Corporate Governance and Earnings Management: Some Evidence from Hong Kong Listed Companies

POK MAN KAM

This thesis is submitted in total fulfillment of the requirements for the degree of Doctor of Philosophy

Faculty of Business
University of the Sunshine Coast
Maroochydore DC Queensland 4558
Australia

Submitted in December 2006
Revised in August 2007
ABSTRACT

This study examines the role of various corporate governance variables in earnings management in Hong Kong during the period 2000 to 2002. The corporate governance variables examined are CEO duality (when the chairman and the CEO is the same person), the proportion of independent non-executive directors and audit committees. It also examines whether the proportion of independent non-executive directors moderates the association between CEO duality and earnings management.

The findings indicate that there is a strong positive association between CEO duality and earnings management. The results suggest that there is no significant association between the proportion of independent non-executive directors on the board and earnings management. However, earnings management is significantly negatively associated with the interaction of CEO duality and the proportion of independent non-executive directors on the board, suggesting that independent non-executive directors’ effectiveness in monitoring weakened the managerial behavior of earnings management in CEO duality firms. This is particularly the case in high-growth firms. The results do not show a significant association between earnings management and the existence of audit committees.
STATEMENT OF AUTHORSHIP

Except where explicit reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis by which I have qualified for or been awarded another degree or diploma. No other person’s work has been relied upon or used without due acknowledgement in the main text and bibliography of the thesis.

Signed:  
Signed:  
Dated:  
Dated:  

Pok Man Kam  
Candidate

Dr. Christopher Lambert  
Principal Supervisor
# TABLE OF CONTENTS

## LIST OF TABLES

- vi

## CHAPTER

### 1 INTRODUCTION

1

### 2 LITERATURE REVIEW

2.1 Introduction ................................................................. 5

2.2 Theory of the firm .......................................................... 6

2.2.1 Agency theory ............................................................ 7

2.2.2 The theory of incomplete contracts ................................. 13

2.2.3 Measures mitigating agency problems .............................. 15

2.2.3.1 Incentive measures ..................................................... 15

2.2.3.2 Monitoring measures ................................................... 18

2.3 Corporate governance and regulation ................................. 19

2.3.1 Regulatory framework in Hong Kong ............................... 21

2.4 Role of accounting numbers and earnings management ............ 23

2.4.1 Earnings management ................................................... 25

2.5 Role of growth opportunities in corporate governance ............... 30

2.6 Corporate governance mechanism ....................................... 34

2.6.1 Board of directors ......................................................... 34

2.6.2 CEO duality ................................................................. 36

2.6.3 Independent non-executive directors ................................. 44

2.6.4 Audit committees ......................................................... 51

2.7 Summary ........................................................................... 57

### 3 HYPOTHESES DEVELOPMENT

3.1 Introduction ................................................................. 59

3.2 CEO duality ................................................................. 59

3.3 Independent non-executive directors ..................................... 60

3.4 Interaction of CEO duality and proportion of independent non-executive directors ......................................................... 62

3.5 Interaction of CEO duality and proportion of independent non-executive directors in high-growth firms .......................... 63

3.6 Audit committees ............................................................ 64

3.7 Interaction of CEO duality and proportion of independent non-executive directors for firms with an audit committee .......... 66

3.8 Summary ........................................................................... 67
LIST OF TABLES

Table 1  Descriptive Statistics of Hong Kong Listed Firms for the period 2000-2002 .......................................................... 104

Table 2  Pearson Correlation Coefficient between Variables for Hong Kong Listed Firms for the period 2000-2002 ......................... 105

Table 3  Univariate t-tests for Differences in Absolute Value of Discretionary Accruals for Hong Kong Listed Firms for the period 2000-2002 .................................................................................. 106

Table 4  Regression Results on Absolute Value of Discretionary Accruals and Income-increasing Discretionary Accruals for Hong Kong Listed Firms for the period 2000-2002 ....................... 107

Table 5  Regression Results on Absolute Value of Discretionary Accruals and Income-increasing Discretionary Accruals for Hong Kong Listed High-growth and Low-growth Firms for the period 2000-2002 .................................................................................. 108

Table 6  Regression Results on Absolute Value of Discretionary Accruals and Income-increasing Discretionary Accruals for Hong Kong Listed Firms with and without Audit Committee for the period 2000-2002 .................................................................................. 109
CHAPTER 1
INTRODUCTION

Since the Asian financial crisis of 1997-98, corporate governance has become the global focal point. Asian countries have tightened the regulations of the securities market, and accelerated the reform of corporate governance structure. The collapse of companies such as Enron in the United States and the scandal at Parmalat in Europe have once again attracted worldwide public concern over a number of corporate governance issues and the credibility of financial reporting. Securities regulatory authorities, stock exchanges of various countries and international organizations have pushed forward the global movement of corporate governance with the passage of the Sarbanes-Oxley Act in the United States, the publication of the Higgs (2003) and Smith (2003) reports proposing changes to the Combined Code on Corporate Governance in the United Kingdom, and the issue in 2004 of an updated and expanded version of the Principles of Corporate Governance by the Organization for Economic Co-operation and Development. All these moves are aimed at rebuilding and maintaining public trust in companies and stock markets by adding new recommendations for good practice in corporate behavior.

Problems concerning corporate governance are associated with the growth of the modern corporation, with the core being the agency relationship generated by the separation of the ownership and management right and the ensuing inconsistent interests between owners and managers. One manifestation of poor corporate
governance is the likelihood of aggressive earnings management. Earnings management occurs when managers choose accounting policies and/or discretionary accruals to manipulate earnings. This is likely to happen when there is a separation of ownership and management control, and the resultant conflict of interest between owners and managers. While a number of studies have investigated linkages between corporate governance variables and earnings management in developed economies (Healy, 1985; Warfield et al., 1995; Beasley, 1996; Klein, 2002; Xie et al., 2003; Bédard et al., 2004; Davidson et al., 2005; Peasnell et al., 2005), limited research has been conducted on emerging markets (Chen and Jaggi, 2000; Fan and Wong, 2002; Fan and Wong, 2005).

Unlike developed economies, in Hong Kong, a significant number of listed companies are owned and managed by one shareholder or a family group of shareholders (Mok et al., 1992; Hong Kong Institute of Certified Public Accountants, 1997). The conflict of interest arising from this ownership concentration would likely to be between controlling and minority shareholders rather than between owners and managers (La Porta et al., 1998).

Denis and McConnell (2003) comment that for many countries, there is relatively little empirical evidence on governance mechanisms other than legal protection and ownership structure and suggest that issues such as board structure provide useful avenues for further research. Similarly Fan and Wong (2002) who examine the relations between earnings informativeness and the ownership structures of companies in Asian economies comment (p. 404) “it would be fruitful for future
research to focus on how ownership structures shape accounting policies in emerging markets and transition economies”.

This study examines the linkages between various corporate governance characteristics and earnings management as proxied by the magnitude and direction of discretionary accruals. The governance characteristics examined are (1) the composition of board of directors of Hong Kong listed companies, specifically the proportion of independent non-executive directors on the board, (2) audit committees (3) auditor quality, measured by Big 5 versus non-Big 5, and (4) CEO duality (where the role of CEO and chairman of the board are held concurrently). In addition, this study also examines if governance characteristics (1) and (2) moderate the association of CEO duality and earnings management. The study further examines if this moderating role is only significant for high-growth firms and for firms with an audit committee.

The study provides evidence that CEO duality firms are more likely to engage in earnings management. The results do not support the propositions that a higher proportion of independent non-executive directors on corporate boards and the existence of an audit committee provide more effective monitoring mechanisms in constraining the managerial behavior of earnings management. However, the results show that the proportion of independent non-executive directors weakens the positive relationship between CEO duality and earnings management and this moderating effect is significant for high-growth firms.
This thesis contributes to the literature in several important ways. First, the study examines whether firms with CEO duality are associated with earnings management in an emerging market. Second, by examining independent non-executive directors and audit committees and their relationship with earnings management, it adds to the growing body of literature addressing the monitoring role of these corporate governance mechanisms. This study provides further insight into the monitoring effectiveness of independent non-executive directors by testing the moderating role of independent non-executive directors on the relationship between CEO duality and earnings management.

This thesis is organized as follow. Chapter 2 provides the theoretical background and reviews the literature on corporate governance and earnings management. Chapter 3 develops the various hypotheses. Chapter 4 discusses the research methodology and provides a description of the discretionary accruals model being used in this study, and chapter 5 presents the results and discussion of the results. The conclusions of the study are reported in chapter 6.
2.1 Introduction

Corporate governance is the system by which companies are directed and controlled. Essentially it is about the exercise of power over the modern corporation and the relationships among participants in the governance system (OECD, 2004). Shleifer and Vishny (1997, p. 737) describe corporate governance as “deal(ing) with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment”. It includes a wide variety of institutional processes to organize and coordinate activities among economic agents (Williamson, 1985).

With the advent of modern corporations and the subsequent separation of ownership and management, managers are given considerable degree of decision-making authority. This separation of ownership from control creates an agency problem: the outside shareholders act as principal and the corporation’s top management team as agent. In different parts of the world different ways to reduce the agency problem have emerged. This has resulted in two rather different corporate governance models: the common law (market) based model of the United Kingdom and the United States, and the code law (control) based model prevalent in continental Europe, Japan, and emerging markets. The former is characterized by an independent board, dispersed ownership, transparent disclosure, active takeover markets, and a well developed legal infrastructure, while the latter emphasizes an
insider (two-tier) board, limited disclosure, and reliance on family and/or bank finance (La Porta et al., 1998).

At the centre of the concept is the board of directors and its role. On the one hand the directors are expected to contribute to the longer term performance of the firm. On the other hand, they are responsible for ensuring that the management is conforming to policies and plans. A two-tier board system attempts to solve the agency problem by separating the performance responsibility of the executive board from the conformance responsibility of the supervisory board. In a one-tier (unitary) board system where the board is responsible for decision management as well as decision control, the independent non-executive directors perform an important function of monitoring and supervising the executive top management.

This chapter is organized as follows. Section two discusses the development of corporate governance research. Corporate governance and regulation are discussed in section three. Prior research on the role of accounting numbers and earnings management are summarized in section four. The role of growth opportunities in corporate governance is discussed in section five. Finally the corporate governance mechanisms of boards of directors, CEO duality, independent non-executive directors and audit committees are detailed in the last section.

