HIH, One.Tel and the global financial crisis) confirms this.

Some accounting students may question why there are issues or problems in accounting that are different from those in the past. After all, the basic building blocks of accounting — the debit and credit rules — have not changed for centuries. Perhaps any problems that have occurred, and related accounting failures, are simply due to a misapplication of accounting rules; that is, the ‘right’ accounting was not followed. While it is acknowledged that inappropriate or even improper accounting has played a part in many corporate failures, this is too simplistic a view of accounting and the role of accountants.

1.1 The nature of accounting and the role of accountants

LEARNING OBJECTIVE 1.1 Reflect on the nature of accounting and the role of accountants.

First we need to consider the nature of accounting. Accounting is not like the ‘hard’ sciences, nor is it a simple mechanical exercise. This has a number of implications. In introductory and intermediate technical accounting courses, examples are often relatively straightforward and it may seem like there is little that is uncertain or contested. Yet even in simple applications, accountants need to make judgments, for example, about which depreciation method to use or what assumptions to make when undertaking certain measurement estimations. Further, a number of accounting standards require a choice to be made (such as IAS 16/AASB 116 Property, Plant and Equipment where after acquisition these assets can be measured either at fair value or on a cost basis).

A further consequence of accounting not being like a ‘hard’ science is that accounting principles and rules are derived through debate and consensus. This is a political process often involving extensive consultation with any parties that may be affected, each advocating for their own perspective, often seeking an outcome that serves their own self-interest. Thus, the outcome (the accounting rules) result from debate, disagreements and compromise. Given the competing interests, consensus can be difficult to reach. A recent example is the issue of the new standard for leases. Although the IASB and the FASB (the US accounting standard-setting body) undertook this as a joint project the resulting standards differ in that:

• the standard issued by the IASB adopts a single model, in principle, for accounting of all leases for lessees
• the standard issued by the FASB requires leases to be classified as either operating or finance leases.

Accounting regulation has also changed. Prior to 2000, accounting standards (the ‘rules’ for financial statements) were largely determined on a country-by-country basis, varying substantially. Globalisation of business has changed this. There is now an acceptance that a global and uniform set of accounting standards are necessary to ensure the quality of financial accounting and nearly 120 countries now require or allow the use of the international accounting standards.¹ The authority of major participants, such as the European Union and the United States, often influence standard setting. For example, during the global financial crisis pressure from the European Union forced a change to international accounting standards to allow banks to reclassify assets retrospectively and thereby improve their reported financial position.
The implementation of the international accounting standard is also affecting the substance and form of accounting requirements. A key feature of international accounting standards is that these are principles-based. Rather than containing an exact list of unambiguous rules that must be followed, these standards identify the principles (concepts) that need to be applied. The aim is to ensure the objectives of accounting are met, that the reports accurately reflect reality (what is referred to as faithful representation in the accounting Conceptual Framework) and therefore provide the information needed for decision making.

The shift to principles-based standards acknowledges that the mechanistic compliance to a set of rules may not result in the accurate portrayal of the economic substance events and transactions. Although guidance is provided in the standards, the application of the principles requires the exercise of judgement.

**FIGURE 1.1** Changing views of accounting

![Diagram showing the shift from mechanistic accounting to principles-based accounting.](source: The Pathways Commission, AAA & AICPA.)

The diagram in figure 1.1 depicts the shift from the traditional view of accounting as a purely technical exercise, where applying exact rules and procedures to data inputs leads to a single and unchallengeable accounting result. The accounting Conceptual Framework itself acknowledges in paragraph OB11 that there is no one immutable accounting result:

To a large extent, financial reports are based on estimates, judgements and models rather than exact depictions.

The Pathways Vision Model in figure 1.1 demonstrates the inherent ambiguities in accounting and therefore the crucial role accountants themselves have in constructing accounting outputs and illustrates:

how accountants use critical thinking to recognize the shades of gray in recording economic activities and apply professional judgment to create and communicate useful information that is relied upon for decisions that lead to a prosperous society.
This model also highlights the central role of professional judgement. The American Accounting Association has identified the defining attribute of the accounting profession to be professional judgement.

Professional judgment is a process used to reach a well-reasoned conclusion that is based on the relevant facts and circumstances available at the time of the conclusion. A fundamental part of the process is the involvement of individuals with sufficient knowledge and experience. Professional judgment involves the clarification of issues and objectives, and the identification, without bias, of reasonable alternatives; therefore, careful and [unbiased] consideration of information that may seem contradictory to a conclusion is key to its application. In addition, both professional skepticism and objectivity are essential to the process and to reaching an appropriate conclusion.4

This model draws attention to the need for critical analysis to precede the exercise of professional judgment. This does not mean that the technical knowledge that you have acquired is not important. This technical body of knowledge underpins any analysis. However, a critical approach is more than the mere application of technical knowledge. If accounting is to provide information useful for optimal decision making, then the question is not simply whether we can account for an item in a particular way, but how should we account for an item. To do this we need to consider a range of issues, such as what alternatives are available, which of these alternatives will provide the best information for decision makers, whether there are any ethical issues, how is the information used or how is the information incorporated into share prices. This requires critical thinking where, informed by theory and research and an understanding of the dictums of the discipline, you systematically question, analyse and evaluate.

While the nature of accounting itself shapes the role of accountants and the skill set required, there are other factors that are also influential. The world is constantly changing and arguably at a faster rate than ever before. Business activities and transactions are more varied and complex and, increasingly, more global, and societal expectations and priorities are changing. In the last 20 years new types of transactions and developments have occurred; for example:

- the sub-prime credit swaps implicated in the global finance crisis
- weather derivatives being traded on certain exchanges
- carbon pricing being expanded to over 40 jurisdictions5
- digital currencies emerging with the rise of the internet
- a framework for integrated reporting being developed.

These are only a few developments that were (or are) novel or posed questions for accounting in the recent past, but that may provide an insight into the types of challenges to be faced in the future. Even without change it is not plausible to have an accounting rule for every conceivable transaction or event. But accountants will need to deal with transactions and events that were never even thought of when accounting rules were created. It is obviously not possible to foresee or predict what these will be. The reality is that accounting usually lags behind changes in the business and social world, effectively needing to catch-up with the developments and innovations that have already occurred.

A recounting of the recent experience of an accounting graduate illustrates this. The graduate, employed by one of the large professional accounting firms, was set the task of researching social bonds to present to staff. Social bonds (also known as social impact bonds) involve contracts with public sector entities where returns (and/or repayments) are linked to the achievement of certain social outcomes.6 The graduate had never even heard of social bonds before and certainly had never been taught about these in their prior accounting studies. This may also lead you to consider what skill set is required to complete such a task.

There are also some contemporary issues that are not new but where the accounting is still uncertain, incomplete or subject to criticism. For example, accounting for certain intangibles, and the restrictions that current accounting pronouncements impose, is still problematic. For many businesses their key assets are now not physical — not the bricks-and-mortar resources that were the focus of traditional accounting — but intangibles, such as software or other computer based assets, brands or even the expertise of their employees. For example, in 2015 Snapchat had been valued at between US$15 billion and US$19 billion but the largest
asset on its balance sheet at the time was $300 million in cash. It has been argued that current accounting practice does not adequately depict the real assets of such businesses. However, even for some common and tangible transactions accounting is problematic. Contemporary issue 1.1 discusses the matter of accounting for rebates, the impact on profit and how the accounting treatment for these rebates remains unclear.

1.1 CONTEMPORARY ISSUE

Dick Smith hearings reveal questionable accounting of rebates

This week, court hearings into electronics chain Dick Smith’s collapse have revealed more details of questionable accounting of rebates.

Once lauded as a miracle turnaround story, Dick Smith collapsed under the weight of soaring debt and a pile of excess stock and was later dubbed by one fund manager as ‘the greatest private equity heist of all time’.

Just three months before Dick Smith collapsed at the start of the year, the once mighty retailer had 12 years worth of private label double-A batteries in stock, one of the more amusing details to emerge from public hearings into the company’s downfall. It is emblematic of the strategies that appear to have caused the firm’s demise, leaving investors, lenders and customers out of pocket.

‘A rebate can be over a period of time, buy x amount of product and we will give an x percentage of it back, it could be a determination that for every dollar you spend, we’ll give you a percentage back,’ said Russell Zimmerman, chief executive of the Australian Retailers’ Association. ‘They are negotiated between the retailer and the supplier and obviously very confidential.’

The use of rebates is standard practice around the world.

In Dick Smith’s case, the court heard management chose its products to maximise rebates, the money retailers get from suppliers to stock and promote their goods, rather than on what its customers actually wanted to buy. Former Dick Smith board member Bill Wavish told the hearings that retailers ‘cannot survive without rebates’. ‘For most companies like Dick Smith and Woolworths, rebates exceed profit,’ he said.

But the accounting of the rebates is another issue, and receivers Ferrier Hodgson allege Dick Smith breached accounting standards by booking its rebates as profit before it actually sold the products and was paid. ‘To actually book it (profit) in before prior to receiving it is certainly of major concern,’ Mr Zimmerman said.

Retailers chasing rebates to inflate profits

But Dick Smith isn’t the only firm accused of chasing rebates to inflate profits, and the case is shining a light on troubles in the retail industry. Australian retailers have experienced a tough year, faced with rising competition, tumbling prices, and a weaker dollar. Another company that seemed to have an increased appetite for risk was the department store Target, which has been struggling in recent years as management tries to turn the company around.

