

A Test for Effective Market Supervision of New Zealand Banks

Xiaojie (Jeff) Zhuang

xiaojiezhuang@hotmail.com

M.L. McIntyre

Sprott School of Business

Carleton University

1125 Colonel By Drive

Ottawa, Ontario

Canada K1H 6S6

mmcintyr@sprott.carleton.ca

+1 613 520-2600 ext 2514

David Tripe*

Centre for Banking Studies

Private Bag 11-222

Massey University

Palmerston North, New Zealand

D.W.Tripe@massey.ac.nz

+64 6 350-5799 ext 2337

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* Corresponding author

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Abstract

The Reserve Bank of New Zealand's (RBNZ) regulatory regime for banks relies on a combination of self, market and regulatory discipline. It follows a specific disclosure regime to support its reliance on market discipline, and this disclosure regime calls for the ready availability of two documents: the Key Information Summary and the General Disclosure Statement. The RBNZ points to retail depositors as essential market participants with the potential to exert market discipline on banks, but there are differing opinions as to their effectiveness in this role.

This paper provides background comments and develops, in the New Zealand context, arguments in support of the Llewellyn & Mayes (2003) prerequisites for the exertion of effective market discipline by stakeholder monitors. We conduct empirical tests relative to some of the Llewellyn & Mayes (2003) prerequisites but find little evidence to support the proposition that they are being met among New Zealand retail depositors.

1. Introduction

The Reserve Bank of New Zealand (RBNZ) exercises a self-described “light-handed regulatory regime for banks, which relies on a combination of self, market and regulatory discipline.” (RBNZ, 2004, p 1). It applies a specific disclosure regime to support its reliance on market discipline, and this disclosure regime calls for the ready availability of two documents: the Key Information Summary and the General Disclosure Statement. The RBNZ points to retail depositors as essential market participants with the potential to exert market discipline on banks. However, there are differing opinions as to their effectiveness in New Zealand in this role. In particular, there are differing views over whether the disclosure statements are effective in assisting market participants to monitor their banks.

In this paper we provide background comments and develop, in the New Zealand context, arguments in support of the Llewellyn & Mayes (2003) prerequisites for the exertion of effective market discipline by stakeholder monitors. We conduct empirical tests relative to a sub-set of the Llewellyn & Mayes (2003) prerequisites but find little evidence to support the proposition that those prerequisites are being met among New Zealand retail depositors.

This paper is organized as follows. In Section 2 we provide a background discussion on banking supervision and market discipline. In Section 3 we introduce the New Zealand context. Section 4 outlines the methodological approach to our empirical work, the results from which are reported in Section 5. Section 6 summarizes and concludes.

2. Background

There appears to be consensus across numerous political jurisdictions that some form of government regulation of financial systems in general, and banking systems in particular, is beneficial. Societies and their governments probably come to this conclusion because of the significant economic and social benefits financial systems provide (Levine, 1997), and also because of the likelihood that most modern financial systems would experience substantial disruption, and concomitant adjustment costs, if a large institution failed. As Llewellyn & Mayes (2003) put it:

“Markets are concerned with the private costs of a bank failure and in principle reflect the risk of this in market prices. The social cost of bank failures, on the other hand, may exceed the private cost and hence the total cost of a bank failure may not be fully reflected in market prices.” (p 22)

Goodhart et al (1999) express a similar sentiment when they say “exit is controlled because the social cost of bank failure exceeds the private costs.”

There is considerably less consensus, however, when it comes to deciding the specifics of how to supervise banks. The Basel Committee on Banking Supervision (the “Basel Committee”) goes a long way toward establishing a cogent framework for banking supervision based on its three pillars: Minimum Capital Requirements; Supervisory Review Process; and, Market Discipline (BCBS, 2005, p 6). Although organizing the matter into a few broad categories is certainly useful, the problem remains that there is little consensus on the appropriate balance across them. The controversy is probably most acute when it comes to arriving at a balance between market and regulatory discipline, complicated in part because decisions in one area may affect the efficacy of the other.

Some advocate a strong regulatory regime with numerous specific rules designed to hem in bank management, combined with frequent on-site auditing and other monitoring to ensure compliance. Proponents of such regimes prefer the certainty they believe this provides, so that bank management cannot exploit information asymmetries it may have with respect to its funders, and fall victim to moral hazard due to its activities and effort being less than perfectly observable by stakeholders in the bank. Reliance on on-site auditing by the regulator also addresses the possibility that moral hazard issues around accurate financial reporting may become exaggerated as a bank approaches failure.

Critics point to the cost and possible distortions this approach introduces. As Llewellyn & Mayes (2003) point out, while the monitoring institutions in such situations may have monopoly power over the monitoring task, they do not necessarily have a “monopoly of wisdom and judgement.” (p 22) As a result, their actions, and the requirements they impose may be sub-optimal, potentially more so than if bank management are left to make decisions solely to maximize private benefit. In a similar vein, Flannery (1999) submits that banks in modern financial systems are too complex to monitor directly,

and that the market is better positioned to perform this function. Both Caprio & Honahan (1999) and Ferguson (1999) find a tendency for the market to identify problems earlier.

In addition, a strong regulatory regime may reduce the inclination of management to carry out its own monitoring activities, may undermine incentives for market discipline, and may make it difficult for governments to credibly signal a no-bailout policy should this be the political goal. In effect, excessive supervision can be taken erroneously by the market as an implicit guarantee by the regulator of specific banks or the banking system in general. Finally, if the safety of the banking system is dependent on the action of a particular regulator, the system is vulnerable to the possibility the regulator will neglect to act, or fail to act in a timely fashion. Beck (2003) addresses this issue in the context of bank distress in Russia, for example. This may occur because action signals the regulator's failure as a supervisor, or it may occur because the regulator is subject to political or other pressure. Mayes & Liuksila (2003) suggest quick action is unlikely in cases where there are multiple authorities involved, particularly if they cross political jurisdictions.