2.2 Theory of the firm

A review of the theory of the firm will help to understand many of the issues on corporate governance faced by the business world today.
Stimulated by the pioneering works of Berle and Means (1932) and Coase (1937), and later Alchian and Demsetz (1972) and others, significant contributions have since been made in developing the theory of the firm. Berle and Means (1932) describe the dispersion of ownership and the resultant separation of ownership and control in the modern corporation. They define the ownership of the firm in terms of the residual claim rights, the shareholders being the residual claimants. Coase (1937) explains that the existence of the firm helps to alleviate the costs of using the market by substituting the price mechanism with the exercise of authority. According to his theory, the optimal size of the firm is determined by the trade-off between the cost of inefficient markets and the cost of managerial inefficiency. Alchian and Demsetz (1972) object to the notion that activities within the firm are governed by authority and maintain that the existence of the firm is due to the fact that production involves joint efforts by multiple workers. They emphasize the role of monitoring in situations in which there is joint input or team production.

The two most important theories which explain the theory of the firm are agency theory and the theory of incomplete contracts.

2.2.1 Agency theory

Jenson and Meckling (1976) apply agency theory to the corporate entity. They define an agency relationship as a contract under which one or more persons (the principals) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent. They suggest that if both parties to the relationship are utility maximizers there is
good reason to believe that the agent will not always act in the best interest of the principal.

Agency theory examines the conflict of interest (the agency conflict) between parties to a contract that comprises all co-operative arrangements. The analysis of agency problems is based on two fundamental behavioral assumptions. First, all individuals are assumed to choose actions that maximize their utility and second, every individual recognizes the self-interested motivations of all others so that future decisions by agents based on their own interests are anticipated and taken into account by principals. The property rights theory of the firm (Alchian and Demsetz, 1972) maintains that self-interested individuals are motivated by attempts to transfer wealth from other parties associated with the firm and take actions that will reduce the value of the firm. At the same time they have incentives to contract with the principals to restrict their opportunistic behavior and to have their actions monitored (Warfield et al., 1995).

Fama and Jensen (1983) see the organization as a nexus of contracts, written and unwritten, among owners of factors of production and customers. The most important contracts specify the nature of the residual claims and the allocation of steps in the decision process among agents. According to Fama and Jensen, the contract structures of most organizational forms limit the risks undertaken by most agents by specifying either fixed promised payoffs or incentive payoffs tied to specific measures of performance. The residual risk is borne by those who contract for the rights to net cash flows, the residual claimants. An organization’s decision
process comprises the initiation and implementation of decisions (decision management) and the ratification and monitoring of decisions (decision control). Fama and Jensen (1983) posit two complementary hypotheses about the relations between risk-bearing and decision processes of organizations: (1) separation of residual risk-bearing from decision management leads to decision systems that separate decision management from decision control, and (2) combination of decision management and decision control in a few agents leads to residual claims that are largely restricted to these agents. Fama and Jensen (1983) note that large open corporations are characterized by separation of decision management from residual risk bearing. In these organizations, the decision managers who initiate and implement important decisions are not the major residual claimants and therefore do not bear a significant share of the wealth effects of their decisions. This issue of separation of ownership and control accords with Berle and Means’s (1932) study of the typical twentieth-century corporation. The large corporation, they say, is owned by many shareholders each holding an insignificant proportion of the outstanding shares, thus effectively depriving them from exercising power over the officers of the corporation. They also note a wide divergence of interests between the corporate officers and the shareholders - the corporate officers in search of power, prestige and money for themselves, the shareholders interested only in profit.

Agency problems arise because contracts are not costlessly written and enforced. Agency costs include the monitoring expenditures by the principal to “control” the agent’s behavior using methods such as budget restrictions, compensation policies and operating rules; bonding expenditures by the agent, for example, contractual
guarantees of external audits, compensation to the principal for the agent’s malfeasance, and contractual limitations of the agent’s decision making power; and the “residual loss”, representing the wealth effect of the divergent actions taken by the agent which differ from the actions the principal would take himself (Jensen and Meckling, 1976). Fama and Jensen (1983) argue that control of agency problems in the decision process in large corporations is important because without effective control procedures, the decision managers are more likely to take actions that deviate from the interests of the residual claimants, the shareholders.

Jensen and Meckling (1976) hold that managers want to consume or pursue projects that benefit them personally. Managers may act to promote their self interests at the expense of the firm, for example, by adopting financing policies and a capital structure for the firm which can help to secure their job (Band, 1992). The agency problem does not exist when management owns the entire equity of the firm. However, if the owner-manager is free to choose the level of perquisites subject only to the loss in wealth he incurs as a part owner, his welfare will be maximized by increasing his consumption of non-pecuniary benefits. It is therefore expected that the inside equity holder, who also manages the firm, has an incentive to consume on-the-job perquisites, enjoying the full benefit of the dollar spent but only bearing the cost up to the share of ownership in the firm.

Managerial entrenchment could also occur when managers (or controlling owners who are also managers) are given so much power that they are able to use the firm to further their own interest at the expense of outside shareholders and other
stakeholders. Managerial entrenchment could be effected through tunneling by transferring assets and profits out of a firm for the manager’s own benefit (Johnson et al., 2000). According to Shleifer and Vishny (1997) and La Porta et al. (2002), management can expropriate assets in various ways, including directly stealing money from the firm’s accounts, transferring the firm’s wealth through favorable pricing (non-market terms) to their own firms, selling expensive firm assets to their own firms at low prices or providing credit to their own firms on generous terms. Controlling shareholders could also extract value from the firm by installing family members as managers in the firm.

When a firm grows beyond a certain size, it is natural that the manager (agent) is given considerable degree of decision-making authority, and the owner (principal) is unlikely to have relevant information for all major decisions due to the complexity of the organization. This necessarily results in information asymmetry and gives rise to increased agency costs. Information asymmetry refers to the possession of different sets of information by parties to a contract, either for initial contracting or for the fulfillment of and monitoring by the contract. The situation occurs because it is costly to acquire and transfer information. Information or knowledge can be either general or specific (Jensen and Meckling, 1992). General knowledge is one that can be acquired easily. Specific knowledge can be idiosyncratic or scientific. Idiosyncratic knowledge is one that can only be gained by personal experience. For example, only the machine operator knows the specific conditions of the machine. Also, only the sales person knows the tastes, needs and spending habits of the customers in his region. While it is less costly to acquire or to transfer general
knowledge, it is more costly to do so for specific knowledge. Some subtleties of the situations can only be made out by personal contact or involvement. Transferring the front-line knowledge to the headquarters for decision making may mean loss of business. All this means that there are differences in the information sets possessed by parties to a contract.

At the firm level, information asymmetry presents agency problems because the best information available for planning and control is in the hands of the controlled (the manager) and not in the hands of the controller (shareholders). This may result in a loss to the firm as the agent can take advantage of the private information to advance self-interest. Fama and Jensen (1983) note that large firms tend to be quite complex, whereas smaller firms adopt simpler systems and structures. Greater information asymmetry is expected in small firms as specific knowledge important for decision management and control is concentrated in one or few agents. Similarly, in high-growth firms, specific knowledge about the firm’s assets and its growth opportunities are in the hands of the managers. Noe and Rebello (1996) suggest that smaller firms and firms whose performance is not examined by financial analysts are more likely to experience greater information asymmetry as it is unlikely that owners would be knowledgeable about managers’ intentions. Information asymmetry increases the loss of control by the principal and hence there is the need for mechanisms that align the interests of the agent with those of the principal, giving rise to increased agency costs.
Agency conflict also arises beyond the firm level. One such instance is regulation. Watts (1977) suggests that firms are often subjects of the political process. Politicians propose regulation on firms as a result of political motivation to gain votes. Hence, firms lobby to decrease the proposed wealth transfer.

2.2.2 The theory of incomplete contracts

A contract defines the duties and rewards of the parties to the contract and specifies the action to be taken when certain conditions arise and the remedies available to a party when another fails to fulfill the contract. The importance of the contract in the theory of the firm was recognized explicitly by Alchian and Demsetz (1972), who characterize the relationship between employers and employees as a contractual relation. Jensen and Meckling (1976) view the firm as a nexus of contracts, and argue that the firm is a legal fiction which serves as a focus for the complex process in which the conflicting objectives of individuals are brought in equilibrium within a framework of a contractual relation.

The theory of incomplete contracts argues that every economic transaction is mediated by a contract, whether explicit or implicit. An incomplete contract is one in which not every contingency and hence not every action is written into it (Baiman, 1990). This partly arises from the inability of humans to foresee every contingency and to be able to plan the course of action to be taken when a contingency arises. It also arises from the imprecision of language to describe unambiguously foreseen contingencies and the complexity of actions to be taken. There are also substantial costs associated with specifying a comprehensive contract. Hence, a contract does
not attempt to specify every contingency or action but instead lays down broad principles to be observed by the parties.

With incomplete contracts, the distribution of rewards when a contingency not covered by the *ex ante* contract arises depends upon the relative bargaining positions of the parties to the contract. The party who is at an information advantage (possessing information unavailable to another party) is likely to act opportunistically. As it is a zero-sum game, the other party loses. A party’s relative bargaining position may also depend upon any previous investment in relationship-specific assets and the way in which the transaction is organized. Klein et al. (1978) discuss the opportunistic behavior of a party after another party had made significant non-transferable investment. For example, an oil pipeline company may offer a very low price on the oil produced by an oil refinery that has no other means of transportation.

The reputation of a party to a contract (i.e. other parties’ beliefs, based upon an individual’s history of actions) plays an important role in incomplete contracts (Baiman, 1990). Transactions between “reputable” individuals can be more efficiently accomplished than between those without such reputations by reducing the cost of collecting information as well as the cost of writing contracts and by increasing the set of supportable actions.

The more complete the contract the lower the agency costs. In a world of incomplete contracts, it is optimal (though not first-best) to leave room for future
renegotiations on what actions should be taken, and which party has the authority to approve them.

2.2.3 Measures mitigating agency problems

Jensen and Meckling (1976) hypothesize that monitoring and bonding contracts, which tie the incentives of the manager more closely to the outside equity holders’ interests, can reduce agency costs. The two broad approaches to mitigating agency problems are: (1) incentives, such as compensation schemes dependent on shareholder wealth, management ownership, and takeover threats, and (2) monitoring, which include among others, auditing, institutional ownership and the board of directors.

