

INVISIBLE VALUE: THE CASE FOR MEASURING AND REPORTING INTELLECTUAL CAPITAL

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The measurement and reporting of intellectual capital emerged as an important issue at the Australian National Innovation Summit in February 2000. The Government's major statement on innovation, *Backing Australia's Ability*, announced earlier this year, is based on the recognition that intangible assets are outstripping traditional assets as drivers of growth. This paper reviews several internal and external measures of intellectual capital and international developments in this area.

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Part A

FOREWORD

By the Minister for Industry, Science and Resources

Intellectual capital is being regarded as an increasingly important factor in innovation and productivity growth, business competitiveness and economic performance. Innovation - developing skills, generating new ideas and turning them into commercial success - is the key to Australia's future prosperity.

This means we need to better manage our intellectual capital in order to increase our innovative capacity. But how do we manage something that traditionally has not been measured and how do we show the world the extent of our innovative capacity?

Australia has an immense store of intellectual capital and this Government recognised its importance and placed it as a high priority at the National Innovation Summit held in Melbourne in February 2000. Following the Summit the Government established an Innovation Summit Implementation Group to form key recommendations relating to innovation. One of the recommendations included the need to *enhance recognition of the significance of intellectual capital and intangible assets*.

The Government has acted on these recommendations and in January 2001, the Prime Minister announced our innovation strategy for the future - *Backing Australia's Ability*. This package includes a national innovation awareness strategy that supports activities aimed at formulating better measures of innovation and of reporting intangibles on company balance sheets.

This issues paper delivers on a commitment of *Backing Australia's Ability*. It is aimed at stimulating discussion and encouraging national debate about improved ways of measuring and reporting intellectual capital. It offers an introduction to the issues surrounding the identification, measurement, valuation and disclosure of intellectual capital.

The paper also canvasses international efforts to address the growing demand for information on intangible assets and notes that this issue is gathering increasing attention. The paper concludes that while not all intellectual capital can be put directly onto balance sheets, better reporting of off-balance sheet intellectual capital would improve investment decisions and resource allocation. This will help entrench more deeply a culture of innovation, from the shopfloor to the boardroom. It is by no means the last word on the subject.

Nick Minchin
June 2001

ABSTRACT

The rise of the new, more knowledge-based economy has driven the need to reexamine the key economic drivers of growth and well being. One such factor that is rapidly gaining prominence is intellectual capital. This paper reviews several internal and external measures of intellectual capital. Internal measures – such as the Balanced Scorecard – are used to manage, guide and enhance a firm's intellectual capital so it can be leveraged to generate greater value for the company. External measures, which include market-to-book value, Tobin's Q and Real Option Theory focus on investors and others attempting to value a company (provides a signal to external parties). Here, greater emphasis is placed on external reporting and consequently is subject to accounting standards and financial regulations - although, a specific accounting standard that adequately addresses intangibles has yet to be developed. This paper also examines the current state of play, both in Australia and overseas and reports on the concerns raised if the International Accounting Standard on intangibles (IAS 38) was to be adopted in Australia.

INTRODUCTION

Intellectual capital is hidden treasure in most businesses. Also known as intangible assets or intangibles, it is now an increasingly important factor in innovation and productivity growth, business competitiveness and economic performance. However, although most companies acknowledge that intellectual capital is their most valuable asset, conventional accounting systems have no capacity to incorporate it on balance sheets. Indeed, many accounting standard setters oppose the recognition of it on balance sheets — they claim that even if intangible assets are identifiable, measures of it are highly subjective and lack sufficient reliability.

The measurement and reporting of intellectual capital emerged as an important issue at the Australian National Innovation Summit in February 2000. The Government's major statement on innovation, *Backing Australia's Ability*, announced earlier this year, is based on the recognition that intangible assets are outstripping traditional assets as drivers of growth.

The Australian Accounting Standards Board has announced that on their current work program, the Intangible Assets project has been ranked as the highest priority.

This paper provides a background discussion on intellectual capital by examining:

- what it is;
- the economics of intellectual capital and the role for government;
- internal and external models for measuring and reporting intellectual capital; and
- intellectual capital in Australia and overseas.

