

**Can Budgetary Slack Still Prevail within  
New Zealand's New Public Management?**

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**Abstract**

The New Zealand (NZ) Government began its public sector reforms in 1984. The purposes of the reforms were to build a more open public sector, a plainer and clearer way of reporting, emphasising accountability and transparency (Wallace, 1993). A central focus of the reforms was to change the accounting culture by adopting accrual accounting and a 3-year budgeting and planning management cycle within Government Ministries. By investigating whether or not budgetary slack is used as a risk management strategy in NZ's new public management (NPM) control setting, this study examines how successful the reforms are, more than 20 years after their inception. Budgetary slack is the excess requirements for resources or understatement of productive capability. Slack allows a budget to be easily achieved and gives a false perception of managers' performance, defeating the basic purpose of budgets. As little research has been conducted on this phenomenon in NZ's NPM, this study was undertaken. Using budgetary slack and earnings management literature, an empirical model is developed to examine whether the potential for budgetary slack exists in NZ Government Ministries. The five Ministries of: Health, Education, Transport, Justice, and Building & Housing, were chosen for this study. They provide a mix of sizes and are very topical for some specific reasons within the political arena. Results of this study will be of interest to the Government, public sector managers, taxpayers, other stakeholders, and academics.

**Key words:**

Budgetary slack, uncertainty, accrual accounting, accountability, managerial performance, public sector reform, new public management.

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**1. Introduction**

The study was designed to investigate whether or not the potential exists for budgetary slack to be used as a risk management strategy in New Zealand (NZ)'s new public management (NPM) control setting. To accomplish this, it was proposed to consider how successful the NZ Government's public sector reforms of the 1980's are, more than 20 years after their inception, by examining how their influence on the accounting culture in the public sector has impacted on the management of 'budgetary slack'. In the past Ministries were found to build in 'budgetary slack' or exceed their budgets with an overall view to maintain the amount of budget they receive each year and/or to obtain a greater budgeted amount (Goldman & Brashares, 1991; The Treasury, 2003).

The motivation for this study is driven by how little research appears to have been done on this phenomenon within a NZ setting. The existence of 'budgetary slack' can be viewed as possibly a bad thing (Hopwood, 1972) and potentially diminish the quality of comparing actual performance to budgeted data, ... *as it creates inefficiency and wastage* (Yuen, 2004: 518). However, 'budgetary slack' can also be viewed as possibly a good thing in that it can increase flexibility when managers are presented with unexpected potential opportunities (Marginson, 1999; Marginson & Ogden, 2005). In regard to budgetary slack management, the focus of earlier research was on the private sector (Merchant, 1985; Dunk & Perera, 1997; Marginson, 1999; Otley & Pollanen, 2000; Van der Stede, 2001). Despite the efforts of two decades of public sector reforms whereby the public and private sectors became quite similar, there still remains a characteristic difference. The public sector maintained a richer culture than the private sector through the nature of Government ownership and the focus of its culture on public interest. The reforms that the Government implemented led to the development of the 'new' public sector culture (Aucoin, 2006). Operationally however, is budgetary slack a good or bad thing? Given the tendency for contemporary governments around the world to continually pursue surpluses while identifying new programmes in managing governments' political costs, how can a New Public manager be efficient and effective without any financial room to manage?

The first set of reforms were implemented to change the public sector culture in NZ within the period 1984-1995 as the then government was determined not to see a repeat of the ... *constitutional and foreign crisis of July 1984* (Evans, Grimes, Wilkinson & Teece, 1996: 1856). The reforms included a deliberate move to a more open public sector, a plainer and clearer way of reporting, and an emphasis on accountability and transparency (Wallace, 1993). Thus, it influenced the way in which budgeting and planning was and is operationalised within the Ministries and reformed the annual backward-looking culture of the public sector to a forward-looking planning culture (The Treasury, 2003).

Based on the above, this study sought to examine the extent of success of these reforms as reflected in the overall improvements in efficiency and economy of the public sector. In view of that, the research question undertaken is:

Is budgetary slack currently used as a risk management strategy in New Zealand (NZ)'s new public management (NPM) control setting?

Budgetary slack is ... *the amount by which a subordinate understates productive capability when given a chance to select a work standard against which his performance will be evaluated* (Young, 1985: 831). In these terms, the existence of budgetary slack has negative impacts on the budget process because budgetary slack provides the potential for a budget to be easily achieved and gives a false perception of managers' performance, defeating the basic purpose of budgets (Merchant, 1985). Any evidence of the current existence of budgetary slack would impact on the overall success of the reforms. Additionally, there would appear to be some commonality between the notion of budgetary slack and the notion of earnings management (financial accounting literature). Thus, we have drawn on this literature and extended it to this management accounting based study.

Suitably, using budgetary slack and earnings management literature, an empirical model based on a contingency theory framework to test for the potential existence of budgetary slack in NZ Government Ministries was developed, thereby extending the application of contingency theory to a public sector setting. It was decided to use the variance in the 'provision for repayment of surplus to the crown', found within the Statement of Financial Performance as proxy for budgetary slack. This figure would represent the difference between estimated surplus/profit and actual surplus/profit for the year, thus reflecting the overall difference between actual and budgeted figures, *potentially* being

budgetary slack. Adopting this approach highlights the potential for using publicly available information for a management accounting research topic. Data that Chenhall (2003) observed as disadvantaging management accounting research when compared to financial accounting research.

It is contended that this model would provide a base for examination of the success of the Government's public sector reforms agenda. Given that the budget and planning related reforms represent approximately 50%<sup>1</sup> of all reforms; these reforms then ought to be viewed as the core of the public sector reform package (Boston, Martin, Pallot & Walsh, 1996). The findings of this study ought to be of interest to the Government, public sector managers, taxpayers, other stakeholders, and academics alike.

The structure of this paper takes the following form. Next, the New Zealand public sector is analysed as to how it has changed due to the reforms. Section three looks at the problem of budgetary slack and is followed by the section detailing the development and discussion of Hypotheses and Model. The penultimate section provides the discussion of the Methodology, Data Set Selection, Data Collection, Data Analysis, and Model Analysis. The last section summarises the study findings, discusses the study limitations, and argues a case for enlarging and expanding the theme for more advanced research.

## **2. Context of Public Sector of New Zealand**

### ***2.1 New Zealand Pre 1984:***

The literature on the NZ financial management systems before the reform of 1984 is very limited (Evans et al., 1996; Lye, Perera & Rahman, 2005) and has been described as follows.

At the time of the reforms, NZ had a population of just over 3 million (Goldman & Brashares, 1991) and was classified as being small in terms of its population when compared to Australia, Canada, Germany and the United States of America, who were also undertaking public sector reforms (Wollmann, 2003).

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<sup>1</sup> See Appendix One: A Summary of New Zealand's Public Sector Reforms 1984-95 (Boston, J., J. Martin, J. Pallot and P. Walsh. 1996. *Public Management: The New Zealand Model*. Oxford, New York: Oxford University Press: 367-370), for a list of the reforms undertaken by New Zealand.

The permanent heads of departments could not be hired or fired by their respective Ministers but only by the State Services Commission (Goldman & Brashares, 1991). This was seen as a weakness in the system as although department heads reported to their respective Ministers, it did not matter how they performed, or did not perform, as their job was safe. Departments were known to be quite large in size on account of their having a multiplicity of functions consisting of a range of commercial and non-commercial operations (Goldfinch, 1998). This in turn meant that the public sector had a duty to look after the public's interest at the same time being engaged in profit making activities (Jensen, 2003). Although the Ministries were involved in profit making activities, they did not operate as commercial departments. Overall, the NZ Government played the traditional role of ownership over the departments (Goldfinch, 1998).

An additional underlying problem was that the budget was prepared and monitored on a cash flow basis (Goldman & Brashares, 1991). The problem, also noticed by the public<sup>2</sup>, was that by using cash budgets it did not fully represent all the revenues and expenses a department has generated during an annual period. Garrison & Noreen (2003: 382) stated ... *a cash budget is a detailed plan showing how cash resources will be acquired and used over some specified time period*. This statement highlights the benefits in preparing a budget on the basis of cash. But its benefits become more pronounced when it is used together with accrual budgets including the sales and production budgets. The cash budget does not include consideration of other financial resources accrued, such as, assets and liabilities, nor does it consider non-financial resources available to the entity.

Prior to the 1984-1995 reforms in NZ, no accounting information was recorded and reported on an accrual basis (Jensen, 2003) leaving budgets to potential manipulation by the managers who prepared them (Petrie & Webber, 2001). Jensen (2003) commented that departments had a cash spend up or put off paying expenses near year end, ensuring

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<sup>2</sup> Submissions to the Public Finance Act 1989. Those who submitted comments were the Department of Maori Affairs, Department of Justice, Department of Labour, Department of the National Library, Department of Transport, National Council of Woman, Parliamentary Offices, NZ Securities Accountants, Integrated Economic Services, Department of Conservation, State Insurance Office, Audit Office, Jarden Morgan, Clerk of the House of Representatives, Department of Statistics, Environment and Conservation Organisations, Ministry of Forestry, Customs Department, Ministry of Agriculture and Fisheries, Coal Corporation, Deloitte, National Bank, Electricity Corporation, Forestry Corporation, Telecom, Land Corp, Government Property Services, Airway Corporation, Ministry of Defence, Tourist Hotel Corporation and the Department of Internal Affairs. Submissions were received during April and May 1989.

that the budget is met. This ensured that at least the same budgeted amount or percentage of available budget funds is obtained from the Government the following year, a characteristic of the existence of budgetary slack (The Treasury, 2003). It was *aptly* remarked that whilst senior managers are responsible for managing cash amounts and are accountable for spending the cash, their overall management performance was difficult to assess under a purely cash-based accounting system (NZ Public Service Association, 1989).

Although cash is important to any business as it is the blood flow required for a business to survive (Garrison & Noreen, 2003), little attention was paid to see how efficiently capital resources were being used. This led the Government to institute reforms in the public sector, to resolve such problems and improve public sector efficiency, economy and overall effectiveness.

Jensen (2003: 32-33) saw the problems in the system as being:

- The public sector was highly centralised.
- The delivery of public goods and services as well as profit making was the activities of the departments.
- The State Services Commission hired and fired public servants.
- The control system was operating on an input-focused procedural rules basis.
- The budget only looked ahead one year.
- Department assets were not monitored.
- Public debt was recorded but there was no mention of liabilities, which required payment at a future date.
- Information about departments' assets and liabilities was generally unavailable.

The above highlights the limitations in decision-making and performance monitoring information under a cash-based accounting and management system. Due to these, managers in departments were able to create budgetary slack without anyone knowing (Jensen, 2003).

The need for reform was driven by a number of significant social and economic events that affected the NZ economy it included the oil shock of 1973, which made trading in international markets difficult for NZ (Chatterjee, 1996). Other factors included 'think big' projects that the Government planned to introduce, to improve the economy and

reverse the down-turn that had been experienced, but they ended up being more costly than initially envisaged. Before 1984 the growth record was poor coupled with high inflation and increasing interest rates, and also rising unemployment rates. Radical changes were required to improve the state economy (Chatterjee, 1996).

## **2.2 New Zealand Reforms Post 1984:**

The range of reforms undertaken during the decades of 80s and 90s are shown in Appendix One<sup>3</sup>, but the focus of this study is on those reforms that pertained to the financial management of the public sector, that were designed to impact on budgetary behaviour and performance. Also considering that in the public sector it is a reporting requirement to use the budget as a performance measure against which all Ministries are assessed.

There was a plethora of literature covering what the reforms were and the reasons why the government felt the reforms should be implemented (Wallace, 1993; Chatterjee, 1996; Boston et al, 1996). At times the relationship between what the reforms were set out to achieve and what the Government said they were achieving did not match (OECD, 2004). This section looks at what reforms were implemented and why there was a need for their implementation. The theory underlying the reforms was identified by Goldfinch (1998) as being 'public choice theory'. This explained the reasons for decentralisation of the Government in allowing Ministers greater autonomy when overseeing their departments. It is posited that public choice theory is not appropriate for this study as the focus of this study centres on the quality of management accounting information and its impact on reform performance. From a management accounting perspective a primary driver for the existence of budgetary slack is uncertainty (Abernethy & Brownell, 1999; Marginson & Ogden, 2005).