2.2.3.1 Incentive measures

Fama (1980) argues that internal monitoring and the managerial labor market help to control managers’ tendencies to shirk. While internal monitoring and market forces can reduce agency costs of moral hazard, they do not eliminate it. The only feasible way to motivate manager effort in the presence of moral hazard is to base their compensation on the payoff. Regardless of the particular payoff measures included in the compensation plan, the manager typically bears risk with respect to his remuneration. Since managers, like other rational, risk-averse individuals, trade off risk and return, the more risk the managers bear the higher must be their expected compensation if reservation utility is to be attained. Compensation plans are normally based on two measures of manager effort – net income and share price (Holmström, 1979). That is, the amounts of bonus, share options, and other
components of executive pay that are awarded in a particular year depend on one or both of net income and share price performance. In conjunction with share price, basing of compensation on net income helps control both the amount of risk these plans impose on managers and the length of their decision horizons. To properly align the interests of managers and shareholders, an efficient contract needs to achieve a high level of motivation while avoiding the imposition of too much risk on the manager. Too much risk can have dysfunctional consequences such as shortening a manager’s decision horizon, adoption of earning-increasing tactics that are against the firm’s long-term interests, and avoidance of risky projects. Evidence of the extent to which management compensation plans act to align managers’ interests with those of shareholders is analyzed by Murphy (1985). He studies the relationship between corporate performance and managerial compensation and finds a strong relationship using either shareholder returns or growth in firm sales as the measure of corporate performance.

Agency theory suggests that stock ownership by management can reduce the underlying agency problem: the more stock management owns, the stronger their motivation to raise the value of the firm’s stock. When insiders own a significant portion of a firm’s stock, they have a strong incentive to enhance its value and act in ways that are in the shareholders’ best interests. In a study of management shareholding and corporate performance, Morck et al. (1988) report that this performance, measured by Tobin’s Q, is highest for firms with management shareholdings of between 5% and 20% of outstanding shares and drops off for larger or smaller levels. This evidence indicates that, at relatively high levels of management
ownership, the agency gains are offset by some additional costs. Warfield et al. (1995) study the impact of the level of managerial ownership in a corporation on the stock price informativeness of its accounting earnings and the accounting choices of its managers. They find that managerial ownership is positively associated with the explanatory power of accounting earnings for stock returns.

The stock market is another mechanism for controlling the problem of separation of ownership and control. Alchian and Demsetz (1972) argue that the policing of managerial shirking relies on across-market competition from new groups of would-be managers as well as competition from members within the firm who seek to displace existing management. If a company performs badly because its managers are incompetent, the market price of that company’s stock will decline. A determined outsider can take advantage of the low share price to gain control of the company, oust existing managers, install new managers and implement a tighter system of control. The takeover mechanism gives shareholders the opportunity to exercise their voting power in the decision as to whether to accept a hostile bid. The threat of takeover, to be effective, requires a well-informed prospective bidder and sufficient under-performance by management to justify the costs and risks of a bid (Whittington, 1993). The takeover market effectively provides an external court of last resort for protection of residual claimants (Fama and Jensen, 1983). Competition between management teams in the market for corporate control increases the pressure on managers to perform well.
2.2.3.2 Monitoring measures

It is argued that companies would not be able to raise capital, or would have to do so on extremely unfavorable terms, if they do not offer contractual terms which would enable providers of finance to monitor performance (Watts and Zimmerman, 1986). Part of such contractual terms will be provision for the supply of financial information audited by an external auditor. The auditing function provides a necessary independent check on the quality of financial reports, and therefore ensures the terms of the information contract are fulfilled *ex post*. Watts’s (1977) analysis of agency relationships suggested that the function of audited financial statements in an unregulated economy is to reduce agency costs.

Large institutional shareholders may combine, formally or informally, to exert control on directors by the exercise of voting power. This is analogous to the protection which such investors can give to the small investors through their information processing activities, if they make the market efficient (Whittington, 1993). For example, in Germany, the voting power of small shareholders can be pooled by banks that hold proxies and exert a similar discipline on directors through their power to elect members of the supervisory board.

It is suggested by some agency researchers that the board of directors is one of the governance mechanisms that limits the agent’s self-serving behavior. According to Alchian and Demsetz (1972), more effective control of corporate activity is achieved for most purposes by transferring decision authority to a smaller group, whose main function is to negotiate with and manage (renegotiate with) the other inputs of the
team. The corporate stockholders retain the authority to revise the membership of the
management group and over major decision that affect the structure of the
corporation or its dissolution. Fama and Jensen (1983) posit that internal control in
the open corporation is delegated by residual claimants to a board of directors.
Residual claimants generally retain approval rights (by vote) on such matters as
board membership, auditor choice, mergers, and new stock issues, while other
management and control functions are delegated to the board. The board in turn
delegates most decision management functions and many decision control functions
to internal agents, but it retains ultimate control over the internal agents, including
the rights to ratify and monitor major policy initiatives and to hire, fire, and set the
compensation of top level decision manager. However, the effectiveness of this
mechanism depends on the relative power of the CEO and the board of directors.

This study focuses on the board of directors and its composition as a monitoring
mechanism and their relation with earnings management arising from conflicts of
interests between management and shareholders due to the separation of ownership
and control.

2.3 Corporate governance and regulation

Corporate governance is affected by the relationships among participants in the
governance system. The role of each of these participants and their interactions vary
widely among countries. These relationships are subject, in part, to law and
regulation and, in part, to voluntary adoption and market forces.
La Porta et al. (1998) examine the legal rules covering protection of corporate shareholders and creditors in 49 countries and find that countries whose legal rules originate in the common-law tradition tend to protect investors considerably more than those countries whose laws originate in the civil law. They argue that the extent to which a country’s law protects investor rights and the extent to which those laws are enforced are the most basic determinants of the ways in which corporate governance evolves in that country. Denis and McConnell (2003) argue that concentration of equity ownership can overcome the lack of legal protection for shareholders.

Within the common-law based countries, different corporate governance practices are followed. For example, in the European Union, member states set minimum expected requirements in their company law or national corporate governance codes and are free to decide how to implement these standards in their jurisdiction. In the United States, at the heart of its corporate governance is a concentration of decision making autonomy in one individual, the chairman and chief executive officer (CEO). According to Higgs (2003), only around one fifth of US-listed companies separate this role. Regulators in the United States have adopted a legislative approach in requiring higher standards of transparency, direct accountability on the part of the CEO, and a greater degree of independence in the boardroom (Higgs, 2003).

Hong Kong was a British colony before July 1997; its corporate governance framework is largely influenced by the British system. However, there are marked differences in institutional structure between Hong Kong and other developed
countries. Unlike the markets in Europe and the United States where very few listed companies are family-owned and operated, and top managers are rarely major shareholders in the companies they operate, corporate ownership is highly concentrated in Hong Kong. Mok et al. (1992) document that over half of the market capitalization of Hong Kong firms are owned and controlled by a few families. According to a report published by the Hong Kong Institute of Certified Public Accountants in 1997, based on the shareholding information on the annual reports of all listed companies with year end dates in 1995, more than half of them have one shareholder or one family group of shareholders that own at least 50 percent of the entire issued share capital. The Hong Kong Institute of Certified Public Accountants report also showed that controlling shareholders tend to appoint members of their family as executive directors to manage their listed companies on a full-time basis. Hostile takeovers are also rare in Hong Kong compared to the United States. A reason for this is that director equity ownership in large Hong Kong companies is higher than for US firms (Gul and Leung, 2004).

2.3.1 Regulatory framework in Hong Kong

By way of background, Hong Kong has a three-tiered system of regulation for its financial markets. Responsibility for the regulation of the securities industries and oversight of the governance of companies falls within the purview of the Financial Services and the Treasury Bureau which is entrusted with the responsibility of formulating and implementing such policies as are necessary to enhance Hong Kong’s standing as an international financial centre. At the next level the Securities and Futures Commission (SFC), an independent statutory body, is responsible for
administering the laws governing Hong Kong’s securities and futures markets. At
the front line is the Hong Kong Exchanges and Clearing Limited, a publicly-listed
entity established in 2000 responsible for the operational administration of the Rules
Governing the Listing of Securities on the Stock Exchange of Hong Kong (Listing
Rules). They set out the contractual obligations imposed upon the stock exchange,
the issuers and their advisers for seeking, and maintenance, of listings on the Stock
Exchange of Hong Kong (the Stock Exchange).

Statutory rules on corporate governance in Hong Kong mainly consist of the Hong
Kong Companies Ordinance, Securities and Futures Ordinance, and the Code on
Takeovers and Mergers and Share Repurchases. Non-statutory rules and standards
include Listing Rules, Listing Agreements, the Code on Corporate Governance
Practices and the Rules on the Corporate Governance Report promulgated by the
Stock Exchange, and accounting and auditing standards issued by the Hong Kong
Institute of Certified Public Accountants.

The first corporate governance initiative in Hong Kong took place in 1992 when
regulations governing conflict of interest between connected parties and the
companies were introduced. In 1993 the Stock Exchange introduced a requirement
into its Listing Rules that every board of directors of a listed issuer must include at
least two independent non-executive directors. It also set out guideline rules for
ensuring their independence. A Code of Best Practice was also established in 1993
to enhance the accountability of directors of listed companies to their shareholders.
Since 1999 the Code of Best Practice recommended listed companies establish and
disclose the existence of audit committees. The Listing Rules were revised in 2004 and required the mandatory establishment of audit committees comprising only non-executive directors, the appointment of a minimum of three non-executive directors to the board with at least one having appropriate professional qualifications or experience in financial matters. In 2005, the Code on Corporate Governance Practices (the Code) and the Rules on the Corporate Governance Report were incorporated into the Listing Rules. The Code sets out two levels of compliance requirements: the Code provisions with which listed companies are expected to comply, and recommended best practices which are provided for guidance only. Listed companies are required to include a Corporate Governance Report in their annual reports and must give considered reasons for any deviation from the Code provisions.

Listed companies in Hong Kong are subjected to detailed financial disclosure requirements prescribed by the Hong Kong Companies Ordinance and the Listing Rules of the Stock Exchange. Effective January 2005 Hong Kong’s financial reporting and auditing standards have fully converged with those prescribed by the International Accounting Standards Board and the International Federation of Accountants.

2.4 Role of accounting numbers and earnings management

The earnings management literature depicts the effect of accounting numbers on the relationship of the parties to a contract.
In contracts, the relationship between parties is defined with reference to accounting numbers. In employment contracts, bonus payment depends on earnings levels (Healy, 1985; Gaver et al., 1995). In debt contracts, limitation on the firm’s action is framed with reference to accounting numbers based on GAAP (Leftwich, 1983). 

For example, the borrower is required to maintain minimum working capital. If the working capital falls below the minimum, the debt holder can take remedial actions according to the covenant (Smith and Warner, 1979). In regulated public utilities, rate setting is based on the return on assets employed (Jarrell, 1979). It is accepted in the literature that accounting is part of the contracting technologies employed by the firm (Watts and Zimmerman, 1986).

Hence, the way that accounting numbers are computed affects the relationship between the parties. Accounting is based on concepts and conventions evolved over time. Such concepts and conventions are not the results of a pedagogic approach to prescribe best accounting practices (Watts and Zimmerman, 1979). Rather they reflect the result of a political process in accounting standard setting (Watts, 1977; Nobes, 1992). They represent the accepted set of concepts and conventions from which managers are allowed to choose (Watts and Zimmerman, 1990).