Some, including the Basel Committee, see an important role for market discipline. Interestingly, although the Basel Committee includes market discipline among its three pillars, it does not define the term in its 2004 or 2005 documents (BCBS, 2004 and 2005), nor do these documents explain which economic agents are to exert market discipline and through which financial instruments. Instead, the market discipline sections of these documents focus on approaches to disclosure intended to facilitate market discipline.

Lane (1993) characterizes market discipline this way: "financial markets providing signals that lead borrowers to behave in a manner consistent with their solvency." But exactly who is to exert influence? Ceuster & Masschelein (2003) suggest that all funders to banks have an incentive to monitor, but they express doubt about the ability of monitoring to translate into changes in bank behaviour. Llewellyn & Mayes (2003) provide an explicit list of parties using Llewellyn's (2002) concept of the "stakeholder monitor", which they define as "...all those agents who have an interest in the outcome of the monitoring process." (p 11) Their list includes funders (shareholders, depositors

and debt holders), other market participants (rating agencies and market traders), and others (supervisory agencies, the board of directors, managers, borrowers and employees).

Equity holders are potential monitors because they have a stake in the bank and can exercise corporate governance mechanisms to influence bank management. Although this may be the case, it is often argued that, among funders, equity holders are the least suitable monitors. This is because of the potential option-like nature of an equity position (c.f. Black & Scholes, 1973, and Merton, 1977), and the fact that, when equity is viewed as a call option on asset values in excess of debt, the value of equity is monotonically increasing in volatility. Furthermore, because of the fact that call options are maximally sensitive to volatility for at-the-money options, the responsiveness of equity value to volatility increases as banks approach failure – that is, as the excess of asset values over debt values shrinks to zero (see also Keeley, 1990).

The equity market can also exert influence on bank management behaviour through the market for corporate control. As the share price of a weakening bank declines, market participants perceive an opportunity to buy in, improve management, and enhance value. Of course, as Llewellyn & Mayes (2003) point out:

“If a bank can be bought on the open market either directly or through an open bid for the holding company then the discipline on the bank from the ‘market’ will be much more effective. If the bank has a mutual structure, is largely private in character or part of a large industrial group (or owned by central or local government) then these pressures will operate very differently and generally with less (if any) power and effectiveness.” (p 10)

Depending on the jurisdiction, there can be restrictions on the percentage of bank equity that a non-bank can own, restrictions on the percentage of foreign ownership, anti-trust legislation, and other frictions that can limit the ability of the market for corporate control to exert market discipline. The qualification in Llewellyn & Mayes (2003) is important for the New Zealand market because more than 98% of bank assets are accounted for by foreign owned banks. The business units that the RBNZ wishes to subject to market discipline, the branches and subsidiaries of foreign owned banks, do not have their primary listings on the New Zealand market, eliminating any scope for equity market

discipline to be applied in response to their New Zealand reporting.

Recently, there has been increased interest in the monitoring role subordinated debt holders can play (c.f. Evanoff & Wall, 2000 for a survey). They can lose all or part of their stake when the bank defaults but, unlike equity-holders, they do not participate in gains from excessive risk-taking. Therefore, some argue that regulators should require banks to issue market-traded subordinated debt in sufficient volume to enable it to act as a disciplining device. There is some empirical evidence that markets for subordinated debt react to the risks taken by banks. Jagtiani et al (2000), and Sironi (2000) find a positive relationship between the spread on subordinated debt and bank risk respectively for US and European subordinated debt issues. However, Ceuster & Masschelein (2003) suggest caution when interpreting bond spreads as they can also be affected by factors other than credit risk, such as liquidity and maturity effects, and the availability of substitute investments.

Depositors, who are generally considered the most risk averse market participants, have an incentive to monitor banks because of their concern over repayment of deposited funds and interest (England, 1988). According to Birchler & Maechler (2002), depositors exert market discipline by withdrawing funds and re-depositing them in a preferred bank. Dewatripont & Tirole (1994), on the other hand, doubt that depositors have the ability to make a sensible risk assessment, especially if their deposit amounts are small, they are imperfectly informed, and face incentives to free ride¹. There is a considerable amount of research that seeks to settle this debate by observing either the correlation of price to risk (the “price approach”), or the movement of funds in response to changes in risk (the “quantity approach”).

Following the price approach, Ellis & Flannery (1992), Brewer & Mondschean (1994), and Cook & Spellman (1996) find a positive relationship between bank risk and the interest rate paid by American banks on large, uninsured deposits.

Using the quantity approach Birchler & Maechler (2002) study bank depositors in Switzerland and

¹ An example would be in the case where they believe there is a regulator who is better informed than they are.

find that they tend to withdraw their deposits when a bank's fundamentals deteriorate. In similar studies, Goldberg & Hudgins (1996), Park & Peristiani (1998), Marino & Bennett (1999) and Jordan (2000) find decreases in uninsured deposits after a perceived increase in bank risk. However, in a New Zealand study, Wilson et al. (2004) are unable to find evidence of market discipline. They use Tier 1 capital as a proxy for a bank's fundamental risk, and hypothesize that, if depositors exert market discipline, Tier 1 capital should be negatively correlated with deposit interest rates. Their empirical results do not support this hypothesis, calling into question the extent to which New Zealand depositors discipline their banks.