A more detailed paper including a bibliography and a range of web-links is available from the New Economy branch, Department of Industry, Science and Resources on 02 6213 6943 or email nghi.luu@isr.gov.au.

Part B

1. WHAT IS INTELLECTUAL CAPITAL?

Intellectual capital covers a multitude of areas and economists, accountants and standard setters are yet to agree on a global definition. It is often referred to as intangible assets or intangibles. A simple definition of intellectual capital is:

Knowledge that can be converted into value.

Another definition states:

Intellectual capital is intellectual material—knowledge, information, intellectual property and experience that can be used to create wealth.

Researchers first became interested in defining intellectual capital in the 1960s. But the demand for information at that time was not strong enough to drive continued research and development. However, in the last decade the change in the global economy—from being manufacturing and industry-based to being knowledge-based—created renewed interest in intellectual capital and increased demand for measuring and reporting its effect on business and profitability.

1.1 Components Of Intellectual Capital

Intellectual capital includes, *inter alia*, inventions, ideas, general know-how, design approaches, computer programs, processes and publications. Understanding the different components helps improve its management and use at a strategic and operational level.

One of the most popular models for classifying intellectual capital is the Hubert Saint-Onge model developed in the early 1990s. It divides intellectual capital into three parts:

- human capital;
- structural capital; and
- customer capital.

A slight variant of this model, devised by Dr Nick Bontis, Director of the Institute for Intellectual Capital Research, re-states customer capital as relational capital to include relationships with suppliers.

Human capital is recognised as one of the largest and most important intangible assets in an organisation. Ultimately it provides the goods or services that customers require or the solutions to their problems. It includes the collective knowledge, competency, experience, skills and talents of people within an organisation. It also includes an organisation's creative capacity and its ability to be innovative. Although investment in human capital is growing, there is still no standard measure of its effectiveness on companies' balance sheets.

Structural capital is the supportive infrastructure for human capital—it is the capital which remains in the factory or office when the employees leave at the end of the day. It includes organisational ability, processes, data and patents. Unlike human capital, it is company property and can be traded, reproduced and shared by, and within, the organisation.

Relational capital is a company's relationship with its customers and with its network of suppliers, strategic partners and shareholders. The value of these assets is determined by the company's reputation or image. The challenge in measuring relational capital is to quantify the strength and loyalty of customer satisfaction, longevity and price sensitivity.

2. THE ECONOMICS OF INTELLECTUAL CAPITAL

The recent focus on knowledge and innovation and their impact on the economy have created a renewed interest in intellectual capital—its importance to business, how it is defined and measured and the role of government.

A defining characteristic of a more knowledge-driven economy is the enormous flow of investment in human capital and information and communication technologies. The new knowledge economy potentially offers unlimited resources because the human capacity to create knowledge is infinite. Intangibles are fast becoming substitutes for physical assets and the laws that governed the capital-driven economy do not necessarily apply to a knowledge-driven economy. As Stiglitz noted, *as the importance of land in production changed dramatically when the economy moved from agriculture to industry, the movement to a knowledge economy necessitates a rethink of economic fundamentals.*

The accumulation of physical capital is no longer viewed as a measure of economic growth and development. Economists now look beyond traditional factors of production—labour, capital and land—as drivers of growth, development and productivity. Knowledge is now explicitly recognised as a key factor of economic production. In developed economies especially, these less tangible forms of capital accumulation contribute a great deal to economic activity and growth. Important contributions to the theory of investment in intangibles have emerged from three main streams:

- human capital theory;
- innovation theory; and
- new growth theories.

These theories underpin the main theories behind the process of economic growth and development. They highlight several key considerations that need to be understood by countries aspiring to be knowledge-based economies.

2.1 The Economic Nature Of Knowledge

Knowledge is the most elementary intangible capital asset and will increasingly be the predominant source of competitive advantage and wealth creation. Several key factors distinguish knowledge and information from traditional goods and services.

Knowledge exhibits increasing returns to scale. This leads to positive feedback and lock-in effects. The larger the network of users, the greater, and the more valuable, the benefit to everyone. Tangible assets—bricks and mortar, machines and computers—depreciate and produce diminishing returns over time. Knowledge creates more knowledge and delivers increasing returns.