But earlier this year, an investigation found Target’s profit in the six months to last December had been inflated by around 40 per cent as a result of some creative rebate accounting. Under a deal, some Target staff negotiated extra rebates from at least 30 clothing suppliers for that half year, and promised to boost prices for their products in the next accounting period.

‘Rebates by themselves aren’t a problem, it’s really the principle issue of disclosure… enabling the market to clearly identify what’s happening in the business,’ said John Walker is the chief executive of Investor Claim Partner, a class action service for institutional investors.

Mr Walker is also on the board of the litigation funder Bentham Europe, which is running a class action against the UK supermarket chain Tesco. Two years ago, Tesco revealed it had overstated its profits by GBP 263 million in part because it had booked rebates from suppliers before receiving them. The case is still under investigation by authorities in the UK. ‘These companies are provided with resources to go out and make money and owe it to their shareholders to identify absolutely line by line not so much who you’re getting the rebate from or what particular stock you’re getting it on,’ Mr Walker said. ‘Simply how much you’re relying upon, at a macro level, for your revenue, on rebates.’
New accounting standards are due to come into force in 2018 that are expected to provide more clarity on how revenue like rebates is accounted for.

‘There’s a lot of pressure on senior leadership people within retailers to turn those businesses around to make them successful but it doesn’t happen overnight,’ said Gary Mortimer, an associate professor at QUT business school, adding that accounting standards are currently unclear.


QUESTIONS

1. This article states ‘accounting standards are currently unclear’ with regard to how to account for rebates. Given these rebates seem to be quite common, can you think of any reasons the accounting for these could be unclear and why there may not be an accounting standard that specifies exactly how to account for these particular transactions?

2. This article claims that profits were overstated by Tesco ‘because it had booked rebates from suppliers before receiving them’. Do accounting principles require cash to be received before recognising items in the accounting? If not, why should accounting be implicated in these profit overstatements?

3. A note prepared by PricewaterhouseCoopers claims that supplier rebates are complex and as accounting requirements are unclear.

   Ultimately, getting rebate accounting correct relies on a culture and leadership that encourages accounting for the commercial substance of rebate arrangements and discourages short-term profit maximisation.

   What do you think is meant by ‘getting the accounting correct’? Can you identify any factors that would influence the exercise of professional judgement in this context?

While accounting has existed in some form for thousands of years, and double-entry for more than 600 years, exponential advances in technology are predicted to change the very nature of many accounting tasks. For some time now technology has freed accountants from a range of routine processing and compliance tasks. In the last decade cloud accounting (where accounting procedures are performed over the internet rather than on proprietary software locally installed and maintained) has transformed how many small businesses access accounting programs. A report by PricewaterhouseCoopers (PwC) states that there is 97.5% probability of the traditional accounting tasks (undertaken now by accounting clerks/bookkeepers) being automated by technology within the next 20 years. However, the impact of technological advances on accountants (and accounting) may be just beginning. To illustrate this, consider blockchain technology. Most people would have heard of bitcoins — a type of digital or crypto-currency — although probably few of us understand in detail how bitcoins actually work. Regardless of whether such digital currencies become more important in the future, the technology behind such currencies may have a more rapid and disruptive impact. Underlying bitcoins is a technology called blockchain (also known as distributed ledger technology). Contemporary issue 1.2 provides an overview of blockchain technology.

1.2 CONTEMPORARY ISSUE

Blockchain technology: everything you need to know

Around the world, finance experts are betting that a technology called blockchain can create the one true record of transaction — and cut billions of dollars in costs.

What is blockchain technology?

When Bitcoin was first introduced [in October 2008], it was based on a technology known as blockchain. The classic accounting ledger records each transaction. Blockchain’s ‘distributed ledger’ does the same thing but with transaction information stored in ‘blocks’ — effectively pieces of computer code. The block is then transmitted to every party involved in a transaction. Network participants verify, clear and store data in this block, and it is then linked to the preceding block, forming a blockchain.
Instead of being kept in one place, as in a normal set of accounts, the record of transactions is stored in many places at once, updated in all of them at the same time and available to everyone involved in the network.

Because every block is linked, the contents can’t be changed without rewriting every single block in the chain — which is considered computationally impossible. That means information can’t be corrupted or changed.

The blockchain record, then, is both transparent and secure.

Source: Extract from Beverley Head, ‘Blockchain technology: everything you need to know’, INTHEBLACK.

QUESTIONS

1. This article explains that blockchain is both transparent and secure. Would the adoption of a technology such as blockchain mean that accountants would no longer need to use professional judgement in determining how to account for or report transactions and events?

2. Identify any technologies or programs that are currently used in accounting firms or for undertaking accounting tasks in businesses. Using the internet to research, are there any developments or available alternatives for these technologies?

Current accounting systems evolved from the debit–credit rules use of private ledgers and rely on extensive and expensive verification and auditing processes, usually undertaken retrospectively. Blockchain technology could allow validity of transactions to be verified automatically, freeing auditors to concentrate on more complex issues. As Hywel Ball at EY stated:

Accountants do a lot of transaction processing, reconciliation and control, and that could change significantly if this technology gets adopted on a widespread basis.

The Big Four accounting firms (Deloitte, EY, KPMG and PwC) have formed a consortium to look at blockchain opportunities in the accounting sector. Indeed, in September 2016 a bitcoin ATM was set up in a Canadian Deloitte office as a way of familiarising its employees with blockchain technology.

There is extensive interest in blockchain technology, not just in accounting but for a range of other uses and in other sectors. Developments in this area may dramatically change the way business, and accounting, is done.

There are other technological advances in areas such as robotics, developments in cloud computing and big data analytics that will also significantly affect accounting and accountants. Accounting has for some time used big data in the sense of large data sets, but many see this as playing a significant part in the broader roles that accountants have as advisers. As Ridell states:

Accountancy will harness the power of big data: Analysis of the vast amounts of data now being generated will allow accountants to model and benchmark information, generating insights that will improve executive decision-making and transform and streamline organisations. Predictive analytics will be used to assess investment risk and will aid the budgeting process. And these insights, once the exclusive domain of multinationals, will now be available to SMEs. Accountants who develop skills in big data analysis will play a critical role in their employer’s future.

In particular the role of big data in predictive accounting can:

shift accountants away from basic compliance work and instead let them focus on advice and consulting on complex, challenging issues, which lets [accountants] play a more involved and significant role within organisations big and small.

A survey of chief financial officers expects that senior accountants will spend at least 40% of their time in the future on ‘non-traditional’ functions. Accountants will always be required to maintain stringent oversight of financial reporting, but in the coming years an increasing amount of their time will
be devoted to providing strategic insight that helps support company initiatives. Regulation is also increasing; not only in financial accounting but in other areas where professional accountants play a significant role. Corporate failures, such as the Enron collapse and the more recent global financial crisis, have led, not just to increased scrutiny of accounting requirements, but to the introduction of further regulation. Corporate governance practices and earnings management have also come into greater focus with an expansion of the duties and roles of accountants.

From the preceding discussion it can be seen that the role of accountants has been changing over many years. The traditional bookkeeping role is in the past, with much of the mechanics of financial accounting undertaken by non-accountants facilitated by specifically designed accounting software. Professional accountants now require a skill set that emphasises problem-solving ability, lifelong learning and communication skills. So what does all this mean? First, accounting cannot be viewed as a static and uncontested set of technical rules. Deciding what is to be reported and how to report in financial accounting is a complicated matter influenced not only by political, financial and personal interests, but also by accounting not being an exact science. At times there are no ‘black and white’ rules and often alternative solutions may be offered to financial accounting problems and preferred solutions will change over time. It is likely that much of the specific technical content that you have been taught at university will be out of date in a short period of time and in the workplace you will certainly encounter situations that you have not previously experienced. Thus, the skill set required for accountants goes beyond comprehension of current accounting rules. As Mr Ellis, former head of BHP, stated:

The best graduates are those who have received a very good training in the fundamentals of university, the theoretical side, the philosophical side of the subject matter; the understanding that will last a long time irrespective of changes in technology or changes in the market place.

The dynamic nature of accounting needs to be appreciated. Second, the changing nature of accounting and the accounting profession provides both opportunities and challenges for future accountants. The changing roles allow accountants to broaden their impact and accountants are now part of the key decision-making teams within businesses. The global nature of both accounting and business provides further opportunities for individuals to pursue challenging and diverse careers. However, with these opportunities there is a responsibility for professional accountants to develop the skills required to underpin the exercise of professional judgement to ensure optimal decisions can be made, to solve new problems and to keep up to date with the ever-changing financial accounting landscape.

The approach of this text

As previously outlined, professional judgement is the defining attribute of the accounting profession. The effective exercise of professional judgement needs to be based on critical analysis. Such analysis needs to be informed by theory, research and an understanding of the foundations of the discipline. This text aims to introduce you to a range of theories and the related research that underpins and informs aspects of accounting and decisions. In addition, case studies will be used throughout to allow you to practice applying the relevant theories and research and to assist you in developing the skills that accountants require in practice. A later section of this chapter outlines a framework to use in answering case study type questions.