Within the accepted set, flexibility is allowed for managers to make their own choices. This flexibility enables the managers to achieve their reporting objectives. In addition, managers are allowed to exercise discretion in the provision of various estimates of the effect of uncertain events on the accounts. This discretion affords managers greater freedom in the preparation of financial statements.
The flexibility in accounting results from a cost/benefit trade-off. As the managers have more information on the operation and potential of the firms, they know which accounting alternative best portrays the firms’ results. For example, they know whether certain costs, e.g., research and development, can generate revenue and hence should be capitalized rather than expensed. Totally eliminating accounting flexibility will decrease the information value of the financial statements (Lev and Zarowin, 1999). On the other hand, the managers may make use of the flexibility to achieve their own goals.

2.4.1 Earnings management

According to Healy and Wahlen (1999), earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports. The intention is to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers.

Managers engaged in earnings management may be motivated by contractual, political and other reasons. For example, managers may opportunistically manage net income so as to maximize bonuses under bonus schemes based on current reported income (Healy, 1985). Similarly CEOs approaching retirement may engage in a strategy of income maximization to increase bonuses (Lewellen et al., 1987). CEOs of poorly performing firms may inflate income to prevent, or postpone, termination (DeFond and Park, 1997). A new CEO may take an earnings bath so that performance starts from a low earnings level and is more likely to show
improvement in subsequent years (Pourciau, 1993). One shareholder group may wish to impress a prospective shareholder group with the firm’s past performance (Dye, 1988). Managers of firms that have defaulted on debt contracts may manage income to avoid heavy costs resulting from covenant violation (Sweeney, 1994). Managers of firms going public have incentives to manage earnings reported in their prospectuses in the hope of receiving a higher price for their shares (Friedlan, 1994). Firms in strategic industries or very large firms may want to manage earnings so as to reduce their visibility to avoid regulatory intervention. If managers engage in earnings management in this manner, the quality of financial reporting of the firm would be tarnished.

According to the political cost hypothesis formulated by Watts and Zimmerman (1986), all other things being equal, the greater the political costs faced by a firm, the more likely the manager is to choose accounting procedures that defer reported earnings from current to future periods. Very large firms may be held to higher performance standards, for example with respect to environmental responsibility, simply because they are felt to be large and powerful. If the large firms are also highly profitable, such political costs will be magnified. Therefore the political cost hypothesis predicts that managers of very large firms will choose more conservative accounting policies than managers of smaller firms and will be less likely to oppose new standards that may lower reported net income. Although large firms may have incentives to reduce political costs by reducing reported earnings, they are likely to be under closer scrutiny by outsiders than small firms, given their size. Such close
scrutiny can potentially reduce managers’ opportunities to exercise their accounting discretion.

The earnings management discussed above interprets earnings management as opportunistic behavior by managers to maximize their utilities in the face of compensation contracts, debt contracts and political costs. Earnings management can be interpreted from an efficient contracting perspective. Under efficient contracting, it is desirable to allow managers some flexibility in accounting policy choice enabling a flexible response to changes in the firm’s environment and to unforeseen contract outcomes.

Earnings management could also be used by managers to signal information to investors so that they are in a position to better evaluate the performance of the firm. Managers can use their knowledge about the business and its opportunities to select reporting methods, estimates and disclosures that match the firm’s business economics, potentially increasing the value of accounting as a form of communication. Schipper (1989) comments that accruals do in fact have information content. That is, the opportunities in earnings management inherent in the current reporting system do not eliminate the usefulness of accounting earnings.

Earnings management is made possible when contracts are based on accounting numbers, such as compensation contracts and debt contracts. In addition, reporting rules (for example GAAP) do not completely constrain a manager’s choice of accounting policies and procedures and afford discretion to managers in making
judgments and estimates. As there is asymmetry of information users cannot undo the earnings management. In addition, the costs to process the information which would undo the earnings management tend to be prohibitively high (Schipper, 1989).

Managers can influence the determination of reported earnings through the choice of accounting methods or through the use of accounting methods that influence the accrual component of earnings (Dechow and Schrand, 2004). Accounting method choice was the early focus of the literature (e.g. Zmijewski and Hagerman, 1981; Bowen et al., 1981; Daley and Vigeland, 1983). It continued to be the focus until the early 1990’s when studies on accounting accruals began to flourish (e.g. Jones, 1991; Cahan, 1992). The accrual component of earnings is that portion of revenue and expense items on the income statement that is not represented by cash flow. In any business which uses accrual accounting, there will be a certain level of accruals that correlate with the level of activities. By increasing or decreasing normal accruals, managers can manipulate the firm’s reported income. For example, Healy (1985) shows that firms with caps on bonus awards are more likely to choose income-decreasing accruals when that cap is reached. As accounting accruals represent the totality of the managers’ accounting estimates, the effect on income is more significant than a single accounting method.

Dechow (1994) examines accounting earnings and cash flows as measures of firm performance. She argues that if accruals are largely the result of opportunistic manipulation of reported earnings, the efficient market will reject them in favor of cash flows, in which case cash flows would be more highly associated with stock
returns than net income. Alternatively, if accruals reflect efficient contracting, net income would be more highly associated with stock returns than cash flows. She further argues that when accruals are relatively large (as, for example, in rapidly growing firms), net income would be more highly associated with stock returns, relative to cash flows, than when the firm is in steady state, supporting the notion that accruals are the outcome of efficient contracting.

While early research on earnings management focused almost exclusively on understanding the existence of earnings management, recent studies have moved away from detecting earnings management to an examination of the factors limiting earnings management. For example, Warfield et al. (1995) examine the impact of the level of managerial ownership on the magnitude of discretionary accrual adjustments and demonstrate that managerial ownership is inversely related to the magnitude of accounting accrual adjustments. Xie et al. (2003) examine the relation between earnings management and the structure, background and composition of a firm’s board of directors. Their research indicates that a lower level of earnings management is associated with greater independent outside representation on the board. However, few studies have tested the relationship between corporate governance variables and earnings management in developing/emerging markets. Fan and Wong (2002) study the relationship of earnings informativeness, measured by the earnings-return relation, and the ownership structure of 977 companies in East Asia economies excluding Japan. They find that high ownership concentration weakens the informativeness of reported earnings to outside investors suggesting that the ownership structure gives the controlling owners both the ability and
incentive to manipulate earnings for outright expropriation or to report uninformative earnings to avoid detection of their expropriation activities.

Thus an important area of research is the linkage between corporate governance variables and earnings management. The next section provides an overview of the variables underlying corporate governance.

2.5 Role of growth opportunities in corporate governance

High-growth firms tend to operate in environments confronted by greater uncertainties. The top management of growth firms would need to be innovative while making strategic decisions to stay competitive (Bathala and Rao, 1995).

The incidence of information asymmetry is higher for growth firms because managers in these firms have private information about the value of future projects and hence their actions are not readily observable to shareholders (Bizjak et al., 1993). Smith and Watts (1992) suggest that as investment opportunities increase, the observability of managers’ actions decreases. Managers in growth firms are also likely to be allowed more decision making discretion because they are likely to possess more specific knowledge about the firm than the firm’s shareholders. Consequently, there are higher shareholder/manager agency costs associated with high-growth firms and there is greater need for corporate controls (Noe and Rebello, 1996).
Incomplete contracts mean that managers have significant control rights (discretion) over how to allocate investors’ funds (Shleifer and Vishny, 1997). Managers in growth firms are likely to behave opportunistically as the value of growth options depends on their discretionary expenditures. Watts and Zimmerman (1986) argue that the assets of growth firms are more difficult to observe because they are primarily represented by future investments. As a result, contracts based on these less readily observed values provide managers with greater flexibility to behave opportunistically \textit{ex post}.

Where growth firms have a higher proportion of executive directors on the board, managers have greater discretion with regard to investment opportunities. As growth options depend on managers’ discretionary expenditures, it is likely that shareholders in these firms will demand a higher proportion of non-executive directors to monitor the actions of executives. It is however difficult to monitor managers’ actions in growth firms, as it is difficult to determine if it is managers’ actions or external factors that led to successful investment options.

In a study of industry-level data from 1965 to 1985, using sixteen industries with 91 to 94 observations, Smith and Watts (1992) find that firms with more growth options have lower leverage and dividend yields, higher executive compensation and greater use of stock-option plans. This suggests that growth firms compensate managers for the uncertainties of investment opportunities and use stock options as an incentive to align manager and firm performance. Gaver and Gaver (1993) test the robustness of Smith and Watts (1992) results by studying the relationship between 474 firms’
investment opportunities and their corporate financing, dividend and compensation policies. They find that a firm’s choice of compensation policy is dependent on the growth opportunities.

Skinner (1993) documents that a firm’s investment opportunities affect the firm’s debt and compensation contracts. In a study of 504 firms, he finds that firms without any bonus plans are those with the largest proportion of growth opportunities, suggesting that accounting numbers are poorer performance measures in growth firms. He also finds that managers in firms with relatively more assets-in-place (non-growth firms) are likely to have larger incentives to choose income-increasing accounting procedures, suggesting that there is an indirect relation between a firm’s investment opportunities, through its effect on contracting, and its accounting choice.

Research into the relationship between a firm’s growth rate and the proportion of outside directors produced conflicting results (Bathala and Rao, 1995; Hossain et al., 2000; Hutchinson, 2002).

Bathala and Rao (1995), while investigating the determinants of the composition of the board of 261 firms, find a negative relationship between the proportion of outside directors and growth, measured by a firm’s growth rate in net sales, and volatility. They argue that managers of firms operating in growth and risky business environments prefer to have more insiders on the board.
In a study of 229 Australian firms for 1998, Hutchinson (2002) finds that firms’ investment opportunities are strongly associated with a higher proportion of executive directors on the board. She also finds that the negative relationship between a firm’s investment opportunity set and firm performance is weakened when there is a higher proportion of non-executive directors on the board.

In contrast, Hossain et al. (2000) find that the percentage of outside directors is positively related to firms’ investment opportunities. In an examination of whether the composition of boards of directors differs between high and low growth firms using a cross-sectional sample of 77 New Zealand firms, they find that the percentage of outside directors is related to growth for two of the four measures of investment opportunities (ratio of market value of assets to book value of assets, and ratio of market value of equity to market value of assets) which they employ.

Hutchison and Gul (2004) posit, as a primary relationship, a negative association between growth and firm performance and then examine whether corporate governance variables moderate this negative relationship. Based on a sample of 310 large Australian companies they find that the negative association between growth and firm performance is weaker for firms with a higher proportion of non-executive directors on the board, firms with higher management shareholdings and firms with higher management remuneration. This result shows that the role of corporate governance variables in firm performance should be evaluated in the context of the firm’s external environment measured in terms of growth opportunities.
2.6 Corporate governance mechanisms

Various corporate governance mechanisms exist that assist in aligning the interests of managers with those of shareholders and limit the agency costs those managers can generate. Principal among these is the board of directors.