The minor changes were virtually made impossible to be incorporated by the Government into the system, on account of its ... *low efficiency and effectiveness in the delivery of public services* (Scott, 1996: 10) coupled with the weaknesses in the management of its operations. At that time NZ's economic future was uncertain, the need for serious reform to be implemented in the public sector was argued to heighten the uncertainty already existing due to poor economic performance.

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<sup>3</sup> A Summary of New Zealand's Public Sector Reforms 1884-95: (Boston, J., J. Martin, J. Pallot and P. Walsh. 1996. *Public Management: The New Zealand Model*. Oxford, New York: Oxford University Press: 367-370).



The reasons behind why the NZ Government decided to implement these reforms were to (Boston et al, 1996):

- Improve ... *quality and efficiency and effectiveness of governments' programmes.*
- Have ... *greater responsiveness of public agencies to clients/customers/citizens.*
- Reduce the ... *size of [the] government and lower public expenditure.*
- Improve ... *accountability of managers to executives.*
- Improve ... *accountability of executives to parliament.*

No reform can be examined in isolation, the Government used the reforms collectively to achieve the above objectives (Goldman & Brashares, 1991). By introducing the reforms as legislation, the Government reinforced its intentions for the public sector (OECD, 1990).

The reforms were stimulated by a weak growth in output and were undertaken when the fourth labour Government was elected (Fox, 2002; Newberry & Pallot, 2003). The reforms commenced in 1984 in the form of financial deregulation of the banking industry by the Government. The reform agenda then continued with product market and public sector reform implementation. A significant point of achievement of reforms was the publication of the Government accounts on an accrual bases (Government of New Zealand, 1992). NZ was the forerunner country in the world to achieve this outcome (Wollmann, 2003).

Government undertook reforms and implemented several main Acts, such as: the State-Owned Enterprise Act 1986; the State Sector Act 1988; Fiscal Responsibility Act 1994; and, the Public Finance Act 1989 (Goldman & Brashares, 1991). The latter Act had the most impact on budgets, how they were prepared and monitored and it is discussed in detail in the next section. In the three paragraphs below, the first three mentioned Acts are discussed in summary so as to provide an idea of the reforms as a whole.

The State-Owned Enterprise Act 1986 was introduced to allow state-owned enterprises (SOEs) to operate as separate corporations so that they could behave as separate businesses from the Government (Goldman & Brashares, 1991). It was a move to increase the accountability within each department. This Act allowed SOEs to perform

their original task for which they were created in the first place, that is, to ... *improve the efficiency of resource allocation and pricing of major government commercial operations* (Goldman & Brashares, 1991: 78). In 1987 as a result of this Act, the Government spent around two billion dollars to privatise many SOEs (Newberry & Pallot, 2003).

Goldman and Brashares (1991: 79) explained the State-Sector Act 1988 as refining ... *the relationship between ministers and departments heads in order to make permanent heads more accountable to their respective ministers for the performance of their departments*. The decentralised departments helped to reinforce this, which in turn made managers more accountable for their actions. However, in exchange for that accountability the managers were given more freedom to make decisions that were right for their department (Minister of State Services of Finance, 2001; Newberry, 2003). This potentially represents a balancing of the 'change driven' uncertainty being experienced by management with the capacity to determine certainty through empowerment and reduced role ambiguity (Marginson & Ogden, 2005).

The Fiscal Responsibility Act 1994 was implemented to ... *bring a responsible long-term focus to annual budgeting; increase the transparency of policy intentions and the fiscal impact of these; [and] allow people to assess the consistency of the Governments fiscal policy with its long-term objectives* (The Treasury, 2003: 7). This focus became inbuilt within the Ministries when the 'Statement of Intent' became a requirement. Each Ministry did not have to just plan for the year ahead but now for three years ahead. This enabled the Government to keep track of short-term spending with a long-term objective focus (The Treasury, 2003). Better indications of the Government's long-term objectives were made possible to be gleaned from this. However, it can potentially increase the uncertainty that the Ministries face as it is quite difficult to plan and budget the costs of the upcoming year, not to talk of three years ahead.

### **2.3 Public Finance Act 1989:**

Goldman and Brashares (1991: 79) saw the Public Finance Act as applying ... *a corporate accounting framework to government finances in order to better measure performance so that departments and the Government can be held accountable for success or failure*. This quote implies that the system was not usable as a good

performance measure prior to the reforms. A product of this initiative is a broadened and more complex management control structure.

The purpose of Public Finance Act was to create better performance measures within the public sector and improve forecast information of the departments and represents one aspect of an improved management control structure. A requirement of the Act was the publishing of the 'Statement of Intent' by departments, which when incorporated with the Fiscal Responsibility Act 1994, improved subsequent reporting (Newberry & Pallot, 2003).

The Bill was introduced into Parliament by Hon. David Caygill (Minister of Finance) on the 21<sup>st</sup> March 1989 (NZG, 1989a: 9859) arguing that the Bill was constructed around the following principles: *parliamentary scrutiny of expenditure; accountability to the House; and the achievement of improved managerial performance*. The Bill was designed to ensure that public resources are being used on expenditure in the interest of the public, thus *hopefully* encouraging good financial management.

The Public Finance Act was implemented to move from a cash-based system to an accrual-base budgeting system:

*The Government of New Zealand was transformed from a cash basis as a result of a set of complex decisions made, within a broader spectrum of economic, historical & political changes, (Lye et al., 2005: 810).*

The cash-based budgetary system was claimed to be inefficient as was mentioned by Hon. David Caygill (NZG, 1989a) while introducing the particular bill. As Hon. David Caygill (NZG, 1989a: 9859) pointed out, ... *under the present system [cash-based] the departments are encouraged to spend all the cash made available rather than to apply it to more efficient purposes in future periods*. These actions are symptomatic of budgetary slack management. A fundamental reason why the budget process was changed to an accrual system was that this basis ... *enables an assessment of financial performance on a basis more likely to encourage efficient utilisation of resource* (NZG, 1989a: 9859).

The change had the purpose of creating efficient spending by departments combined with matching ... *more closely the costs of resources consumed in the production of goods and services with the revenues or services produced* (Goldman & Brashares,

1991: 80). As a result, costs would be recorded when they were incurred and not just when they were paid for, which could be easily manipulated. The 'new' public management system had the intention to better match the revenues and expenses of each department with the period in which they occurred (Goldfinch, 1998) – this represents an improvement to the management control system as it adheres to the accrual accounting system.

Hon. Peter Neilson (Associate Minister of Finance) elaborated on this during the parliamentary debate by asserting that changing to an accrual-based system would allow the Government and its departments to better monitor their capital assets. He stated that the proposed Bill would provide a way of accessing the actual expenditure of providing goods and services to the public sector in any given period (NZG, 1989a). The statements prepared by Ministries will ... *become more transparent* (Chatterjee, 1996: 32) as to what is going on within a department. Overall ... *improving their [statements] quality as a tool to measure, evaluate and control the performance of departments* (Chatterjee, 1996: 32). It was concluded that operating under an accrual-based system, more statements would be prepared providing a means for cost effectiveness checks (Newberry & Pallot, 2003).

This Act also places upon Ministries a criterion to produce more efficient documents for the Government and also the public, which better explain just how public funds are spent. Under the previous system the Government just gave each department a budget with which to operate, they were then able to spend it how they wanted and were able to overspend with [only] the Treasury's approval. How they spent their funds was not monitored (OECD, 1990). An accrual-based system would make the information presented to the Government more efficient and effective for decisions about future budget figures. This change was undertaken in relation to the reform to decentralise departments and ... *encourage efficient use of capital and enable a level playing field when evaluating whether government should 'contract out' or produce a given output [within one of its departments]* (Goldman & Brashares, 1991: 81). This had the intention to make departments more efficient with their resources in order to get the Government to buy their services (outputs), instead of them getting goods and services from an outside source.

As a result of this Act departments were to be decentralised, cease to act as part of the Government but act as separate Government entities. Accordingly, the role of the Government changed to a purchaser, an owner or a funder of transfer payments. Goldman and Brashares (1991: 81-82) explained each of these as; *a purchaser appropriates money to a department for the purchase of outputs without specifying the appropriate mix of inputs; [as an] owner appropriates money for capital contributions to inject additional capital; and [as a] funder of transfer payments appropriates funds (payments on behalf of the Crown) directly to the department responsible for the disbursement with administrative costs being appropriated separately as a purchase of an output.* Such roles were introduced to increase the efficiencies that the reforms were implemented to create. This resulted in a move away from the Government's traditional role as just an owner and represents both a broadening and expansion of what has been considered to be public sector management control considerations.

According to Goldman and Brashares (1991), the focus was on what the final product will cost the Government to purchase, rather than what goes into production. Thus, by changing the focal from inputs to outputs, the departments were allowed to choose the best way to use the allocated resources in a competitive situation. The NZ Public Service Association (1989: 1) observed ... *the relationship between government and department [will] mimic the relationship between buyer and seller in a market.* The distinction between outputs and outcomes was also made within this Act to better articulate Government's responsibility (Petrie & Webber, 2001).

There was an interest in accrual-based accounting from some departments willing to switch to the new system. Like any Bill going through Parliament, submissions to make the Public Finance Bill more effective were accepted April-May 1989. However, some submissions expressed the opinion that the Bill conflicted with the other reforms and departments such as Maori Affairs, Justice, Transport, Conversation, and the Ministry of Forestry, disagreed with having to prepare accounts every six months due to time and cost constraints in preparing them.

Other ideas coming across in the submissions were: the Bill did not get close [enough] to solving what the reforms were set out to achieve as expressed by the Integrated Economic Services and the Government Property Services. While the Audit Office, Jarden Morgan and Deloitte opined that the Bill would be, and is, a fundamental part of

the economy. These contradicting views had to be considered if they wanted to successfully advance the legislation.

Given the changes this Bill set out to achieve the best place to discover the intention of it is to look at its explanatory notes, which stated:

*The principal purposes of the Bill are –*

- *establish the appropriation mechanisms by which Parliament grants approval for the use of public resources;*
  - *establish the procedures and controls relating to the banking investment activity of the Crown and Crown agencies;*
  - *establish the minimum financial reporting requirements which are to apply to the Government acting on behalf of the Crown as a whole;*
  - *establish the minimum financial reporting requirements which are to apply to Government departments;*
  - *establish the minimum financial reporting requirements which are to apply to Crown agencies; and*
  - *provide for the controls and procedures that are to apply to the raising of loans and the giving of securities and guarantees by the Crown*
- (Government, 1989b: 1)

Above summarises the aims this Act intended to achieve, whether or not it did this in terms of budget management and budgetary slack, is what this paper endeavours to investigate. There is a potential for the inefficiencies that existed prior to the reforms such as the presence of budgetary slack, to still persist in today's public sector (OECD, 2004).

#### **2.4 Problems seen with the Reforms:**

At first glance, the proposed reforms would seem to be beneficial to the New Zealand economy and it would appear as though there is a reduction in the amount of budgetary slack. However, a closer look may lead a discerning person to a conclusion that may be at a variance from that.

A number of articles have dealt with different aspects of the 'reform-implementation' with regard to the prospects of success or otherwise since the initial 10-year period of 1984 – 1995 (Cash, 1997; Goldman & Brashares, 2001; Newberry, 2003). Problems occurred around the shift of focus to outputs at the departmental level and outcomes at the Government level. It was explained by Robinson (2002) that an output focus doesn't work every time. This is due to ... *budget [public] sector outputs are mainly services rather than goods, and they are generally not standardized* (Robinson, 2002: 26). How each department defines what is an output proved to be a problem within

itself. According to Halligan (2003), the distinction between managerial responsibility of outputs and Government's accountability of outcomes turned out to be a difficult one to narrow down. He also pointed out, that there is no central agency playing an advocacy role once the reforms were implemented as compared to the Australian Government who played a more leading role.