A brief review of the chapter titles for this text will reveal that some chapters discuss particular theories or research. For example, another chapter examines the Conceptual Framework for Financial Reporting, which is a theory that outlines the underlying principles on which financial reporting should be based, and a further chapter discusses particular theories in accounting. The remaining chapters focus on financial accounting in either specific contexts (such as its role in corporate governance) or in relation to particular issues (such as accounting for sustainability) and the distinct problems and approaches relevant to these contexts. You will notice that the examination of many of these issues in financial accounting, often
Contemporary issues in accounting involve the use or discussion of theories and research. An alternative approach could have been to write each chapter around a particular theory. The approach in this text, however, is based on the premise that whenever you examine a particular financial accounting problem or issue, you need to consider a range of factors including the nature of the issue and the characteristics that cause it to be problematic, the specific context, whether there are any relevant theories that provide explanations, insights or guidance, and whether there is any related research. By considering particular issues or contexts, this text allows you to see the interrelationship between financial accounting issues, theories and research.

- Agency theory is examined in the chapter focusing on theories in accounting to explain the components of executive packages and motivations for providing accounting information. It is also considered in the chapters that discuss corporate governance and earnings management.
- Stakeholder theory is outlined in the chapter that focuses on theories in accounting, but the role of stakeholders in explaining why entities would provide disclosures about environmental performance is examined in the chapter that looks at sustainability and environmental accounting.

You can see that specific theories can be used when considering a range of issues and in various contexts in financial accounting. You should be able to recognise that analysing financial accounting problems and issues has come a long way from the simple and unproblematic application of debit and credit rules.

Before you consider the individual topics in the other chapters, it is useful to have some understanding of the nature and types of theories, and related research, and an introduction to how such theories can be used to solve or identify problems.

1.2 What is theory?

**LEARNING OBJECTIVE 1.2** Define ‘theory’.

Accounting is often viewed as a practical discipline and your earlier studies may have involved learning how to apply accounting rules (such as debits and credits), often using computerised accounting programs. There may seem to be little use for theory. This doubt about the relevance of theory is not limited to accounting students. Many people say that they do not need theories; that by definition theories are not practical or useful in the real world. However, theories are necessary for us to try to understand the world we live in. Theories provide a basis for decisions we make. Even though you may not yet have explicitly studied any theories in your accounting studies, you no doubt have used them. For example, when deciding whether to include an item in the financial statements, you may have applied the concepts of materiality and recognition criteria, such as relevance. These concepts are part of an accounting theory, referred to as the *Conceptual Framework*, which provides the basis for accounting standards.

When choosing how to measure items in the financial statements (e.g. choosing between fair value and historical cost), you are applying measurement theory.

There is no simple definition of ‘theory’. In different circumstances, it can mean different things. People often use the word to mean a guess or their thoughts on something, such as ‘I have a theory about why my friend is always late’. Or it is used to suggest an unrealistic or impossible ideal, such as ‘In theory, it should take one hour to get to work but the traffic always causes delays’. In this usage, a theory is simply an opinion or explanation.

The following are dictionary definitions of what a theory is:

- a belief or principle that guides actions or behaviour (such as behavioural theories of positive reinforcement or theories in management about motivating employees)
- an idea or set of ideas that is intended to explain something (such as Darwin’s theory of evolution)
- the set of principles, on which a subject is based, or ideas that are suggested to explain a fact or event (such as economic theory or the theory of relativity)
- more generally, a conjecture or an opinion.

As these definitions show, theories can do different things: some describe and some explain what is happening. Some of these theories will also make predictions about what will happen. Other theories
make suggestions or guide action (i.e. say what should happen). This text is not concerned with the opinions that characterise the common usage of the term ‘theory’, but considers the more systematic theories. Accounting theory therefore means:

- ‘a description, explanation or a prediction [of accounting practice] based on observations and/or logical reasoning’¹⁹
- ‘logical reasoning in the form of a set of broad principles that (1) provide a general framework of reference by which accounting practice can be evaluated and (2) guide the development of new practice and procedures’.²⁰

Other chapters provide a more detailed examination of the types of theories in accounting. The next sections consider why it is important to consider and know about theory and provides a brief overview of some types of theories and related research areas.

1.3 Why theory is needed

LEARNING OBJECTIVE 1.3 Reflect on why theory is needed and appreciate the need to evaluate theories.

As noted previously, any critical analysis needs to be informed by theory. Theories can explain, predict and guide decisions and actions. This can be illustrated using a simple example. In some civilisations, there was initially a theory that the world was flat. However, this theory was replaced by a new theory that the Earth was round. Let us consider how this ‘round Earth’ theory may have developed and the impact it may have had on people’s views and actions. People would have sat on the shore and watched boats sail off, and disappear as they neared the horizon but always hull first. Also, some stars disappeared from the sky if you travelled north or south. There may have been many individual observations of this happening. But without some explanation (some theory) about why the stars disappeared or why boats disappeared from view hull first, the observations were interesting but provided little useful information. Then a theory was formed that fitted with the observations. If the world was round, then the stars disappearing as you travelled north or south or the boats disappearing hull first on the horizon would be explained. It would fit with what people had seen. This helped people understand their world and would of course influence their views and actions: if you believed this theory, then you certainly wouldn’t be concerned about falling off the edge of the world if you were to travel far out to sea in a boat. It also allowed people to predict what would happen if you continued travelling in one direction — that is, you would end up where you began.

This example illustrates two different ways in which theories are useful:

- it provides an explanation of what is happening
- it helps us predict what will happen.

This example also demonstrates a further point. Just because a theory exists does not mean that the theory is correct. An important issue when learning about or using theory (including accounting theory) is to consider how the appropriateness of any particular theory can be assessed. We now know that the theory of the Earth being round is incorrect (it is not a true sphere), but to the people of the day, this theory was useful: it provided an explanation of how their world worked, so provided a basis for their actions and decisions.

Today, much of life is affected by theory. Only the end results of the application of theories are usually seen and the theories behind them may not be fully understood. However, theories are the driving force behind many of the things that affect our daily lives, as in the following examples.

- Governments make decisions about whether to increase or decrease taxes based on economic theories that explain and predict the impact rises or falls in tax will have on consumer behaviour, inflation, unemployment and national debt. These decisions also take into account theories of social justice, which consider which groups in society should be helped or should bear the burden of higher taxes.
- There are theories about global warming and the impact of the use of resources on the environment.

Some of these theories also make predictions about what will happen (such as the increase in
temperatures to be expected and the impact this will have on climate in particular regions). Other theories suggest what should be done to reduce environmental damage. Our daily lives are witness to the result of these theories, reflected in recycling programs, reductions in certain chemicals in the petrol used in cars and in water restrictions.

These are only two examples but you should see that theory intrudes on our lives every day; from theories about the best way to teach university students, to mathematically based theories that underlie the building of bridges and tunnels. These examples also illustrate two further things about theories.

- There are also theories that do not explain what is happening in the world but, rather, provide solutions or ways to improve the world.
- There are often different theories on the same topic. There are many alternative theories about the impact of global warming and how best to prevent it. There are some theories that suggest that global warming is a natural cyclical event and that there is no need to do anything.

From this, you should see that theories are important. As noted, theories can do different things and in accounting there are many, some of which describe, explain or predict accounting practice and others that provide recommendations or suggestions about what accounting practice should be. Theories inform our everyday lives and provide important information that can be used in making decisions, such as whether to sail off into the horizon, or whether to recycle and reduce waste. Theories can provide the same benefits in accounting by:

- describing and explaining current accounting practices, for example:
  - capital market theory describes how share prices react to accounting information
  - researchers investigating financial reporting failures (such as Enron) have, after identifying factors that have contributed to these problems (e.g. lack of independence of auditors, rules-based accounting standards and share-based compensation payments), arrived at theories about why these failures have occurred.
- predicting accounting practice, for example:
  - agency or contracting theory, as well as explaining why managers may change the way in which they account (i.e. the accounting policies) for items in the financial statements, makes predictions about the accounting policies that will be chosen by managers in particular circumstances.
- providing principles to take into account when taking action or making decisions; for example:
  - in management accounting courses you will have used theories of capital budgeting, which might involve calculating net present values of projects and payback periods, to help decide which projects to invest in.
  - a theory of asset recognition helps to determine when and how assets should be included in the financial statements.
- helping to identify problems and deficiencies with current accounting practice and make improvements, for example:
  - the Conceptual Framework for accounting provides the basic principles on which to base accounting standards (the more detailed reporting rules), which can make accounting practice more consistent
  - theories about how investors make decisions and what information they need and use can explain which accounting measures are most useful and suggest ways to improve the functionality of financial statements (e.g. by increasing the use of fair values)
  - theories about corporate social responsibility can suggest that companies also need to provide information about any environmental impacts of their activities.

**Evaluating theories**

As previously noted, there are many theories, and in some cases alternative theories, about the same topic or area. In financial accounting, for example, there are alternative theories about how items should be measured. Just because there is a theory about something does not mean it is correct. So how can it be
decided whether a theory should be accepted? How do people decide whether a particular theory is true? How do people choose between alternative theories? In practice, various ways are used to make judgements about theories. These range from simple (often intuitive) approaches, to more systematic and scientific approaches. People accept theories every day that they may not fully understand (such as theories of global warming, the theory of relativity and theories about how certain diseases are spread).