2.6.1 Board of directors

As discussed, at the heart of corporate governance is the board of directors. The board is a governing body capable of independently monitoring and advising management with the objective of maximizing the value of all shareholders. The board, at the apex of the internal control system, has the final responsibility of the functioning of the firm (Jensen, 1993). As part of its role, the board considers and decides on major business strategies, annual budgets, performance targets, as well as management compensation and appointments. It also ensures the integrity of the company’s financial reporting system and the accurate and regular disclosure of material information to shareholders. One of the major functions of the board of directors is to minimize agency costs that arise from the separation of ownership and decision control of the modern-day corporation (Fama and Jensen, 1983).

The primary board related issues studied in the United States are board composition and executive compensation. Board composition includes size and structure, the number of directors that comprise the board, the fraction of these directors that are outsiders (independent non-executive directors as opposed to insiders who are executive directors or persons affiliated with them) and whether the same individual holds the CEO and chairperson positions. The literature is rather fragmented in that
different studies choose different aspects for examination and the context of examination differs across the studies. For example, Weisbach (1988) studies the relationship of CEO turnover and board composition and finds that the association of CEO resignation with firm performance is stronger for outsider-dominated boards than for insider-dominated boards. On the other hand, Klein (1998) studies the working of committees and reports a positive relationship between the percentage of inside directors on finance and investment committees and firm performance. Brickley et al. (1997) study the accounting performance of firms that combine the position of CEO and chairperson and firms that separate the two positions and find that firms with unitary leadership do not necessarily have lower accounting returns than firms with dual leadership.

One of the major roles of the board of directors is its control functions (Pound 1995). Fama and Jensen (1983) argue that the board’s effectiveness in monitoring management is a function of the mix of insiders and outsiders who serve. In some circumstances it may be more efficient to have a board composed primarily of executive (inside) directors. The ability of the board to monitor the firm’s executives is a function of its access to information. Inside directors possess superior knowledge of the decision making process and are able to reward top management on the basis of the quality of decisions that lead to financial performance outcomes, *ex ante*. In contrast, outside directors can only evaluate managers on the basis of financial performance measures *ex post*. Inside directors are also able to look beyond the financial criteria, thus creating less risk aversion on the part of managers. Therefore, given the characteristics of the firm and the
environment in which it operates, an executive dominated board may sometimes be
more efficient than a non-executive dominated board. Zahra and Stanton (1988)
find that where a company’s board is dominated by non-executive directors there is
a detrimental impact on financial performance. Imposing a particular board
structure (internal versus external members) on companies could be to the detriment
of the shareholders by compelling them to adopt a suboptimal structure which might
lead to monitoring that is redundant and costly.

2.6.2 CEO duality

CEO duality refers to the situation when the positions of the chairman of the board
and CEO are held by the same individual. The CEO is a full-time position and has
the responsibility for the day-to-day running of the firm as well as setting, and
implementing, corporate strategy. In contrast, the position of the chairman is
normally part-time and the main responsibility is to ensure that the board works
effectively. The chairman’s role therefore involves monitoring and evaluating the
performance of the executive directors, including the CEO (Weir and Laing, 2001).
The importance of these two key roles represents a considerable concentration of
power if combined in one person.

Proponents of CEO duality argue that duality should lead to superior firm
performance as it permits clear-cut leadership for purposes of strategy formulation
and implementation (Anderson and Anthony, 1986). CEOs supporting this position
contend that non-duality would dilute their power to provide effective leadership of
the company, create the potential for rivalry between the chairperson and the CEO,
and lead to unnecessary duplication and diffusion of responsibility which may not be in the best interests of the company’s shareholders. They argue that CEO duality would be in the interest of the company provided that there is a clear division of responsibilities at the head of the company which ensures an appropriate balance of power and authority such that no one individual has unfettered powers of decision. This perspective accords with the argument put forward by organization theories, which focus on issues of structure, leadership, and legitimacy, that duality enhances unity of command (Finkelstein and D’Aveni, 1994).

Opponents of CEO duality, however, maintain that there should be a clear division of responsibilities at the head of the company between the running of the board and the executive responsibility for running of the company’s business. In an independent corporate board, no single board member has absolute power. The CEO holds the responsibilities for decision making and for smooth operation of the firm, whereas the chairman provides monitoring and oversight of managerial decisions and activities (Lorsch and MacIver, 1989). Critics of CEO duality argue that when the positions of the board chairman and CEO are held by the same person, the corporate board is considered to be dominated by the firm’s CEO and is less independent (Molz, 1988; Lipton and Lorsch, 1992; Whittington, 1993; Jensen, 1993). Dalton and Kesner (1987) and Worrell et al. (1997) argue that when a CEO is also the chair of the board, the independence of the board may be compromised. The lack of independence in a CEO duality board is expected to constrain the board’s effectiveness in monitoring managerial behavior. They argue that an independent non-executive chairperson is more likely to provide objective opinions
on proposals, be a more effective decision monitor and more likely to promote shareholder interest (Weir and Laing, 2001). This perspective accords with the argument put forward by agency theorists, which focus on monitoring and entrenchment, that avoiding duality limits potential CEO entrenchment.

In an attempt to reconcile the two perspectives, Finkelstein and D’Aveni (1994) propose a contingency model of CEO duality. In a study of 108 firms from three industries over the period 1984 to 1986, they find that board vigilance (measured by the proportion of outside directors on a board and the proportion of firm shares owned by outside board members) is positively associated with CEO duality. However, they find conflicting results on the association between CEO duality and the interaction of board vigilance and firm performance in different industries. They argue that the association between CEO duality and board vigilance changes with circumstances – with a vigilant board considering duality to be less desirable when firm performance is good and when the CEO possesses substantial informal power. The rationale for this seemingly paradoxical position is that boards fear that duality, under these circumstances, constrains their ability to fulfill their oversight role.

Fama and Jensen (1983) point out that CEO duality signals the absence of separation of decision control and decision management and that (p. 314) “the board is not an effective device for decision control unless it limits the decision discretion of individual top managers”. In the absence of clear separation of decision making and monitoring functions, the board is ineffective because the lack of independence creates a situation of potential conflict of interests and reduces the board’s ability to
execute its oversight and governance roles (Vance, 1983; Finkelstein and D’Aveni, 1994). Contrary to conventional wisdom that posits CEOs with dual titles yield more power to the board, Klein (1998), in a study evaluating the link between board composition and firm performance for US firms listed on the S&P 500 for 1992 and 1993, documents that firms in which the CEO has double duties have more independent audit, compensation and nominating committees.

The Cadbury Committee Report (1992) recommends that large companies should separate the roles of CEO and the chairperson. In a review of the role of non-executive directors and their effectiveness, Higgs (2003) comments that separation of the role of the board chairman and CEO avoid concentration of authority and power in one individual and differentiates leadership of the board from running the business. Hence he recommends that the Combined Code should contain a straightforward statement that the roles of board chairman and CEO should be separated and the division of responsibilities between the chairman and CEO set out in writing and agreed by the board.

Appointing an outside director as chairman of the board might reduce the agency costs of controlling the CEO’s behavior. Fama and Jensen (1983) argue that agency costs in large organizations are reduced by institutional arrangements that separate decision management from decision control. However, Brickley et al. (1997) argue that the costs of separation are larger than the benefits for most large firms.
Research into the relationship between CEO duality and firm performance has produced conflicting results (Daily and Dalton, 1993; Boyd, 1995; Baliga et al., 1996).

Daily and Dalton (1993) examine the effects of corporate governance structures and firm performance for the small corporation. They argue that CEOs and directors are less constrained by organizational systems and structures in the small corporation as compared to their large firm counterparts, and a focus on small corporations may reduce some of the ambiguity in the governance literature. Their definition for small corporations are those employing less than 500 and generating sales not exceeding US$20 million per annum. In a study of 186 companies for 1990, they find that the incidence of CEO duality is higher for those companies whose CEO is the founder of the firm, and that firms that are managed by the founder are characterized by lower proportions of outside directors. They find that board structure (composition and size) are associated with firm performance but there is no significant association between CEO duality and firm performance, suggesting that of the three roles of the board of directors, control may be of less importance for the financial performance of the small corporation compared to the service and resource dependence functions.

Baliga et al. (1996) consider the announcement effects of changes in duality status. They examine accounting measures of operating performance for firms that changed their duality structure and long-term measures of performance for firms that had a consistent history of a duality structure. In a study of 375 Fortune 500 firms over the period 1980 to 1991, they find no evidence of significant announcement effects...
associated with changes in managerial structure from non-duality to duality or perceived superiority of a non-duality management structure. They also find no evidence that changes from duality to non-duality or from non-duality to duality have any measurable impact on the operating performance of the affected firms in the period up to two years after the change occurs. There is only weak evidence that duality status affects long-term performance, after controlling for other factors that might affect that performance. Their findings oppose the recommendations for the abolition of duality as a primary way to improve firm governance and performance.

Boyd (1995) tests the relationship between CEO duality and firm performance. The results of the study of 192 US firms in 12 industries are mixed. While the correlation between duality and firm performance for the overall sample is negative, it is not statistically significant, suggesting that neither the agency nor stewardship models can adequately predict the consequences of CEO duality. However, supplementary analyses for different types and levels of environmental uncertainty indicate that duality can have a positive effect on performance under certain industry conditions, and a negative effect under other conditions. These findings are inconsistent with the results of previous studies which indicate that CEO duality has a weak negative relationship with firm performance.

Brickley et al. (1997) compare the accounting and stock performance measures, both raw and industry-adjusted, for 1988 and 1989 to 1991, for firms that combine the positions of CEO and chairman of the board versus firms that separate the two positions. In a study of 628 firms derived from the Forbes survey of executive
compensation, they find no evidence that unitary leadership structure is associated with inferior accounting and market returns. In addition, they find that changes in leadership structures have no systematic effects on stock prices, suggesting that dual leadership is associated with systematically lower cash flows and value – not higher cash flows and value, as reformers claim.

Prior studies also examine the relationship between CEO duality and financial disclosures. Forker (1992) tests the relationship between governance structure and the degree of internal control exercised over managerial remuneration as reflected by the quality of share option disclosure in financial statements. He examines whether firms provide precise data for the determination of options benefits at least equal to the statutory requirement. In a study of 182 firms representing the largest and smallest UK quoted companies during 1987 and 1988, he finds a negative relation between dominated firms (proxied by CEO duality) and disclosure quality and argues that a threat to monitoring quality exists where the roles of CEO and chairman are combined.