It was the intention that after the reforms, departments were to place ... *greater emphasis on the managerial role of public servants* (Mascarenhas, 1990: 85).

## 2.5 Outcomes of the Reforms:

Generally the results of analysis of the reforms by Chaterjee (1996: 42) show there were improvements in the statistics of the NZ economy over the reform period. These results are presented in *Table 2.5.1* next. Improvements included the decline in inflation rate as well as the disappearance of the budget deficit. However, not everything is shown to improve, as the real gross domestic product (GDP) kept fluctuating over the period and the unemployment rate was still on the rise.

	1985	1988	1989	March - Year		1992	1994
				1990	1991		
Real GDP (annual %)	4.9	0.5	-1.3	1.4	-1.3	-0.2	4.6
Inflation rate (annual %)	13.4	9.0	4.0	7.0	4.5	0.8	1.3
Unemployment rate (annual %)	3.2	5.0	7.4	7.3	9.9	11.1	9.1
Current account balance (% of GDP)	-8.3	-4.1	-1.3	-4.0	-3.3	-0.5	-2.0
Budget deficit (% of GDP) <sup>b</sup>	7.2	2.6	3.7	3.1	3.4	4.2	+0.5
Total external <sup>c</sup> debt (% of GDP)	71.0	66.0	61.0	74.0	83.0	81.0	78.0
90-day bank bill	NA	16.6	13.5	13.8	12.1	6.23 <sup>a</sup>	7.19 <sup>b</sup>
Five-year Government stock	10.4	14.3	13.3	12.1	11.7	7.10 <sup>a</sup>	7.98 <sup>b</sup>
First mortgage (four largest banks)	13-16	18.6	15.5	14.8	14.1	8.9 <sup>a</sup>	8.75 <sup>b</sup>
Trade weighted exchange rate Index (1979 = 100)	62.1	66.3	59.8	61.6	58.8	54.2	58.8

Notes:  
<sup>a</sup> July 1992  
<sup>b</sup> June year after 1989. The deficit, as reported, excludes revenues from asset sales  
<sup>c</sup> Includes debts of the government, the state owned enterprise and the private sector  
 NA Not available on a comparable basis

**Table III.**  
Selected performance indicators of the New Zealand economy 1985-1994

## Analysis of the Reforms during the Period 1984-1994

Source: Chaterjee (1996: 42)

### Table 2.5.1

Expanding the above analysis by juxtaposing it with 2005 data, the following *Table 2.5.2* was constructed.

<b>Indicators</b>	<b>1985</b>	<b>1994</b>	<b>2005</b>
Real Gross Domestic Product (GDP) (annual %)	4.9	4.6	4
Inflation Rate (annual %)	13.4	1.3	2.8
Unemployment Rate (annual %)	3.2	9.1	3.8
Current Account Balance (% of GDP)	-8.3	-0.2	-7.3
Budget Deficit <sup>4</sup> (% of GDP)	7.2	+0.5	4.1
Total External Debt (% of GDP)	71.0	78.0	110.1
90-day Bank Bill	NA	7.19	6.99
Five-year Government Stock	10.40	7.98	6.10
First Mortgage	13-16.00	8.85	9.00
Trade Weighted Exchange Rate Index (1979 = 100.0)	62.1	58.2	70.7

### Selected Performance Indicators<sup>5</sup> for 1985, 1994, and 2005

**Table 2.5.2**

A definite comfort can be derived from the above table that since the end of reforms in 1995, there has been a visible economic improvement as indicated by key performance indicators, such as the inflation rate is under control<sup>6</sup>, to where it is between the inflation target rate of 1 – 3%. The unemployment rate has decreased since the end of the reforms and since the 1990's it has maintained a downward trend<sup>7</sup>. The 90-day bank bill rate has become more stable since the official cash rate (OCR) was introduced in 1999<sup>8</sup>. Within the last few years NZ has also improved its real GDP, as fluctuation has declined, and when compared to Australia and the United States (USA), NZ's two largest trading partners, it is decisively more favourable<sup>9</sup>.

Halligan (2003) concluded that the reforms have resulted in better information flows from the departments to the Government, a sign that the efficiency of the departments has improved. There has been increased effectiveness and a reduction of costs to obtain those efficiencies. On the other hand, Goldfinch (2003) believed that the benefits of the

<sup>4</sup> This represents a deficit of the budget within the public sector, meaning a negative figure. When a surplus is made, a positive figure is shown in the table, such as that in 1994.

<sup>5</sup> Data for 1985 and 1994 (Chatterjee, S. 1996. Ten Years on: An Appraisal of New Zealand's Economic Restructuring 1984-1994, *International Journal of Social Economics*. 23 (10/11): 42), and data for 2005 (Reserve Bank of New Zealand (RBNZ). 2006. *New Zealand Statistics*. Retrieved 2006, 3<sup>rd</sup> October. Cited at: <http://www.rbnz.govt.nz/statistics/>).

<sup>6</sup> See Appendix Two: Statistical Graphs of main key performance indicators (RBNZ, 2006), for a graph representing inflation from 1970-2006 (Graph 1).

<sup>7</sup> See Appendix Two, for an employment / unemployment trend graph since 1990 (Graph 2).

<sup>8</sup> See Appendix Two, for a 90-day trend graph since 1990 (Graph 3).

<sup>9</sup> See Appendix Two, for Real GDP trends since 1990 compared to Australia and USA (Graph 4).



reforms were oversold to the public and also to departments. Additionally, it was claimed that any benefits gained from the reforms are offset by significant reporting costs, (Lawrence & Doolin, 1997). Extra weight can be given to these claims if this study can find that there is a potential for budgetary slack to still prevail.

The shift to an accrual-based system will not always reduce the debt of an entity. Reporting a surplus does not necessarily mean that the surplus is present in cash, therefore a surplus cannot be expected to reduce debt (Newberry & Pallot, 2003) as debt may actually increase, depending on Government spending/investment priorities under conditions of a budget surplus. The New Zealand Government (NZG) has had surpluses for at least the past 10 years (The Treasury, 2006). Could this be another form of budgetary slack? These surpluses make the NZG show better performance but are they only occurring because of budgetary slack? These are questions that cannot be answered within this study, given time and cost constraints, but are ideas that can be expanded in a future wider study.

## **2.6 Additional Reforms since 1995:**

The major reform in changing the NZ public sector financial management was the Public Finance Act 1989. Since the reforms finished in 1995, this Act has been amended to become the Public Finance Act 2004. Amendments made to this Act were to integrate the Fiscal Responsibility Act 1994, which was to be repealed (NZG, 2003). The new purpose of the Act is ... *to consolidate and amend the law governing the use of public financial resources*. The other major amendment this Act entailed was to force the Treasury to produce annual statements to show the NZG's long-term fiscal issues. These changes and amendments can be viewed as an additional reform to the public sector. This when combined with the earlier reforms raises the question: Has the uncertainty behind the creation of budgetary slack been eliminated? Or even still after all the reforms: Can budgetary slack *potentially* still prevail within New Zealand's new public management (NPM)?

### 3. Budgetary Slack

Before it can be determined just how and why budgetary slack is a defect to the budgetary process, the role of the budget must first be identified. It is a detailed plan for acquiring and using financial and other resources over a specified period, which is a detailed plan for the future, expressed in quantitative terms. A budget helps to make managers more responsible and accountable, as it is a way to communicate plans, allocate resources, uncover bottlenecks, coordinate plans, define goals and objectives, and serve as a benchmark within an organisation (Garrison & Noreen, 2003).

#### 3.1 *Budgetary Slack and Its Creation:*

Horngrén (1982) concluded that budgetary slack has been singled out as one of the primary unsolved problems in budgetary control. Organisational slack has been defined as ... *the difference between the total resources available to a firm and the total necessary to maintain the organisation coalition* (Onsi, 1973: 535). Onsi (1973) explains the two parts of organisational slack as being external payments and internal payments, where budgetary slack is the distribution of internal payments. Young (1985: 829-830) explains slack as the amount by which managers ... *intentionally build excess requirements for resources into a budget or knowingly understate production capabilities*. Van der Stede (2001) referred to slack as ... *resources and efforts towards activities that cannot be justified easily in terms of their immediate contribution to organisational objectives*. It is the padding placed within budgets (Prendergast, 1997) and the difference between the amount budgeted for and the amount necessary to run operations (Merchant, 1985).

Creating budgetary slack refers to ... *the intentional underestimation of revenues and productive capabilities and/or overestimation of costs and resources in the budget* (Dunk & Perera, 1997: 649). Although there are many definitions of budgetary slack, the one thing that can be taken from all of them is that there is an attempt, by management, to overcome operational uncertainty. Through building a resource 'buffer' into the budget, greater certainty can be gained in narrowing the gap between future budgeted and actual outcomes. Even managers have different definitions of slack. It was found by Onsi (1973) that 80% of 32 managers from large and international companies 'bargain for slack'. Prendergast (1997: 46) backed up this

conclusion when he observed ... *that there will always be some budgetary padding in any organisation*, although managers may not always realise it is being created.

According to Onsi (1973), budgetary slack can be created by anyone who prepares the budget. That is, those who are included in the budgetary process and thus have information advantage (Schiff & Lewin, 1990). The usual situation within organisations is to have lower level management prepare the budget (Prendergast, 1997). Since this occurs, the budgets that lower level managers prepare are the ones that contain the budgetary slack. This is commonly the result of the heavy pressure placed upon lower level managers from top management (Merchant, 1985; Reid, 1997). However a monitoring emphasis by top managers can have a reducing impact on how much slack is created (Reid, 1997). Also participation by all levels of management can reduce information asymmetry and the amount of slack that is created (DeCoster & Fertakis, 1968; Merchant, 1985; Dunk & Perera, 1997). It will be very difficult for this to occur in a larger entity, as getting everyone involved in the process is almost impossible to achieve (Bitner, 2005). Thus the larger the entity the more likely budgetary slack will exist. Commitment to the budgetary process also plays a part in reducing slack creation. If managers are committed to the budget process they are more likely to take it seriously and use it to determine real variances, thereby improving their management (Nouri, 1994).

### **3.2 *Reasons behind Budgetary Slack:***

Creating budgetary slack helps to ensure that budgetary targets are achievable (Merchant, 1985; Prendergast, 1997). Budgetary slack results in the budget becoming inefficient when comparing actual results with budgeted (Schiff & Lewin, 1970). Thus limiting the decision and performance usefulness of the budget process as variances from budget will not be true.

When managers incur more expenses than expected, slack creates room to hide those uncertain and unpredicted expenses (Schiff & Lewin, 1970). But when the entity comes in under budget, the question is raised: are they really under budget or did they just create enough slack? Explaining this variance becomes difficult when the variance is made up of slack (DeCoster & Fertakis, 1968; Reid, 1997). This is especially difficult when income is changing at a significant rate from year to year (Bitner, 2005). This shows that the creation of slack is used as a tool to provide a level of flexibility in

moderating the uncertainty faced by managers (Brownell & Hirst, 1986; Abernethy & Brownell, 1999; Marginson & Ogden, 2005). Therefore how stable the entity is becomes an important tool in reducing this uncertainty (Onsi, 1973; Reid, 1997).

Schiff and Lewin (1970: 265) stated that ... *an organisations reward structure, by overreaching to under-achievement of objectives, is one of the causes of managerial desire for slack*. A reward structure gives managers the incentive to create slack to obtain their bonus for meeting the budget (Healy, 1985). As Healy (1985: 88) pointed out ... *bonus schemes create an incentive for managers to select accounting procedures and accruals to increase the present value of their rewards*. This will result in the budget losing its importance as a tool for performance measurement (Chow, Cooper & Walker, 1988), as real performance cannot be determined due to the existence of budgetary slack. However, as Merchant (1985) explained it is in a manager's best interest to create slack, as their performance overall looks better. Thus, using the budget as a performance measure also creates the incentive to create budgetary slack (Walker, 1988).

