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Intellectual Capital: Acquisition and Maintenance:

The Case of New Zealand Banks

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Abstract

The new knowledge economies have highlighted the importance of intellectual capital (IC) and the imperative need to measure and manage their associated costs and benefits. Banks and financial institutions, which are rich in IC (human, customer, and social capital), are in danger of becoming subject to 'IC walkouts' if they resist accounting for the hidden value that exists in IC and its constituent elements.

This paper discusses how New Zealand banks incur the cost of acquiring IC and realize the need to recognize related cost drivers. For banks in New Zealand, one of the most important sources of revenue or interest income is from mortgage business. This investigation looks at the value added by mobile mortgage managers (MMMs) and a possible model for measuring the IC vested in MMMs.

Some of the issues and concerns explored should be of importance to accounting (management) academics. A number of potential problems that are identified suggest

the need for more diversified research to develop an effective model for IC valuation that includes social networking and political underpinnings, in this age of globalization and value creation.

Keywords: **Intellectual capital, measurement, banks, maintenance, Mobile Mortgage Managers**

INTRODUCTION

It is increasingly stated by professional accountants, institutional investors, and e-accountants, especially of the new knowledge economies, that new financial and management accounting concepts and practices need to be established to acknowledge the intellectual capital (IC) of business enterprises. Whether it is in manufacturing or service or technology, the value vested in human IC cannot be ignored. This concept of measurement and management of IC costs is gaining importance in the service industries too. These industries include insurance companies, financial institutions, banks and companies based on high technology. Accountants from different countries, industries, companies and backgrounds agree that the focus should be shifted from IC measurement to another level of accounting for IC that is acceptable to auditors and accountants to fit in the financial reporting regime.

In New Zealand, banks are a special vehicle of the service industry and occupy a unique and pivotal place. Of their various products and services, one of the most important is the residential mortgage and it is this intellectual or human capital (the terms IC and human capital have been used synonymously for this analysis) that drives it and possibly makes it successful. All banks lend funds and have several schemes for residential mortgages, but how many are doing it successfully or recognising that it is human capital that adds the value to their products? Further, there is no evidence of measuring the enhancement of social capital in New Zealand through mobile mortgage managers (MMMs), and their value in creating the rich tapestry of social and political well-being.

Simply put, IC in banks is the vested human capital that builds or expands the customer capital base. In recent years, MMMs in New Zealand banks (NZ banks) have become one of the important means of building a customer capital base. They are a principal generator of revenue, through helping create continuous revenue over a long period of time. Therefore, they are an aid in managing and improving bank profitability. The profitability generated from the IC contributed by the MMM category can be measured directly or indirectly and hence it can be managed.

The main objective of this paper is to investigate how NZ banks incur the cost of acquiring IC and realise the need to recognise related cost drivers (e.g. research and development (R&D), recruitment, maintenance and retention), but are not spending much time or capital on assigning values to MMMs.

The paper also identifies and analyses the important cost drivers that provide insight into the suggested cost-benefit analysis approach and develops a value-creation model in

accounting for IC in NZ banks. This can be applied to any human capital-related area in a service industry (e.g. an insurance company or an educational institution) or to any commercial enterprise having a customer base as one of the strands of its capital.

To achieve these objectives an investigation of the following issues was conducted:

(i) the major types of cost traceable to MMMs in NZ banks
(ii) the percentage of residential mortgage business brought in by MMMs from 1999–2006
(iii) whether MMMs add value to the mortgage products.

This paper acknowledges that the social and political underpinnings of capitalism cannot be ignored. Also, the social conflict between labour and capital that is fundamental to capitalism cannot be isolated. Having said that, despite the importance of the above it is not possible to explore value creation on the basis of critical and normative theories in this paper due to the type of information available from the banks.

The paper discusses the constituents of estimating the value of IC and contextualizes it in the MMMs initiative in NZ banks. The author provides an overview of techniques for IC valuation, with particular reference to the work of Baruch Lev, Bob Woods, Ramona Dzinkowski and Ante Pulic. That overview is followed by methodology and links between the theory and the model. The paper then presents some insights into the banking sector and the IC vested in MMMs. Further, against the backdrop of the insights and empirical findings of the MMMs, a comprehensive, simple, straightforward and user-friendly value-added model is suggested. Finally, in the context of product differentiation and change driven by globalization (lifestyle implications, technological advancement), the conclusions and scope for further research are outlined.

WHY INTELLECTUAL CAPITAL?

With regard to IC, over the years many definitions, indicators and measurement techniques have emerged. Some of the widely accepted and all-inclusive definitions encompass organizational (structural) capital; innovation and structural capital; human capital; relational (customer) capital; and social capital. Our ability to understand and measure intangible assets and intellectual capital has progressed greatly in recent years. Some examples of ground-breaking research in this area are the Q model developed by the Nobel Laureate economist James Tobin in the 1950s, the invisible balance sheet (Sveiby, 1989), the balanced scorecard (Kaplan & Norton, 1992), Skandia Navigator™ (Edvinsson & Malone, 1997), the VAIC™ model (Pulic, 2000), IC-Index (Roos, Roos, Dragonetti & Edvinsson 1997), Direct Intellectual Capital (Anderson & Mclean, 2000) and IC Rating (Edvinsson, 2002).

Pulic (1997) developed the VAIC™ model to measure the extent to which and how efficiently IC and capital employed create value based on the relationship between capital employed, human capital, and structural capital. Williams (2000) used the VAIC™ model and recognised it as a 'universal indicator showing abilities of a company in value creation and representing a measure for business efficiency in a knowledge-based

economy' (Pulic (1998) – see Appendix I). Schneider (2000) supported the adoption of this technique as an effective method of measuring IC through the VAIC™ model.

One of the authorities on IC is Baruch Lev. He defines IC in the following way (Bernhut, 2001, p. 17):

> Any asset is a claim to a future benefit, such as rent from owning a commercial property. An intangible asset is – if it is successfully managed – a claim to a future benefits that does not have a physical or financial embodiment. When that claim is legally secured, as with a patent or copyright, it we generally call that asset 'intellectual property'.

There has been considerable research on IC management and valuation techniques embedded with complex and intricate issues on constituent elements. Researcher Baruch Lev, having initiated the value creation scorecard, is now campaigning the knowledge capital earnings methodology and is finding ways to provide intangible asset valuations corresponding with the financial reporting hypothesis. Critical accounting advocates have admitted and acknowledged the empowerment of middle-class intellectuals as administrators of hegemony, as conceived by Gramsci (Strinati, 1995).
The Canadian Institute of Chartered Accountants recently conducted a survey that shows that top executives of the Financial Post 300 firms in Canada and the Fortune 500 firms in the United States consider IC to be a critical factor in a firm's success.

With respect to IC, it is very difficult – even with patent laws – to appropriately secure and derive all the benefits from the assets. This weighs heavily on accountants because for something to qualify as an asset it must control the benefits. But you don't really control the benefits from training employees or labour, for example. So it is said, 'Well you may get benefits from it from time to time, but you don't control it, so it's not an asset' (Bernhut, 2001, p. 18).

A unique aspect of IC is that it contains no markets. There is no market in processes and no market in human assets, except where 'headhunters' focus on senior management, directors and CEOs, making it riskier and more difficult to manage and value these assets. At the same time, it is only by applying market values to human capital that banks in New Zealand compete with each other when hiring human capital or labour or mortgage managers. This type of competition, given New Zealand's small population (approximately 4.2 million population) within which the same people are moving from one organisation to another, and the human and social capital enrichment, may be seen as debatable.

The market provides guidelines for valuations, so investment bankers or employment markets, when valuing companies for initial public offerings (IPOs), usually look at what are known as 'comparable' or similar company valuations. Due to competition in hiring appropriate mortgage managers, and the lack of specific value measurement, the valuation of these assets involves subjectivity.