There are a number of reasons theories might be accepted without firsthand or direct knowledge, including the authority of the source of the theory, whether the theory makes sense and fits with personal experiences and beliefs, and whether other people accept the theory. If you are a researcher or professional in a particular discipline, it would be expected that more legitimate, independent and justifiable methods would be applied in assessing and evaluating theories. These would include examining the logical construction of the theory and considering evidence that confirmed or refuted the theory. It is generally accepted that theories cannot be proven true. This is because regardless of how many observations fit or confirm a theory, it can never be certain that there are enough; how many observations is sufficient to prove that a particular theory is true? A theory can, however, be proven incorrect by just one observation that does not fit with the theory — finding one observation that is inconsistent with a theory would establish that the theory is wrong. Therefore, the rational way to use observation to test a theory is not to try to find observations that confirm the theory but to search for instances that do not fit with (disprove) the theory. This is referred to as falsification.

This book does not cover the specific ways in which theories are tested so you should refer to more detailed texts that specifically focus on theories if you wish to consider this issue further. The testing and evaluation of theories will usually involve research. The following sections consider accounting research because the specific issues in financial accounting covered in this text all involve or are influenced by research.

1.4 Understanding the role of research

LEARNING OBJECTIVE 1.4 Understand the nature of research and its relationship to theory.

As outlined, an accounting theory is either a description, explanation or prediction of accounting practice or a set of principles with which to evaluate or guide practice. According to the Macquarie Dictionary, research is the ‘diligent and systematic enquiry or investigation into a subject in order to discover facts or principles’. Research is often repeated and adjusted, which means that later studies build on earlier ones, so that knowledge about a particular aspect of accounting is expanding.

Most research studies will not provide definitive answers to the problem examined but, by searching over and over again, each study should contribute to our understanding of the issue.

Relationship between theory and research

The relationship between theory and research is complex. Empirical research is essentially concerned with observation; although this may not be observation of the ‘real’ world. For example, researchers may conduct experiments and observe the results. Research can be undertaken to test theories, or it can result in new theories being proposed (or both).

- Research may be conducted using an experiment in which the relative usefulness of historical cost and fair value measures are considered and it is found that better decisions are made using fair values. This may suggest a theory that fair value should be used as the measure for items in the financial statements.
- There may be a theory that explains the relationship between the accounting methods a manager chooses and the compensation package of the manager. This could predict that if a manager’s bonus is related to the accounting profit, the manager will choose accounting methods that increase reported profits. Research could test whether this actually happens by examining the bonus plans of managers and the accounting choices they make.

As you can also see from these examples, research can come before a theory is formed or after it is formed.
Because accounting is a human activity, the object of the accounting research extends beyond the economic events, the procedures for recording them and the methods of reporting them, to the use of accounting products and the interests of users in accounting information. Because accounting is a human invention, research (and related theories) can be categorised in two ways, although these can overlap.

**Research of or about accounting**

Research of or about accounting considers the role of accounting itself (the bigger picture) at the macro level and considers questions such as: what is the role of accounting? Is accounting information useful in investment decisions? Should accountability or decision usefulness be the key goal of accounting? What impact does culture have on accounting? And what role has accounting played in the rise of capitalism or environmental degradation?

**Research in accounting**

Research in accounting focuses more at the micro level on issues within accounting and considers questions such as: what measurements are being used? What measures should be used? And what impact do changes in specific accounting policies have on share prices?

An analogy would be medicine. To research of or about medicine would be to consider what the role of medicine is. For example, should a holistic approach that considers lifestyle, cultural context, personal preferences, choices and so on be taken or should the role be to treat physical health only? Research in medicine would be at a micro level, such as considering different approaches to treating a particular disease or impacts of particular drugs.

### 1.5 Research areas in accounting

**LEARNING OBJECTIVE 1.5** Identify some of the research areas in accounting.

Financial accounting is associated with a wide range of theories and research. Examples of some areas of research are described in the following subsections.

**Capital market research**

Ball and Brown\(^2\)\(^1\) and Beaver\(^2\)\(^2\) began the research stream known as capital market research, which investigated the use (and impact) of accounting information by capital markets. Given that a key role identified by researchers prior to this had been that accounting information should be useful to investors, this research provided descriptions and explanations of market behaviours and reactions to accounting information.

**Accounting policy choice research**

Another major school of accounting research is accounting policy choice research (this is often known simply as ‘positive accounting theory’ because of its domination of research for a significant period), which began with Watts and Zimmerman.\(^2\)\(^3\) This research attempted to explain the motivations behind the accounting choices made by managers and its significant position continues. Agency (or contracting) theory, which underlies much of this research, is considered in the chapter that focuses on theories in accounting.

**Accounting information processing research**

Given that the objective of financial accounting is to provide information to aid decision making, this research investigates the use (and users) of information in the decision-making process, often using theories and models from psychology. One example here is the Brunswick Lens model, which can be used to examine how specific types of information are used in, for example, investment decisions by a particular user of financial accounting information (say an investor).
Critical accounting research

Critical accounting research considers the role of accounting in society and its social context and aims to develop:

a critical understanding of the role of accounting processes and practices and the accounting profession in the functioning of society and organisations with an intention to use that understanding to engage (where appropriate) in changing these processes, practices and the profession.\(^2\)

This type of research considers the social context of accounting. Such research often challenges and questions the current state of accounting and in particular the relationships (and relative power or influence) of the participants. It can adopt a social welfare perspective or rely on philosophical perspectives and theories (e.g. those of Marx, Habermas or Foucault).

International accounting research

With increasing calls for more uniform accounting standards worldwide and effort towards harmonisation of financial accounting, this research area grew in the second half of the twentieth century. This has included research into differences in accounting practices and also considered contextual and cultural influences on financial accounting.

There are of course other areas of research (such as those specifically relating to auditing and accounting history). Research about an issue in accounting can involve many types of research and research areas. For example, the issue of environmental accounting and disclosures could involve:

- documenting the environmental disclosures made by companies and evaluating the quality of these disclosures.
- determining whether environmental disclosures have been used in decisions — this could involve information processing research and trying to identify how decision makers have used this information or could involve capital market research by examining market reactions to the disclosure of such information.
- examining the motivations behind companies’ disclosure (or nondisclosure) of environmental information.
- examining the impact that accounting’s focus on measurable financial costs (rather than externalities such as environmental costs) has on environmental impacts made by companies, so taking a more critical approach.

Contemporary issue 1.3 uses theory and research to explain what occurred in the failure of Dick Smith.

1.3 CONTEMPORARY ISSUE

Some answers, more questions over Dick Smith failure

In their report on the demise of Dick Smith, McGrathNicol liquidators pinpointed dubious accounting methods that are known in the industry as ‘real activities management’.

The practices, involving manipulating sales figures and stock inventories saw Dick Smith purchasing excessive amounts of inventory in order to fill their rapid expansion of stores and bank rebates from suppliers to boost earnings.

The origins lie in Dick Smith’s transition from a subsidiary of Woolworths to its listing on the Australian Stock Exchange. This took only a year but the private equity owners of Dick Smith, Anchorage Capital, were able to realise a high price when the firm was listed, making a significant profit from the deal. And this is where the seeds of failure were likely sowed.
Investments by private equity are always undertaken with the aim of rapidly increasing the value of the firm. This is done through selling non-core assets, discontinuing non-profitable business segments and looking to improve efficiency in the remaining business.

These remaining businesses are then sold as profitable — and perhaps most importantly — growing businesses. In the case of Dick Smith, prospective owners were attracted to the IPO with an expectation of a growing business. This ensured that directors placed enormous demands on management and pressure on staff to purchase excessive inventory.

This strategy is likely linked to its float on the ASX last year, providing directors with incentives to pursue aggressive growth that led to increases in floor stock as well as in its warehouse.

There is an extensive accounting research literature that refers to these actions as ‘earnings management’ (EM) and in this particular case a variation of EM known as ‘real activities management’ (RAM).

RAM is a manager’s divergence from standard operational behaviour involving the structuring of transactions that will alter financial results in order to potentially mislead the users of financial reports. It involves activities such as the ‘myopic’ reduction of research and development expenditure, timing of the sale of fixed assets, price discounts to meet short-term earnings targets, and overproduction that generates excess inventory in order to lower the cost of goods sold. Initially, the financial results of RAM are positive, but down the track have a negative impact.

Unfortunately, RAM is difficult to detect or measure as it is easily disguised in normal day-to-day business activities. It is not based on the interpretation of the accounting standards and corporations law, and instead involves the use of ‘legitimate’ transactions. Both traditional EM and RAM lower the overall value of the firm in the longer run.

All EM activities tend to intensify for companies in financial distress. Strategies viewed as previously risky may be contemplated. Companies have greater incentive to therefore manipulate accounting policies to temporarily increase operating income to evade default on debt contracts and to improve results to avoid additional monitoring of shareholders.

Despite it being seen as inherently risky, a 2005 survey study by John Graham, Campbell Harvey and Shiva Rajgopal indicates that RAM is a preferred EM tool for management to attain earnings benchmarks. Their study cites numerous examples of RAM.

Almost 80% of the CFOs surveyed indicated that, in order to meet an earnings target or ‘smooth’ earnings, they would decrease expenditure on R&D, advertising, and maintenance, while 50% said they would postpone a new project, even if such delay caused a small loss in firm value. Plus, the incentives to undertake such activities increase in businesses that are financially distressed.