Accruals can be used to adjust figures in the accounts so that managers overall performance looks better, therefore examining discretionary accruals can establish how managers exercise discretion when dealing with accruals (Bartov, Gul & Tsui, 2000). However it was observed by Bartov et al. (2000) that empirical models have given conflicting results about whether or not they can be used to detect earnings management. Nonetheless, Bitner (2005) concluded that when current asset values are high there is a greater chance that budgetary slack has been created (Bitner, 2005).

Utilising the literature discussed in this section 3 *Budgetary Slack*, the following table has been produced.

	<b>Indicators</b>	<b>Relationship with Budgetary Slack</b>	<b>Literature Support</b>
H <sub>1a</sub> :	High accruals	Positive	Francis & Krishnan (1999) Bartov, Gul & Tsui (2000) Butler, Leone & Willenborg (2004)
H <sub>2a</sub> :	Increasing revenue trend	Positive	Bitner (2005)
H <sub>3a</sub> :	Asset quality	Negative	Bitner (2005)
H <sub>4a</sub> :	Size of company	Positive	Onsi (1973)
H <sub>5a</sub> :	Organisational stability	Negative	Onsi (1973) Reid (1997)
H <sub>6a</sub> :	Bonus, compensation plans	Positive	Schiff & Lewin (1970) Healy (1985)
H <sub>7a</sub> :	Importance on explaining the variance from budget	Negative	DeCoster & Fertakis (1968) Reid (1997)
H <sub>8a</sub> :	Budget used as a performance, and accountability measure	Positive	Walker (1988)
H <sub>9a</sub> :	Organisational commitment to the budget	Negative	Nouri (1994)
H <sub>10a</sub> :	Monitoring emphasis	Negative	Reid (1997)
H <sub>11a</sub> :	Budget participation	Negative	DeCoster & Fertakis (1968) Merchant (1985) Dunk & Perera (1997)

### **Indicators of Budgetary Slack and Earnings Management**

**Table 3.2.1**

Based on these indicators outlined in *Table 3.2.1* above, hypotheses are developed in the next section 4 *Hypotheses and Model Development* and summarised in this study's empirical model.

## 4. Hypotheses and Model Development

### 4.1 *High accruals:*

Firms with higher accruals are more likely to receive a modified or qualified opinion from auditors because of evidence of earnings management (Francis & Krishnan, 1999; Bartov et al., 2000; Butler et al., 2004). Since there is a potential for earnings management to exist with high accruals, budgetary slack can exist along with it, leading to hypothesis one being developed.

H<sub>1a</sub>: A material change in accruals is positively associated with the existence of budgetary slack.

The proxy used is the number of discretionary accruals that materially change from the previous year, no matter the direction. The discretionary accruals used are: prepayments, debtors/receivables, creditors/payables/provisions, net surplus payable to the Crown, provision for restructuring, provision for doubtful debts, provision for employee entitlement and accumulated depreciation. An accumulated total will be calculated, where 1 will be given to all items that have materially changed, adding them together to get a proxy to be used in this study.

### 4.2 *Increasing revenue trend:*

When revenue is increasing at a rate that is material (i.e., 10%), there is an increased chance that earnings management is being undertaken and for budgetary slack to potentially exist (Bitner, 2005). Material changes in revenue can potentially mean that the figures produced in the accounts are not the true figures. Therefore hypothesis two states:

H<sub>2a</sub>: Revenue trends are positively associated with the existence of budgetary slack.

Revenue trends will be examined in this study by taking the percentage change in revenue from the previous year. This will give an indication of how revenue is changing and be used to determine whether earnings management is likely to exist, as the greater the percentage change, the greater the chance of budgetary slack existing.

### **4.3 Asset quality:**

When there are increases in current asset value it is likely to be a result of budgetary slack (Bitner, 2005). It is assumed that non-current assets have greater quality than current assets. Therefore, if current assets are compared to non-current assets then asset quality can be determined. That is, when current assets have a higher value compared to non-current asset value, asset quality is low and the potential for budgetary slack is high. Hypothesis three is therefore developed from this.

H<sub>3a</sub>: Asset Quality is negatively associated with the existence of budgetary slack.

The proxy that will be used in this study for asset quality will be the relationship between current and non-current assets. The proportion of current assets to non-current assets is used. Thus a high proportion is indicative of low asset quality, since the assumption is made that non-current assets have higher quality than current assets. When the relationship between current assets and non-current assets is used, there is a potential for a negative relationship between asset quality and budgetary slack. Increases in current assets that are relatively higher than that of non-current assets, is a signal of discretionary items increasing.

### **4.4 Size of company:**

In larger entities it is less likely that budgetary slack will be detected, therefore more likely for slack to exist (Onsi, 1973). Therefore as the size of the company increases so will the potential for budgetary slack to exist. Thus, hypothesis four is created.

H<sub>4a</sub>: The size of an entity is positively associated with the existence of budgetary slack.

Size in this study will use the proxy of revenue, given that when revenue increases the size of the entity is also likely to increase. Therefore the higher the revenue the greater the chance that budgetary slack exists.

### **4.5 Organisational stability:**

Organisational stability creates certainty and when change in structure is occurring this certainty is diminished, therefore budgetary slack is more likely to exist (Onsi, 1973; Reid, 1997). Thus the more stable an entity is the lower the chance of budgetary slack being created. Hypothesis five is therefore developed.

H<sub>5a</sub>: There is a negative association between organisational stability and the existence of budgetary slack.

The proxy used in this study, is whether or not there has been a change of the Minister or Director of the Ministry. A 1 will represent a change, thus increasing uncertainty and a 0 will show that the Minister or Director have not changed since the last financial year.

#### **4.6 Bonus, compensation plans:**

According to Schiff & Lewin (1970) and Healy (1985), if managers receive a bonus or if a compensation plan exists, there is a greater incentive for them to manipulate data and undertake earnings management. Thus, as the amount of bonus increases, earnings management will also increase and so would the potential for budgetary slack to exist. Given this the following hypothesis six is developed.

H<sub>6a</sub>: An existence of bonus or compensation plans is positively associated with the existence of budgetary slack.

Within this study, this variable will be a dummy variable, where a 1 represents Ministries with evidence of a bonus or a compensation plan and a 0 will represent no bonus or compensation plan. Within a bigger study actual bonus amounts can be used as the proxy, to test more accurately if an increase in the amount of bonus does result in an increase in the amount of budgetary slack that is created. Since annual reports of the Ministries were utilised in this study, they do not give amounts for bonuses paid, so this proxy is unable to be used here.

#### **4.7 Importance on explaining the variance from budget:**

Variances between budget and actual can be difficult to explain when budgetary slack has been created. Therefore it is easier to explain the variance when it is a true variance rather than one that contains slack (Decoster & Fertakis, 1986; Reid, 1997). This literature, led to hypothesis seven being developed.

H<sub>7a</sub>: Explaining the variance(s) from budget are negatively associated with the existence of budgetary slack.

This independent variable in the study will be used as a dummy, where a one (1) represents those Ministries who explain material variances between actual and budgeted



results, and a zero (0) indicating no explanation. Time and cost do not allow for a more in-depth analysis than this, but within a larger project an index-based score (low/medium/high) could be developed to rank the explanations of the variances.

#### **4.8 Budget used as a performance, and accountability measure:**

Managers' performance can be enhanced when budgetary slack has been created at the beginning of the year to cover any unexpected expenses and thus still allowing managers to come in under budget (Walker, 1988). Creating slack can result in an easy target to be achieved. In such situations managerial performance can look better even if they are not performing. Given this hypothesis eight was developed.

H<sub>8a</sub>: The use of the budget as a performance measure is positively associated with the existence of budgetary slack.

This hypothesis will be tested with a dummy variable, where 1 will represent the budget being used as a performance measure and a 0 will represent if this is not the case. Thus, the proxy is using the budget as a performance measure. However given that in the public sector it is a reporting requirement to use the budget as a performance measure, the result of a 1, will hold for all Ministries.

#### **4.9 Organisational commitment to the budget; Monitoring emphasis; and Budget participation:**

There are other variables such as: (i) organisational commitment to the budget (Nouri, 1994), managers' commitment to the budgetary process will impact on whether slack is created or not; (ii) monitoring emphasis (Reid, 1997), if lower levels of subordinates are monitored in how they prepare their budget they are less likely to create slack as it will be detected; and (iii) budget participation (DeCoster & Fertakis, 1968; Merchant, 1985; Dunk & Perera, 1997), when more subordinates participate in the budgetary process, less information asymmetry will occur, therefore making it less likely for slack to be created. These variables give rise to the following three hypotheses.

H<sub>9a</sub>: Organisational commitment is negatively associated with the existence of budgetary slack.

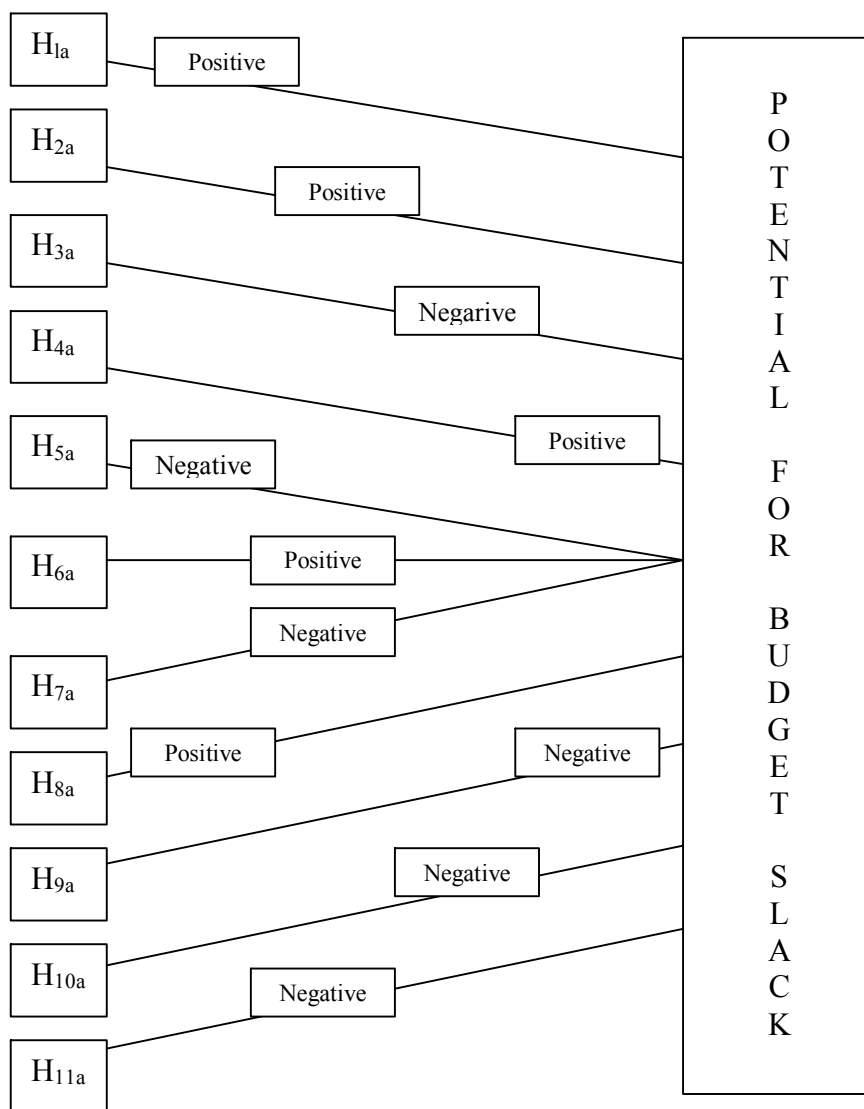
H<sub>10a</sub>: A monitoring emphasis will be negatively associated with the existence of budgetary slack.

H<sub>11a</sub>: More budgetary participation is negatively associated with a higher existence of budgetary slack.

However given time and cost constraints of this study, these three hypotheses were unable to be tested here, as only secondary data is used. To gather information about these three variables would require visiting the various Ministries, and may be examined in a larger study.