Knowledge is diverse. It cannot be quantified in the same way as physical objects like land or industrial capital because its value depends on its relationship to the user. Each piece of information is different from every other piece of information. This means that information cannot satisfy the essential property of homogeneity that characterises competitive markets. Markets for trading intangibles are limited. There is a large risk element for buyers and sellers of knowledge—sellers do not give samples. But potential buyers cannot appraise the knowledge that they might buy without actually buying it—and have no use for additional units of knowledge identical to what they already have.

2.2 Role Of Government In The Knowledge Economy

Knowledge and information as commodities differ from ordinary commodities in several fundamental ways. These differences have implications for public policy.

Production or provision of knowledge generates considerable externalities. National public goods provide one of the central rationales for national collective action and the role of

government. In the new economy, an important role for governments in addressing this market failure is to ensure that knowledge is used efficiently and encourages innovation.

Knowledge is a global public good; more precisely knowledge can be considered a quasi-public good or an impure public good, because it is to some extent excludable—returns can be appropriated. Once it is discovered and made public, the marginal cost of supplying an additional item of knowledge to an additional user is essentially zero. Hence, the efficient use of knowledge requires that there be no charge. But without charging, companies and individuals have limited incentive to produce knowledge. The prospect of large returns on capital invested in intellectual capital and other intangible investments drives innovation and development. Governments reward investment and encourage innovation and development by:

- enacting patents and copyright laws that provide incentives for companies to produce knowledge; and
- by providing financial support in the form of grants or subsidies (for example, in research and development activities).

3. WHY IS INTELLECTUAL CAPITAL MEASURED?

The increasing interest in accounting for intangibles on balance sheets has been the result of growing disquiet that not accounting for them on balance sheets is producing misleading information. Supporters for a uniform accounting system for intellectual capital argue that it explains the difference between the book value and market value of companies. Opponents argue that balance sheets are not designed to be speculative and that determining precise figures is highly subjective and difficult to measure. Many accounting professionals argue against the inclusion of intangibles on balance sheets because:

- much of it is not owned or controlled by the organisation; and
- there are ethical concerns about including human capital on balance sheets—placing a price on individuals or quantifying the value of employees is a risk because it can give the impression that employees are, to an extent, substitutable for other forms of capital.

But not measuring intangible assets is creating problems in the corporate world—for example, under-investment, misallocation and information inequality between companies and investors. A uniform method of accounting for intangibles will deliver tangible economic benefits. One of the most important benefits will be an improvement in the allocation of resources as more information is available about the quality and cost of the resources.

Part C

4. HOW IS INTELLECTUAL CAPITAL MEASURED?

Conventional accounting systems were developed for manufacturing economies and measure the value of financial and physical assets—tangibles that can be quantified. These include plant, equipment, laboratories, land and natural resources—assets that are easily identifiable and can be sold for an agreed price. The global transition to knowledge-based economies has made this cost-based accounting of assets increasingly irrelevant.

For accountants and accounting standard setters, the problem with intangibles is that it is difficult to account for the rate of change. It is almost impossible to match investments and costs in one period with profits in another period. Conventional accounting treats tangibles—such as computers, land and equipment—as assets. But investment in intangibles is treated as a cost.

There are currently no widely accepted methods for accounting for intangible assets. Historically, the 'goodwill' line on a balance sheet provided a convenient accounting place for intangibles. But the increasing complexity of business and finance mean that this is no longer appropriate.

4.1 Internal Measures

Companies that have a deep understanding of the role of knowledge in their business treat it as an asset. Measuring and reporting information on their intangibles has the potential to improve their management and decision-making and creates significant business opportunities. The most common internal measures of intellectual capital focus on budgeting, training and human resources. The four most popular internal measures of intellectual capital are:

- Human Resource Accounting;
- the Intangible Assets Monitor;
- the Skandia Navigator™; and
- the Balanced Scorecard.