The Basel Committee appears to take the position that if the market is to discipline banks, market participants must possess sufficient information to enable them to assess individual banks. In fact, the Basel Committee's discussion of market discipline in both its 2004 and 2005 documents (BCBS, 2004 and 2005) is almost completely comprised of disclosure requirements. Not all agree, however. Horvitz (1996) suggests that better information is produced by the bank examination process than by bank disclosure. Similarly, in a commentary on the New Zealand bank disclosure regime, Turner (2000) argues that the nature of banking firms renders their information "non-communicable." Disclosure statements that only provide information on a bank's balance sheet are too limited to enable depositors to evaluate bank risk. In addition, he questions the extent to which market participants can actually "decipher" disclosure statements.

3. The New Zealand Situation

Of interest to us in this study is the RBNZ's partial reliance in its supervisory approach on market discipline asserted by retail depositors. Its underlying assumption concerning market discipline is that:

"The market therefore has greater scope to react to developments affecting a bank's financial condition - rewarding those banks which are well managed and penalising those which appear to be less well managed. The strongest banks are likely to benefit from that strength by operating at lower costs; weaker banks are likely to be under pressure to strengthen their position. Over the longer term we believe that stronger market disciplines will make a major contribution to the soundness of New Zealand's financial system." (Brash, 1997, p 11)

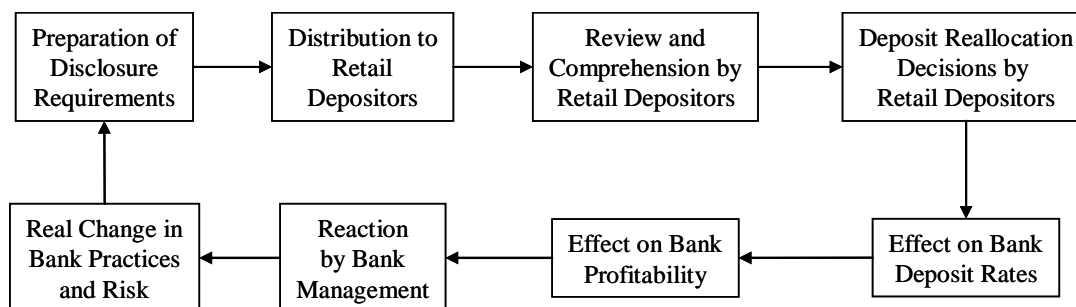
The view taken by the RBNZ is clearly consistent with the interpretation of market discipline set out in Llewellyn & Mayes (2003):

“The underlying theory of market discipline is clear: well-informed creditors and, in some cases, rating agencies have the resources, incentives, expertise and market knowledge to monitor banks, and that their behaviour will discipline banks through various equilibrating market price and quantity adjustments.” (p 7)

The cornerstone of the RBNZ’s approach to market discipline is its disclosure regime. Registered banks in New Zealand are required to publish a disclosure statement every quarter. The disclosure statement is comprised of two components: the Key Information Summary and the General Disclosure Statement. One of the objectives of the RBNZ’s disclosure requirements is to “assist depositors, among others, to make well-informed banking decisions” (Bollard, 2004).

The model the RBNZ envisions appears to be a feedback model like the one presented in Figure 1.

Figure 1
Feedback Model



The mechanism by which market discipline arises and is exerted on banks commences with publication of the disclosure statements, which are provided to depositors on request. Depositors consider the information in the disclosure statements, and assess the risk-return trade-off their bank represents. The depositors may then decide to move funds from one institution to another depending on the view they form of their own bank and others. If a sufficient number of depositors move their funds, this will influence the price banks offer for deposits (a higher price to counteract fleeing deposits; a lower price to counteract an influx of new deposits). The penalty of higher deposit rates is

intended to encourage a bank that suffers a loss of depositors to improve its risk profile.

There are issues that call into question the likely effectiveness of the feedback loop described in Figure 1. The first concern relates to the design of the Key Information Summary, which constitutes a sub-set of the information in the much more detailed General Disclosure Statement. Tripe (2001) argues that the information is so condensed it is of little practical value to depositors seeking to assess banks' safety and soundness. It does not reveal a bank's financial position and risk exposures in sufficient depth.

The dependence of the supervisory approach on the decisions and actions of retail depositors raises a series of questions about the potential behaviour of these economic agents. Is there sufficient incentive for retail depositors to incur the costs associated with the monitoring role the RBNZ expects of them? Will retail depositors actually read the disclosure statements? Can they correctly interpret them and select prudent actions based on their interpretations? Will the decisions of retail depositors, presumably made to maximize their own private welfare, be any better at protecting social benefits than similarly self-interested decisions of bank management? If retail depositors come to the conclusion that they should act, will they? Will the reliance on market discipline make it more difficult for the RBNZ to intercede when it perceives a bank to be in imminent danger of failing, if their view is not corroborated by the actions of market participants? How can market discipline by retail depositors be operationalized in the case where all banks degrade together, leaving no incentive to switch deposits from one bank to another?

A prevailing counter-argument to this is that bank disclosure statements will be read by potential agents of depositors such as the financial press, financial analysts and investment advisers. As a result, the disclosure statements produce an incentive for banks to operate prudently to avoid criticism from these quarters (Brash, 1997). In practice, however, there have been very few professional readers monitoring banks' quarterly published information.

It is also not clear that the manner in which information is presented in disclosure statements actually enables investors to identify and quantify the risks to which a bank is exposed. Tripe (2001) points out

that there is considerable scope for modifying the disclosure requirements to more realistically reflect a bank's risk position. For instance, every bank in New Zealand, either as a New Zealand incorporated bank or a branch of an overseas bank, is required to report their large exposures. However, these exposures are only required to be reported as a percentage of equity, which means that banks operating as branches in New Zealand normally do not report any large exposures because they are comparing local exposures to the comparatively much larger capital pool of their parent organizations. Tripe (2001) also points out that the way information is presented in the disclosure statements makes it difficult for their users to make cross-sectional comparisons of income statements and balance sheets.