**4.9 Empirical Model:**

Based on the eleven hypotheses, the empirical model takes the following form:



**4.10 Operationalisation of Empirical Model:**

The preceding empirical model can be operationalised in the form of an ordinary least squares (OLS) regression as follows:

$$\begin{aligned}
 \text{BS} = & \alpha + \beta_1(\text{ACCRUAL}) + \beta_2(\text{REVGRTH}) + \beta_3(\text{ASSETQ}) + \\
 & \beta_4(\text{SIZE}) + \beta_5(\text{STABIL}) + \beta_6(\text{BONUS}) + \beta_7(\text{MBUDGET}) + \\
 & \beta_8(\text{PERF}) + \beta_9(\text{COMMIT}) + \beta_{10}(\text{MONITOR}) + \beta_{11}(\text{PARTIC}) + \varepsilon
 \end{aligned}$$

**Where:**

BS	= Potential budget slack
$\alpha$	= Constant
$\beta$	= Individual parameters holding for the independent variables
ACCRUAL	= High Accruals
REVGRTH	= Revenue growth
ASSETQ	= Asset Quality
SIZE	= Size of the company
STABIL	= Organisational stability
BONUS	= Bonus, compensation plan
MBUDGET	= Importance on meeting the budget
PERF	= Performance measure
COMMIT	= Budget Commitment
MONITOR	= Monitoring emphasis of the budget
PARTIC	= Budget participation
$\varepsilon$	= Standard error of the regression coefficient

However, the independent variables of BONUS, MBUDGET and PERF are the same for all entities and therefore are considered to be constant. Additionally due to the time and cost considerations COMMIT, MONITOR and PARTIC have to be omitted, resulting in the following OLS regression equation, which is tested in this pilot study:

$$\begin{aligned}
 \text{BS} = & \alpha + \beta_1(\text{ACCRUAL}) + \beta_2(\text{REVGRTH}) + \\
 & \beta_3(\text{ASSETQ}) + \beta_4(\text{SIZE}) + \beta_5(\text{STABIL}) + \varepsilon
 \end{aligned}$$

## **5. Methodology, Data Set Selection, Data Collection, Data Analysis and Model Analysis**

### **5.1 Methodology:**

Five different Ministries were selected for analyses in this pilot study. Annual reports over a six year period for the five Ministries were examined, resulting in a sample of 30 (6 x 5). Data was collected from the annual accounts in relation to the hypotheses developed in the previous section *Hypotheses and Model development*. Using the collected data, the OLS regression equation was ran using SPSS (Statistical Package for the Social Sciences) to determine if the independent variables are significantly associated with the potential existence of budgetary slack.

### **5.2 Data Set Selection:**

Five Ministries of the NZ Government: Health, Education, Transport, Justice, and Housing were selected for the study. The rationale for choosing these Ministries is their various sizes and their currently very topical nature within the political arena.

#### **5.2.1 Ministry of Health:**

The Ministry of Health is the Ministry that gets the biggest appropriation each year, which is seven times as much as any other Ministry in the public sector of NZ. Their aim is ... *to ensure that the health and disability system works for all New Zealanders* (MoH, 2005: 7). In achieving this aim they are the primary advisors of the Government on any policy concerning health services of NZ.

#### **5.2.2 Ministry of Education:**

The Ministry of Education is the second largest Ministry within the NZ public sector. This Ministry has the focus of ... *effective teaching for all students; family and community engagement in education and quality providers* (MoE, 2005: 9). The NZ education system has a high average achievement when compared to international education systems, making it a good system (MoE, 2005).

#### **5.2.3 Ministry of Transport:**

The Ministry of Transport is the fourth largest Ministry in NZ in terms of appropriation received from the Government. Their purpose is to be the: *Government's principal transport policy advisor* (MoT, 2005: 4). In undertaking this purpose the Ministry

upholds the values of integrity, communication, people matter, leadership, positive relationship and effective action (MoT, 2005).

#### 5.2.4 Ministry of Justice:

The Ministry of Justice is a Ministry that is average in size when compared to all of the other Ministries, but still prominent in the political arena. The purpose driving this Ministry's activities is to provide: *services to contribute to safer communities and a fairer, more credible and more effective justice system* (MoJ, 2005: 1).

#### 5.2.5 Ministry of Building and Housing:

The Ministry of Building and Housing is the smallest of the Ministries analysed in this study, although it is ranked 38<sup>th</sup> largest out of a total of 67 Ministries. There responsibility is to ensure: *an effective regulatory environment for the building and housing sector; regulating the building sector and the rental housing sector; delivering effective information, advice and dispute resolution services and providing purchase and monitoring advice to the government on Housing Zealand Corporation* (MoBH, 2005: 13). In 2004 the Department of Housing became apart of the Ministry of Building and Housing, which was made up of a combination of groups, all with the purpose of improving the housing sector (MoBH, 2005).

Appendix Three<sup>10</sup> shows how each of the five Ministries selected for this pilot study compare to the other Ministries, as regards how much they receive from the Government for their budget.

In *Table 5.2.1* and *Table 5.2.2* next, are descriptive statistics for the five Ministries analysed.

<b>Ministry of:</b>	<b>Budgeted (000)</b>	<b>Actual (000)</b>
Building and Housing	\$40,709	\$40,709
Justice	\$180,736	\$180,736
Transport	\$1,048,054	\$1,048,054
Education	\$1,961,710	\$1,960,870
Health	\$8,449,258	\$8,392,092
<b>Total Allocation:</b>	<b>\$11,680,467</b>	<b>\$11,622,461</b>

**Allocation of Appropriation Amounts to the Ministries**  
**Table 5.2.1**

<sup>10</sup> Shown in Appendix Three: New Zealand Ministries and there Appropriations Received in 2005 (New Zealand Government (NZG), 2005. *Annual Report*. Wellington, New Zealand: Government Printer).

	<b>Budgeted (000)</b>	<b>Actual (000)</b>
Average Appropriation Amount	\$2,336,093.4	\$2,324,492.2
Standard Deviation	\$3,503,011.0	\$3,478,097.2
Maximum Appropriation	\$8,449,258.0	\$8,392,092.0
Minimum Appropriation	\$40,709.0	\$40,709.0

**Descriptive Statistics for the Ministries used in this study**  
**Table 5.2.2**

The five Ministries analysed as part of this study have a combined actual total appropriation of \$11,622,461,000. This equals 56.72% of the total amount allocated to all Ministries. Hence this study analyses a significant amount of Government appropriations given to Ministries.

### **5.3 Data Collection:**

From the Ministries annual reports, for the years 2000-2005, data was collected in relation to the developed hypotheses. The data collected from the five Ministries over the six year period, results in an overall sample size of 30 years for this study, which is analysed in the next sub-section.

### **5.4 Data Analysis:**

After the data collection, analysis was undertaken to determine whether or not there is the potential for budgetary slack to still prevail within NZ's NPM. With the five independent variables' data established and analysed, the following descriptive statistics were produced.

	<b>Mean</b>	<b>Std. Deviation</b>	<b>Sample Size</b>
<b>Budgetary Slack (000)</b>	\$4,951.30	\$4,395.06	30
<b>High Accruals</b>	4.63	1.07	30
<b>Revenue Growth (%)</b>	26.74	67.81	30
<b>Asset Quality (%)</b>	158.58	114.28	30
<b>Ministry Size (000)</b>	\$282,181.30	\$416,051.65	30
<b>Ministry Stability</b>	.10	.31	30

**Descriptive Statistics on the Variables of the OLS Regression Equation**  
**Table 5.4.1**

Table 5.4.1 shows the mean and standard deviation of each of the independent variables given the data that was collected from the five Ministries.

Next, a *Pearson Correlation* was prepared to determine which independent variables are associated with the existence of budgetary slack, and the following *Table 5.4.2* produced.

		<b>H<sub>1a</sub> High Accruals</b>	<b>H<sub>2a</sub> Revenue Growth</b>	<b>H<sub>3a</sub> Asset Quality</b>	<b>H<sub>4a</sub> Ministry Size</b>	<b>H<sub>5a</sub> Ministry Stability</b>
<b>Budgetary Slack</b>	Pearson Correlation	.135	-.061	-.656(**)	.785(**)	.156
	Sig. (2-tailed)	.478	.748	.000	.000	.410
	N	30	30	30	30	30

\*\* Correlation is significant at the 0.01 level (2-tailed).

### **Correlation Analysis of the Variables**

**Table 5.4.2**

This *Table 5.4.2* shows that both Asset Quality and Ministry Size are highly associated with the potential existence of budgetary slack, at a 1% significance level. Furthermore, the correlations have the expected association signage as per the two individual hypotheses, H<sub>3a</sub> and H<sub>4a</sub> respectively. This is consistent with past literature (Onsi, 1973; Bitner, 2005) that also found there to be a significant association between these independent variables and potential budgetary slack and/or earnings management. Although this pilot study utilises data from a sample size (n) of 30, the analysis equates this to a population size (N) of 30.

Next, the *standardized coefficients*<sup>11</sup> of each of the independent variables were prepared, shown in *Table 5.4.3*. It also shows which independent variables are highly significantly associated with the potential for budgetary slack to exist.

<b>Model</b>	<b>Standardized Coefficients</b>	<b>t</b>	<b>Significance</b>	<b>Collinearity Statistics</b>	
	<b>Beta</b>			<b>Tolerance</b>	<b>VIF</b>
<b>1 (Constant)</b>		.574	.571		
<b>High Accruals</b>	.129	.949	.352	.781	1.280
<b>Revenue Growth</b>	-.078	-.578	.569	.795	1.258
<b>Asset Quality</b>	-.161	-.873	.391	.427	2.344
<b>Ministry Size</b>	.718	3.741	.001	.395	2.533
<b>Ministry Stability</b>	-.122	-.925	.364	.835	1.198

a Dependent Variable: Budgetary Slack

### **Standardized Coefficient Analysis**

**Table 5.4.3**

<sup>11</sup> Also referred to as *beta coefficients*, not to be confused with  $\beta$ , the population parameter consisting of the various parameters holding for the independent variables.

Given the above analysis of *standardized coefficients* it can be seen that it differs from *Table 5.4.2 Correlation Analysis of the Variables*, produced earlier. Here only Ministry size ( $H_{4a}$ ) is highly significantly associated (.001) with the potential for budgetary slack to exist. These conflicting results can potentially mean that the problem of *multicollinearity* could exist within this OLS regression, which means that there could be a potential association between Asset Quality and Ministry Size, which may have an impact on the study's results. This problem will be addressed later in sub-section 5.5 *Model Analysis*, to see if it exists.

Size is not only significantly related to the existence of budgetary slack but it is also consistent with past literature (Onsi, 1973) as is the positive association, shown by a positive beta. Therefore hypothesis four ( $H_{4a}$ ) is supported in this study, in that 'the size of an entity is positively associated with the existence of budgetary slack'.

There are no other variables that appear to be statistically significant to the existence of budgetary slack; however there are certain results that show the direction of association to be consistent with that of the hypotheses and past literature. The direction of hypothesis one ( $H_{1a}$ ), 'a material change in accruals is positively associated with the existence of budgetary slack' is shown to be supported but not significantly.

Hypothesis three ( $H_{3a}$ ), 'asset quality is negatively associated with the existence of budgetary slack' is another hypothesis that is supported in the signage direction. The last hypothesis where the direction of association is supported by the results is hypothesis five ( $H_{5a}$ ), the more stable the Ministry is the less likely budgetary slack will exist.

In regard to hypothesis two ( $H_{2a}$ ), 'Revenue trends are positively associated with the existence of budgetary slack', analysis results do not support it statistically nor is the direction of association supported. Although the hypothesis is not supported, it does not rule out that the direction of association is incorrect. With a bigger sample size of more Ministries, a greater insight into this hypothesis may be achieved.

Hypothesis six, seven and eight could not be tested in this model, given that the data collected relating to these hypotheses were constant results for all of the Ministries. Therefore whether or not the hypotheses are supported is inconclusive given the data set



and would require a larger sample to determine whether these variables are constant for all Ministries in the NZ public sector.