Recognized authorities on IC like Baruch Lev, Bob Woods and Ante Pulic have created techniques to measure intellectual capital. Notwithstanding the many advantages of these techniques (like those for intangible assets such as brand equity and copyrights), the methodologies for measurement and management of IC have their application

problems and limitations.

At a brainstorming round-table conference, 'Leveraging Your Hidden Brain Power' (hosted by Deloitte Touche Tohmatsu), the theme was: 'Harness your company knowledge before it walks out of the door – and takes your business with it' (Haapaniemi, 2001). In their conclusion, attendees at the round-table conference agreed: 'knowledge management – sharing intellectual capital, leveraging intellectual capital, however you want to describe this process – can produce another amazing round of productivity improvement'. Or, as stated by Zhou and Sun (2001, p. 19):

> Generally, intellectual capital refers to the difference between a company's market value and its book value. It consists of organisational knowledge and the ability of the organisation's members to act on it. IC is often used synonymously with the terms intangible assets, intellectual assets or knowledge assets.

Lev developed a methodology for valuing intangible assets that consists of three parts: measurement, drivers and validating usefulness. The basis of the methodology is generated by three major inputs: physical assets, financial knowledge and intangible assets.

An Australian project entitled 'Are companies thinking smart?' (Guthrie and Petty, 2000), based on empirical aspects, applied a popular model – the Intangible Asset Monitor, developed by Karl Erik Sveiby, wherein Sveiby classifies firm intangibles into three elements. Firstly, Human Capital: represented by human resources (employee competencies), which are broadly related to education and training of professional staff, who are the principal generators of revenue. Non-revenue generators are called support staff. Employees create value by applying their skills, exerting their knowledge and initiating new ideas. It's a matter of transforming their tacit knowledge into explicit variety. Secondly, Structural Capital: related to internal structure, which includes organisational structure, legal parameters, manual systems, research and development and software systems. Thirdly, Customer Capital: related to external structure, which includes items such as brands and customer/supplier relationships. It also includes customer loyalty and organisational reputation.(Adapted from Karl Sveiby's developed Framework (1997).)

In the abovementioned Australian project, the percentage breakdown of the IC of 70 companies was represented as follows: 40 per cent reporting external capital, 30 per cent the internal capital structure, and 30 per cent the human categories. The skew towards external (customer and relational) capital items was greatest, proving that in recent years rationalizing distribution channels, reconfiguring firm value chains and reassessing customer value have increased in importance. The internal and human categories were evenly matched at 30 per cent each.

Human capital can be interpreted as the engine of intellectual capital, with structural capital providing the support and customer capital deriving benefit from human and structural capital. Banks and financial institutions, which are rich in intellectual capital stock, need to create an environment in which people (human capital) can produce extraordinary results (customer capital).The sum total of this forms the basis of social capital and raises questions about how to sustain this social capital in a political and capitalist environment. The core idea of social capital is that social networks have value. The value of networks is not exactly measurable, but they do increase productivity, both

individual and collective. Jane Jacobs tried to define social capital in the 1960s as the 'value of networks'. Portes (1998) identified four negative consequences of social capital. On this basis, and with other established research, it is an economic concept of human capital (see Fig. 1 Influences on the process of economic growth).

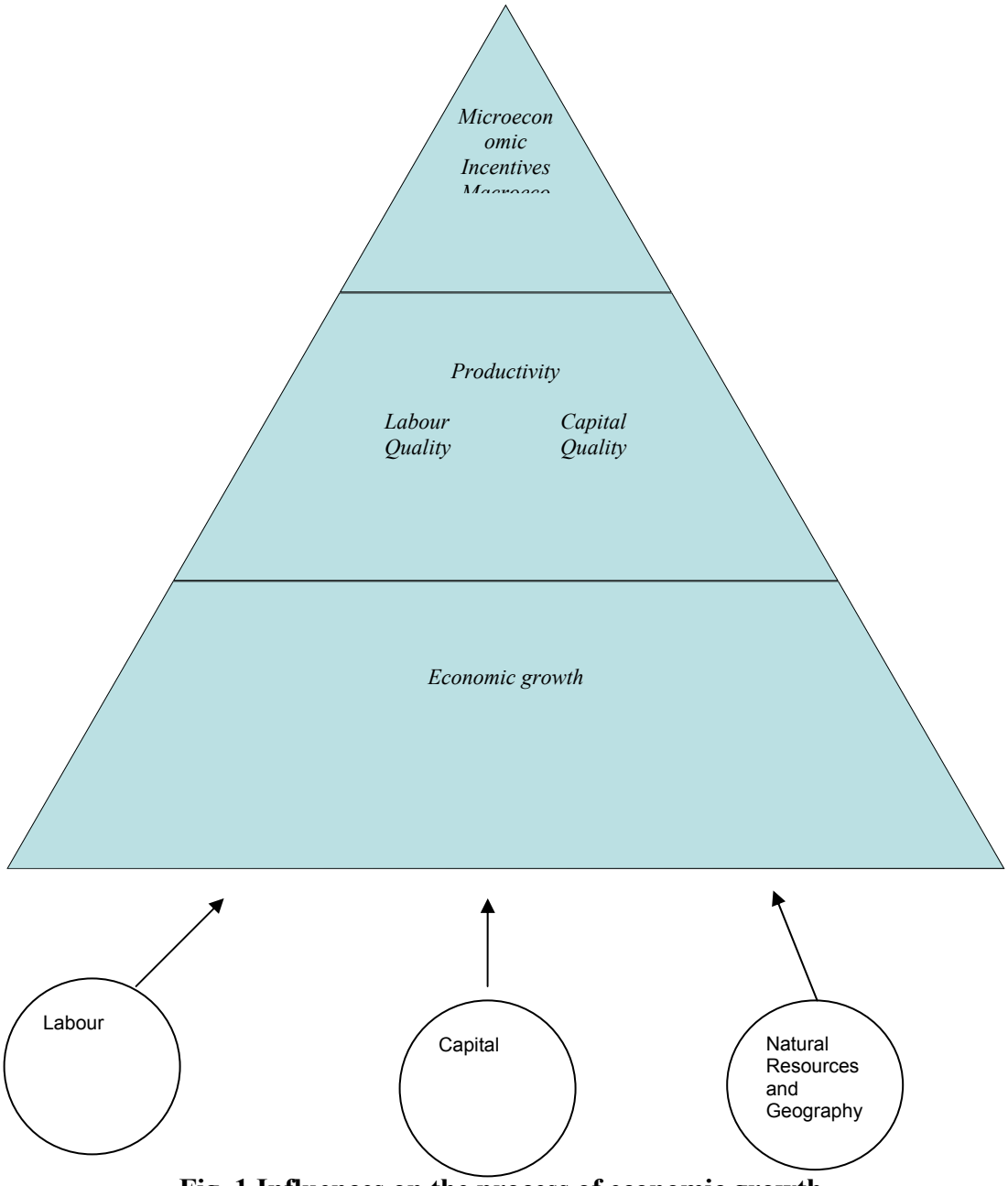

Fig. 1 Influences on the process of economic growth

Source: Adapted from Conway & Orr, 2000, p. 11.