4.1.1. Human Resource Accounting

Human Resource Accounting (HRA) is an accounting method that describes the management of a company's staff. It has two aims:

- to improve the management of human resources from an organisational perspective—by increasing the transparency of human resource costs, investments and outcomes in traditional financial statements; and
- to attempt to improve the basis for investors' company valuation.

It focuses on employees' education, competence and remuneration. HRA supports accounting for investments in staff, thus enabling the design of human resource management systems to follow and evaluate the consequences of various HR management principles. There are four basic human resource accounting models:

- anticipated financial value of individuals to the company;
- financial value of groups;
- staff replacement costs; and
- human resource accounting and balancing.

The difficulties associated with several major human resource evaluation methods cast doubt on HRA's accuracy. The difficulties for any model of human resource evaluation include input measurement, output measurement and replacement values.

4.1.2 The Intangible Assets Monitor

Karl-Erik Sveiby developed the Intangible Assets Monitor (IAM) as a management tool for organisations wanting to track and value their intangible assets, particularly accounting for the difference between market and book value.

The Konrad Group, to which Sveiby belonged, introduced the 'family of three' concept of intellectual capital. This concept became the basis for many intellectual capital measurement systems, including Sveiby's Intangible Asset Monitor. According to the IAM, the intangible part of a company's balance sheet consists of three parts:

- external structure—a company's relationships with its customers and suppliers, brand names, trademarks and organisational reputation or image;
- internal structure—a company's organisational assets—for example, patents, processes, systems, concepts, and computer and administrative systems; and
- individual competence—a person's ability to act in various situations—for example, skills—including social skills—education, experience, and values.

The IAM is based on the assumption that people are an organisation's only profit generators. According to Sveiby, people are the only true agents in business. All assets and structures, whether tangible physical products or intangible, are the result of human action and depend ultimately on people for their continued existence. Therefore, according to the IAM, human actions are converted into both tangible and intangible knowledge structures. These structures are either directed outwards—external structures; or inwards—internal structures. They are considered assets because they affect the organisation's revenue streams.

4.1.3 The Skandia Navigator

The Skandia Navigator is perhaps the best-known business model developed to identify intangible assets. A feature of the Navigator is its definition of intellectual capital. In addition to the skills and expertise of its workforce, it also includes the systems and processes that it has put in place to capture and exploit all the knowledge it can. The Navigator is based upon the same broad conceptual framework as the IAM.

It is designed to provide a balanced picture of financial and intellectual capital. Consequently, it incorporates measures in categories similar to those of the balanced scorecard. The focus on financial results, capital, and monetary flows is complemented by a description of intellectual capital and its development. The Navigator framework has at its top end a series of measures about financial focus. But it also has below the line measures of intellectual capital. These involve four areas and two dimensions. The four areas and what they quantify are:

- customer focus—how the organisation views its customer;
- process focus—key aspects of the organisation's process performance;
- renewal and development focus—what is being done to renew and develop the intellectual asset base; and
- human focus—the virtual binding force of customer, process, renewal and development and finance.

4.1.4 The Balanced Scorecard

The Balanced Scorecard (BSC) is an organisational framework for implementing and managing a strategy at all levels of an enterprise by linking objectives, initiatives and

measures to an organisation's vision and strategy. The BSC translates a business's vision and strategy into objectives and measures across four balanced perspectives:

- financial performance;
- customers;
- internal business processes; and
- organisational growth, learning and innovation.

A Balanced Scorecard is a structured way of communicating measurements and targets. It is used as a tool for managing, measuring and communicating a company's financial and non-financial information. The BSC allows an organisation to monitor both its current performance—financial, customer satisfaction and business process—and its efforts to improve processes, motivate and educate employees and enhance its ability to learn and improve. It is closely related to the concept of intellectual capital and comprises tools for measuring intangible resources as well as a vision of continuous learning and change so as to create value for the future. Since its introduction in 1992, the Balanced Scorecard has been implemented at the corporate, strategic business unit and individual level in hundreds of public and private sector organisations worldwide.