After the analysis of each of the independent variables within this study, variables were combined together and analysed to determine whether the research question can be supported statistically overall. The research question being: Is budgetary slack used as a risk management strategy in NZ's new public management control setting? In order to determine an answer to this research question, a full model analysis was run calculating: (i) the *coefficient of multiple correlations*<sup>12</sup> denoted as R; (ii) the *coefficient of multiple determination*<sup>13</sup> denoted as R<sup>2</sup>; and (iii) an adjusted R<sup>2</sup><sup>14</sup>. In summary these three calculations determine the extent to which the five independent variables analysed in this study help in explaining the existence of budgetary slack.

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>
<b>1</b>	.790(a)	.624	.580

- a Predictors: (Constant), High Accruals, Revenue Growth, Asset Quality, Ministry Size, and Ministry Stability  
 b Dependent Variable: Budgetary Slack

#### **Full Model Analysis**

**Table 5.4.4**

What can be interpreted from these results in *Table 5.4.4* is that 58% of what constitutes the potential for budgetary slack to exist is explained by the five independent variables analysed within this study (High Accruals, Revenue Growth, Asset Quality, Ministry Size, and Ministry Stability).

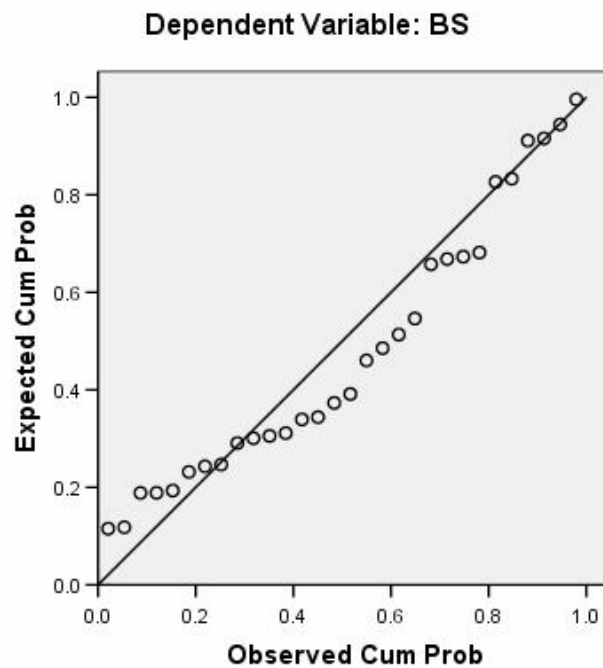
<sup>12</sup> The coefficient of multiple correlation (R) indicates the degree to which variation in the dependent variable is associated with variations in the five independent variables taken simultaneously (Schroeder, L., D. Sjoquist & P. Stephan. 1986. *Understanding Regression Analysis: An Introductory Guide*. SAGE University Paper 57).

<sup>13</sup> The coefficient of multiple determination (R<sup>2</sup>) measures the percentage of the variation in the dependent variable, which is explained by variations in the independent variables taken together. Note that the value of R<sup>2</sup> will never decrease when another independent variable is added to the regression, but would normally increase the value of R<sup>2</sup> even though the additional variable may be off no use in explaining variations in the dependent variable, hence the calculation of the adjusted R<sup>2</sup>. Therefore if a variable has no place in theory, it should not be included in the regression analysis (Schroeder, L. et al, 1986).

<sup>14</sup> The adjusted R<sup>2</sup> indicates the *coefficient of multiple determination* (R<sup>2</sup>) adjusted for the number of independent variables used in the OLS regression. Thus the adjusted R<sup>2</sup> can be used to determine whether another independent variable increases the explanatory power of the regression (Schroeder, L. et al, 1986).

These results are a motivation for expanding this study to determine whether the other three variables (i.e., organisational commitment to the budget, a monitoring emphasis of the budget, and participation by subordinate staff (*everyone*) in the budgetary process) that were unable to be examined in this study actually help in explaining whether budgetary slack exists. In interpreting these results, it can be concluded that the independent variables analysed here are highly associated with the existence of budgetary slack.

The last type of analysis that will be undertaken in this sub-section 5.4 *Data Analysis* is shown next in *Graph 5.4.1*. This graph illustrates the line of best fit as regards the expected and observed residuals calculated within this study.



**Normal P-P Plot of Regression Standardized Residual<sup>15</sup>**

**Graph 5.4.1**

The probable line that fits the plots shows there is a positive association between expected and observed residuals. This result shows that the given factors of: High

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<sup>15</sup> Where the *Expected Cum Prob* represents the residuals that are expected given the model developed and *Observed Cum Prob* represents those residuals that were calculated in this model given the data set.

Accruals, Revenue Growth, Asset Quality, Ministry Size, and Ministry Stability, all influence the amount of potential budgetary slack that exists.

The preceding analysis raises the question: Is it possible that there are two aspects of budgetary slack impacting on the Government's NPM? There is the traditional budgetary slack that is examined within this study, and then there is the potential for the Governments' surplus to also be a type of budgetary slack existing within its NPM. The issue raised is about whether the Government should separate their desired surplus from the Ministries to identify whether management of desired budgetary slack (surplus) exists. Within a bigger study there would need to be some means developed to differentiate between the two types of budgetary slack, distinguishing how both impact on the efficiency and effectiveness of the NPM. This could potential confound the results of this study as it is difficult to differentiate between the traditional notion of budgetary slack (analysed within this study) and the Government's 'acceptable' notion of a surplus. As explained earlier, NZ has had a surplus for at least the past 10 years, since the reforms ended. Therefore could this be another form of budgetary slack being created by the Government?

### **5.5 Model Analysis:**

To test the overall conclusions of the model developed in this study, analysis is undertaken to test the OLS regression. This includes: (i) a test for multicollinearity; (ii) a test for heteroskedasticity; and (iii) a test for stability.

#### **5.5.1 Test for Multicollinearity:**

There are two ways to test for *multicollinearity*<sup>16</sup> within a model. Firstly, a matrix correlation between each of the variables (independent and dependent) is prepared. When independent variables have a *Pearson Correlation coefficient* greater than one, it will result in the existence of the multicollinearity problem. The matrix correlation is presented in *Table 5.5.1.1* next.

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<sup>16</sup> The multicollinearity problem represents that there is an association between independent variables. This means that the independent variables are not independent in explaining budgetary slack.

		<b>Budgetary Slack</b>	<b>High Accruals</b>	<b>Revenue Growth</b>	<b>Asset Quality</b>	<b>Ministry Size</b>	<b>Ministry Stability</b>
<b>Budgetary Slack</b>	Pearson Correlation	1	.135	-.061	-.656(**)	.785(**)	.156
	Significant (2-tailed)	.	.478	.748	.000	.000	.410
	Sample Size	30	30	30	30	30	30
<b>High Accruals</b>	Pearson Correlation	.135	1	-.160	-.011	.026	.011
	Significant (2-tailed)	.478	.	.398	.953	.892	.956
	Sample Size	30	30	30	30	30	30
<b>Revenue Growth</b>	Pearson Correlation	-.061	-.160	1	.066	-.063	-.148
	Significant (2-tailed)	.748	.398	.	.731	.740	.436
	Sample Size	30	30	30	30	30	30
<b>Asset Quality</b>	Pearson Correlation	-.656(**)	-.011	.066	1	-.742(**)	-.143
	Significant (2-tailed)	.000	.953	.731	.	.000	.450
	Sample Size	30	30	30	30	30	30
<b>Ministry Size</b>	Pearson Correlation	.785(**)	.026	-.063	-.742(**)	1	.337
	Significant (2-tailed)	.000	.892	.740	.000	.	.068
	Sample Size	30	30	30	30	30	30
<b>Ministry Stability</b>	Pearson Correlation	.156	.011	-.148	-.143	.337	1
	Significant (2-tailed)	.410	.956	.436	.450	.068	.
	Sample Size	30	30	30	30	30	30

\*\* Correlation is significant at the 0.01 level (2-tailed).

### Matrix Correlations for all Variables

**Table 5.5.1.1**

As can be seen in *Table 5.5.1.1*, there is no correlation values greater than 1, so the multicollinearity problem does not exist within this model. However there is a potential association between Asset Quality and Ministry Size. Therefore secondly, in order for the multicollinearity problem to be ruled out completely, further analyses will be undertaken to see how the results differ when *Asset Quality* is omitted from the model. The analyses carried out are: (i) the Standardized Coefficient Analysis; (ii) the Full Model Analysis; and (iii) a graph showing the Normal P-P Plot of Regression Standardized Residuals. These are done in order to compare how the results change when the independent variable *Asset Quality* is excluded from the OLS regression.

Model	Standardized Coefficients	t	Significance	Collinearity Statistics	
	Beta			Tolerance	VIF
<b>1 (Constant)</b>		.243	.810		
<b>High Accruals</b>	.113	.837	.410	.797	1.254
<b>Revenue Growth</b>	-.076	-.568	.575	.795	1.257
<b>Ministry Size</b>	.842	6.529	.000	.867	1.154
<b>Ministry Stability</b>	-.140	-1.082	.289	.856	1.168

**Standardized Coefficient Analysis, Excluding Asset Quality**

**Table 5.5.1.2**

This *Table 5.5.1.2* shows that by removing *Asset Quality* from the model, the independent variable High Accruals has become less significant, while three independent variables, namely: Revenue Growth, Ministry Size, and Ministry Stability, have all become more significantly associated with the existence of budgetary slack. With *Asset Quality* omitted from the model it does not result in any more variables, other than Ministry Size, being highly significantly associated with the existence of budgetary slack. Hence, although Asset Quality and Ministry Size show a significant association with each other they do not tend to impact significantly on the model and therefore the results of this study. Nonetheless, to avoid any problems of multicollinearity when it comes to the concluding summary of this study's results, the results in *Table 5.5.1.2* will be held as being more accurate than those presented in *Table 5.4.3*. There has also been an improvement in the *Variance Inflation Factors* (VIF), as they have all decreased and are all below 2 for the independent variables shown in the *Table 5.5.1.2* above, indicating that the multicollinearity problem does not exist within this simple model of only four independent variables.

Next, the Full Model Analysis is computed again excluding *Asset Quality* as an independent variable. The results shown in *Table 5.5.1.3*, exclude the multicollinearity problem from having an affect on the new results and shows that these results differ from those presented in *Table 5.4.4*.

Model	R	R Square	Adjusted R Square
1	.800(a)	.640	.582

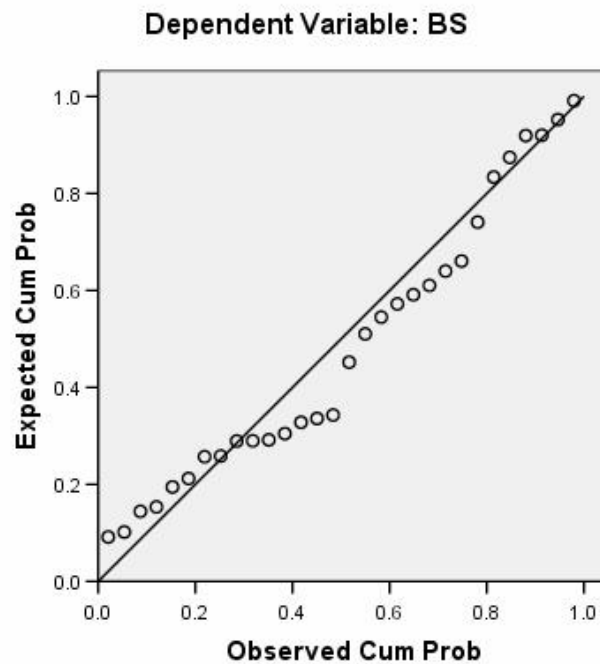
- a Predictors: (Constant), High Accruals, Revenue Growth, Ministry Size, and Ministry Stability  
b Dependent Variable: Budgetary Slack

**Full Model Analysis, Excluding Asset Quality**

**Table 5.5.1.3**

As these results show, there is little impact on the Adjusted R<sup>2</sup>, concluding that without *Asset Quality* in the model, the variables of High Accruals, Revenue Growth, Ministry Size, and Ministry Stability appear to explain more of the existence of budgetary slack being 58.2%, compared to 58% when *Asset Quality* was included. This increase is due to *Asset Quality* having a negative association with budgetary slack. Although there has not been a significant change in analysis, *Table 5.5.1.3* is considered to be better than *Table 5.4.4*, since multicollinearity has no evidence of existing here.