If one subscribes to the conclusions within accounting research, the Dick Smith strategy was always going to be a dangerous one, with the incentive for management to maintain only likely to increase, as the group’s financial distress intensified.

Dick Smith’s core business of disposable consumer electronics (such as computers, mobile phones, televisions, sound systems) is extremely competitive, has low profit margins, and inventory has notoriously short shelf life. Subsequently, Dick Smith wound up carrying a lot of inventory that was worth less than they could sell it for. Although their suppliers offered discounts and rebates that were designed both to aid marketing and provide customer discounts, Dick Smith instead used their supplier rebates to over-inflate their sales figures.

However, with wafer slim product margins to start with, they were now making real losses. These ‘rebated sales’ were never going to be enough to supplement the retail cash flows that management needed for a sustainable business and had budgeted on.

The company’s auditors, Deloitte questioned these rebates as far back as September 2015, and by October Dick Smith needed to write down inventory by $60 million because they carried too much in obsolete stock. Their share price was always going to suffer from this, which made it even more likely that Dick Smith would breach their debt covenants with the banks.

In the end, they simply paid too much for inventory that they couldn’t sell profitably and their subsequent cash flow shortage made them insolvent. Ultimately, although employee benefits have been paid in full, it appears to McGrathNicol that there is a likely creditor shortfall of around $260 million.

This raises a number of questions of both management and the auditors. While Deloitte realised that inventory was over-valued, how did they (and Dick Smith directors) justify their decision to value the company as a ‘going concern’?
When did Deloitte advise the directors of control weaknesses in their management control systems that allowed managers to manipulate sales figures and stock purchases to meet budget expectations rather than manage the business to real market demand? Were the directors trading while Dick Smith was insolvent?

These questions will need answers. The Dick Smith saga is far from over.

Source: Roman Lanis, Brett Givendir & Peter Wells, ‘Some answers, more questions over Dick Smith failure’, *The Conversation*.²⁵

QUESTIONS
1. This article explicitly refers to earnings management research. How has this research been used in this article to assist in explaining the Dick Smith failure?
2. The article states ‘If one subscribes to the conclusions within accounting research’. This proviso implies that others may question the conclusions of the research used in this article. Can you think of reasons why particular theories or research would not be accepted?
3. This article states that the auditors, Deloitte, questioned the rebates, realised that inventory values were too high, yet certified that the company was a going concern. A review of the 2015 annual report indicates that inventory represented almost 60% of total assets and was twice the net asset amount. However, in this report there is no mention of these rebates or their impact on profit and the audit report does not suggest any issues of concern. Referring to the previous definition of professional judgement in this chapter, in your opinion what elements in that definition may not have adequately been practiced?

1.6 The case study approach

LEARNING OBJECTIVE 1.6 Understand the case study approach and the steps to take in answering case study questions.

Throughout this text, case studies will be used that will allow you to practice critical thinking and assist you to develop the skills that accountants require in practice. This section explains what case studies are, why these have been used and outlines a framework to use when answering case study type questions.

What is a case study and why are they used?

A case study involves a description of a scenario or situation, within a particular discipline context. Case studies provide an opportunity to:

• think about the complexities of real-life situations that you may face in the workplace
• make connections between the theory you have learned and real-life practice
• provide realistic, reasonable and practical solutions to real-life problems.²⁶

The value of case studies is not in the specific case being considered. The purpose is not to ‘learn’ the case. The key benefit is that case studies provide a platform for integrating and applying the discipline’s body of knowledge, developing and demonstrating analytical skills and critical thinking, that underpin the exercise of professional judgement. These are the type of skills that employers of accounting graduates are seeking. A report by Hancock et al. into the changing skill set for professional accounting found that:

Employers valued [an accounting graduate’s] ability to relate concepts learned at university to new situations in the workplace, the ability to think for oneself, the ability to regard critically new information and situations. Theory learned at university needed to be applied to a range of new problems and contexts and the graduate who had this ability was in demand. Problem solving was strongly related to being able to apply theoretical knowledge learned at university to real-life situations encountered in the workplace. Employers valued highly the ability to apply knowledge from one workplace context or problem to another.²⁷
Types of case studies
A case study may be factual, or it may be fictitious; it may be short or long; it may be relatively simple or extremely complex; narrow or broad. The focus may also vary. Some case studies may be aimed at deriving a solution to a particular problem or question. For example, the aim may be to:
• determine how a particular event or transaction should be recorded and/or disclosed — for example, should it be recognised as an asset? If so, how should it be measured?
• determine what type of compensation package should be offered to employees in a particular scenario.
  In such case studies, often there may be no one answer. Rather the emphasis is on identifying and evaluating possible options/solutions. Alternatively the aim may be to identify the issues involved and undertake further analysis to provide information on which decisions can then be made. This may or may not require a solution or actions to be suggested. For example, the case study may:
• describe the release of particular accounting information and share price reactions (or non-reactions) — the aim may be to undertake an analysis that can explain and provide an understanding of what has occurred, and why
• require the impact of a new accounting standard on a particular company to be determined and explained — this could also require suggesting strategies to mitigate any adverse effects
• describe a situation where a company is considering introducing integrated or sustainability reporting and require an exploration of the advantages and disadvantages of such reporting for the company
• describe inconsistencies in accounting for particular transactions between companies, and require an analysis of why these inconsistencies have occurred — this could also require suggestions as to how to eliminate the divergence in accounting treatments.
  For a case study, context is crucial. The analysis needs to consider the particular circumstances of the case study. A generic one-size-fits-all analysis is not appropriate. The analysis needs to be sensitive to the particular settings and environment. For example, recommendations for effective corporate governance structures would vary between a large public company and a privately owned company; considerations in selection of a new board member in a large company would be influenced by the characteristics of existing board members; suggestions to regulate financial reporting or businesses will vary depending on cultural influences, the legal regime and effectiveness of enforcement practices within jurisdictions.

How to approach a case study question
Below are six steps to follow when approaching a case study and accompanying questions.

Step 1: Read quickly through the case study
The aim here is to start familiarising yourself with the information provided and the context, before you begin examining the case study in detail.

Step 2: Read the question
It is very important that you know what you are required to do. The purpose of the case study directs your subsequent analysis. Do you need to determine how to record an event or transaction? Do you need to provide an explanation as to what has occurred? Do you need to respond to claims made, or assess the validity of arguments? Do you need to outline potential consequences and/or suggest strategies?

Step 3: Read the case study again carefully
Reconsider the information in the case study, given the questions to be answered, and identify the key elements in the case study that are relevant. The case study may be muddled so it can be useful to reorganise and clarify:
• what hard data is included
• what is happening or what is the matter of interest
• what the perspective is, what company or person is involved, and how this could affect the analysis.
At this point you may also identify:
• information in the case study that is not relevant (given the focus of the questions)
• gaps in the information provided in the case study. It maybe that some information that would assist in answering the questions is missing. This could mean you need to make some assumptions, place caveats on any recommendations, or your answer may include recommendations to obtain further information before a final decision is made.

Figure 1.2 summarises the suggested steps to take in attempting a case study question.

**FIGURE 1.2** Steps in attempting a case study question

**HOW TO APPROACH A CASE STUDY**

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Read quickly through the case study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>Read the question</td>
</tr>
<tr>
<td></td>
<td>What is it you need to do?</td>
</tr>
<tr>
<td>Step 3</td>
<td>Read the case study again carefully</td>
</tr>
<tr>
<td></td>
<td>Consider in context of question</td>
</tr>
<tr>
<td>Step 4</td>
<td>Identify the discipline practice, concepts or issues (including any theories and research) that may be relevant and that you need to consider and/or apply</td>
</tr>
<tr>
<td>Step 5</td>
<td>Apply the concepts or issues identified in step 4 to the case study</td>
</tr>
<tr>
<td></td>
<td>Requires critical analysis and evaluation of alternatives</td>
</tr>
<tr>
<td>Step 6</td>
<td>Write your answer</td>
</tr>
<tr>
<td></td>
<td>Plan and structure this</td>
</tr>
</tbody>
</table>
Step 4: Identify the discipline practice, concepts or issues (including any theories and research) that may be relevant and that you will need to consider and/or apply

You need to take a systematic approach to ensure all potential concepts/theories/issues that may be relevant are considered. As the case studies in this text are directly related to materials in a particular chapter, these may direct you to certain concepts/theories/issues to consider. Hence, a first step is to review the key concepts/theories in the chapter and consider which of these may be of use in addressing the questions. This is a practical approach for case studies in this text. Obviously in real-life such an approach would not be possible. Further, some case studies may require you to also consider discipline practice, concepts or issues from outside the particular chapter. For example, if a case study required you to consider whether and how to implement a bonus plan for managers linked to environmental performance as well as financial success, it would be appropriate not only to consider agency theory (from the chapter on theories in accounting) but also issues relating to the identification and measurement of environmental performance (from the chapters focusing on measurement, and sustainability and environmental accounting).

For case studies where you need to determine how to account for a particular event or transaction, a hierarchical analysis is proposed, where first you consider the underlying principles in the Conceptual Framework before considering specific accounting pronouncements or practices. This framework-based approach, where analysis considers the underlying framework and principles, before considering more specific guidance, is advocated in the IFRS Foundation Education Initiative. The application of this approach will be used in the chapter that discusses the Conceptual Framework for Financial Reporting.