4.2 External Measures

The growing influence of intangibles in company performance is perceived as a major factor in explaining the exceptionally large differences between market and book values currently seen in our capital markets. The development of measurement and reporting models enables comparisons to be made between firms in the same industry. By reporting on its intellectual capital a company can give itself a market advantage, attract investment capital more easily and improve its stock price by giving current and potential customers a more accurate picture of its assets. Market-to-book values, Tobin's Q and Calculated Intangible Value are the most common intra-industry measures. A relatively new technique, Real options, is increasingly being used in research-intensive industries such as pharmaceuticals and information technology.

4.2.1 Market-To-Book Values

The value of intellectual capital is commonly expressed as the difference between the market value (MV) of the company (market capitalisation) and its book value (BV), also known as equity value. Recent acquisitions show that the price paid for an acquired company is invariably higher than its book value. Conventional accounting practices incorporate this difference as goodwill on the balance sheet.

The growing disparity between market value and book value is largely based on the intangibles of the business providing the foundation for future growth. The largest disparity occurs in high-tech and knowledge-intensive industries where investment is heavily concentrated in intangible assets such as R&D and brands. According to Skyme, in June 1997, the ratio of market-to-book value for all Dow Jones Industrial companies was 5.3, while for many knowledge-intensive companies—for example, Microsoft and pharmaceutical companies—the ratio was more than 10.

From an internal perspective, differences between MV and BV are due primarily to assets that are not currently included in the conventional balance sheet—such as knowledge, relationships and image. The external perspective on the gap between MV and BV is primarily due to the company's future opportunities and these are currently not valued in the conventional balance sheet. Other examples of the growing gap between market value and book value include:

- Netscape—the market valued it at US\$3 billion at the end of its first day of trading. But its book value was US\$17 million—giving it a market-to-book value of 176.4; and

- Merck—a pharmaceutical company with a market value of US\$139.9 billion was valued at 11 times greater than its book value of US\$12.6 billion.

Research findings demonstrate that in the last 20 years the value of hard assets in most companies has dropped by almost 50 per cent. Recent estimates suggest that 50–90 per cent of a firm's value is derived from its management of intellectual capital rather than from its management of traditional physical assets.

Market-to-book value is limited as a tool for measuring intellectual capital for three reasons:

- the stock market is volatile and can react strongly to factors outside the control of management;
- there is evidence that market value and book value are usually incorrectly stated; and
- market-to-book value valuations can be affected by timing inconsistencies. Market value is determined and revised constantly whereas book values are only updated periodically.

4.2.2 Tobin's Q

Tobin's Q compares a company's market value with the replacement cost of its assets. It uses the ratio—the Q—to analyse dynamic firm behaviour, independent of macroeconomic conditions such as interest rates. The replacement cost of fixed assets can be calculated by adding the reported value of a company's fixed assets to its accumulated depreciation and adjusting the result for inflation.

Tobin's Q can be a useful measure of intellectual capital because it can reflect the value markets place on assets which are not typically reported in conventional balance sheets. By making intra-industry comparisons between a firm's primary competitors, these indicators can act as performance benchmarks and be used to improve a company's internal management or corporate strategy. The information provided by these ratios facilitates internal benchmarking and enables the organisation to track its progress in an area it defines as integral to its success.

Tobin's Q and market-to-book ratio are most revealing when like companies are compared over several years. They are best suited to comparing the value of intangible assets of firms within the same industry, supplying the same markets, with similar tangible assets, over a number of years. When the Q and the market-to-book ratio of a company fall over time, it is a good indicator that a firm's intangible assets are depreciating. It might tell investors that a particular company is not managing its intangible assets effectively and lead them to adjust their investment portfolios towards companies with climbing, or stable, Qs.

4.2.3 Calculated Intangible Value

Calculated Intangible Value (CIV) is a model for calculating a fair dollar value for intangible assets. It assigns a value to intangible assets by comparing the firm's performance with an average business competitor with similar tangible assets. This approach is similar to that used to evaluate brand equity. Brand confers economic benefits to the owners—pricing power and greater distribution—above the return on assets to unbranded competitors. If the premium induced from the brand can be calculated it is possible to infer the asset value of the brand. An advantage of the CIV approach is that it allows firm-to-firm comparisons using audited financial data and, as such, can be used as a benchmarking tool. As a benchmarking tool, CIV can help assess whether an organisation is fading or indicate value not reflected in traditional financial measures or whether the company is generating the capacity to produce wealth in the future.