4. Methodology

The research on banking supervision discussed in Section 2, and the fact that the RBNZ's supervision regime depends on market discipline beg the question, "Under what conditions is market discipline likely to be effective?" Llewellyn & Mayes (2003) set out a list of key prerequisites that one can use to address this question. They are²:

- a) "Relevant and accurate information about the status of banks needs to be publicly available on a timely basis to all *stakeholder monitors* (SHMs)."
- b) "There needs to be a sufficient number of SHM groups who are capable of analyzing the information made publicly available."
- c) "SHMs need to have clear incentives to monitor the behaviour of banks and to incur the costs of doing so." [Elaboration omitted.]
- d) "A sufficient cohort of SHMs needs to adjust their behaviour on the basis of relevant information about the status of the banks in which they have an interest."
- e) "SHMs need to respond rationally to relevant information which, for instance, implies that they are not subject to the same errors or misperceptions as the banks being monitored." [Elaboration omitted.]
- f) "Such rational responses need to lead to equilibrating changes in market quantities and/or prices (e.g. the supply and pricing of debt available to banks)."

² The items a) through h) are presented word for word from Llewellyn and Mayes (2003). Where indicated, elaboration provided by the authors in Llewellyn and Mayes (2003) has been omitted to provide emphasis in the points prerequisites themselves.

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- g) “Bank managers need to have incentives, and the ability, to respond to these market changes, or must be conscious of the potential threat of such changes...” [Elaboration omitted.]
 - h) “It follows from the above seven conditions that the market should efficiently incorporate information about risk into prices.” [Elaboration omitted.]

In the Sections that follow we describe our empirical approach to investigating a sub-set of these pre-requisites.

4.1 Availability of disclosure statements

The ready availability of a bank’s Key Information Summary and General Disclosure Statement is an important part of the RBNZ’s disclosure regime. The provision of information about the status of a bank that is relevant, accurate, timely and publicly available is also an important prerequisite for the success of market discipline (Llewellyn & Mayes, 2003, their prerequisite a)). The first component of this study involved a test to determine if banks are following the RBNZ’s policies for the provision of the Key Information Summary and the General Disclosure Statement in their branches. Banks are also required to make their disclosure statements available on their Websites, but as branches are traditionally the most important way for banks to serve their customers, we selected branch visits to observe adherence to RBNZ requirements.

We drew a sample of forty bank branches and arranged for a researcher to visit them. During each branch visit, the researcher:

- a) Posed as a bank customer;
- b) Entered the selected branch and attempted to locate an information display presenting the bank’s copies of its Key Information Summary;
- c) If the Key Information Summary was not on display, requested a copy from branch front line staff (officers or tellers); and,
- d) Asked front line bank branch staff for a copy of the bank’s General Disclosure Statement.

Insofar as the specifics of data collection are concerned, the researcher:

- a) Noted whether or not the Key Information Summary was on display;
- b) Noted the branch staff’s familiarity with the term General Disclosure Statement;

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- c) Noted whether or not the branch staff processed the request for the General Disclosure Statement, and if applicable, the Key Information Summary;
 - d) Recorded the length of time the interactive process required; and,
 - e) If a branch was able to react to the researcher's requests quickly, and followed the RBNZ's requirements, identified the branch as "Prompt and Standard."

Our sample included bank branches from six major banks in New Zealand located in eight medium to small-sized towns and cities across the North Island. We selected bank branches located outside major cities, such as Auckland, Wellington and Hamilton, out of concern that the branches in major cities would be more likely to be checked by RBNZ staff. Also, the major cities are all education centres. The branches located there are study subjects convenient to researchers from the educational institutions within these cities. We were therefore concerned that favourable results in the larger cities would be an artefact of these effects (bank supervision and repeated requests from other researchers) rather than a measure of bank staff knowledge of the RBNZ requirements and the general availability of the disclosure statements in New Zealand.

4.2 Understanding disclosure statements

In the second component of this study we considered whether or not ordinary depositors can correctly interpret information relevant to the soundness of a bank. The Key Information Summary is the most widely available document specified in the RBNZ's disclosure regime, so we made it the focus of this component of our study. According to Llewellyn & Mayes (2003), the ability to correctly interpret information is a prerequisite to effective market discipline by stakeholder monitors (their prerequisite b).

To find out whether or not retail depositors could correctly interpret information contained in the Key Information Summary we conducted structured interviews with nine bank customers. Because random sampling of subjects can result in a sample that is excessively homogeneous, which limits generalizability, we constructed a reasonably heterogeneous sample from individuals known to us (detailed in Appendix 1). We presented each subject with the Key Information Summary of a major bank in New Zealand, allowed them to review it, and then asked the eleven questions set out in Section 5.2.

Our questions addressed four main themes that are important in assessing the soundness of a bank: credit rating, capital, credit quality, and peak credit exposure concentration. In designing the questions we sought to build-in gradations of difficulty to enable us to observe various levels of interpretive ability among our subjects. We gave subjects time to thoroughly read through the Key Information Summary before answering our questions, and allowed them to refer to it at any time. We also encouraged them to express their overall opinion on how they felt about the safety of the bank for which the Key Information Summary was presented. The researcher recorded each subject's answers to the various questions, as well as general comments.