Gul and Leung (2004) examine the linkage between CEO duality and voluntary disclosure. In a study of 385 Hong Kong listed companies for 1996 and a list of 44 discretionary items which include background information, financial performance information and non-financial performance information contained in the annual reports of these companies, they find that firms with CEO duality are associated with significantly lower levels of disclosures for the following items in the annual report: a statement of corporate goals, general statements of corporate strategy,
actions taken during the year to achieve the corporate goals, principal products, financial highlights, operation details and project progress. They conclude that CEO-dominated firms are associated with lower level of voluntary corporate disclosures. They also find that the negative CEO duality/voluntary disclosure association is weaker for firms with higher proportion of experienced non-executive directors on the board, suggesting that the expertise of non-executive directors moderates the CEO duality/corporate disclosures relationship. Their findings support the view that the position of chairman and CEO should be separated.

Prior studies on the relationship between CEO duality and earnings management are limited. Dechow et al. (1996) find that firms subject to SEC enforcement resulting from earnings manipulations are more likely to have an insider dominated board and more likely to have a CEO as chairman of the board. Contrary to the expectation discussed above, Xie et al. (2003) find no association between CEO duality and earnings management.

Despite the perceived desirability of separating the roles of CEO from the chairperson, most companies in the United States continue to have CEO duality. Baliga et al. (1996) give several possible explanations for the persistence of the CEO duality managerial structure: (1) duality reflects the traditional influence of firm management in board composition and the reluctance of the board to exercise its governance prerogative; (2) the board may be indifferent to the duality issue and is content to let duality prevail as long as it is convinced that the CEO has the ability to occupy both positions effectively; (3) duality reflects board hubris; (4) duality may
be a superior organizational structure; and (5) though a non-duality structure may be superior to a duality structure, *ceteris paribus*, there are other managerial control mechanisms in place to mitigate any abuse of managerial discretion that may arise from a duality structure.

### 2.6.3 Independent non-executive directors

Within a unitary board, non-executive directors have a crucial part to play (Higgs, 2003). While it is customary for senior executives such as the CEO and CFO to retain seats on the board, a substantial majority of the directors should be non-executive and independent in order to provide checks and balances among management, controlling shareholders and the wider shareholder base (OECD, 2004).

According to Higgs (2003), a non-executive director is considered independent when the board determines that the director is independent in character and judgment and there are no relationships or circumstances which could affect, or appear to affect, the director’s judgment. Such relationships or circumstances would include where the director: is a former employee of the company until five years after employment has ended; has, or has had within the last three years, a material business relationship with the company; has received or receives additional remuneration from the company apart from a director’s fee; has close family tie with any of the company’s advisers, directors or senior employees; has significant links with other directors through involvement in other companies; represents a significant shareholder; or has served on the board for more than ten years. The
Listing Rules in Hong Kong provide similar guidelines to assist issuers in assessing the independence of a non-executive director. Under the Listing Rules, independent non-executive directors must have no past or present financial or other interests in the business of the company or its subsidiaries. They should have no past or present connection with any connected person of the company which might affect their exercise of independent judgment. They are also not expected to have any management function in the company.

When the CEO has a significant influence on the appointment of non-executive directors, the latter’s objectivity and monitoring effectiveness may be affected. Parkinson (1993) argues that to be genuinely independent of management, non-executive directors must not be appointed by the executive directors, nor simply nominated by the executives and elected by the shareholders, given the likely outcome of such a procedure in the light of shareholder passivity. Since a major objective of internal monitoring is to prevent senior managers from exercising unbridled control over the company and their own rewards, genuine accountability to some other body with ultimate power to remove them from office will provide a direct incentive to maximize their performance. Fama and Jensen (1983), however, argue that outside directors will monitor the management that chooses them because outside directors have incentives to develop reputations as experts in decision control. Given that most listed companies in Hong Kong are family controlled, the non-executive directors in these companies are likely to be less independent than in other jurisdictions as they must be acceptable to the controlling family and gain their trust (Lawton and Tyler, 2001).
Independent non-executive directors have both monitoring and strategic roles. Higgs (2003) suggests that non-executive directors should constructively challenge and contribute to the development of strategy, and should scrutinize the performance of management in meeting agreed goals and objectives and monitor the reporting of performance. As independent non-executive directors have no commercial links to the firm, they are able to demonstrate an objective willingness to question management choices. This improves the probity of the board and ensures the firm is run to serve the best interests of its shareholders. Independent non-executive directors can also bring valuable professional knowledge and business experience to the board and provide additional guidance, leadership and networking contacts to the business. Since non-executive directors often have strong industry or financial experience, they can bring helpful and refreshing perspectives to the management with their insights and expertise.

Independent non-executive directors are perceived as a tool for monitoring management behavior (Rosenstein and Wyatt, 1990). Both Lefwich et al. (1981) and Fama and Jensen (1983) argue that the larger the proportion of independent non-executive directors on the board, the more effective it will be in monitoring managerial opportunism. Tsui et al. (2001), based on a sample of 650 firm observations in Hong Kong for the period 1994 to 1996, find that firms with independent corporate boards are associated with lower audit fees and attribute this to the effective monitoring mechanism provided by the independent corporate board that reduces control risk and the scope of audit work.
Research into the relationship between independent non-executive directors and financial disclosures produces conflicting results. Forker (1992) tests the association between disclosure of information on non-executive directors and disclosure quality by defining it in terms of fineness of details relating to stock option plans disclosed in the firms’ financial statements. His findings, however, do not fully support the positive association between non-executive directors and disclosure quality. He attributes this lack of support to measurement errors resulting from the firms not disclosing information on non-executive directors.

Chen and Jaggi (2000) examine whether comprehensive financial disclosures, used as a proxy for corporate board’s responsiveness to investors, are positively associated with the proportion of independent non-executive directors on corporate boards, and whether family control of the firm has an impact on this association. The study covers 87 large Hong Kong listed firms over a two-year period of 1993 and 1994. The results show that a higher proportion of independent non-executive directors are positively associated with more comprehensive financial disclosures. They also find that this association is weaker for family controlled firms compared to non-family controlled firms.

Gul and Leung (2004) examine the linkages between board leadership structure in terms of CEO duality, the proportion of expert outside directors on the board and voluntary corporate disclosures. They find that firms with a higher proportion of expert outside directors are associated with lower voluntary disclosures and
conclude that the result is consistent with the substitution relationship between expert outside directors and voluntary disclosure in monitoring managers.

Prior studies also examine the relationship between independent non-executive directors and financial statement manipulations. Dechow et al. (1996) find that firms with a large proportion of non-executive directors are less likely to be subject to accounting enforcement actions by the SEC for alleged GAAP violations.

Beasley (1996) examines the relation between the board of director composition and financial statement fraud. Of the 150 publicly traded firms examined, 75 represent the “fraud firms” because each of these firms has occurrence of financial statement fraud publicly reported during the period 1980 to 1991. He finds that no-fraud firms have boards with a significantly higher proportion of outside members than fraud firms. He also finds that an increase in outside directors’ tenure helps to decrease the likelihood of financial statement fraud. This result is consistent with the view that the outside directors’ ability to monitor management effectively for the prevention of financial statement fraud increases with their years of service.

Beekes et al. (2004) examines the links between accounting quality, proxied by earnings timeliness and conservatism, and the composition of the board of directors. In a study of 501 UK incorporated non-financial firms listed on the London Stock Exchange between 1993 and 1995, they find that firms with a higher proportion of outside board members are more likely to recognize bad news in earnings on a timely basis. However, they find that firms whose boards comprise a relatively high
proportion of outsiders do not display greater reporting conservatism with regard to the recognition of good news.

Klein (2002) examines whether audit committee and board characteristics are related to earnings management by the firm. In a study of 692 firm-years listed on the S&P 500 for 1992 and 1993, she finds that firms with boards and/or audit committees composed of less than a majority of independent directors are more likely to have larger abnormal accruals (the proxy for earnings management). She also finds a negative relation exists between abnormal accruals and the percentage of independent directors on the board and/or audit committee. The study further examines the relation between changes in the level of abnormal accruals and changes in board or audit committee structure. Based on a sub-set of 339 firms with the required data the study finds that reductions in board independence are accompanied by large increases in abnormal accruals, suggesting that boards structured to be more independent of the CEO are more effective in monitoring the corporate financial accounting process.

Xie et al. (2003) examine the role of the board of directors, the audit committee, and the executive committee in preventing earnings management. In a study of 281 firms on the S&P 500 index from 1992, 1994 and 1996, they find the proportion of independent outside directors negatively related to discretionary current accruals, suggesting that a greater proportion of outside directors are associated with better monitoring. They find that the proportion of outside directors with a corporate background is similarly negatively related to discretionary current accruals. Their
findings support the contention that outside directors with corporate backgrounds are more likely to be financially sophisticated and their presence is associated with a reduced level of earnings management. They also find that larger boards are associated with lower levels of discretionary current accruals and attribute this to the greater number of experienced directors large boards may bring to a board.

Davidson et al. (2005) investigate the role of a firm’s internal governance structure in constraining earnings management. Based on a broad cross-sectional sample of 434 listed Australian firms for the financial year ending in 2000, they find that a majority of non-executive directors on the board and on the audit committee are significantly associated with a lower likelihood of earnings management, as measured by the absolute level of discretionary accruals.

Peasnell et al. (2005) examines whether the incidence of earnings management by UK firms depends on board monitoring. In a study of 1,271 firm-years between 1993 and 1996, they find that the likelihood of managers making income-increasing abnormal accruals to avoid reporting losses and earnings reductions is negatively related to the proportion of outsiders on the board. They also find that the chance of abnormal accruals being large enough to turn a loss into a profit or to ensure that profit does not decline is significantly lower for firms with a high proportion of outside board members. In contrast, they find little evidence that outside directors influence income-decreasing abnormal accruals when pre-managed earnings are high.
Bathala and Rao (1995) find a negative relationship between the proportion of outside directors and earnings volatility. While investigating the determinants of the composition of the board of 261 firms, they find that there is an inverse relationship between the external members of the board and managerial stock ownership, dividend payout ratio and debt leverage. They also find a negative relationship between the proportion of outsiders and growth, supporting the notion that internal directors possess superior knowledge of the decision making process than external directors.

2.6.4 Audit committees

In their introduction to “A Guide for Effective Audit Committees” published in 2002, the Hong Kong Institute of Certified Public Accountants states that the existence of an audit committee is a pre-requisite for good corporate governance. This echoes similar views expressed internationally over the years. Since 1978 the New York Stock Exchange has required all listed companies to have an audit committee and, as a result of the Cadbury Committee Report (1992), the London Stock Exchange includes such a requirement in its Code of Best Practice. The Hong Kong Stock Exchange followed in 1998, including audit committees in its Code of Best Practice, and in 2004, it is a requirement under the Listing Rules for every quoted company to have an audit committee. It is generally accepted that audit committees play a significant role in a company’s corporate governance framework.