Notwithstanding the immense importance of external (customer and relational) capital, it is important to remember the following:

(a) Customer capital is also an intrinsic part of social capital. Social capital theory is based on the core idea that social networks have value. Just as structural capital and human capital can increase productivity, so can social contacts affect productivity? Unlike economic capital, social capital does not deplete on use. In fact, it is based on the reverse analogy – it depletes by non-use ('use it or lose it').
    In the context of mortgage managers, the process of sourcing funds is achieved via a procedure known as securitization. This is a process whereby assets (such as mortgages) with an income stream are pooled and converted into saleable securities These assets are purchased and packaged into low-risk, negotiable securities such as bonds and then issued to investors. The MMM's job is to set up the loan and perform a liaison role with all parties involved, namely originators, trustees, credit assessors and the borrowers providing the customer service role. Having said that, NZ banks do not follow the securitization procedure.
(b) Customers can be bought and sold in terms of explicit valuation of future sales, and the potential of specific customer groups is increasingly an important component of merger and acquisition decisions (Schmittlein, 1995).
(c) With the increase in internal sales (business to business) in the area of electronic commerce, customer loyalty has become a greater challenge. Today's customer is exposed to a huge variety of advertisements, competing firms, products, brands and price wars.

Therefore, IC includes traditional intangible assets such as brand names, trademarks and goodwill and new intangibles such as technology, skills and customer relationships. These are resources that an organization could – and should – make the most of, in order to obtain competitive advantage (Zhou & Sun, 2001).

WHY IS IT DIFFICULT TO MEASURE VALUE?

The term 'value' has been the most used phrase since accounting history began. It has been applied in different forms: (i) utility-based (marginalist) forms; and (ii) concept of value (with all its social allegiances) forms, which dominate contemporary accounting and form 'the normative origins of positive theories' (Tinker, Merino & Niemark, 1982, p. 168). Why is it so difficult to measure and assign value to IC, when value theory has traditionally been central to the development of accounting? In fact, value assigning, accounting, measuring and reporting are inclusive of one another, and the alignment of accounting and value seems impossible. If the social concepts of value and social conflicts are treated as another lens that is essential to and an intrinsic part of the social capital, then the valuation of intellectual capital is possibly affected by variables such as land, labour and capital, which again form the basis of different theories of value. Against this backdrop the value addition also includes an element of the evolution of products, in contrast to worldwide competition in response to client demands.

The value given to MMMs in dollar terms may be in line with the economic environment, wages, price index and competition in the New Zealand labour market. However, the value assigned to MMMs in terms of social and political capital, sustainability, healthier

and motivated employment or dynamic labour markets and the basic security levels provided to New Zealand's clean, green landscape is immense, and needs to be acknowledged and valued.

Labour and capital are the two critical powerful forces impacting directly on intellectual capital (property rights) to achieve productivity improvements, which are in turn the driving forces behind sustainable economic growth (see Fig. 1, Influences on the process of economic growth). Endogenous growth models speculate that increases in the stock of knowledge, which improve the quality of labour and capital, are important, and at the same time knowledge alone cannot generate sustained economic growth. A number of important mechanisms must be in place to facilitate the conversion of knowledge into productive technology that has the potential to improve economic growth.

Figure 1 makes it clear that the productivity with which labour and capital are combined to create output is potentially influenced by a number of factors. At a fundamental level, a sound legal and institutional framework that enforces a well-defined system of property rights is considered to be an essential part of a well-functioning market economy. Such an arrangement allows firms and individuals to control the assets that they own and thereby retain the benefits of their productive endeavours. The second tier of Fig. 1 indicates that macroeconomic stability is also widely accepted for sustainable growth and instills greater certainty about the future. As a consequence, investment in physical and human capital can be undertaken with greater confidence. A social infrastructure that is favourable to economic growth supports capital accumulation, skill acquisition, innovation and technology transfer. Predetermined geographical factors can have an important influence on productivity. This factor is of special relevance to New Zealand, given the size of the country and its distance from international trading partners, despite it being integrated into the global economy (adapted from Conway & Orr, 2000).

Methodology

The suggested cost-benefit analysis model for finding value addition (VA) by MMMs, developed later in this paper, is a simple process of acknowledging and measuring important cost drivers, revenues, productivity, profitability and other relevant variables. It prepares the basis to measure the value added by MMMs. Therefore, it is suggested that important issues of value addition through the measurement of cost and IC-related costs for an important intangible asset vested in MMMs is probably the secret best kept by banks in New Zealand.

As mentioned earlier, since the social conflict between labour and capital is fundamental to capitalism, the distortions of the role of labour/human capital in the process of value creation are being increasingly recognized. Globalization and communication channels are forcing the sharing of information (the very essence of knowledge economy) and dismantling the high walls built around senior or knowledge managements. Therefore, there is now much less distinction between management and labour. Having said that, in reality the desired level of emancipation among 'middle-level' intellectuals has not yet been achieved, even in the developed world. Secrecy and holding back certain types of useful information from employees is still the preferred way of the employers and senior management in most organizations. Sharing value additions to the firm or a product line due to the improved productivity, profitability and proactive attitudes of employees

responsible in the creation of a customer base is still seen as a threat. This is especially true for union-oriented, commercial and industry environments.

Although the techniques used in this paper for measuring value are somewhat subjective, once the importance of the system of cost management of IC is recognized, improvements may follow. This paper focuses on how NZ banks incur a cost in acquiring IC (human capital) and their need to recognize the importance of the related cost drivers: research and development; recruitment and training; maintenance; upgrading; and retaining of MMMs.

Investments are made in human capital (MMMs) and through them in customer capital (customers who take the loans). It is a fundamental business objective and moral responsibility of an entrepreneur (bank owner) or investor in people and management to ensure that they reap the benefits from the investments made and costs incurred.

The VAICTM model can be used in a variety of ways and markets to measure IC in a holistic manner. Pike and Roos (2004) analysed various models of IC measurement and suggested that VAICTM is a model that passes the test of completeness, independence, agreeability and scale measure (ratio), and is therefore more reliable and comprehensive. The VAICTM model is complex in application and its use requires specialists equipped with practical knowledge of the applications (see Appendix I). Unfortunately, even if such specialists are readily available, banks and organisations do not wish to hire such expertise, as the specialists (being few) demand high remuneration packages and most employers and owners try to avoid such a situation if possible. This is the reason they wish to maintain absolute secrecy on a number of variables in the VAICTM formulae.

The NZ banks cannot afford to ignore the adverse implications (in terms of costs and loss of revenue) for their profitability and productivity when their IC is lured out or leaves for other reasons. Peter Drucker (1999, p. 142) emphasised: 'Knowledge has become the central, key resource that does not have geographic boundaries'. However, knowledge has social, cultural and political underpinnings, especially in the New Age globalization bursting with dynamic and powerful levels of communication. The global movement has, therefore, become much easier.

Since 1996 MMMs have revolutionised the residential mortgage business in New Zealand. They are the principal generators of total revenue from mortgage business (approximately 66–85 per cent; see Tables 2 and 3). MMMs form the building blocks of a high value of human and customer capital, and therefore their importance in the social capital formation in the New Zealand economy cannot be understated. (Note that for the purposes of this paper, IC and human capital are treated synonymously.)

My investigation of NZ banks revealed that there is an absence of any costing technique or value-addition measurement method being applied to find out the changes in profitability and productivity as a result of employing MMMs. However, banks do measure the absolute amount of variances in dollars, in terms of targets and actual achievements. The accounting firms auditing the banks' financial statements and reporting systems are also silent about the value added by MMMs to organizations, society and the economy, despite the significance of property and/or mortgage business to New Zealand's society and economy.

My plan for approaching the exploratory research was, first, to approach the banks that have employed MMMs. I then identified my sampling group by selecting those banks that had been using this form of human capital (MMMs) for value addition and revenue generation from the mortgage business for at least 5–8 years (in order to make the period representative). There are five major NZ banks (ANZ National, ASB, Westpac, BNZ and Kiwi bank) and I chose three of them due to availability of information and responses to questionnaires. Finally, I chose to conduct semi-structured interviews, as information and data in response to direct questionnaires was not forthcoming because:

(a) the banks did not have the relevant databases and did not agree to give the detailed empirical evidence needed owing to New Zealand's Privacy Act 1993
(b) the banks were not ready to divulge information that would demoralise other employees
(c) there is competition among the banks.