4.3 Bank Customers as Stakeholder Monitors

In the third component of this study, we examined five matters:

- a) The ranking of four considerations that might influence bank customers in their choice of a bank;
- b) Bank customers' awareness of sources of information on banks;
- c) Bank customers' awareness of and engagement with the Key Information Summary and the General Disclosure Statement;
- d) The source that bank customers consider to be most important, and rely on to judge a bank's soundness; and,
- e) Bank customers' perceptions of whether or not New Zealand banks are guaranteed by the New Zealand government or the RBNZ.

We developed five questions to address the above matters, each of which is discussed below. We distributed the questionnaires by post to two thousand individuals randomly chosen from the 2005 New Zealand Electoral Roll. Three hundred and eleven completed survey questionnaires were received (a response rate of 15.8%, exclusive of 33 non-delivery questionnaires).

Question 9 asked respondents to rank four considerations that might influence them in their choice of a bank. One of the considerations is the "soundness of the bank." One of Llewellyn & Mayes's (2003) prerequisites for effective market discipline by stakeholder monitors is that they must adjust their behaviour in response to information and do so rationally (their prerequisites d) and e)). The idea underlying this question, and the inclusion of soundness as an option, is that if market discipline is to be effective bank customers must show reasonable sensitivity to this factor when making their banking decisions.

In Question 11 we addressed bank customers' awareness of and engagement with the Key Information Summary and the General Disclosure Statement. Llewellyn & Mayes (2003) submit that if stakeholder monitors are to exert market discipline, they must be able to obtain and analyse information, and there must be an incentive for them to do so (their prerequisites a), b) and c)). The idea is that if bank customers are not aware of New Zealand banks' disclosure documents, there must be a question whether appropriate information is available to them, let alone whether they can analyse it. Further, if they are not "engaged" with the information, this calls into question whether they perceive adequate incentives for participating in the market discipline process.

Question 12 sought to identify the source that bank customers consider to be most important to judge a bank's soundness. One of the eligible answers is their bank's formal disclosure information. Similar to question 11, this question addresses whether information is available to bank customers, whether they are in a position to analyse it, and whether they are engaged with the disclosure information.

Question 13 sought to determine bank customers' perceptions of whether or not New Zealand banks are guaranteed by the New Zealand government or the RBNZ. Llewellyn & Mayes (2003) submit that if stakeholder monitors are to exert market discipline, there must be apparent incentives for them to do so (their prerequisite c)). The idea of this question is that if bank customers hold the view that deposits are guaranteed, there will be little incentive for them to monitor banks.

5. Results and discussion

5.1 Availability of disclosure statements

Twenty-eight (70%) of the forty branches the researcher visited displayed the Key Information Summary in the branch as required by the RBNZ's disclosure regime. Of the twelve that did not display it, five had it available in the branch and produced it on request.

Only 8 branches met our "Prompt and Standard" level of service when we asked for the General Disclosure Statement. The contact individual in the branches that met this standard was able to react

quickly to our request, and the document was either available in the branch or ordered from the bank's head office and posted to the researcher within five working days.

We encountered various problems in the other thirty-two branches. In twenty-one cases the contact person was not familiar with the term "Disclosure Statement." With some assistance from colleagues or the branch manager, the contact person was able to work out what the researcher was asking for. A typical scenario involved the branch manager spending fifteen minutes making several telephone calls to resolve matters. In one episode, the General Disclosure Statement booklet was actually displayed right in front of the teller to whom the researcher spoke. Despite this, the teller had no idea what the researcher was asking for until the researcher pointed it out. In 6 cases the contact person indicated the requested material was not available and was unresponsive to prompts from the researcher to the effect that the material could be obtained from the head office. In the remaining 5 cases the failure to achieve the "Prompt and Standard" level largely related to the delivery standard. For instance, in one case we requested the material, received a commitment that the bank would send it, but ultimately never received it. There are a number of possible explanations for this aside from non-performance by the bank, such as mail delivery problems. In one case, the contact person provided an obsolete General Disclosure Statement instead of the current one.

Overall, the disclosure statements were generally available in the branches, but it was evident that most bank staff were not very proficient. The over-riding impression was that requests for disclosure statements of either type were not regular occurrences at the branches.

5.2 Understanding disclosure statements

As shown in Appendix 1, eight individuals in our nine-person sample were fifty years of age or older. We expected that deposit levels would be positively correlated with age, and so we expected this group to have larger than average deposit levels, and thus, more than average incentive to assess the soundness of their banks. Moreover, most sample members had tertiary qualifications and more. We thus expected this group to be in a better than average position to understand disclosure statements compared with the population at large. Surprisingly, the interview results reveal that all of our subjects had considerable difficulty in comprehending the information contained in the Key Information

Summary. Below we list the questions we posed, followed by comments on our observations.

Questions:

- a) What does “credit rating” mean to a bank?
- b) Is “Aa3” a high, medium or low credit rating?

In our view, subjects appeared to have an intuitive understanding of a bank’s credit rating. Most of them were able to connect the term “credit rating” with the “safety”, “reputation” or “solidity” of a bank. They also correctly pointed out that a higher credit rating implies the bank is more fundamentally sound. Nevertheless, they were uncertain of how to interpret a specific rating. Five subjects correctly understood that “Aa3” represents a strong credit rating, while three considered it to be a medium or low rating.

Questions:

- c) What is a bank’s capital?
- d) What is the implication of “Tier One Capital”?
- e) Please compare two figures of “Tier one capital as a percentage of risk weighted exposures” of two sequential years. What can you tell in terms of the change of the bank’s ability to absorb losses? Has the bank become safer or riskier?

Eight of our nine-member sample could not define capital. The best definition that was offered was “Money invested in the balance sheet. They’re shareholder’s funds other than other borrowings.” All nine subjects were unfamiliar with the term “Tier One Capital”, and were unable to explain the implication of the change from one year to the next of “Tier one capital as a percentage of risk weighted exposures.”