Step 5: Apply the concepts or issues identified in step 4 to the case study

This is where you use your knowledge of discipline practice, concepts, theories and research identified in step 4, to address the questions and connect theory and practice to the particular case study. This requires critical thinking where you systematically question, analyse and evaluate.

You may want to consider the following questions.
• How can the discipline practice, concepts, theories or research inform this case?
• What information or statements are in the case study? Are these fact or opinion? Are these consistent or inconsistent with each concept or theory?
• What evidence supports or refutes the information/statements?
• How valid are any arguments made? How credible are any sources?
• What assumptions, if any, have been made — either implicitly or explicitly?
• How can the particular concept or theory help address the concerns or circumstances in this case study, or explain what has occurred?
• Does the analysis of concepts/theories indicate areas that have not been considered but that should be?
• What alternatives, if any, arise from this analysis?
• How will you evaluate any alternatives in terms of advantages and disadvantages?
• How would the specific context of this case study influence the effectiveness of available alternatives?

Step 6: Write your answer

It is important to plan and structure your answer. The structure will depend on the nature of the case study and the questions that you have been asked to address.
• Structure your answer logically so that it is easy for the reader to follow your findings, arguments and the basis for these. A short introduction can help guide a reader.
• Identify, in writing, each concept or theory that is considered, so that the reader has no doubt about the knowledge, concepts or theories that you are applying. This also provides support and validity for your answers.
Overview of chapters in this text

This book examines issues related to financial accounting. Many of these involve consideration of associated theories and research, although the extent will vary. There are many issues in and influences on financial accounting and it is not possible to consider all of these in one book, so the text is selective and chooses issues to consider based on their significance, prevalence and contemporary relevance. The topics chosen should provide you with an understanding of a range of issues and influences confronting financial accounting that will help you recognise the implications and rationales behind some of the decisions, changes and developments in the accounting arena. The following is an overview of the chapters considered in this book.

The Conceptual Framework for Financial Reporting

This is a theory that you should already be familiar with, at least in part, from your previous studies in accounting. Conceptual frameworks, which specify the purpose of financial reporting and the nature and qualities of information to be included in financial reports, have been dominant in theories of accounting both locally and internationally for more than 20 years. The text looks at the theory itself, by looking at Conceptual Framework issued by the International Accounting Standards Board, and recent developments to this as a result of the joint project by the international and United States accounting standards bodies to develop a common conceptual framework. The chapter also considers the alternative reasons and rationales for having such a theory as the Conceptual Framework and looks at some specific criticisms of these. This chapter also illustrates the application of the Conceptual Framework to items where recognition is more problematic and controversial: intangibles and heritage assets.

Standard setting

This chapter examines the application of the Conceptual Framework in its practical form: accounting standards. It considers the process of setting accounting standards and examines the structure of this procedure in Australia in more detail. It also considers the benefits and disadvantages of rules-based over principles-based standards and examines several theories of regulation and arguments for and against regulation. It also examines the political nature of the standard-setting process, and looks briefly into the program to harmonise international standards.

Measurement

This chapter considers one of the most controversial areas of accounting: measurement. A variety of measures are currently used in financial reporting. The Conceptual Framework, in its recognition criteria, requires that items reported in the financial statements be measured. However, the Conceptual Framework does not specify how the items are to be measured. This chapter considers the alternative
measurement choices that are available and the factors to be considered in determining which measurement approach is most appropriate. It also identifies some specific areas, such as intangibles and sustainability reporting, that involve unique challenges in terms of measurement.

**Theories in accounting**

While the chapter on contemporary issues in accounting considers theory in general, this chapter is concerned with the role of theories in the specific context of accounting and how theories can be used to explain, understand or guide accounting practice. The distinction between positive and normative theories is outlined. Further, this chapter explains a number of dominant theories in accounting including agency theory, stakeholder theory and legitimacy theory and considers how these are applied to financial reporting issues.

**Products of the financial reporting process**

The products of financial accounting include general purpose, special purpose and voluntary reporting practices. This chapter considers some of the ways these accounting products are manipulated (both legally and illegally) and undertakes an examination of the purpose of reported disclosures. It looks closely at the value of disclosures not required by law and the methods open to entities to manage their image through voluntary, non-regulated disclosure. It also examines some theories of management motivation which attempt to explain why entities supply voluntary information in the first place.

**Corporate governance**

Corporate governance is concerned with how companies are managed and controlled. Financial accounting plays a key role in ensuring good corporate governance, which this chapter discusses. There are theories of accounting that support the introduction of corporate governance practices and may provide explanations for some financial reporting problems (such as accounting policy choice research). The chapter also considers developments in corporate governance practices, including the role of accountants, resulting from the effects of the global financial crisis and the expansion of corporate governance principles beyond corporate entities. It also provides examples of where deficiencies in corporate governance have been associated with corporate failures. Furthermore, it briefly considers the role of ethics in corporate governance and accounting practices.

**Capital market research and accounting**

Capital market research considers the relationship between security (share) prices and accounting information. Given that investors are often seen as the traditional users of accounting reports, it makes sense to see how much share prices reflect and are affected by accounting information. The research in this area considers such questions as whether the accounting information provided was useful and also examines the effect that changes in accounting policies have on share prices.

**Earnings management**

The issue of earnings management, whether by accounting policy choice or other methods of manipulation, has been associated with a number of corporate scandals and collapses. This chapter examines the meaning and types of earnings management and how earnings management has an impact on the quality of reported earnings. It also considers some examples where earnings management has been associated with corporate failures. Further, it considers the roles of corporate governance and managerial compensation in this context.

**Fair value accounting**

There has been an increasing use of fair value as the measurement basis for many items in financial statements and fair value is viewed as the preferred alternative by many to address the criticisms of the historical cost approach traditionally used in accounting. However, the determination of fair value in
particular circumstances is problematic as it involves subjectivity and this can lead to possible manipulations, distortions and inconsistencies. With this in mind, this chapter outlines the application of fair value in specific contexts, considering the guidance and direction provided in the international accounting standard.

**Sustainability and environmental accounting**

With the impact of climate change, sustainability is an increasing area of concern and interest for both society in general and for businesses. This chapter explores the meaning of sustainability and the role of accounting in sustainability reporting. It examines alternative reports that consider sustainability such as triple bottom line, social and environmental reporting practices. It also considers international guidelines that provide methods for comparing and analysing this kind of non-financial information and environmental management systems that support such reporting. The chapter also considers how sustainability issues affect non-government organisations (NGOs) and explores how collaborations between NGOs and corporations have been used to address major sustainability issues.

**International accounting**

Business in the twenty-first century operates globally. Increased foreign investment and access to capital markets have opened countries that were previously closed. Accountants and managers need to keep up to date with changing accounting and financial complexities when doing business on an international scale. The chapter introduces international accounting and highlights a range of issues that impact on financial reporting around the world.
SUMMARY

1.1 Reflect on the nature of accounting and the role of accountants
- Accounting is not a precise uncontested technical exercise.
- Financial accounting requirements are principles based and the application of appropriate accounting and reporting relies on the exercise of professional judgement.
- The role of the accountant is changing and is influenced by increasing complexities and changes in economic activities, societal expectations and developments in technology.

1.2 Define ‘theory’
- There is no one definition of theory because theories can do different things; they can describe, predict, explain and prescribe.
- Accounting theory in this text is defined as either a description, explanation or prediction of accounting practice or a set of principles on which to evaluate or guide practice.

1.3 Reflect on why theory is needed and appreciate the need to evaluate theories
- Theories help us to understand and make sense of the world. They help to explain, describe, predict and guide decisions and actions. Any critical analysis should be informed by theories.
- In financial accounting, theories can help the understanding of current accounting practice and also provide the means to improve it by:
  - describing and explaining current accounting practice
  - providing principles on which to base actions and decisions in financial accounting
  - identifying problems and deficiencies with current accounting practice
  - providing suggestions for change.
- There are a number of reasons theories might be accepted without first-hand or direct knowledge. These include:
  - the authority of the source of the theory
  - whether the theory makes sense and fits with personal experiences and beliefs
  - whether other people accept the theory.
- A researcher or professional in a particular discipline would be expected to apply more legitimate, independent and justifiable methods in assessing and evaluating theories. These include:
  - examining the logical construction of the theory
  - considering evidence that confirms or refutes the theory.

1.4 Understand the nature of research and its relationship to theory
- Research is an activity that involves investigation. Research can be used to test or to derive theories.
- Various types of research is undertaken in financial accounting, which contributes to knowledge of financial accounting issues and can also result in changes to financial accounting practice and developments.
- Research of or about accounting considers the role of accounting itself (the bigger picture) at the macro level.
- Research in accounting focuses more at the micro level on issues within accounting.

1.5 Identify some of the research areas in accounting
- Some of the major research areas in accounting include:
  - capital market research
  - accounting policy choice research
  - accounting information processing research
  - critical accounting research
  - international accounting research.

1.6 Understand the case study approach and the steps to take in answering case study questions
- A case study involves a description of a scenario or situation, within a particular discipline context.
• A key purpose of case studies is to provide an opportunity for integrating and applying the discipline’s body of knowledge, developing and demonstrating analytical skills and critical thinking, and to practice exercising professional judgement.
• A systematic approach is required to ensure all relevant issues are addressed, considered and the adequate identification and evaluation of alternatives is undertaken.