The semi-structured interviews were conducted with MMMs, their senior managers, branch consultants and some customers. For an overall secondary information analysis, I relied on annual reports, financial disclosure statements, and documents and archived sources. The semi-structured interviews provided some insights on value and scope for further research. Some of the issues raised should be of concern to accounting (management) academics and need to be addressed.

Table 1: Registered banks: residential mortgage as a percentage of total loans and advances

Year	Residential mortgage (NZ$m)	Total loans and advances (NZ$m)	Percentage of residential mortgage
1999	55,670	121,239	46
2000	64,011	130,636	49
2001	72,920	142,982	51
2002	71,145,	154,553	46
2003	82,747	168,938	49
2004	95,271	186,233	51
2005	97,914	203,989	48
2006	115,586	231,173	50

Source: Retrieved October 10, 2007, from http://www.rbnz.govt.nz/statistics/mofin/discontinued/ssr/ssrpartE/data.html?sheet=1

Table 2: Average total residential mortgage business per bank per year* – three sample banks

Year	Total amount (all mortgages) (NZ$m)	Total amount (MMMs) (NZ$m)	Percentage of business done by MMMs
1999	3,300	2,200	66
2000	3,000	2,300	76
2001	3,400	2,900	85
2002	3,400	2,900	85
2003	3,700	3,100	84
2004	4,100	3,300	80
2005	4,300	3,400	79
2006	4,400	3,300	75

* This is the average of the three sample banks.

Table 3: Average productivity of MMMs* – 3 sample banks

Year	Average number of MMMs per bank	Total average salary plus benefits per annum (NZ$m)	Average business per annum per MMM (NZ$m)
1999	55	70,000	40
2000	42	75,000	55
2001	48	78,000	60
2002	49	82,000	59
2003	50	86,000	62
2004	49	91,000	67
2005	49	92,000	69
2006	47	96,000	70

*This is the average of the three sample banks.

See Appendix III ((a), (b) and (c)) for details of each bank.

INTELLECTUAL CAPITAL IN THE BANKING SECTOR

The New Zealand banking industry is rich in human capital and customer capital. The industry should try and optimise the advantages accruing from this intellectual capital. Mobile Mortgage Managers provide the banks with the benefits of managing customers as strategic assets. The customers include loyal customers who are less inclined to shop around or buy mortgages at a given price, for a more efficient, effective, highly targeted and focused customer base (Schmittlein, 1995):

> It is this customer who provides a stable predictable source of revenue, future revenue and can be reliably differentiated from each other based on his/her behaviour.

Customer networks form one of the main lenses of social capital in the banking sector context in New Zealand, as in most other countries. Despite the overhyped secrecy surrounding information sharing, banks seem oblivious to the role that is played by MMMs in structural capital and labour savings on the one hand and contributions to the social capital in the form of value addition by customer networks on the other hand. From discussions and interviews conducted it emerged that banks were blissfully ignorant, and wished to remain so, about assigning direct and indirect value additions by MMMs. Acknowledging the value addition may cause pressures on management and capital that employers were not ready to deal with. Simply put, it is not on the banks' agenda, due to cumbersome consequential costs and information they may have to deal with or disclose.

The MMMs of the big NZ banks represent the walking, talking intellectual skills that have brought in a huge customer capital base. Since 1996, they have added a completely different flavour to the mortgage business in New Zealand through their creative networking. The personalised networking and methodology may be old, but the style is new. Their innovative strategies have produced unexpected results and yet they are not recognized as contributors enriching the social fabric of communities they are serving in terms of value creation and ultimately measured through some form of accounting. MMMs in New Zealand are not appreciated as high-value contributors to the social capital environment, even though mortgages are one of the intrinsic and basic lifestyle choices of New Zealanders.

Traditionally, the banking industry has a dual driver, unlike manufacturing companies or industries, where the main driver is the product. In banking there is a three-dimensional and three-phased process on the one hand – the organization, product and accounts – and on the other hand there is the service driver, which has its wealth in customer capital. The cost of funds in a bank, like the cost of goods in a manufacturing firm, represents the cost of producing and selling a product. While in manufacturing there tends to be a reduction of production costs per unit as fixed costs are more widely spread with increased production (up to a certain point), this is not so in banking operations (Kiran, 1986).

Efficiency in the banking industry is measured through traditional ratio analysis (for

example, earning ratios, expense ratios) and through simple productivity parameters like deposits per employee, advances per employee, mortgage business per manager, total business per employee, and expenses per employee.

Funds used efficiently owing to high productivity of personnel will lead to high profitability. Productivity is an input/output ratio. When we talk of productivity, we enter into the area of employee efficiency, which has a bearing on profitability. Some bank managers feel that one or all of the following could improve profitability in general:

(i) Internal efficiency:
  – Operational efficiency
  – Managerial efficiency (that is, efficiency of management control).
(ii) External efficiency (that is, efficiency in dealing with customers).

These are interrelated to a certain extent. It is well known that external efficiency is of prime importance in the banking industry.

In general, therefore, a drive for continuous productivity improvement, especially in the Internet economies, is a challenge to the banking sector. The VAIC^{TM} method measures and monitors the value creation efficiency in a company using accounting-based figures (see Appendix I). The better a company's resources have been utilized, the higher the company's value creation efficiency will be.

The efficiency of NZ banks in serving customers has been driven by technological advances in the last few years. In New Zealand, electronic funds transfer at point of sale (EFTPOS) terminals have grown in number from 46,360 in 1996 to 84,351 at the end of 2000 (Detoured, October 2001, p. 6). However, there are customers who prefer traditional 'across-the-counter' and 'face-to-face' relationships, and these results in different levels and quality of productivity.

In banking, customer capital refers to the organization's relationship with outside parties. It includes customer loyalty, the organization's reputation and its relationship with suppliers, partners and/or other stakeholders. Customer capital is the organization's ability to meet rapidly changing customer needs, to provide knowledge and financial service to customers and to capitalise on their relationships with outside parties (Zhou & Sun, 2001, p. 19).

It is this customer capital approach that some of the big banks in New Zealand have adapted and refined that has added more value to important, high income generating mortgage business through MMMs. They operate in an almost free business environment, capitalising on their abilities and using traditional relationship-building techniques of servicing customer needs and assessing customer satisfaction on an ongoing basis. It is important here to concede the importance of social capital. The lens of customer capital as part of social capital is important for both the microeconomic and macroeconomic environments, especially capitalist economies, which are based on social and political underpinnings. Another important lens to be recognised lies in the relationship of income and capital, which cannot be ignored when discussing value creation. The customer provides the 'income' and is the essential contributor to the survival of the banking sector. In New Zealand, MMMs are one of the main catalysts or mediums through which considerable cash flows are injected into banks at the micro level and the financial market at the macro level. Hence, by engaging with customers the MMMs are facilitating, supporting and promoting social, cultural, and political stability, as

well as motivating society to do better through investments in real estate and thereby lead a higher quality life through property ownership. Among the many positive dimensions, MMMs are also providing sustainability through quality of life, risk-adjusted rate of return (to both banks and their customers), collateral benefits and security for future generations, and this is yet another lens of the social capital, responsibility and social accounting framework. This is also in sync with Maslow's pyramid of needs, security, self-esteem and so on. However, this aspect is beyond the scope of the present investigation.

Mobile Mortgage Managers

Mobile Mortgage Managers are people who are helping other people to achieve one of their major goals in life. They are driven individuals who work closely with the retail networks and have the ability to proactively network while developing new business opportunities. They have almost unlimited earning potential. Their success, however, depends on self-motivation, excellence in maximising customer retention, a technical and flexible approach to working hours and most importantly having a 'can-do' attitude along with outstanding relationship management skills and networking capabilities. They may or may not have a background in the finance and property sector. They are given training and have the capacity to earn commissions on NZ$2–5 million plus loans monthly.