Questions:

- f) What are impaired assets?
- g) Are loans that are classified into impaired assets likely to be fully repaid?
- h) Please compare two figures of “Impaired assets as a percentage of total assets” of two sequential years. Has the bank’s credit quality turned better or worse?

Respondents also struggled to understand the term “Impaired Assets”, although two of them interpreted the term as “Assets that have been damaged” or “Assets that become worthless.” When answering the question g) six subjects correctly identified that impairment signalled a reduced likelihood of repayment. Five subjects correctly interpreted that the “Impaired assets as a percentage

of total assets” going from 0.2% in 2004 to 0.1% in 2005 indicated that the bank’s asset quality had improved. However, these correct answers were often qualified with statements such as, “I guess”, “probably” and “I think.” Four subjects did not correctly interpret this item.

Questions:

- i) What is the implication of credit exposure concentration?
- j) Is a bank with a high credit exposure concentration safer or riskier than a bank with a low credit exposure concentration?

Our entire sample failed to understand the term “Credit Exposure Concentration”, with four of them adding emphasis to the effect that they had no idea what this term meant. Eight subjects seemed to understand that credit concentration exposure was undesirable. They correctly identified that a bank with high credit exposure concentration is riskier than one with low credit exposure concentration. It is possible that their correct interpretation arose because the term includes the word “exposure” which, on its own, can have negative connotations.

Question:

- k) Will you feel safe putting money with this bank, on the basis of the information provided in this Key Information Summary?

Seven subjects felt safe depositing their money in the bank for which the Key Information Summary was presented. One sample member said, “The rating is very important...the rating is good. It’s pretty safe from this point of view. I’m also aware there is no government guarantee... but it’s not likely to fail. Tier one capital and impaired assets are OK. Overall, I suspect it’s safe.” This subject not only applied some indexes in the Key Information Summary to judge the bank’s soundness, but also realised that there is no government guarantee for public deposits in the case of bank failure. Another subject believed that the deposit interest rate reflected underlying risks, and that banks were a safer place to put money compared with non-bank financial companies. The subject said, “Yes... I would put my money in a bank that offers a lower interest rate. You know, some retired people wanted to put their money in some quick investment... they offered 20% return. At the end of the day, they’re all gone... you know. I have a [named a bank] account. It’s safe, I think.” Two subjects appeared more risk-conscious than the others, with one of them saying, “Safer than having no information, but bear in mind that all investments bear some elements of risk” and the other saying, “I wouldn’t put my money

into this bank, because I don't understand the information the bank provides. So, I'll go elsewhere for my money." One of the respondents simply expressed the feeling that all major banks in New Zealand are reasonably safe.

Overall, the members of our sample possessed only limited ability to correctly interpret the Key Information Summary. Our experience with this sample does not suggest these individuals amount to constitute effective stakeholder monitors.

5.3 Bank Customers as Stakeholder Monitors

5.3.1 Question 9

We asked respondents to rank in order of importance considerations that might influence their choice of bank. We record below the percentage of instances in which respondents ranked a particular consideration first:

47.5%	Good deals (e.g. higher deposit interest rates, low transaction and account fees, low interest rates on credit cards and loans).
13.5%	The ability to do my banking business easily (e.g. convenient branches, good ATM network, internet banking and telephone banking).
22.4%	Soundness of the bank (e.g. high credit rating, high capital ratio).
16.6%	Good quality customer service (e.g. friendly and helpful bank staff, efficient services and accurate transactions).

Soundness of the bank was ranked as the primary consideration relatively infrequently at 22.4%. In addition, 40.9% of respondents ranked soundness of the bank as their least important consideration from those listed. In our view, these results suggest it is unlikely that retail depositors are exerting market discipline.

5.3.2 Question 11

In question 11, we told respondents that all registered banks in New Zealand are required by law to publish a quarterly disclosure statement and that a disclosure statement contains a wide range of financial and other information on a bank. We further indicated that there are two forms of statement available to the public: the Key Information Summary and the General Disclosure Statement. We asked respondents to indicate which of the five descriptions listed below best

describes their situation? We present below the percentage of respondents who put the indicated description in first place:

42.2%	I was not aware of the availability of disclosure statements.
5.9%	People at my bank told me about them, but I've not looked at them.
5.6%	People at my bank told me about them, and I have looked at them.
35.3%	I have heard about disclosure statements from newspapers, the Reserve Bank, or some other source, but I've not looked at any of them.
10.9%	I have heard about disclosure statements from newspapers, the Reserve Bank, or some other source, and I have looked at them.

Combining responses to the third and fifth items gives a total of only 16.5% of respondents indicating they had looked at bank disclosure statements. 83.5% of respondents had not looked at disclosure statements, and of this group, many (42.2%) were not aware of them. In our view, this response profile calls into question the ability of retail depositors to effectively exert market discipline. The observation that a large number of respondents had not heard of disclosure statements reinforces the view we developed during the branch visits: specifically, that requests for disclosure statements are not every-day occurrences at branches.

5.3.3 Question 12

In Question 12 we asked respondents to indicate the most important source(s) that they rely on to judge their bank's soundness. We list below the percentage of respondents who put the indicated source(s) in first place:

42.7%	Reports and reviews in newspapers, financial magazines and financial TV programmes.
27.0%	Recommendations or suggestions from my family and friends.
11.3%	The bank's advertisements in newspapers, financial magazines and on TV.
10.7%	Advice from my financial advisers/planners.
8.3%	Formal disclosure information provided by my bank.