KEY TERMS
accounting standards authoritative statements that guide the preparation of financial statements
accounting theory either a description, explanation or prediction of accounting practice or a set of principles on which to evaluate or guide practice
corporate governance the system by which corporations are directed and controlled. It includes the rights and responsibilities of different participants in the organisation, and the rules and procedures for decision making
corporate social responsibility a term referring to management choosing business practices that benefit society, for example choosing to voluntarily disclose non-compulsory information in annual reports
empirical research research based on observation or experience
ethics the standards of conduct that indicate how one should behave based on moral duties and virtues
financial accounting the regular reporting of the financial position and performance of an entity through financial statements issued to external users
integrated reporting a proposed framework for accounting for sustainability. The framework is anticipated to bring together financial, environmental, social and governance information in a clear, concise, consistent and comparable format
research diligent, systematic enquiry into a subject to discover facts or principles
stakeholders those individuals or groups existing in society that an organisation impacts, and/or that have an influence on an organisation

REVIEW QUESTIONS
1.1 ‘Accounting is merely a technical exercise and all accountants need to do is follow the rules’. Drawing on your understanding of accounting, discuss whether this statement is correct. LO1
1.2 What is meant by ‘professional judgement’? Consider the Pathways Vision Model in figure 1.1 and explain the role of professional judgement in accounting. LO1
1.3 Define what is meant by ‘theory’ and explain how theory is useful. Do you think theory needs to be considered in accounting? LO2
1.4 It has been stated that ‘many people accept theories without justification’. Identify reasons people may accept theories. Provide examples of theories that you accept or believe although you may not have direct knowledge in the area. LO3
1.5 Identify a theory that you have heard about (this can be about any area, e.g. global warming). Consider how you would test whether this theory was true. Do you think you could prove it? LO4
1.6 What is your understanding of the term ‘research’? LO4
1.7 Explain the role of research and how this relates to theory. LO4
1.8 Outline the different classifications of research. LO5
1.9 Explain why case studies are used and outline the suggested steps in answering case studies. LO6
APPLICATION QUESTION

1.10  (a) Search (either on the internet or via your library database) for academic journals that publish research in accounting. Some examples of journals are:
   - Accounting, Auditing & Accountability Journal, www.emeraldgrouppublishing.com/products/journals
   - Abacus http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1467-6281
   (b) Read the abstracts for three articles in the latest issue of two of the journals you have located and for each abstract:
      - identify the purpose of the research undertaken
      - explain how this research could assist in improving accounting.  

CASE STUDY 1.1

ECONOMIC THEORIES THAT HAVE CHANGED US: EFFICIENT MARKETS AND BEHAVIOURAL FINANCE

Whether you realised it or not, if you’ve ever invested in the stock of a company, or have mutual funds in your superannuation, you’ve taken a stance on one of the biggest economic debates of the last 50 years. That debate is about whether stock prices (or bonds, or even property for that matter) reflect all available information. Another way to frame it — as Justin Wolfers and I did when discussing the 2013
Nobel Prize in Economic Sciences — is whether prices reflect the wisdom of crowds, or the madness of crowds.

**Efficient markets**

The starting point in this debate was the extraordinary contribution of Eugene Fama (of the University of Chicago) who developed the ‘efficient markets hypothesis’. According to this view, stock prices incorporate all available information and hence there are no profitable arbitrage opportunities.

How would one go about demonstrating this? After all, in economic scholarship one doesn’t just get to argue in prose. What Fama showed was that at any moment in time the next movement of a stock price is just as likely to be up as down. Or, a little more formally, stock prices follow a ‘random walk’. This finding is probably the most successfully, repeatedly replicated finding in all of the social sciences.

Now that’s the short run. Even Fama himself (with co-author Kenneth French) found that stock prices are predictable in the long run. They showed that small market capitalisation stocks outperform large ones, and that high market-to-book value stocks also outperform. Their interpretation is that this is compensation for taking on extra risk, and is thus consistent with efficient markets.

**Behavioural finance**

Beginning in earnest in the early 1990s, however, a different set of theories emerged. Economists such as Richard Thaler (of ‘Nudge’ fame), Robert Shiller and Andrei Shleifer began to take seriously the role of psychology among investors.

Social psychologists such as Nobel Laureate Daniel Kahneman (with whom, interestingly, Thaler was an important collaborator, thus providing the bridge from psychology to economics) had long documented human departures from rationality. For example, people tend to overweight recent events relative to equally important past events. People are ‘loss averse’ in the sense that they overweight losses relative to equal-sized gains. People often attribute events to skill when they are actually the product of luck. And so on.

These sorts of cognitive biases have profound implications for asset pricing. If people overact to information then we would expect companies that report unexpectedly bad earnings to suffer a big hit and then bounce back over time. We would similarly expect companies that announce unexpectedly good earnings to get a big bump and then drift back down over time. And indeed we do. The empirical evidence is overwhelming on this point.

Loss aversion should mean that stocks that have dropped from when most people bought in, behave differently from those that have risen. Again, the evidence is in and it confirms the psychological insights.

The list goes on. Indeed, tracking down and documenting these kinds of effects is what modern day empirical asset pricing is largely about.

**Index fund or hedging strategy?**

Now, back to stock picking and mutual funds. If one subscribes to Fama’s efficient markets view of the world then stock picking is a fools errand. Even if you end up doing well, all that has happened is that you have been compensated for taking on extra risk. Things could have turned out really badly, and you were lucky. For instance, maybe you invested in Australian mining companies during the early 2000s. We now know that was a very profitable investment — but it could have been different, and nobody knew ahead of time. Under the Fama view the best thing to do is invest in the whole market — buy a low cost index fund.

If you take the behavioural finance view, then there are profitable opportunities beyond investing in the whole market. But that doesn’t mean that it’s easy for individual investors to take advantage of those. Okay, people are loss averse, now what? Taking advantage of these takes a fair degree of sophistication, and it also typically requires having low enough trading costs to be able to trade often without wasting a lot of money on fees. This is why there are hedge funds that specialise in this kind of investing.

Whichever view you subscribe to there are two things that never makes any sense: investing in a stock because you think it’s a good company (I like shopping at David Jones, but that doesn’t make it a good investment) or picking an industry that you think is going to do well.
Efficient markets devotees will tell you that information is already factored in. And behavioural finance aficionados will tell you that it is you that is suffering from a cognitive bias.

*Source:* Richard Holden, ‘Economic theories that have changed us: efficient markets and behavioural finance’, *The Conversation.*

**QUESTIONS**

1. Briefly outline the two theories that are explained in this article.

2. The article states that these theories prescribe opposite actions for investors. If you were considering investing in the share market, which theory would you follow? How did you decide?

3. Discuss whether you believe that these theories have any relevance to, or implications for, accounting or accountants?

4. The article states ‘there are two things that never makes any sense: investing in a stock because you think it’s a good company...or picking an industry that you think is going to do well’. Does this mean that you should invest in bad companies, or if the industry is doing poorly? Explain your answer.

5. Discuss how this article may illustrate the overall limitations of theories.

**CASE STUDY 1.2**

**ACCOUNTING FOR POWER: THE HISTORY OF AN INDUSTRY THAT SHAPED THE WORLD**

The number crunchers who helped create our capitalist world have been measuring the world since ancient times.

In ancient Mesopotamia, Babylonia, Egypt, Rome and in Greece, the world saw the first flowering of an industry that would document and shape its progress. Wealthy landowners, emperors, princes and kings would keep track of their gold and grain using papyrus, stones or wooden tablets to keep records after purchases and sales.

This was how the art of accountancy was born. In Abydos, in the Egyptian tomb of King Scorpion, 5300-year-old bone labels were found by the archaeologist Günter Dreyer inscribed with marks and
attached to bags of oil and linen. By the time of Emperor Augustus, some 2000 years ago, inscriptions had evolved to become an account to the Roman people of the emperor’s stewardship, listing and quantifying his public expenditure covering a period of about 40 years.

In the modern day, accounting has become a key social technology of a capitalist society, for better or worse. It has become a vast network. More than 485,000 people are members of professional accountancy bodies worldwide, collecting, analysing and communicating data for clients who might be parsimonious pensioners or spendthrift tech firms.

**New babylon, new danger**

For many people in this post-financial crisis (and possibly pre-financial crisis) world, accountants and auditors are the occasional villains of the story, hunting down and exploiting loopholes for the wealthy and the profit-driven, or waving through bank balance sheets loaded with risk. So how did the accounting industry become such a crucial part of civilisation?

**Renaissance to revolution**

Accountancy grew in stature as taxes became more common. It was revolutionised with the emergence of a modern style of bookkeeping during the Italian Renaissance which offered more reliability and encouraged confidence. Luca Pacioli, an Italian mathematician and friar, offered a treatise on double-entry bookkeeping in 1494 which described the method used by Venetian merchants and made him famous as the father of accounting.

The next leap forward arrived as England started to build its economic strength in the 18th century as a centre of global trade, and in the 19th as the birthplace of the industrial revolution. Rapid economic growth brought transport and technical innovations and at the same time an accounting system was developed to address the aggregation of capital, methods of labour and production costs and income determination.