The ANZ National Bank was a pioneer in employing MMMs in New Zealand. It started in 1996 with approximately 20 MMMs and this figure had risen to 52 in December 2006. The BNZ has the second highest number of MMMs. Some of the specific features of value addition through the use of MMMs in New Zealand banking that emerged from interviews with bank staff and MMMs are as follows:

- **Relationship marketing:** MMMs work on a one-to-one basis, using the most personalised retail sales technique, in the form of relationship building. It is like the haute couture or boutique business, where the word of mouth of an already satisfied and known customer is enough to encourage others to become customers. The average New Zealander changes their house and reorganises their mortgage arrangements six to eight times in their lifetime.

  In New Zealand, taking out a mortgage is a comparatively frequent and compulsive decision that affects the person's lifestyle and makes a social statement. A satisfied customer's communication is significant. A customer communicating satisfaction to a friend or colleague has greater influence on whether or not that friend or colleague becomes a customer of the bank or MMM. A customer gained through the recommendation of another customer is already in a positive frame of mind and is more easily satisfied by the MMM.

- **Value addition:** MMMs add value to the mortgage by working closely with other retail networks and facilitating sales of other related products like insurance (life, property, and contents), credit cards, loyalty programmes, holiday packages, furnishing sweeteners and so on. They end up developing new business opportunities through proactive relationships. The big influx of MMMs into the

marketplace in recent years has substantially heightened competition and enhanced global communication.

- **Adding brand equity:** MMMs help the customer to make decisions and choices through their selling techniques for specialised products, like fixed-interest, floating-interest and flexi-interest loan accounts (these are the brands in one New Zealand bank, the ANZ National Bank – others, like the BNZ, sell air points through global access credit cards, and Fly Buys points for mortgage installments).

- **Time management:** MMMs have the special advantage of flexi time and are thus able to accommodate a customer at the customer's convenience. They are self-driven individuals who want to work for themselves but are employed by a particular bank. They are not mortgage brokers who work on their own but sell mortgages for several banks at the same time. Unlike mortgage brokers, MMMs do not have a range of choices of different banks for their customers.

- **Better verification:** MMMs have the hands-on advantage of verifying the creditworthiness and credibility of the customer by personal interaction, as they are able to visit the client's home and workplace. They get to know their client better than a branch consultant (BC), who stays at their office. They can, therefore, conduct a more rigorous loan and client appraisal. Their relationship management skills and networking ability makes verification easier.

- **Price competitive:** MMMs are price competitive for a number of reasons. They have substantially lower overheads than the BCs working from bank premises. They have no extensive branch networks or shop fronts, as they do not have deposit facilities. Obtaining funds via the securitization process and low overheads often allow MMMs to undercut the bank's rates. In more recent times increasing numbers are offering comprehensive products with numerous features that increase the flexibility of the loan. MMMs normally operate from home and therefore save the bank a considerable cost for space, although banks compensate MMMs by giving them a car and reimbursing them for other maintenance costs (not a common benefit in the New Zealand private sector).

- **Increasing market share:** MMMs have a better opportunity to add on a segment of customers who would otherwise be left out – those who state 'I'll find out', but don't follow this up. Such a customer probably comes their way easily through the network of solicitors, estate and insurance agents, registered valuers and builders.

- **Comparative analysis:** The flexi time, mobility and freedom gives MMMs the time to make comparisons with other banks' mortgage products and to analyse other qualitative issues. This matters more in competition, where the product generates a high income (for example, average mortgage funds advanced range from NZ$200,000 to 300,000). These reports help the banks to maintain a competitive edge and improve their own policies.

- **High-level motivation:** Instant commissions on top of fixed salaries and benefits keep MMMs happy and motivated to achieve higher targets. They feel rewarded and respected and pass on their satisfaction to their customers, who in turn pass on their satisfaction and thereby bring in more potential clients. (For the purposes

of this paper the words 'client' and 'customer' have been used synonymously.) Motivation also improves the quality of social networks and value.

Empirical analysis

The mortgage business on an overall basis for the 17 registered banks in New Zealand showed residential mortgages formed 46 per cent (NZ$55,670 million) of the total loans and advances in 1999 and 50 per cent in 2006 (Table 1). Between 1999–2006 the percentage ranged from 46 per cent to 51 per cent. Most of the registered banks are foreign banks (non- New Zealand and Australian banks), with the exception of Kiwi bank, and generally do not employ MMMs for residential mortgage business. A few foreign banks that have initiated this service in recent years are not willing to disclose the amount or percentage of business generated by MMMs. The proportion of bank lending to households has increased from 34 per cent to 44 per cent between 2001 and 2005, increasing alongside the cyclical pick-up in house prices for the four major registered banks (ANZ National, ASB, BNZ and Westpac). During the December 2005 year, NZ$16 billion was attributable to residential mortgages, following on from NZ$12.5 billion in each of the preceding two years. The earning yield of the four abovementioned banks on loans and advances was approximately 7.77 per cent in 2004 and 8.10 per cent by the end of 2005 (Reserve Bank of New Zealand, 2006, p. 47). It is an established fact that mortgage lending is generally viewed as lower risk than corporate lending: the loans are for low amounts relative to corporate loans and are spread across a large number of borrowers. Having said that, there are some risks and risk-management challenges associated with residential mortgage lending. For example, rapid growth in residential mortgages could compromise the quality of risk monitoring or management services in other parts of banks' balance sheets. Despite the importance of the risk-management issues, they are outside the scope of this paper.

For the three sample banks (see Table 2) during 1999–2006, the residential mortgages business generated and attributable to MMMs ranged between 66–85 per cent. The balance of 14–35 per cent of business was brought in by the mortgage managers and independent mortgage brokers. The average productivity of an MMM during 1999–2006 for the three sample banks was approximately NZ$60 million per annum. However, the static mortgage managers' or BCs' average output was approximately NZ$17 million per annum. Therefore, the productivity of MMMs in terms of advances per employee is much higher (almost 30 per cent more) than the productivity of BCs and independent brokers put together.

Of the 52 MMMs in the ANZ National Bank (one of the three sample banks) during the year 2006, approximately 22 were very aggressive (those producing more business than the average). In most of the banks each MMM is doing an average business of NZ $2.5 million a month, although three or four bring in NZ$6 million per month. By 2006, the average business of an MMM had nearly doubled to approximately NZ$5 million per month, whereas the number of MMMs had increased by only 7 (total 45 in year 1999).

The total business produced by MMMs for the three sample banks has increased by nearly 33 per cent over eight years. The impact on productivity of advances per MMM in

the year 2006 is nearly twice that of the year 1999. It is important to mention here that overall residential property prices have increased by nearly 40 per cent during the same period. The analysis of the increase in property prices is outside the scope of this paper.

The average number of MMMs in the three banks has ranged from 42 to 55 in number (Table 3). The percentage of average business generated through MMMs has increased from 66 per cent in 1999 to 85 per cent in both 2001 and 2002. The average percentage of business produced by MMMs for the three sample banks has dropped from 84 per cent in 2003 to 75 per cent in 2006 (Table 2). This is probably attributable to Bank B, which reduced the number of MMMs employed due to internal policy changes (Appendix III – the figures shown in Appendix III for the three sample banks have been rounded off to keep the anonymity of banks). This bank has engaged more BCs to handle premium business clients (customers with higher mortgage business) for its branches by increasing salary packages to motivate them.

This move was perhaps due to the increasing rivalry and aggressive competition in hiring MMMs among the five main banks in recent years. MMMs were increasingly walking in and out of banks and negotiating higher remuneration packages corresponding to their IC (customer and social networks) on the one hand and the aggressive property market in New Zealand on the other hand.