The formal disclosure statements do not appear to be an important source of information for many people, receiving a first place ranking among only 8.3% of our respondents. This calls into question their role in the market discipline process.

The empirical results show no statistically significant correlation between a choice of “Advice from my financial advisers/planners” as the most important source of information on Question 12 and a choice of “Soundness of the bank (e.g. high credit rating, high capital ratio)” when identifying the most important consideration that might influence their choice of a bank on Question 9. This disconnectedness calls into question the assumption that advice from financial advisers/planners is an important transmission device between disclosure by banks and understanding of the soundness of a bank on the part of bank customers (Brash, 1997).

5.3.4 Question 13

In Question 13 we asked respondents to select from a list of alternatives what kind of guarantee they believe the New Zealand Government and/or the RBNZ provides to depositors in the case of bank failure? The results are:

48.4%	It is very clear that there is no government guarantee for my deposits.
32.7%	It is not very clear, but I think a part of my losses will be compensated by the Government.
3.4 %	It is quite clear that a part of my losses will be compensated by the Government.
12.8%	It is not very clear, but I think the Government will guarantee all my bank deposits.
2.7%	It is very clear that the Government provides full guarantee for my deposits.

Although the RBNZ’s message seems to be getting through to 48.4% of our sample, this leaves a rather large 51.6% of respondents who think the government provides some sort of guarantee to depositors should there be a bank failure. Within this group, views vary as to whether the guarantee is implicit or explicit, and full or partial.

There is no statistically significant correlation between individuals holding the perception of no government guarantee on Question 13 and ranking soundness of the bank as their most important consideration when selecting a bank. Thus, there is no support in our data for the assertion that the absence a government guarantee heightens retail depositors concerns about bank soundness.

These results make an interesting contrast with results obtained from a survey commissioned by the Reserve Bank of Australia (RBA, 2006), looking at the potential outcome in the case of a bank failure. The questions asked were a little different, but more-or-less comparable results were reported as follows:

10%	No guarantee and government unlikely to step in
21 %	Unsure about guarantee, but government unlikely to step in
9%	Unsure whether government would step in
60%	Government likely to step via guarantee (22%) or otherwise (37%) ³

New Zealanders would seem to have a better appreciation of the potential for losses from bank failure than does the Australian population, despite Australia sharing with New Zealand the distinction among OECD countries of not operating any formal deposit insurance scheme.

6. Summary and Conclusions

Although the branch visits we conducted in connection with this study reveal that disclosure statements appear to be generally available through bank branches, requests for them do not appear to be a regular occurrence. Only 20% of branches achieved our “Prompt and Standard” outcome. Our branch experience is supported by our survey results which reveal low rates of specifying bank soundness as the most important consideration in bank selection, low awareness of disclosure statements, an even lower incidence of having read them, and a low incidence of respondents specifying disclosure statements as their most important source of information on banks. The apparent lack of interest in bank soundness and disclosure statements may relate to our finding that the majority of respondents perceive there to be some form of government guarantee of retail bank deposits, whether implicit or explicit, partial or full. We do not find support for the idea that retail depositors are effective stakeholder monitors relative to the New Zealand banking system. Despite the RBNZ’s intentions to make clear it does not guarantee retail bank deposits, there may be unknown factors standing in the way of credibly asserting this. There is a role for additional research here to be more explicit about whether the perception of some sort of guarantee reflects the fact retail depositors are not receiving the RBNZ’s message, or whether they

³ Total does not add to 60% due to rounding.

receiving it, but then embark upon some thought process that leads them to erroneously conclude there must be some form of guarantee.

The findings of this study are in line with those of Hale & Tripe (2005), who conducted a risk awareness survey in Palmerston North in 2004. They conclude that New Zealand retail depositors have insufficient knowledge and understanding of their position in dealing with commercial banks. They advocate a public education campaign around the disclosure regime and the inherent risks for bank depositors in the absence of a deposit insurance system in New Zealand. To some extent, the results of this study are also consistent with the findings of Wilson et al. (2004) who examined the relationship between Tier 1 capital and the interest rates banks offer to retail depositors. Due to the absence of a detectible response in interest rates to changes in Tier 1 capital, they conclude retail depositors exert no market discipline on New Zealand banks.

We acknowledge that some research supports the idea that retail depositors exert market discipline on banks, however, we suggest that, when considering this matter, the fact situation of each jurisdiction must be considered. There is no guarantee that the fact situation in a jurisdiction will hold up favourably when compared to the Llewellyn & Mayes (2003) pre-requisites for effective market discipline.