Lastly, the Normal P-P Plot of Regression Standardized Residual analysis on the OLS regression will be undertaken again excluding *Asset Quality*.



**Normal P-P Plot of Regression Standardized Residual**

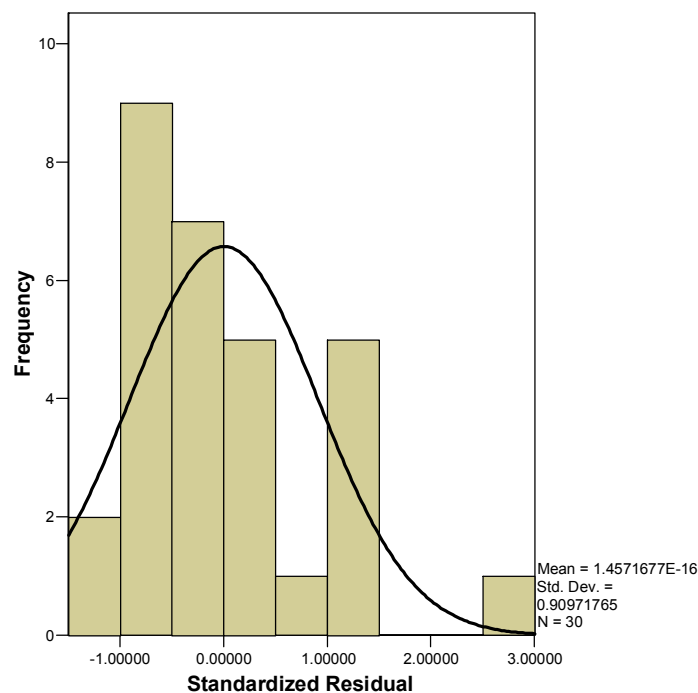
**Graph 5.5.1.1**

As can be seen from *Graph 5.5.1.1*, change has occurred due to the exclusion of the independent variable *Asset Quality*. The plots of residuals on the graph follow the line of best fit more closely than do those in *Graph 5.4.1*. Thus showing that the four independent variables of: High Accruals, Revenue Growth, Ministry Size, and Ministry Stability, better explain the existence of budgetary slack.

### 5.5.2 Test for Heteroskedasticity:

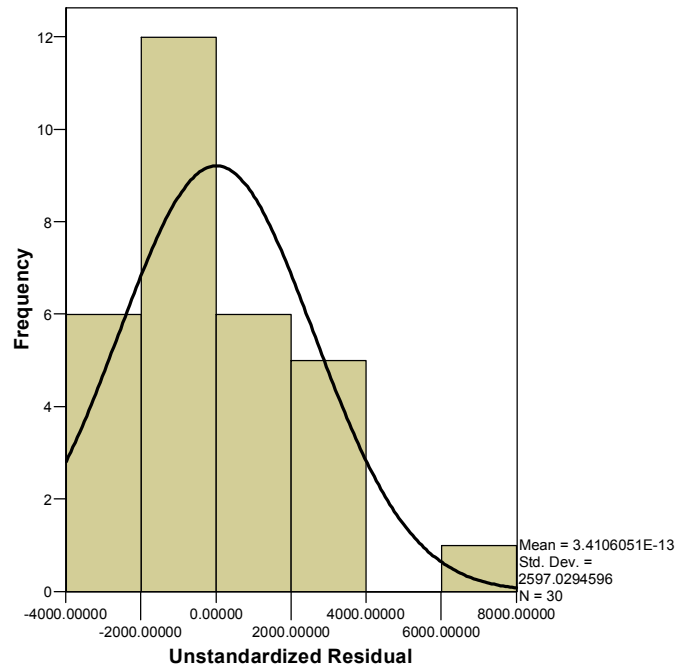
The problem of *Heteroskedasticity*<sup>17</sup> will exist when the residuals of a regression follow a certain trend and are not normally distributed. To test for this problem, both the standardized and unstandardized residuals are plotted on a histogram. This will determine whether the residuals are normally distributed, and if they are then heteroskedasticity will not exist within the OLS regression developed in this study. As explained in the previous subsection 5.5.1, the exclusion of the variable *Asset Quality*, results in a better model at explaining the existence of budgetary slack. Hence, this model will be examined for the problem of heteroskedasticity.

Shown next on *Graphs 5.5.2.1* and *Graph 5.5.2.2* are the plotted residuals computed within this study's model of independent variables.



**Plotted Standardized Residuals**  
**Graph 5.5.2.1**

<sup>17</sup> The problem of Heteroskedasticity represents that the data collected is not random and therefore are bias. When the results are normally distributed, it will illustrate that the results are random.



**Plotted Unstandardized Residuals**  
**Graph 5.5.2.2**

As shown on both histograms, the problem of heteroskedasticity is not present within this study's OLS regression. This is due to both Standardized and Unstandardized Residuals being normally distributed.

**5.5.3 Test for Stability:**

To test the *stability*<sup>18</sup> of the model, the data was ranked in order of size (revenue), and then split into two groups. Each of the two groups were regressed with the same dependant variable (Unstandardized Residual, to represent error term within the model), and then compared. The results of each of these tests are shown next in *Table 5.5.3.1* and *Table 5.5.3.2*.

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>
<b>1</b>	.000(a)	.000	-.400

- a Predictors: (Constant), High Accruals, Revenue Growth, Ministry Size, and Ministry Stability
- b Dependent Variable: Unstandardized Residual

**Sample of 15 with the Highest Revenue**  
**Table 5.5.3.1**

<sup>18</sup> Stability represents whether the data set would produce different results, given separate particular characteristics in the data set.



<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>
<b>1</b>	.000(a)	.000	-.400

a Predictors: (Constant), High Accruals, Revenue Growth, Ministry Size, and Ministry Stability

b Dependent Variable: Unstandardized Residual

**Sample of 15 with the Lowest Revenue**  
**Table 5.5.3.2**

The two groups show no correlation between the existence of budgetary slack and the error term, represented by residuals. Thus being represented by a 0% R<sup>2</sup>, illustrating no association. Given this analysis it can be concluded that the model that was developed in this study is stable and robust, and is not affected by the different sizes of the Ministries.

## **6. Concluding Summary**

The purpose of this study was to investigate whether or not budgetary slack is used as a risk management strategy in NZ's NPM control setting. In determining this, the public sector reforms that occurred in the 1980's and 1990's were examined and certain hypothesis tested so as to see whether or not budgetary slack still has the potential to prevail within the NPM of NZ. The study's results led to the conclusion that budgetary slack still has the potential to prevail within the NPM of NZ. This is shown by an Adjusted R<sup>2</sup> of 58.2% for the independent variables of: High Accruals, Revenue Growth, Ministry Size, and Ministry Stability. Interpreting this as saying there is a high potential for budgetary slack to still be created. Although a further study is required to determine which budgetary slack is being explained. That is, the traditional notion of budgetary slack (analysed within this study) or the Government's acceptable notion of a surplus.

Of the independent variables examined, Ministry size was the only variable found to be highly significantly associated to the potential for budgetary slack to exist. There was also a positive association between Ministry size and the existence of budgetary slack, as predicted from past literature, which highlighted that the bigger the size of the Ministry (in terms of revenue) the greater potential for budgetary slack to exist. Although not statistically supported, the results of this study show that for High

Accruals, Asset Quality, and Ministry Stability the direction of association was supported.

Further analysis of the data revealed there was a potential problem of multicollinearity, due to the significant association between Asset Quality and Ministry Size. Analysis was therefore conducted on the OLS regression excluding Asset Quality as an independent variable. This led to an increase in significances of three of the other four variables when explaining the existence of budgetary slack. However within a wider study, other proxies of Asset Quality need to be explored, given that a larger sample size will enhance the testing of this variable.

Within a wider study, just what form of budgetary slack is being created and thus examined needs to be established. This study examined the traditional form of budget slack, being the excess requirements for resources or understatement of productive capability. However, the Government's acceptable notion of a surplus could also result in another form of budgetary slack. This notion of budgetary slack was not examined here due to time and cost constraints but future research could be undertaken to determine whether the Governments' surplus each year, is proportioned back to the departments. A real indication of budgetary slack would be able to be gained from this. Giving the surplus back to the departments will indicate a potential for budgetary slack to exist, although not in its traditional form.

The model developed, utilised and investigated in this study, has shown results that give motivation for a wider study to be undertaken of all Ministries within the NPM control setting. It also gives motivation for extending the use of financial accounting literature (earning management) in management accounting based research. In doing so, an avenue for management accounting research is potentially provided for the use of elements of the financial accounting research data sets. Data sets that Chenhall (2003) observed were not available to management accounting researchers. Also given greater time, more in-depth investigation into the Ministries can be gained through structure interview visitations to each of the Ministries. By doing so, invaluable data could be collected on the three independent variables discussed in sub-section *4.9 Organisational commitment to the budget; Monitoring emphasis; and Budget participation*, for investigating and testing to determine/explain whether these three variables have a

significant association with the existence of budgetary slack. A future study could also review in-depth the selection of Asset Quality as an indicator of budgetary slack.

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**Summary\* of New Zealand's Public Sector Reforms 1984-1995**

\*Source: Boston et al, 1996: 367-370.

- 1. Commercialisation, Corporations and Privatisation:**
- 1.1 User-pays introduced for many state services 1985-
- 1.2 Removal of almost all state-regulated monopoly rights and restrictions on state-owned companies and corporations. 1984-89
- 1.3 Establishment of new state enterprises under State-Owned Enterprises Act (1986): 1987-90
  - SOEs given primarily commercial objectives
  - significant managerial autonomy, arms-length relation with ministers
  - removal of controls on inputs, finance, operational scope etc.
  - transparent state subsidies for non-commercial functions
  - substantial rationalisation of assets and staff reductions
  - improved external monitoring and accountability requirements
- 1.4 Restructuring of isolate natural monopoly elements of SOEs 1989-
- 1.5 Emphasis on light-handed regulation
- 1.6 Comprehensive privatisation programme 1987-
  - range of sale techniques used including partial sale of shares, partial share flotations, shares distributed to customer, the sale of usage rights (e.g. forest cutting rights), the divestiture of some physical and financial assets, etc.
  - heavy reliance on competitive tendering rather than fixed price share flotations
- 1.7 Application of commercial imperatives to some social services providers, including hospital and related services, public housing, etc. 1992-93
- 2. Machinery of Government:**
- 2.1 Separation of commercial and non-commercial functions 1987-90
  - most commercial assets placed in SOEs, a few remain as agencies within government departments
  - in most cases service delivery has been transferred to separate organisations (e.g. defence, education, environmental administration, health, housing, scientific research, etc.)
- 2.2 Separation of policy advice from service delivery functions 1987-
  - in some cases departments have been recognised internally to ensure greater functional separation of policy advisers and service providers (e.g. education and transport)
- 2.3 Separation of policy advice from regulatory, review, and monitoring (e.g. education and transport) 1987-
- 2.4 Separation of many service delivery functions into distinct business units
- 2.5 Establishment of new population-based ministries (e.g. Woman's Affairs, Youth Affairs, Pacific Island Affairs, etc) 1985-
- 2.6 Abolition of many quasi-governmental organisations 1986-
- 2.7 Establishment of 10 Crown Research Institutes 1991
- 2.8 Establishment of 23 Crown Health Enterprises 1993
- 3. Human Resource Management:**
- 3.1 Major changes to senior management of the public sector via State Sector Act (1988), including: 1988