Successful MMMs have a unique way of networking with customers and branch consultants. The relationship or team-building skills between the branch banking consultant (BC) (the static loans or mortgage manager) and the customer comes second. Sometimes a customer who is ready to sign may suddenly be put off by a little carelessness on the part the BC and walk out. Interview data has shown many times that a little negligence on the part of an MMM towards the end of the deal has also cost them time, money and loss of reputation and, therefore, future business.

One cannot ‘buy it’ – one either ‘has it’ or ‘hasn’t got it’. Some skills cannot always be acquired through training. As highly skilled bank staff, MMMs cannot afford to be careless or negligent because of the time invested in a client. Only when the deal is through and all the add-on products (essential to complete the deal) sold to the customer, arrangements for follow-up by the concerned accounts manager made, and the actual disbursement of the loan on the settlement day made, can an MMM claim the particular mortgage arrangement as their business. This is the time when MMMs make commissions.

When an MMM gives the best deal and gets the next referral customer, they may consider their added value to the bank and the bank in turn must recognize the intellectual capital vested in this MMM. As opposed to MMMs, the BC may work most efficiently in the safe and secure environment of the bank branch, but be uncomfortable outside it. In New Zealand’s multicultural environment, where the customer base consists of Māori, Pacific, European, Chinese, Japanese and Indian people, one of the recognised add-on qualities of an MMM is their ability to relate to diverse cultures and to

be bilingual where necessary. A loan and customer may be lost when a BC does not give the customer sufficient time, because of routine branch pressures and the consultant's unwillingness to work outside a set routine. Banks in New Zealand are increasingly hiring MMMs from different ethnicities to reach out further and provide additional and specific services relevant to the culture of the client, as long as the mortgage arrangement is within policy limits and the requisite documentation is completed to the satisfaction of the bank.

COST MEASUREMENT AND ACCOUNTING FOR IC

Some companies and banks have already adopted activity-based costing (ABC) techniques and can further refine cost pools and drivers. Others have adopted the income generation or incremental cost or profit approach. However, the foundation of IC is people, and its importance lies in assigning people's abilities and capabilities a value. The reliability of valuations of intangibles such as IC is controversial. The controversy can be resolved through consistently measuring the effects of IC on the profitability of an organization or bank. The valuation controversy has been resolved to some extent by iconic models such as Skandia's Navigator, Balance Scorecard and Value Creation Scorecard. However, these pursuits have not found much practice in New Zealand, especially in the banking sector.

The following are two issues that any bank needs to consider before designing an accounting and measurement model for IC:

(a) Acknowledgement that intangible assets like human capital are non-rival assets that can be simultaneously used by different users. However, rival assets as explained by economists are those physical assets that cannot be used elsewhere at the same time. Different users compete for the use of an asset (adapted from Bernhut, 2001).
(b) Protection or valuation of their own IC and its measurement, especially in the new economy, through value addition.

Generically, a firm's IC is acknowledged as the difference between market value (MV) and book value (BV):

IC = MV – BV of the company or firm

This method is simple, but it is unlikely to capture the complexities of the real world. There are various imperfections in market valuations, and book values can be affected if firms choose or are required to adopt tax/depreciation rates for accounting purposes.

A way of getting around the depreciation rate problem when comparing firms' intellectual capital is to use Tobin's 'q'. This was initially developed by Nobel Prize winning economist James Tobin as a method for predicting investment behavior. It uses the value of the replacement costs of a company's assets to predict the investment decisions of the firm, independent of interest rates. The 'q' is the ratio of the market value of the firm (share price x number of shares) to the replacement cost of its assets.

Tobin's 'q' is subject to the same exogenous variables that influence market price as the market-to-book method described above (Dzinkowski, 2000). Both of these methods are best suited to making comparisons of the value of intangible assets of firms within the same industry, serving the same markets, with those having similar types of fixed assets.

Another measure is the calculated intangible value (CIV). This has been developed by NO Research to calculate the fair market value of the intangible assets of the firm (the method follows Revenue Ruling 680609 of the United States Internal Revenue Service). The CIV calculates the excess return on hard assets, and then uses the figure as a basis for determining the proportion of return attributable to intangible assets. In this approach the company's cost of capital will dictate the net present value (NPV) of intangible assets. In order for the CIV to be comparable within and between industries, the industry average cost of capital should be used as a proxy for the discount rate in the NPV calculation.

According to Bob Woods (2001), measurement of intellectual capital can be seen as follows:

> **The value of IC = cost + value of goods and services as they increase as a percentage over time**

Woods gives an example of a pharmaceutical industry where probably 99.5 per cent of the cost of the product represents IC. In a pharmaceutical industry one pays a few cents for the actual chemical/material that goes into the capsules, pills or injections, and one pays a fortune for the R&D costs of the medicine. This R&D cost is the real intellectual cost of capital for an investment. The accounting school of thought, however, regards and treats R&D skills and endeavors as a cost that must be written off immediately against profits.

EFFECTIVE COST DRIVERS

As in many other organizations, besides the usual recruitment and training costs (RTC), the cost drivers identified below are also relevant in the banks for cost measurement and ascertainment.

The research and development costs (RDC) are equally important in service industries like banking and financial institutions, where the search for streetwise, honest, reliable and flexible personnel is of paramount importance. Another cost can be the cost of researching and developing the type of personnel capable of learning to sell the variety of products and brands to the customers and fulfilling the high expectations of the new economy clientele. Typical bank advertisements for MMMs read along the following lines: 'We require driven individuals, with demonstrated experience, who want to work for themselves. Required skills include: excellence in managing customers; the ability to maximize customer retentions; and outstanding relationship management skills and networking ability'.

The cost of non-communication – that is, not sharing knowledge – is that some people communicate after the event is over. When organizations do not bring their staff together for meetings or brainstorming sessions, they are not using their intellectual capital. Bouncing ideas in person is very different from asking for ideas via emails or circulars,

as these methods do not allow theories to develop and discussions cannot take place. This leads to stagnation and underutilization of valuable human capital. These can be termed as maintenance costs (MC) of intellectual capital or retention or harnessing costs. Organizations have to keep coming up with ideas to retain the interest of innovative and creative intellectual capital. In the case of MMMs, it is essential that they have regular meetings so that they can discuss uncertainties and difficult issues and develop new strategies that will help them to generate more business.

Another common set of costs is the upgrade and development cost (UC) of existing intellectual capital. Sending MMMs to self-development courses and workshops, where they are encouraged to up skill (that is, enhance their professional capabilities and personal attributes), allows them to acquire further skills and techniques or accumulate new toolkits. The development courses and workshops range from marketing to real estate to customer psychology.

The upgrading programmes must be custom-built or tailor-made for the type of group or IC being sent to up skill and upgrade their knowledge. Upgrading costs form a part of maintenance costs or retaining costs, depending on the organizations' cost-management strategies. Although these vary from organization to organization, the end result or objective remains the same – to preserve and nurture the organization's intellectual capital.

Among retention costs (RC) may be a number of benefits (in quantity and kind) that can make the employee feel rewarded and special. Paid vacations for the employee and their family, club memberships and special establishment cards have become a little outdated. The new mantra is a balanced lifestyle, meditation, spirituality, business/life coaches and 40 hours a week real time work. Preserving precious intellectual capital needs care and the will to sustain human and social capital. The number of professionals seeking solutions to attain spiritual healing, the higher self, the inner self, happiness, management of ego, self-control and accelerated meditation learning is growing. The costs incurred in sending MMMs to business life coaches are linked to retention.

An organisation must never become confident that their IC will stay forever. However, as noted by sociologist Abraham Maslow, strong relationships with human capital have sometimes proved valuable in meeting needs in terms of esteem and self-actualisation. The cost of assisting employees in the fulfillment of their needs for esteem and self-actualization is another retention cost.