Calculated Intangible Value has several limitations. It relies on averages to determine value and this means that it lacks the precision provided by balance sheet numbers. The application of CIV is also limited to industries or sectors that are not dominated by a small

number of companies. In addition, for CIV to be useful a company must also have reported earnings and an above average return on assets.

4.3 Real Options-Based Approach

Real options is a recent approach which uses the methodology and theory of financial options to value intangible assets. A financial option is the right, but not the obligation, to buy or sell an underlying asset at a fixed price for a predetermined period of time. A real option is an option that is based on non-financial assets. Real options can be applied to determine the value to proceed, defer, expand or abandon investment. By drawing on financial market techniques, benchmarks, and information, businesses can discipline their investment decisions and align them with the investment decisions of the market.

Unlike the previous measures of intellectual capital—market-to-book value, Tobin's Q, and CIV—real options provides an approach which values the opportunities arising from intellectual capital. Deciding how much to spend on R&D, or the kind of R&D in which to invest, translates to the valuation of opportunities. Companies with new technologies, product development ideas, defensible positions in fast-growing markets, or access to potential new markets own valuable opportunities. For some companies, opportunities are the most valuable things they own. The challenge for the companies is converting opportunity to reality. For the investor the challenge is to quantify the opportunity.

The oil industry provides a classic example of how real options can be applied. Oil companies today place great emphasis on exploration to find new reserves. The exploration is highly speculative and risky, particularly in the early stages of the process. To counteract this uncertainty, oil companies have become increasingly sophisticated in the way they price the risks involved by using real and financial options. If an exploration project is successful, a company has the option to drill wells and pump oil. If the project is unsuccessful, the company has the option to cease development and cut its losses. Even so, the exploration may have generated useful knowledge and diverted competitors. The option increases the value of the exploration project because it protects the full potential gain of the investment while reducing the possible losses.

The real options approach is in its infancy and there are limits to its usefulness. Natural resources companies have been the early experimenters in the use of real options. This is largely a result of their ability to link the future value of their assets to traded commodities, for which market information is readily available.

Although this new measure seems attractive, there are significant drawbacks. Determining the value of real options remains an inexact science. Substantial difficulties remain in valuing non-financial assets accurately at a firm level. As most business opportunities are unique, the likelihood of finding a similar option is low. The only reliable way to find a similar option is to construct one. Furthermore, real options pricing is often too complex to be worthwhile for minor decisions. The use of real options presents two fundamental problems:

- quantifying real options value; and
- persuading an organisation to change the way it traditionally thinks about valuation and investment.

4.4 Current Developments And Future Directions

There are two streams in the development of a standardised accounting treatment of intangibles. The first improves information about intangibles by making it easier to treat them as assets in financial statements. This would increase their visibility in financial accounting and reporting. The International Accounting Standards Committee moved in this direction in 1998 when it approved International Accounting Standard (IAS) 38—a standard on intangibles including advertising, training, start-up and R&D activities. The Standard specifies that to be recognised as assets, intangibles must comply with definitions in the standards, generate a flow of benefits that are likely to accrue to the company and be able to be

measured reliably. IAS 38 has been open to much criticism, in particular, the standard's treatment of internally generated intangibles.

The other approach is to encourage voluntary disclosures and increase the availability of non-financial information about investment in, and management of, intangibles. This is happening in Europe. For example, some countries require companies to report certain information about human resources, and many companies voluntarily disclose non-financial information about everything from training efforts to customer networks and process R&D.

4.5 International Efforts

Organisation for Economic Cooperation and Development

In 1996, the OECD, in conjunction with Ernst & Young (EY), organised a conference in Helsinki on the valuation of companies in the knowledge society. This mutual interest led to the joint publication, in 1997, of *Measuring Performance in the Age of Intangibles: Enterprise Value in the Knowledge Economy*.

In June 1999, an international OECD symposium: [Measuring and Reporting Intellectual Capital: Experience, Issues and Prospects](#) was held in Amsterdam. The objective of this Symposium was to assess the feasibility and value of improving non-financial information on intellectual capital so as to better inform decision-making.