While all directors have a duty to act in the interests of the company the audit committee has a particular role, acting independently from the executive, to ensure
that the interests of shareholders are properly protected in relation to financial reporting and internal control (Smith, 2003). The audit committee’s main role and responsibilities are to monitor the integrity of the financial reporting of the firm, to review the firm’s internal financial control system, and to monitor and review the effectiveness of the firm’s internal audit function (Klein, 2002). The audit committee is also the body responsible for overseeing the firm’s relations with the external auditors. It should have a primary responsibility to make recommendations to the board in relation to the appointment and removal of the external auditor and to approve the auditor’s remuneration and terms of engagement; to monitor and review the external auditor’s independence and objectivity and the effectiveness of the audit process; and to develop and implement policy on the engagement of the external auditor to supply non-audit services.

An effective audit committee can bring significant benefits to a firm. It can improve the quality of financial reporting by reviewing the financial statements on behalf of the board, and create a climate of discipline and control which will reduce the opportunity for fraud. An effective audit committee enables the non-executive directors to contribute an independent judgment and play a positive role in controlling the business operations, and helps the finance director, by providing a forum in which to raise issues of concern. In addition, it can strengthen the position of the external auditor, by providing a channel of communication and forum for issues of concern, and a framework within which to assert independence in the event of a dispute with management. It can also strengthen the position of the internal audit function, by providing a greater degree of independence from management.
The biggest influence that an audit committee has on any organization is the fact that it exists. Its existence means that there is an independent channel of communication between the internal audit department and the audit committee, and between the external auditor and the audit committee, without having to go through management or executive directors of the organization, coupled with the fact that the chairman, executive directors and management know that such an independent channel of communication exists. If the committee chairman can successfully establish this relationship with the head of internal audit and the representative of the external auditor, and can encourage them to use the link, it will be of enormous value to the efficient working of the audit committee, and to the discipline and control within the organization. An audit committee thus helps to alleviate the agency problem by facilitating the timely release of unbiased accounting information by managers to shareholders and other stakeholders.

Early research on audit committees focused on the existence of audit committee as a monitoring tool. Recent studies have moved from the existence of audit committee to an examination of its composition.

Forker (1992) examines the relationship between governance structure and the degree of internal control exercised over managerial remuneration as reflected by the quality of share option disclosure in financial statements. He finds that the existence of dominant personalities (proxied by CEO duality) is negatively associated with the establishment of audit committees. However the study finds no evidence of a positive causal relation between good disclosure and audit committees.
Beasley (1996) investigates the relation between the composition of the board of directors and financial statement fraud. He finds that the interaction of audit committee presence with board composition does not affect the likelihood of financial statement fraud, suggesting that board composition, rather than the presence of an audit committee, is significantly more likely to reduce the likelihood of financial statement fraud. He attributes this result to the lack of difference between fraud and non-fraud firms in the number of meetings held by the audit committee. In addition, he finds that audit committee composition does not have a significant effect on the likelihood of fraud.

Peasnell et al. (2005) examine whether the incidence of earnings management by UK firms depends on board monitoring. They find no evidence that the presence of an audit committee directly affects the extent of income-increasing manipulations to avoid reporting losses and earnings reductions. They also find no evidence that audit committees appear to have a direct effect on the degree of downward manipulation, when pre-managed earnings exceed thresholds by a large margin.

The Cadbury Committee (1992) recommends that an audit committee be appointed from amongst the non-executive directors of the company. Klein (2002), using a sample of 692 publicly traded US firm-years, examines whether the magnitude of abnormal accruals (the proxy for earnings management) is related to audit committee independence. She finds evidence supporting a negative relation between the proportion of independent directors on the audit committee and
abnormal accruals but no evidence of a systematic association between having an all-independent audit committee and abnormal accruals.

In a study of 434 listed Australian firms, Davidson et al. (2005) do not find any association between the level of discretionary accruals and the existence of an audit committee, the committee’s independence or its effectiveness, measured by the number of committee meetings and the size of the committee. However they find a negative association between a reduction in earnings management and a majority of non-executives on the committee, suggesting that an entirely independent committee has no meaningful relation with earnings management. Both the US requirements under the Sarbanes-Oxley legislation and the UK Combined Code as recommended by Smith (2003), however, insist that all members of the audit committee be independent non-executive directors and in the United Kingdom the chairman of the company is specifically excluded from serving on the committee.

A major move over the years is to increase not only the independence of the individual members of the committee and its composition but also an increase in the independence of the committee from the other board members. Smith (2003) states that the finance director, head of internal audit and a representative of the external auditor shall attend meetings at the invitation of the committee. He also recommends that the chairman of the board, the CEO and other board members only attend if invited by the committee.
As one of the audit committee’s main roles is to monitor the financial reporting of the firm, there is also a universal preference for at least one member of the audit committee to have some “financial expertise”. Smith (2003) proposes that at least one member of the audit committee should have significant, recent and relevant financial experience, for example as an auditor or a finance director of a listed company. The Sarbanes-Oxley Act (2002) also provides that the SEC should issue rules to require issuers to disclose whether at least one member of its audit committee is a “financial expert”.

Bédard et al. (2004) examine the relationship between audit committee characteristics and the extent of corporate earnings management as measured by the level of income-increasing and income-decreasing abnormal accruals for 1996. Using two groups of US firms, one with relatively high and one with relatively low levels of abnormal accruals, they find that the presence of at least one member with financial expertise and the level of governance expertise in the committee is associated with a lower likelihood of aggressive earnings management. Their results also support the Sarbanes-Oxley requirement that all members of the audit committee be independent from the firm’s management.

Xie et al. (2003) show that the composition of a board in general and of an audit committee more specifically, is related to the likelihood that a firm will engage in earnings management. They find that board and audit committee members with corporate or financial backgrounds are associated with firms that have smaller discretionary current accruals. They also find that board and audit committee
meeting frequency is associated with reduced levels of discretionary current accruals. They conclude that board and audit committee activity and their members’ financial sophistication may be important factors in constraining the propensity of managers to engage in earnings management.

Agrawal and Chadha (2005) examine whether certain corporate governance mechanisms are related to the probability of company restating its earnings. In a study of 159 US public companies that restate earnings and an industry-size matched sample of control firms, they find that the probability of restatement is lower in companies whose boards or audit committees have an independent director with financial expertise.

2.7 Summary

In this chapter a literature review relevant to this study has been detailed. The second section discusses the development of corporate governance research. The third section reviews the regulatory framework of corporate governance. The fourth section reviews the role of accounting numbers and earnings management. The role of growth opportunities in corporate governance is then reviewed. The final section provides an examination of prior studies on the various corporate governance variables of CEO duality, independent non-executive directors and audit committees.

While prior studies have shown consistent results on the CEO duality/financial disclosures relationship and the independent non-executive directors/earnings management relationship, conflicting results are identified on the CEO
duality/earnings management relationship, the independent non-executive directors/financial disclosures relationship and the CEO duality/firm performance relationship. Consistent results are also identified on the audit committee presence/earnings management relationship and the audit committee independence/earnings management relationship.

Limited research has been conducted on corporate governance issues in emerging markets. In particular, very few studies have tested the relationship between corporate governance variables and earnings management. This study examines the linkage between earnings management and the corporate governance variables of CEO duality, the proportion of independent non-executive directors and audit committee.
CHAPTER 3
HYPOTHESES DEVELOPMENT

3.1 Introduction

In this chapter, a number of hypotheses are developed which examine the effects of the corporate governance variables of CEO duality, independent non-executive directors and audit committees on the managerial behavior of earnings management. In developing the hypotheses, consideration is given to the impact of the growth opportunity of the firms.

3.2 CEO duality

Prior research suggests that managers may engage in earnings management to promote their self interests at the expense of the firm (Healy, 1985; Lewellen et al., 1987; DeFond and Park, 1997). Fama and Jensen (1983) and the Cadbury Committee (1992) have argued that corporate boards would be more independent if the board chairman is independent of the firm’s CEO. When the positions of the chairman of the board and CEO are held by the same individual, the board is considered to be more managerially dominated and is less independent (Dalton and Kesner, 1987; Molz, 1988; Lipton and Lorsch, 1992; Whittington, 1993; Jensen, 1993; Worrell et al., 1997). The lack of independence creates a situation of potential conflict of interests and reduces the board’s ability to execute its oversight and governance roles (Vance, 1983; Finkelstein and D’Aveni, 1994). Fama and Jensen
(1983) suggest that without governance controls, managers’ interests are more likely to deviate from the interests of the shareholders.

Based on the conceptual arguments, it is expected that the lack of independence in a CEO duality board will constrain the board’s effectiveness in monitoring managerial behavior. Prior research has documented a negative relation between CEO duality and corporate disclosures (Forker, 1992; Gul and Leung, 2004). Dechow et al. (1996) find that firms subject to SEC enforcement resulting from earnings manipulations are more likely to have a CEO as chairman of the board. In contrast, Xie et al. (2003) find no association between CEO duality and earnings management.

The association of CEO duality and earnings management is an important issue in Hong Kong as a significant number of Hong Kong companies have CEO duality (Gul and Leung, 2004). On the basis that the lack of independence in a CEO duality board will constrain its monitoring effectiveness of managerial behavior of earnings management, it is anticipated that:

**H1: Firms with CEO duality are more likely to engage in earnings management.**

### 3.3 Independent non-executive directors

An independent board plays an important role in today’s complex organization when the specific interests of executive management and the wider interest of the company may at times diverge. As board size varies, the proportion of independent non-executive directors on the board would give an indication of the relative independence of a board. Independent non-executive directors are generally
considered better monitors than other directors because they have the ability to act with a view to the interests of the company. There is strong support in the literature for a positive association between an independent corporate board and its monitoring effectiveness (Fama and Jensen, 1983; Williamson, 1985). There is also strong empirical evidence on the corporate board’s monitoring effectiveness when non-executive directors are present. In an examination of US firms, Klein (2002) finds a negative relation exists between abnormal accruals (the proxy for earnings management) and the percentage of independent directors on the board. She also finds that reductions in board independence are accompanied by large increases in abnormal accruals. Xie et al. (2003), Davidson et al. (2005) and Peasnell et al. (2005) also provide evidence of a negative association between the proportion of outside directors on the board and earnings management based respectively on a sample of US, Australian and UK firms.