Though all banks have different mission statements, the NZ banks' mission statements require them to retain the IC vested in their MMMs. The interviews revealed that some banks have made a small beginning by doing one or more of the following:

(a) Some senior managers and directors of banks have realised that they cannot achieve their goals by being sales driven only. It is important to have bosses who have a balance-in-life approach or policy for their employees

(b) drawing the attention of MMMs to the investments made in them, in terms of recruiting, training and extra benefits; encouraging them to consider the accounting aspects; motivating them to be more productive; sending them on vacations to rejuvenate them; and providing business/life coaches to help them achieve personal and more balanced goals automatically lead to more mortgages.

Hypothetically, if an average MMM generating NZ$3 million per month in business decides to leave, the bank immediately loses NZ$9 million of hardcore sales (as it takes 3 months to recruit MMMs). Besides this, for the next 3 months their sales are lower and three people (the new staff member's network, which may include a mentor) are helping the newly recruited MMM. Add to this the loss of the MMM's personal talent, expertise and networking ability (which cannot always be acquired). Therefore, by the time the new MMM comes up to the level of NZ$3 million a month in sales, the amount of business that has been lost by the bank is approximately NZ$13–15 million. It is estimated that it takes approximately 6 months before a new MMM shows any worthwhile results.

When recruiting, the additional costs such as non-competition agreements and their long-term implications are increasingly important to banks (these are like the non-compete agreements among IT professionals, especially where they have access to sensitive information). Features of non-compete agreements may be:

(a) stipulating conditions about the extent of time that employees stay away from competitors
(b) prohibiting employees from taking secrets or confidential materials to the competition.

Previously, these contracts were common among executives and sales employees. However, today they are common for telecommunications and software and hardware companies. The practice is also expanding into non-technology companies where employees have access to sensitive information. A TMP Executive Search (USA) Survey of 200 companies found 78 per cent of the companies ask all or some employees to sign formal agreements, 98 per cent require confidentiality agreements, and 88 per cent with sales of US$50 million or less have strict non-competes (Goodridge, 2001, p. 59).

Therefore, once the recruitment, training and required level of performance costs and networking costs are added, the total cost becomes quite an encumbrance. Analysing the reasons why an MMM wants to leave and what motivates them, sending them to business/life coaches, and knowing more about their overall ambitions and aspirations in life would be worthwhile. The ANZ National Bank has found this cost to be worthwhile to look after their IC or intellectual property. Besides retention, it also helps in creating a personal balance in life. The costs to the bank as a whole are negligible when compared with the benefits.

Unless the intangible value added by MMMs is explicitly recognized and valued by banks it cannot be socially valuable and sustainable. This form of IC needs to be acknowledged and valued (as in dollar terms in the labour market) just like any other tangible asset or service. It is necessary to recognise that in the case of IC 'what gets measured gets managed' and becomes a requirement or driver of the management control process. The non-acknowledgement of IC is causing concern, as emphasised by Thorbjornsen and Mouritsen (2002), who stated that IC and knowledge management 'is a problem for management, because suddenly the power of an individual over the central resource in society is beyond the immediate grasp and reach of the manager'. This point is outside the scope of this paper, but is by no means to be underestimated or ignored.

SUGGESTED VALUE-ADDITION MODEL

A simple methodology that gives an insight into the cost and value addition of MMMs in a bank is presented below. This procedure enables the calculation of the total cost of MMMs as a percentage of the total cost of acquiring, maintaining and retaining the entire human capital in the bank.

1. The total cost of MMMs may be represented as:

   TC = (RDC + RTC + MC + UC + RC)

   (Where RDC = research and development cost; RTC = recruitment and training costs; MC = maintenance costs; UC = upgrading costs; RC = retaining costs.)

2. Find the additional costs (AC) incurred to acquire the source of revenue (that is, the residential mortgage) through MMMs [AC (MMMs)]
3. Calculate the cost (C) incurred to acquire and retain branch consultants [C (BCs)]
4. Compare the percentage increase in revenue attributable to MMMs since their introduction [R (MMMs) – R (BCs)]
5. Compare the percentage increase in profitability traceable to MMMs since their introduction [P (MMMs) – P (BCs)]
6. Compare the percentage increase in productivity due to MMMs with pre-MMMs period figures [OP (MMMs) – OP (BCs)]
7. The mathematics of these will give an approximation of the value of the MMMs in the form of added value to the bank:

   [TC + AC (MMMs)] – C (BCs) = X (% increase in cost)

   R (MMMs) – R (BCs) = Y (% change in revenue)

   P (MMMs) – P (BCs) = Z (% change in profitability)

   OP (MMMs) – OP (BCs) = U (% change in productivity)

   X – Y = VA (value added)

While this model requires certain subjective assumptions, it is argued that it allows an approximation of the value of the MMM function to the institutions, which is preferable to ignoring the costs involved. This model represents a first step in the assessment of the real value of the banks' mortgage products.

Therefore, this empirical and conceptual thinking initiates the concept of cost-benefit analysis that could be used for the accounting of IC in banks. As this concept of MMMs is maturing in New Zealand, with more information and better quantitative tools it can be explored further.

The value-addition model suggested is a result of acknowledging and analysing some effective cost drivers. Like other measurement models or techniques it has its imperfections in terms of subjectivity and approximations, but it is a starting point for measuring the value addition attributable to human and social capital based on achieving a number of global objectives – namely product differentiation, client

demands, lifestyle implications and evolution of a global mortgage market. For example, it is quite common for a New Zealand MMM to organise a mortgage for a customer in Australia or vice versa, although this is mainly due to the migration of mortgagees between the two countries. It can also be due simply to the loyalty, dependability and reliability level achieved during previous experiences with a particular MMM and bank.

CONCLUSIONS

With existing research results in view, the major finding of my investigation in the context of NZ banks is that there is human and social capital vested in MMMs. It has added value to the mortgage products of banks and has increased productivity in terms of the amount of residential mortgage business.

In recent years, banks in New Zealand have found a way of accumulating and developing IC by way of MMMs. They have also found a way to generate more income from customer capital by producing diverse and attractive mortgage products for the unique New Zealand marketplace. This evolution of a product in the context of a global mortgage market is largely driven by globalisation issues – such as culture, lifestyle implications and technological sophistication. Recognising the value addition is an evolution of the product in the context of a global mortgage market. Management accountants have still not been able to influence banks or such financial organizations to present IC statements, and accounting regulation has not been able to make this mandatory. Merely conceding it does not imply 'measuring it or fixing it'. MMMs in New Zealand are trying to be recognised as IC of the particular bank that they are working for and yet they do not wish to forego the freedom of movement within the industry. Also, banks are not willing to give valuations or added value in monetary terms due to fears that this category of IC will become more demanding and competition, which is already severe, may become cut-throat. Everyone does not have the makings or discipline required to become an MMM in terms of personality type or attributes or the ability to work from home. Some employees can only produce results within structured workplaces. Some are naturals and yet not all can deliver outcomes in a flexible and relatively free business environment.

When banks in New Zealand downsize (see Appendix III(c)), throwing away their income-producing capability and incurring the costs of terminating people and then hiring others (the two most apparent costs), they need to explore the positive side of their business by researching the talents of the existing workforce. By being given options, those in the existing workforce have the opportunity to diversify their talents and prove their worth. Protecting and securing those who have the ability to create value-adding opportunities is a way of preserving talent. Another option is to retain and motivate the few (10–12) aggressive MMMs, while making the lower output producing MMMs redundant (tried by one bank with positive results). This may result in a larger customer base, greater customer loyalty, and ultimately a better customer fabric. But the question that arises here is: Are banks ready to recognise their responsibility and more so their social responsibility role, by embracing the value of labour and capital cycles created through MMMs?