Canada

In Canada, the [Canadian Institute of Chartered Accountants](#) is driving the development of tools for measuring and reporting on intellectual capital. The Institute is actively pursuing a leadership role in helping the global accounting community come to terms with intellectual capital and its challenge to the traditional accounting model.

In January 2001, the fourth World Congress on the Management of Intellectual Capital was held in Hamilton, Ontario. This forum provided an opportunity to discuss current methodologies, case studies, and forward thinking analysis related to intellectual capital.

United States

In 1992, the American Society for Training and Development (ASTD) formed the Benchmarking Forum. The Forum brought together several large corporations to help develop a set of indicators to measure companies' human capital investments.

Earlier this year, the American Financial Accounting Standards Board (FASB) as part of its Business Reporting Research Project released a report, [Improving Business Reporting: Insights into Enhancing Voluntary Disclosures](#) [PDF 289kB], addressing non-financial performance metrics, forward looking information and the disclosure and recognition of internally generated intangibles. The FASB has also recently published a Special Report, [Business and Financial Reporting: Challenges from the New Economy](#) [PDF 700kB], as part of its research into placing a project on internally generated intangibles, non-financial metrics and forward looking information onto the Board's active agenda. Both reports aim to encourage companies to follow the examples of other organisation and begin to voluntarily disclose more information about non-financial performance metrics and forward looking information thus improving business reporting for investors and other users.

In May 2001, a conference, *Advances in the Measurement of Intangible (Intellectual) Capital* was organised by the Stern School of Business, New York University. The conference addressed the key issues surrounding intangibles - measurement and valuation. Specifically, progress in managing and reporting on intangible-intensive enterprises, policymaking for intellectual property and progress in developing new corporate disclosure systems reflecting the value of intangible assets.

Norway

The major Norwegian project, *Competence Capital*, headed by the [Norwegian Confederation of Business and Industry](#), is named as a parallel to the Danish project *Knowledge Capital*. The project's aim is to generate a level of interest in, and activity around, intellectual capital, as has been achieved in Denmark, without copying fully the Danish project. The *Competence Capital* project aims to have a number of intellectual capital recommendations for their members by the end of 2000.

Sweden

In November 1998 six European nations—Denmark, Finland, France, Norway, Spain and Sweden—launched the Measuring Intangibles to Understand and Improve Innovation Management ([MERITUM](#)) project. It is expected to finish in April 2001.

Netherlands

The Netherlands aim to play a leading role in Europe concerning the disclosure of intangible assets. In 1998, the [Ministry of Economic Affairs](#) launched an *Intangible Assets Pilot Project* on intellectual capital reporting. In response to the difficulty that knowledge-intensive companies encounter in attracting investment capital, the Dutch Government commissioned four firms of accountants to develop a method for measuring and valuing intellectual capital that produced a more realistic value for financial accounting purposes. Also in 1998, EUROSTAT commissioned [Statistics Netherlands](#) to produce a report on intangible investments. Other organisations working on measuring intellectual capital include the [MERIT Institute](#) in Maastricht and the Economic Institute for Small and Medium Sized Industry.

To continue the debate concerning intangibles and transparency in the Netherlands, the Dutch government have introduced a number of follow up actions, such as an intangible assessment tool for SMEs, a promotional campaign for entrepreneurs, and further studies involving Dutch Statistics and the Dutch Central Planning Office.

4.6 International Accounting Standard 38

International Accounting Standard 38 (issued in September 1998), defines an intangible asset as an:

Identifiable non-monetary asset without physical substance held for use in the production or supply of goods and services, for the rental of others, or for administrative purposes: (a) that are identifiable; (b) that are controlled by an enterprise as a result of past events; and (c) from which future economic benefits are expected to flow to the enterprise.

If an asset conforms to the definition of an asset, IAS 38 requires the recognition of intangible assets at cost where the cost can be reliably measured. This recognition also applies to intangible assets that are generated internally but additional recognition criteria must be satisfied. IAS 38 also requires all expenditure on research to be expensed. However, some development expenditure—such as internally developed software—may qualify for recognition as an intangible asset.