## Appendix One (Continued)

- new procedures for appointing departments chief executives (CEs)
  - CEs placed on performance-based contracts for terms of up to 5 years
  - annual performance agreements between CEs and ministers
  - end of unified public service; CEs become employers and thus responsible for pay fixing and conditions of employment, and all personnel functions
  - establishment of Senior Executive Service
- 3.2 Major changes to industrial relations and wage-fixing arrangements via State Sector Act, including: 1988
- abolition of annual general adjustments and other service-wide uniform employment determinations
  - abolition of fair relatively with private sector
  - abolition of compulsory arbitration; final offer arbitration made available on certain conditions
  - State Services Commission continues as employer party for bargaining purposes
  - Increased emphasis on equal employment opportunities
- 3.3 General trends in HRM: 1988-
- decentralisation of bargaining units
  - restructuring of remuneration systems and salary scales (including range of rates)
  - greater use of performance-based pay and performance management systems
  - increased reliance on fixed-term contracts
  - devolution of human resource management to line managers
  - increased union membership in public service
  - delegation of bargaining authority by Commission, with some provisos, to individual departments, Crown entities, etc.
- 3.4 Employment Contracts Act (1991): 1991
- emphasis on individual contracts rather than collective arrangements
  - union bargaining rights made contestable
- 4. Financial Management:**
- 4.1 Sweeping changes to financial management via Public Finance Act (1989) and amendments: 1989-94
- CEs made responsible for financial management
  - distinction between Crown and department cash flows, assets and liabilities
  - introduction of accrual accounting throughout the public sector
  - introduction of capital charges for most public sector agencies
  - distinction between the Crown's ownership and purchaser interest
  - shift from input controls to output assessment
  - change from programme-based to output-based appropriation system; ministers select outputs to achieve specified outcomes, and specify conditions (such as quantity, quality, price, and timing of delivery)
  - comprehensive new reporting requirements, including statement of service performance

## Appendix One (Continued)

- extension in range of quality of performance indicators
  - introduction of monthly Crown financial statements on an accrual basis (similar to those for departments), including a consolidated balance sheet and an operating statement for the whole of the state sector
  - new estimates format
- 4.2 Fiscal responsibility initiatives under Fiscal Responsibility Act (1994): 1994
- provides for regular and explicit fiscal reporting, including an annual Budget Policy Statement at least three months before the deadline for budget (31 July), a Fiscal Strategy Statement Report at the time of the budget, and comprehensive economic and fiscal updates before each general election, etc.
  - provides for parliamentary review of fiscal reports
  - specifies various principles of responsible fiscal management, such as reducing total Crown debt to prudent levels and prudent management of fiscal risks facing the Crown
- 5. Expenditure Control:**
- 5.1 Assignment of privatisation proceeds to repay public debt 1987-
- 5.2 User-pays principle applied to many public services 1985-
- 5.3 Across-the-board cuts to most government departments 1988-
- 5.4 Cuts to welfare benefits 1991
- 6. Local Government Reforms:**
- 6.1 Reorganisation and amalgamation of local authorities: 1989
- Abolition of most special purpose authorities; more than 700 local authorities were reduced to fewer than 100
- 6.2 Corporatisation of Local Authority Trading Enterprises (LATEs) 1989-
- 6.3 Sale of shares in airports, port companies and local utilities 1991-
- 6.4 Separation of service delivery and regulatory functions 1989-
- 6.5 Human resource management changes similar to central government 1989
- 6.6 Financial management changes similar to central government 1989
- 6.7 New accountability requirements 1989
- 6.8 Major changes to resource management policies and planning Procedures 1991
- 6.9 Contracting out of many local government services 1989-
- 7. Other Public Management Reforms:**
- 7.1 Emphasis on biculturalism 1987-
- establishment of Maori units in government departments
  - new advisory and delivery agencies created
  - responsiveness programmes introduced
  - mainstreaming of programmes of former Department of Maori Affairs 1992-94
  - establishment of Office of Treaty Settlements 1994
- 7.2 Implementation of new information technology policies with the public services

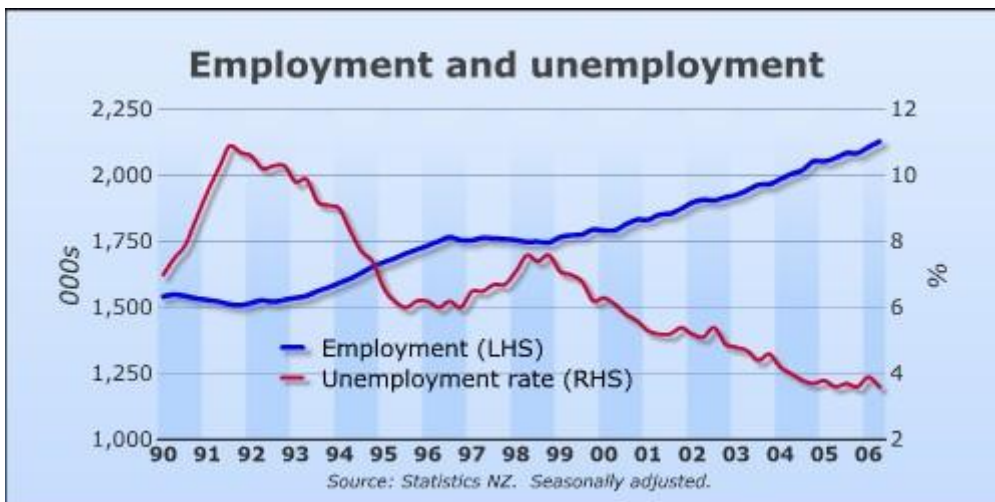
**Statistical Graphs of Main Key Performance Indicators**

Source: Reserve Bank of New Zealand, 2006.



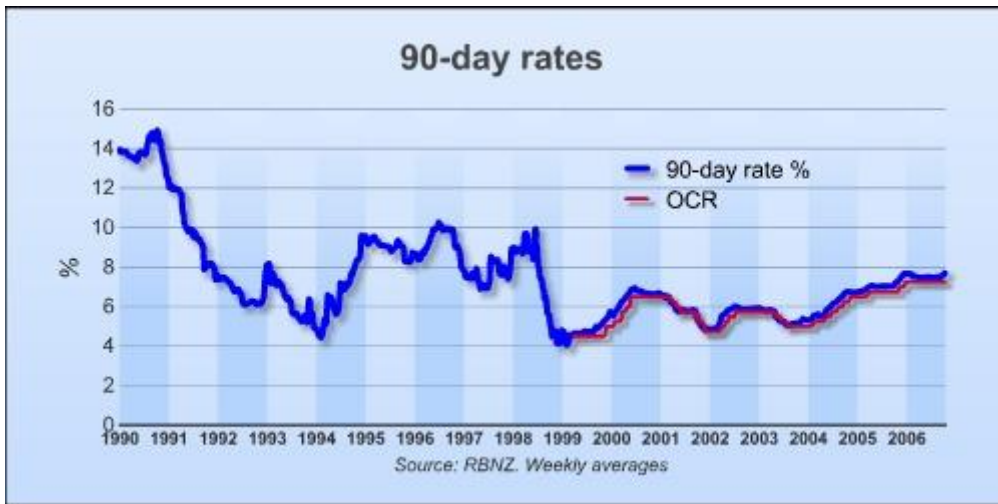
**Inflation from 1970-2006**

**Graph 1**



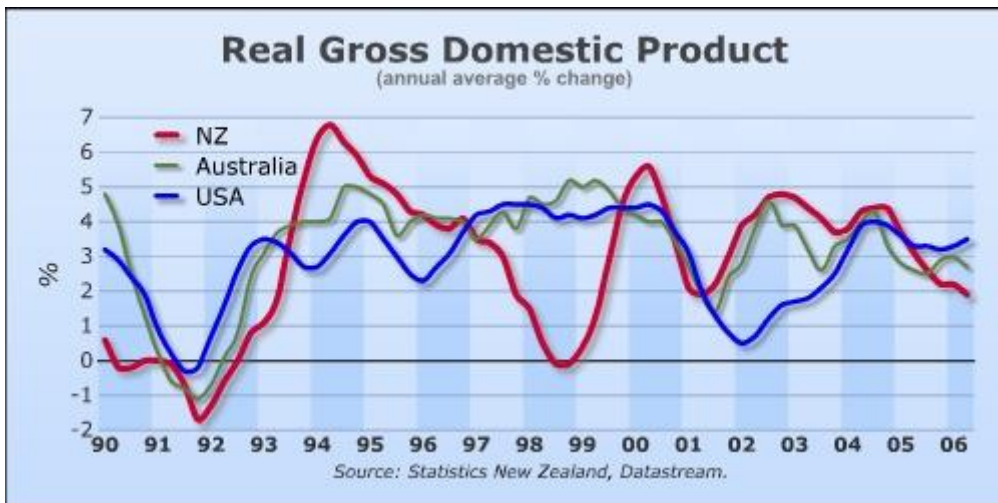
**Employment and Unemployment Rates from 1990-2006**

**Graph 2**



90-Day Bank Bill Rate from 1990-2006

Graph 3



Real GDP of New Zealand, Australia and USA from 1990-2006

Graph 4

**New Zealand Ministries and there Appropriations Received in 2005**

Source: Reserve Bank of New Zealand, 2005: 34-37

<b>Department/Ministry</b>	<b>Budgeted \$(000)</b>	<b>Actual \$(000)</b>
Racing	193	193
Senior Citizens	1,026	1,026
Crown Research Institutes	1,031	1,031
Parliamentary Commissioner for the Environment	2,259	2,259
State-Owned Enterprises	2,354	2,354
Woman's Affairs	4,147	4,147
Serious Fraud	4,820	4,820
Ombudsmen	4,927	4,927
Emergency Management	6,051	6,051
Consumer Affairs	6,090	6,005
Pacific Island Affairs	6,746	6,746
Veterans' Affairs	8,619	8,619
Defence	9,121	8,821
Local Government	9,468	8,995
Office of the Clerk	12,646	12,646
Youth Development	14,060	14,060
Parliamentary Counsel	15,241	15,241
Prime Minister and Cabinet	16,084	15,040
Community and Voluntary Sector	16,165	16,066
National Archives	16,787	16,787
Communications	17,235	16,267
Treaty Negotiations	17,246	17,246
Official Development Assistance	20,994	20,994
Employment	21,012	20,993
Climate Change and Energy Efficiency	22,514	22,514
Education Review Office	25,645	25,277
Ministerial Services	30,632	30,333
Sport and Recreation	38,250	38,250
Parliamentary Service	40,612	40,612
<b><i>Building and Housing</i></b>	<b><i>40,709</i></b>	<b><i>40,709</i></b>
Audit	41,767	41,067
State Services	43,240	43,240
Environment	46,356	46,356
Attorney-General	47,589	47,589
National Library	48,033	47,783

Appendix Three (continued)

Department/Ministry	Budgeted \$(000)	Actual \$(000)
Finance	60,822	60,781
Tourism	61,194	60,858
Commerce	66,474	65,137
Labour	70,178	66,358
Food Safety	80,169	75,181
Statistics	81,570	78,027
Fisheries	87,971	81,155
Agriculture and Forestry	91,962	90,036
Customs	95,668	95,668
Energy	98,821	94,628
Lands	99,603	98,718
Internal Affairs	104,230	104,229
Maori Affairs	118,010	118,010
Immigration	149,996	146,214
Biosecurity	164,076	152,771
Economic, Industry and Regional Development	164,810	150,957
<b><i>Justice</i></b>	<b><i>180,736</i></b>	<b><i>180,736</i></b>
Foreign Affairs and Trade	194,937	194,937
Arts, Culture and Heritage	202,235	202,235
Courts	271,903	271,903
Conservation	282,921	282,921
Child, Youth and Family Services	430,431	430,431
Revenue	433,029	433,029
Research, Science and Technology	541,497	541,497
ACC	559,080	559,075
Corrections	565,134	565,134
Social Development	748,645	748,645
Police	943,822	943,823
<b><i>Transport</i></b>	<b><i>1,048,054</i></b>	<b><i>1,048,054</i></b>
Defence Force	1,542,520	1,542,520
<b><i>Education</i></b>	<b><i>1,961,710</i></b>	<b><i>1,960,870</i></b>
<b><i>Health</i></b>	<b><i>8,449,258</i></b>	<b><i>8,392,092</i></b>
<b>Total Allocation</b>	<b>\$20,611,135</b>	<b>\$20,491,694</b>