From 1999–2001 two banks (B and C in Appendix III) showed that fewer MMMs produced a greater volume of business. The average output of an MMM is approximately three times higher than that of the ordinary mortgage manager or BC employed by a particular bank. The residential mortgage business garnered by MMMs is two to four times higher than that brought in by most managers or BCs. On the whole for four of the major banks (ANZ National, BNZ, ASB and Westpac), residential mortgages increased from 34 per cent to 44 per cent between 2001 and 2005. The percentage of the business generated by the fifth major bank through MMMs is not known, as the bank did not participate in the survey.

Since it is accepted that what can be measured can be managed, some NZ banks using MMMs and depending on static branch consultants or even independent mortgage brokers would be advised to explore the benefits of MMMs in building up customer capital and social capital, and building sustainable communities. In relation to the benefits from human and customer capital, it is pertinent to recognise the various costs and variables associated with customers, MMMs and static branch consultants, who are the principal generators of revenue (they are the means to the end – the customer). For each successful mortgage deal, the cost-benefit analysis is a result of networking among all three. Finally, the costs involved include:

(i) acquiring, recruiting and training employees

(ii) maintaining, upgrading and retaining employees

(iii) retaining existing customer capital – that is, keeping customers interested and offering them incentives

(iv) matching competition from other banks

(v) loss of business when human capital leaves

(vi) loss due to below standard or suboptimal level targets in mortgage business when new employees start performing.

The cost of retention, therefore, is important to NZ banks with MMMs. When valued IC leaves, this loyalty may be lost and it is commonplace to see certain customers move on with the MMM to the next bank. The IC vested in MMMs provides customers with knowledge and maneuvering skills to meet or exceed their (the customers') expectations. Therefore, there are additional costs associated with customer psychology and lost loyalty that must be dealt with when customers walk away with MMMs. The long-term impact of such movements is benefits for some banks and losses for others, and it does not effect the overall economic dynamics of the New Zealand banking sector.

In the survey of NZ banks it was found that some banks also entered into a 3-month non-compete agreement stipulating that the MMM will not work for another bank in the same capacity for a period of 90 days. However, in practice this is not good enough, as it takes a minimum of 12–16 weeks of induction and training before a new MMM is allowed to go out into the field and work alone. By this time they are no longer bound by the non-compete agreement terms. If an MMM left a bank and started up an independent mortgage broking business, the dynamics of the non-compete agreement would be different.

Introducing MMMs in New Zealand has proved to the banks that employing a high number of skilled mortgage managers or BCs is no longer required. Banking consultants do not carry the same importance they did a few years back, nor do they contribute directly as much as MMMs in terms of revenue generation (15–35 per cent, including the contribution of independent brokers – see Appendix III). They have much lower productivity, and are mostly involved in adding value in terms of quality to lending portfolios. Banking consultants mostly complete documentation and service of the product after the sale (mortgage deal) has been completed. Banks can restructure these staff to reduce the cost burden. The increasing number of online users of banking facilities (Internet banking) is also a contributory factor to BCs having a somewhat insignificant role in value creation when compared with MMMs.

It is important to find the right clients, not the most clients. The MMMs have improved not only the number but also the quality of the customer base, through better verification, relationship marketing and time management and a higher level of motivation. They are also creating immense wealth by marketing other products under one roof (like insurance, which is highly competitive). Besides persuading customers through product differentiation, they are enticing customers with holiday packages on behalf of tourism companies. The cumulative effect of this business of mortgages is a win-win situation for socio-economic capital and higher productivity, ultimately leading to higher value of labour and social capital.

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Appendix I: VAIC™ Model by Ante Pulic (1997)

Measurement model VAIC™: components
VAIC is a composite sum of three indicators or subcomponents:

(1) Value added capital coefficient (VACA) – indicator of value added (VA) efficiency of capital employed.
(2) Value added human capital (VAHC) – indicator of VA efficiency of human capital.
(3) Structural capital value added (STVA) – indicator of VA efficiency of structural capital.

The higher the VAIC coefficient, the better the efficiency of VA by the firm's total resources: VA_i = I+DP+D+T+M+R
VA = Interest expenses (I)

+ Depreciation expenses (DP)
+ Dividends (D)
+ Corporate Taxes (T)
+ Equity of minority shareholders (M)
+ Profits retained for the year (R)

Capital coefficient VACA = VA/CA
CA is the capital employed book value of net assets for a firm
Human capital coefficient VAHU = VA/HC
HC is the total salary and wage cost for a firm

Structural capital (SC) = VA – HC

Structural capital coefficient STVA = SC/VA
Source: Adapted from Pulic (1998) and Williams (2001).

Appendix II

Two approaches to asset appraisals for value creation

The cost of an asset doesn't change once it is purchased. The value of an asset like a brand name can change. Consider Ipana toothpaste or Burma shave. These were well-known brands 40 years ago, but now they have only historic interest. Yahoo or Amazon.Com are two of the most valued brands in electronic commerce today, and no one had heard of them a few years back (King & Jay, 1999, p. 36).

The cost approach

If, in the New Zealand real estate market, bank loans or mortgages and valuations are examined, it will be noticed that the cost of the asset (that is, the house/building) has not changed, but the value is changing every year. The government adds value by appraising almost the entire real estate of New Zealand every year (varying estimates according to demand and location and so on). It gives the client a loan based on the Registered Value (RV) or Government Value (GV) today, which has nothing to do with the actual cost of the asset.

Houses or personal property are a tangible asset. Yet, if the depreciation is to be accounted for, the value should be nil for a 25 or 50-year-old house today. But here the value is the price a purchaser will have to pay to build the same building today. A purchaser wouldn't acquire an existing house at a NZ$150 per square meter if a new house could be constructed at NZ$100 per square metre.

The cost approach is considered to be reliable when dealing with tangible estates like real estate.

The notional approach

This is a market-based approach comparing similar assets or products and their selling prices – for example, how would one value a 1999, four-door BMW? A comparison with models of the same horsepower and vintage and with other similar features will establish a market value or sale price. This approach can also be used for well-established products and for consumer durable intangibles like technology, skills and customer relationships. These are the resources in which is vested the very foundation of banking in the new economy.

Appendix III

(a) Total amount of residential mortgage business – three sample banks (NZ$m)

Year	Bank A	Bank B	Bank C	Average
1999	3,600	3,300	3,100	3,300
2000	3,100	2,900	3,100	3,000
2001	2,900	3,500	3,900	3,400
2002	3,000	3,100	4,200	3,400
2003	3,400	3,300	4,600	3,700
2004	3,600	3,800	4,900	4,100
2005	3,900	3,800	5,100	4,300
2006	4,300	4,200	4,800	4,400

(b) Total amount of residential business done by MMMs – three sample banks (NZ$m)

Year	Bank A	Bank B	Bank C	Average
1999	1,800	2,200	2,600	2,200
2000	2,000	1,900	3,000	2,300
2001	2,400	2,800	3,500	2,900
2002	2,500	2,600	3,700	2,900
2003	2,700	3,000	3,600	3,100
2004	2,800	3,200	4,000	3,300
2005	3,000	3,300	3,900	3,400
2006	3,300	3,600	3,200	3,300

(c) Total number of MMMs – three sample banks

Year	*Bank A*	*Bank B*	*Bank C*	*Average*
1999	*45*	*58*	*42*	*55*
2000	*30*	*39*	*57*	*42*
2001	*60*	*40*	*45*	*48*
2002	*55*	*43*	*48*	*49*
2003	*57*	*45*	*49*	*50*
2004	*54*	*45*	*48*	*49*
2005	*52*	*43*	*51*	*49*
2006	*52*	*38*	*50*	*47*