For cotton textile manufacturing firms, accounting focused on annual inventories of stock, debts and credits and a private ledger with partners’ interests. These accounts contained information about valuing a company to sell stock and to create a financial market.

In a familiar tale however, complexity brought creativity. There was a succession of corporate scandals among railway companies in the mid 1800s as funds were raised on false premises for the construction of railway lines. Subsequent insolvencies led to the need for company regulation while encouraging the rise of advanced cost accounting systems and greater control through auditing and winding up procedures.

The rise of commercial companies was unchecked, though, and as they increased in number so bookkeeping became more refined. The industry gained a royal charter, which brought a new respectability — on the same footing as barristers — and presaged the creation of professional accountancy bodies and their expansion worldwide.

**Capitalist accounting**

In *Der Moderne Kapitalismus*, Werner Sombart argued that double-entry bookkeeping actually enabled the birth of capitalism. It allowed assets to become quantitative values within a business while systematic accounting in the form of double-entry bookkeeping made it possible for capitalist entrepreneurs to plan, conduct and measure the impact of their activities. It also allowed for a separation of owners and the business itself, through the sale of shares, leading to growth.

Accounting has also been a powerful imperial tool, employed to control and protect investments around the world. This directly helped the process of accumulation of capital in favour of the capitalist interest in colonial societies. Being part of the British Empire meant that you were subject, not just to the monarch, but to British capital, to British accountants, to British laws and education — and to the absorption by colonial accountants of British accounting models that survived after independence.

Accountants remained in the former colonies to support and protect the continued corporate interests, the operations of multinational firms and the investment activities of supranational organisations like the IMF, World Bank and World Trade Organization. Simply put, there is a straight line to be drawn from the accounting infrastructure which underpinned imperial expansion and the advance of global capitalism.
Global power
You see, the development of global capitalism gave accountants a fundamental role. Their techniques and practices had a significant impact upon the measurement and distribution of income, on the allocation of wealth, the operation of capital markets and the flow of capital investments.

You can see it in the role played by English and Scottish accounting practitioners in the development of the profession in the US. This led many UK audit and accounting firms to develop US connections from the 19th century. Growing trade between the UK and US saw PricewaterhouseCoopers (PwC) open an office in New York in 1890 and the trend continued to 1989 when Ernst & Whinney merged with Arthur Young to create Ernst & Young.

And so the world now had active Anglo-American firms, seeking to expand their activities beyond national borders and reflecting their desire to exploit and accumulate capital across the world.

The fabled Big Four accounting firms (EY, Deloitte, PwC, KPMG), established in the late 1980s, were oriented towards international clients and labour markets. They have played a significant role in shaping global accountancy practices and the nature of capitalism worldwide in the era of the multinational.

Shaping societies?
As a social and institutional practice, accounting is a set of practices that affects the social reality we inhabit. It defines our understanding of the choices open to businesses and individuals, and how we organise and administer the lives of others and ourselves.

The power that the industry has achieved since those Babylonian landowners made a note of their transactions has facilitated tax avoidance by Google, Amazon and Starbucks, and the balance sheet trickery which underpinned the 2008 financial crisis.

The power is money, pure and simple. Accounting firms are paid fees to help their clients, legally, avoid paying tax on their sales. Companies transfer wealth from society to capital with the help of an accounting industry that has been at the heart of capitalism since the very beginning. The architecture has deep foundations, and it allows corporations to sidestep the sources of revenue which might enable governments to improve the quality of life.

Source: Christina Ionela Neokleous, ‘Accounting for power: the history of an industry that shaped the world’, The Conversation.

QUESTIONS
Some of the issues addressed in this article will be considered in detail in later chapters in this text. Please answer the following questions, given the material in this current chapter and your own understanding of accounting.

1. Do you think the claims made in this article about the impact of accounting on the world are consistent with the role of accounting as depicted in the Pathways Vision Model in figure 1.1? Explain your answer.

2. The article infers that accounting has privileged corporate interests over broader social interests. Identify an example of this from the article. Do you believe that accounting has a role in balancing the interests of corporations and society?

3. The article claims that ‘complexity brought creativity’ and that accountants ‘exploited loopholes’. Can you suggest any ways to reign in ‘creativity’ by accountants? Do you believe that more exact accounting rules (rather than principles-based rules) would help solve the problem of creative accounting? LO1, 6

CASE STUDY 1.3
ABSTRACTS FROM CRITICAL ACCOUNTING RESEARCH
Accounting lays claims to be the language of business: a clear, technical, unambiguous means of communication for decisions on investment and economic development. Accounting concepts have increasingly entered mainstream debate on issues affecting society at large. This makes the fairness and effectiveness of accounting as a mode of communication more important for social justice than ever before. In a contentious development, if the discussion is framed primarily in accounting terms, this may
disenfranchise those parties to the dispute whose issues are not readily expressed in the common vocabulary of business. Their concerns may become invisible in the debate. If this happens, then accounting has failed as a means of communication, and that failure is non-neutral in that it favours those whose position is best supported by economic arguments.

This paper explores this phenomenon using the case of a dispute between Royal Dutch Shell and a local community in Ireland concerning a gas refinery located in an environmentally sensitive area. The issues in conflict are complex and at times intangible. I explore how the limitations of accounting as a language blinded the protagonists to an understanding of each other’s concerns, marginalised the concerns of protestors from the public discourse, shifting power from objectors within the local community to those whose primary concern was the economic exploitation of natural resources. I argue that accounting failed as a mode of communication to progress a resolution of the dispute, and that this failure was both unnecessary, and systematic in its support of economic interests.

Source: Abstract by Sheila Killian, “‘No accounting for these people’: Shell in Ireland and accounting language’, Critical Perspectives on Accounting.30

Such major scandals as the savings and loan failures in the late 1980s and 1990s, the Enron, Global Crossing, WorldCom and Tyco corporate scandals, Arthur Andersen’s demise, and the current crisis of the financial system have all been linked directly or indirectly to false, misleading, or untruthful accounting. Thus, in a pragmatic sense the question of the veracity of accounting or what it could mean for accounting to be true seems to exist. The assertion of a false or misleading financial report implies some belief that there could exist a true or not-misleading report. Accounting standard setters have finessed this issue by agreeing that ‘decision usefulness’, not truth, is financial reporting’s ultimate objective. Over time they have gravitated to a coherence notion of truth to provide rationales for accounting policy. The result has been a serious conflict between the content of financial accounting and the auditing of that content. In this paper we describe this conflict and its consequences and, relying on John McCumber’s work, provide an argument about how accounting scholars and practitioners might begin to think more cogently about what a truthful type of corporate reporting might be. We suggest that accounting-standard setters have too narrowly construed what accounting’s role in democratic society is and how the contradictions of current standard setting jeopardise the essential professional franchise of accountants, the audit function.

Source: Abstract by Bayou ME, Reinstein A & Williams PF, ‘To tell the truth: A discussion of issues concerning truth and ethics in accounting’, Accounting, Organizations and Society.31

QUESTIONS

1. In each of these abstracts the notion of true or fair accounting for financial statements is considered. Identify any requirements in accounting standards or corporations legislation that relate to the truth or fairness of financial statements or reports.

2. Can you think of reasons why there could be claims that financial statements that are prepared in accordance with accounting standards are not true or fair?

3. The first abstract states that current accounting ‘may disenfranchise those parties to the dispute whose issues are not readily expressed in the common vocabulary of business’. What do you think the author means by ‘the common vocabulary of business’? Given this, what type of issues may not be included in accounting reports or statements and how could their exclusion impact on decision making?

ADDITIONAL READINGS


CHAPTER 1 Contemporary issues in accounting 31
END NOTES

2. The Pathways Commission, AAA & AICPA 2014, Implementing the recommendation of the Pathways Commission: Year Two, figure 3, p. 15.
4. ibid.
14. del Castillo, M 2016, ‘“Big Four” accounting firm Deloitte is now running a bitcoin ATM’, CoinDesk, 7 September.
15. Ridell, C 2015, ‘Surfing the wave’, Acuity, iss. 11.
27. Hancock, P, Howieson, B, Kavanagh, M, Kent, I, Tempone, I & Segal, N 2009, Accounting for the future: more than numbers 2009, vol. 1, p. 42. Support for the original work was provided by the Australian Learning and Teaching Council Ltd, an initiative of the Australian Government Department of Education, Employment and Workplace Relations.

ACKNOWLEDGEMENTS

Photo: © TK Kurikawa/Shutterstock.com
Photo: © JLRphotography/Shutterstock.com
Photo: © Rido/Shutterstock.com
Photo: © Sarawut Chamsaeng/Shutterstock.com
Figure 1.1: © The Pathways Commission, AAA & AICPA 2014, Implementing the recommendation of the Pathways Commission: Year Two, figure 3, p. 15, commons.aaahq.org/files/4d57647ac0/PathwaysAnnualReport.pdf
Article: © ‘Blockchain technology: everything you need to know’, INTHEBLACK, Head, B 2016, 1 October, CPA Australia
Article: © https://theconversation.com/some-answers-more-questions-over-dick-smith-failure-62485
Article: © Holden, R 2015 ‘Economic theories that have changed us: efficient markets and behavioural finance’, The Conversation, 25 June
Quote: © Hancock, P, Howieson, B, Kavanagh, M, Kent, J, Tempone, I & Segal, N 2009, Accounting for the future: more than numbers