References

- Basel Committee on Banking Supervision (“BCBS”) (2004, June). *International Convergence of Capital Measurement and Capital Standards, A Revised Framework*. Bank for International Settlements. Downloaded from <http://www.bis.org/publ/bcbs107.pdf>, May 5, 2006
- Basel Committee on Banking Supervision (“BCBS”) (2005, November). *International Convergence of Capital Measurement and Capital Standards, A Revised Framework, Updated November 2005*. Bank for International Settlements. Downloaded from <http://www.bis.org/publ/bcbs118.pdf>, May 6, 2006.
- Birchler, U. W. & Maechler, A. M. (2002). Do depositors discipline Swiss banks? *Research in Financial Services*, 14, 234-266.
- Black, F. & M. Scholes, “The Pricing of Options and Corporate Liabilities,” *Journal of Political Economy*, 81 (1973), 637-54.
- Bollard, A. (2004, August/September). Promoting strong corporate governance in New Zealand banks. *B+FS*, 118 (4), 30-32.
- Brash, T. D. (1997, March). Banking soundness and the role of the market. *Reserve Bank Bulletin*, 60(1), 9-17.
- Brewer, E. & Mondschean, T.H. (1994). An empirical test of the incentive effects of deposit insurance. *Journal of Money, Credit and Banking*, 26(1), 146-164.
- Caprio, G. & Honohan, P. (1999). Beyond capital ideals: restoring bank stability. *World Bank Working Papers*. Retrieved May, 30 from <http://econ.worldbank.org/docs/962.pdf>.
- Ceuster, D. & Masschelein, N. (2003). Regulating banks through market discipline: a survey of the issues. *Journal of Economic Surveys*. 17(5), 749-766.
- Cook, D. O. & Spellman, L. J. (1996, June). Firm and guarantor risk, risk contagion and the interfirm spread among insured deposits. *Journal of Financial and Quantitative Analysis*, 31(2), 265-282.
- Dewatripont, M. & Tirole, J. (1994). *The prudential regulation of banks*. Cambridge: MIT Press.
- Ellis, D. M. & Flannery, M. J. (1992) Does the debt market assess large banks’ risk? *Journal of Monetary Economics*, 30(3), 481-502.
- England, C. (1988). Agency cost and unregulated banks: could depositors protect themselves? *Cato Journal*, 7(3), 771-802.

-
- Evanoff, D.D., & Wall, L.D. (2000). Subordinated Debt and Bank Capital Reform. Federal Reserve Bank of Chicago Working Paper 00-7.
- Ferguson, R. W. Jr. (1999). Alternative Approaches to Financial Supervision and Regulation. *Journal of Financial Services Research*, 16(2/3), 297-303.
- Flannery, M. J. (1999). Modernizing Financial Regulation: The Relation Between Inter-bank Transactions and Supervisory Reform. *Journal of Financial Services Research*, 16 (2/3), 101-114.
- Goldberg, L. G. & Hudgins, S. C. (1996). Response of uninsured depositors to impending S&L failures: evidence of depositor discipline. *The Quarterly Review of Economics and Finance*, 36(3), 311-325.
- Goodhart, C., Hartmann, P., Llewellyn, D., Rojas-Suarez, L. & Weisbrod, S. (1999). *Financial Regulation: Why, How and Where Now?* London: Routledge.
- Goodman, L. S. & Santomero, A. M. (1986). Variable rate deposit insurance. *Journal of Banking and Finance*, 10(2/3), 203-218.
- Hale, W. & Tripe, D. (2005, June/July). Understanding bank risk in New Zealand: Just how informed are retail consumers about the implications of a bank failure? *B+FS*, 119(3), 19-21.
- Horvitz, P. (1996, Winter). Financial disclosure: is more always better? *Journal of Retail Banking Services*. 57-61.
- Jagtiani, J., Kaufman, G. & Lemieux, C. (2000). Do markets discipline banks and bank holding companies? Evidence from debt pricing. *Emerging Issues Series Working Papers of Federal Reserve Bank of Chicago*.
- Jordan, J. S. (2000, March/April). Depositor discipline at failing banks. *New England Economic Review*, 15-28.
- Keeley, M. (1990). Deposit insurance, risk and market power in banking. *American Economic Review*, 80(5), 1183-1200.
- Lane, T.D. (1993). Market discipline. *IMF Staff Papers*, 40(1), 53-88.
- Levine, R. (1997). Financial development & economic growth: Views and agenda. *Journal of Economic Literature*, 35(2), p. 688-726.
- Llewellyn, D. T. & Mayes, D. G. (2003). The role of market discipline in handling problem banks. *Bank of Finland Discussion Papers*. Retrieved April 13, 2004 from http://www.bof.fi/eng/7_tutkimus/index.stm.

- Marino, J.A. & Bennett, R.L. (1999). The consequences of national depositor preference. *Federal Deposit Insurance Corporation Banking Review*, 12(2), 19-38.
- Mayes, D.G. & Liuksila, A. (2003). *Who Pays for Bank Insolvency?* Basingstoke: Palgrave.
- Merton, R.C. (1977). An analytic derivation of the cost of deposit insurance and loan guarantees: an application of modern option pricing theory. *Journal of Banking and Finance*, 1, 3-11.
- Park, S. & Peristiani, S. (1998). Market discipline by thrift depositors. *Journal of Money, Credit and Banking*, 30(3), 347-364.
- Reserve Bank of Australia ("RBA"). (2006, March). *Financial Stability Review*.
- Reserve Bank of New Zealand ("RBNZ"), (2004). *Central Banking in New Zealand*.
- Sironi, A. (2000). Testing for market discipline in the European banking industry. *Journal of Money, Credit and Banking*, 35(3), 443-472.
- Tripe, D. (2001). Banking supervision by disclosure – a review of the New Zealand regime. Retrieved 20 November, 2005 from http://centre-banking-studies.massey.ac.nz/index.php?id=562&output_id=890.
- Turner, J. D. (2000). The Hayekian approach to banking supervision in New Zealand. *Annals of Public and Cooperative Economics*, 71 (1), 105-125.
- Wilson, W. R., Rose, L. C. & Pinfold, J. F. (2004). *Market discipline in New Zealand: Can retail depositors exercise it?* Auckland: Department of Commerce, Massey University.

Appendix 1

Panel A: Demographic Data		Number
Gender	Male	6
	Female	3
Age	20-29	1
	50-59	2
	Over 60	6
Education	School Certificate	1
	Polytechnic or other tertiary certificate or diploma	2
	University Bachelor's degree	1
	University post-graduate qualification	5
Panel B: Careers Represented		
Primary school teacher	Semi-retired worker	
Language school teacher	Retired policeman	
University lecturer	Retired soil scientist	
Nurse	Retired engineer	
Businessman		