IAS 38 specifically prohibits the recognition of internally generated goodwill, brand names, mastheads, publishing titles, customer lists and items “similar in substance”. If IAS 38 is ratified, companies will be able to put acquired brands on their balance sheets, but not ones developed within the company. This will create a glaring paradox. Companies A and B are identical except for one fact. Company A purchased its brands from another company—whilst Company B self-created its brands. Under IAS 38, Company A will be able to treat its brand names as intangible assets, equivalent in almost every sense to tangible assets while Company B's brand will be regarded as having essentially no value.

The acceptance of IAS 38 would make it easier to compare financial reports from different entities, because all companies would be subject to the same rules. This cannot be done currently because of the variety in reporting practices. However, the rigidity of the rules about recognition and revaluation of intangible assets move IAS 38 significantly away from properly accounting for certain types of intangibles and is likely to undermine the relevance of financial reports.

5. INTELLECTUAL CAPITAL IN AUSTRALIA

To date little work has been done on Australian companies' relative global position in managing and reporting their intellectual capital. Australian businesses recognise the importance of intellectual capital and the important role it plays in their success. Research shows that by the end of 1998 only two of Australia's largest 10 companies were resource based—BHP and Rio Tinto. In the remaining eight companies intellectual capital made up a significant portion of the assets.

However, although businesses acknowledge that intellectual capital is an essential element of their success, a study by Guthrie, Petty, Ferrier and Wells in 1999 found that:

- the key components of intellectual capital are poorly understood, inadequately identified, managed inefficiently, and not reported within a consistent framework;
- reporting was generally minimal but the types of intellectual capital reported most often included human resources, technology and intellectual property rights, and organisational and workplace structure;
- no industry is significantly ahead of any other in its intellectual capital reporting practices; and
- company representatives believed management of intellectual capital is an important factor in determining future company success and competitiveness. Few executives however, were able to identify initiatives within their own organisation designed to help manage intellectual capital. The frequent claim that human resources are a firm's most important resource was not supported in terms of the intellectual capital elements measured and reported in most annual reports.

Guthrie's results suggest that few Australian enterprises take a proactive approach to reporting their intellectual capital. And while there is some evidence that Australian companies are identifying their stock of intellectual capital, they do not compare favourably with their overseas counterparts in their ability to manage, develop, support, measure and report their intellectual capital.

5.1 IAS 38 In Australia

The requirements of IAS 38 are inconsistent with existing accounting practices in Australia, yet there is no specific accounting standard that addresses intangibles. Concerns raised about the harmonisation of IAS 38 in Australia include:

- many existing intangible assets would no longer be recognised as assets, because of the standards specific exclusions;
- far fewer new intangibles would be recognised as assets;
- operating results would decrease as costs associated with developing intangibles would be expensed; and
- there would be less information in financial reports.

The Australian Accounting Standards Board has announced that on their current work program, the Intangible Assets project - which addresses the accounting treatment of intangibles - has been ranked as the highest priority. This has been a promising decision from the standard setters to address the complex issue of accounting for intangibles (including consideration of IAS 38). It is hoped that the high priority status of the project is maintained.

CONCLUSION

Accounting bodies, standard setters and international regulatory organisations recognise the challenge that intellectual capital creates for accounting. The difficulty and imprecision with which intellectual capital is measured can result in unreliable or incorrect valuations that can mislead users of financial information. Therefore, accounting standard setters are reluctant to allow intangibles to be included in financial reports. However, the failure to account for intellectual capital can lead to a misallocation of investments, in both tangible and intangible assets.

Although an abundance of literature exists on the study of intellectual capital and despite the growing involvement of business consultants and technical accountants on intangible issues, there has been no substantial developments in any country that has succeeded in pushing the measurement and reporting of intellectual capital to be widely accepted. Much work is needed to improve our understanding of the role intellectual capital plays at a firm, industry and national level. Presently, measuring, valuing and reporting intellectual capital remains a challenge and future work in this area will need to focus on transforming intellectual capital from a theoretical, conceptual ideal to a more practical form.