While non-executive directors in family-controlled companies in Hong Kong are perceived to be less independent (Lawton and Tyler, 2001), Fama and Jensen (1983) argue that outside directors will monitor the management that chooses them because outside directors have incentives to develop reputations as expert in decision control. Thus, it is possible that despite the predominance of family control in Hong Kong firms, it is likely that non-executive directors will perform their monitoring role to develop their reputations. This is consistent with prior studies using Hong Kong data which support the monitoring effectiveness of non-executive directors. For example, Chen and Jaggi (2002) provide evidence of a positive relationship between the proportion of non-executive directors and comprehensive financial disclosures,
while Gul and Leung (2004) confirm the substitution relationship between expert outside directors and voluntary disclosures in monitoring managers.

Based on the conceptual arguments in the literature and empirical evidence provided by Dechow et al. (1996), Beasley (1996), Klein (2002), Xie et al. (2003), Davidson et al. (2005) and Peasnell et al. (2005), it is expected that the monitoring effectiveness of managerial behavior of earnings management will be stronger when there is a higher proportion of independent non-executive directors on corporate boards. This leads to the following proposition:

\[ H2: \text{Firms with a greater proportion of independent non-executive directors are less likely to engage in earnings management.} \]

3.4 Interaction of CEO duality and proportion of independent non-executive directors

Prior research has demonstrated that non-executive directors are effective in the monitoring of managerial behavior of earnings management (Klein, 2002; Xie et al., 2003; Davidson et al., 2005; Peasnell et al., 2005). However, when the positions of the board chairman and CEO are held by the same person, the corporate board is likely to be dominated by the CEO (Lipton and Lorsch, 1992; Whittington, 1993; Jensen, 1993) and there are potentials for opportunistic behavior. Beekes et al. (2004) find no evidence that firms with more outsiders are more timely in reflecting bad news (the proxy for accounting quality) for firms with CEO duality, suggesting that CEO duality may have an impact on the effectiveness of outside directors’ monitoring. In contrast, Gul and Leung (2004) find the negative CEO duality/voluntary disclosure association weaker for firms with higher proportion of
outside directors on the board, suggesting that the expertise of non-executive directors moderates the CEO duality/corporate disclosure relationship. Based on this reasoning, it is expected that the association between CEO duality and earnings management (H1) would be different for firms with a higher proportion and firms with a lower proportion of independent non-executive directors. This leads to the following hypothesis:

\[ H3: \text{The positive relationship between CEO duality and earnings management will be weakened by the proportion of independent non-executive directors.} \]

### 3.5 Interaction of CEO duality and proportion of independent non-executive directors in high-growth firms

High-growth firms are confronted by uncertainties and therefore need to be innovative while remaining competitive. It is expected that the composition of their board reflects the expertise of executive directors rather than the monitoring role of independent non-executive directors (Bathala and Rao, 1995). High-growth firms are likely to use boards where internal directors dominate as decisions regarding opportunities are made on the basis of \textit{ex ante} predictions. Bathala and Rao (1995) and Hutchinson (2002) find a negative relationship between the proportion of outside directors and the firm’s growth rate. In contrast, Hossain et al. (2000) find that the percentage of outside directors is positively related to the firm’s investment opportunities.

Unlike low-growth firms which are likely to have less agency costs as they are pre-committed to a certain course of activity, firms with growth options are expected to have higher agency costs as there is likely to be greater information asymmetry due
to the managers’ specific knowledge about the firm’s assets and its growth opportunities (Noe and Rebello, 1996). Access to growth options provides greater choice of investment opportunities and provides more discretion to managers. Prior studies have suggested the possibility of higher opportunistic behavior by managers in growth firms (Watts and Zimmerman, 1986; Gaver and Gaver, 1993; Bizjak et al., 1993; Skinner, 1993). Hutchinson and Gul (2004) find that the negative association between growth and firm performance is weakened for firms with a higher proportion of non-executive directors on the board. It is anticipated that when a firm has both CEO duality and high growth opportunities, there is greater likelihood that management would behave opportunistically. Board independence is therefore more important in these instances to monitor the managerial behavior of earnings management. This leads to the following hypothesis:

**H4: The moderating role of independent non-executive directors on the positive relationship between CEO duality and earnings management is only significant for high-growth firms.**

### 3.6 Audit committees

It is generally accepted that audit committees play a significant role in a firm’s corporate governance system. As one of the main roles of the audit committee is to monitor the integrity of the financial reporting of the firm, it is expected that an active, well functioning and well structured audit committee would be effective in constraining the managerial behavior of earnings management.

Prior studies do not support a negative relation between the mere existence of an audit committee and earnings management (Beasley, 1996; Davidson et al., 2005;
Peasnell et al., 2005). However, Klein (2002) finds evidence supporting a negative relation between the proportion of independent directors on the audit committee and abnormal accruals. Similarly, Davidson et al. (2005) find that a majority of non-executive directors on the audit committee is significantly associated with a lower likelihood of earnings management. Both Xie et al. (2003) and Bédard et al. (2004) find that the presence of audit committee members with financial backgrounds is associated with a lower likelihood of earnings management.

The establishment of audit committees in Hong Kong was a recommended best practice since 1999 until the revision of the Listing Rules in 2004 when it was made a mandatory requirement. The Code of Best Practice states that the principal responsibilities of the audit committee are the review and supervision of the company’s financial reporting process and internal controls. Consistent with the recommendations made by the Hong Kong Institute of Certified Public Accountants in its report “A Guide for the Formation of an Audit Committee” (1997), the Code further recommends that the committee should be appointed from amongst the non-executive directors and a majority of the non-executive directors should be independent. It is anticipated that firms will follow the recommendations of the Hong Kong Institute of Certified Public Accountants and the Code in the formation of an audit committee. Accordingly the audit committee would play an effective role in monitoring the managerial behavior of earnings management. This leads to the following proposition:

\[ H5(a): \text{Firms with an audit committee are less likely to engage in earnings management.} \]
As discussed in the previous section, given that managers in growth firms are allowed more decision making discretion, there is greater possibility that they would behave opportunistically (Watts and Zimmerman, 1986; Gaver and Gaver, 1993; Bizjak et al., 1993; Skinner, 1993) and there is greater likelihood of earnings management. Therefore it is anticipated that the monitoring role of the audit committee is more important in high-growth firms. This leads to the following hypothesis:

\[ H_5(b): \text{The audit committee is more important as a monitor of earnings management when the firm has high growth opportunities.} \]

3.7 Interaction of CEO duality and proportion of independent non-executive directors for firms with an audit committee

As the audit committee is specifically charged with the responsibilities of monitoring the integrity of a firm’s financial reporting, the monitoring role of the independent non-executive directors would be enhanced for firms with an audit committee. It is anticipated that the monitoring of independent non-executive directors on the positive relationship between CEO duality and earnings management (H3) would be different for firms with and without an audit committee. This leads to the following hypothesis:

\[ H_6: \text{The moderating role of independent non-executive directors on the positive relationship between CEO duality and earnings management is only significant for firms with an audit committee.} \]

The following model illustrates the various relationships examined in this study:
3.8 Summary

In this chapter the hypotheses that predict the role of the board of directors and audit committee in monitoring the managerial behavior of earnings management are developed. The method for testing the stated hypotheses will be discussed in the following chapter.
CHAPTER 4
RESEARCH METHODOLOGY

4.1 Sample selection and data collection

The sample is drawn from the WorldScope database for firms on the Main Board of the Hong Kong Stock Exchange for the years 2000 to 2002. Selection of the three-year period was motivated by the stable economy during this period following the Asian financial crisis of 1997-98. In addition, the various corporate governance initiatives that took place in the early 1990s are gaining acceptance in the marketplace and further enhancement has been made before the turn of the millennium. For example, revisions to the Code of Best Practice require listed companies to establish and disclose audit committees since 1999.

Eight hundred and sixty nine Hong Kong firms were identified in the Worldscope database after excluding banking and insurance companies which are subject to more stringent regulatory requirements (258 firms in 2000, 304 firms in 2001 and 307 firms in 2002). The WorldScope database was examined for the availability of financial data to estimate total discretionary accruals. Data was not available on all firms for the three-year period. As a result of this selection process, 760 firm-year observations were identified for the three-year period.

Corporate governance variables were hand collected through examination of the annual reports of the sample firms. In the final step, data on control variables were
collected from the WorldScope database. As a result of some missing values, a small number of observations were lost. The final sample consisted of 755 firm-year observations with data available for corporate governance and control variables.

4.2 Discretionary accruals

A fundamental element of any test for earnings management is a measure of management’s discretion over earnings (McNichols, 2000). There is a large literature that attempts to identify discretionary accruals based on the relation between total accruals and hypothesized explanatory factors. This literature began with Healy (1985) and DeAngelo (1986), who use total accruals and change in total accruals, respectively, as measures of management’s discretion over earnings. Jones (1991) introduces a regression approach to control for non-discretionary factors influencing accruals, specifying a linear relation between total accruals and change in sales and property, plant and equipment. Dechow et al. (1995) modify the Jones model to eliminate the conjectured tendency of the Jones model to measure discretionary accruals with error when discretion is exercised over revenues. Bartov et al. (2001) show that, in detecting earnings management, the cross-sectional Jones model and the cross-sectional modified Jones model perform better than their time series counterparts.

The unsigned (absolute value of) discretionary accruals are used as a proxy for earnings management (Warfield et al., 1995; Becker et al., 1998; Bartov et al., 2001). In addition, the absolute values of discretionary accruals are split into negative and positive discretionary accruals. Negative (incoming-decreasing) accruals are
generally regarded as reflecting a conservative application of generally accepted accounting principles. On the other hand, positive (income-increasing) accruals are likely to be regarded as opportunistic earnings management (Ashbaugh et al., 2003).

Total discretionary accruals (TDA) are calculated using the cross-sectional discretionary accruals model suggested by Jones (1991) and modified later by Dechow et al. (1995). Total discretionary accruals (TDA) are calculated as the difference between total accruals (TA) and non-discretionary accruals (NDA).

The total accruals (TA) are the difference between net income and cash flow from operations.

\[
TA_{it} = NI_{it} - OCF_{it} \tag{1}
\]

where,

- \(TA_{it}\) = total accruals for firm i in year t,
- \(NI_{it}\) = net income for firm i in year t,
- \(OCF_{it}\) = operating cash flow for firm i in year t.

The parameters for calculation of non-discretionary accruals (NDA) are estimated by using the following equation:

\[
\frac{TA_{it}}{A_{it-1}} = \alpha \left( \frac{1}{A_{it-1}} \right) + \beta_1 \left( \frac{\Delta REV_{it}}{A_{it-1}} \right) + \beta_2 \left( \frac{PPE_{it}}{A_{it-1}} \right) + \epsilon_{it} \tag{2}
\]

where,

- \(TA_{it}\) = total accruals for firm i in year t,
- \(A_{it-1}\) = total assets for firm i in year t-1,
- \(\Delta REV_{it}\) = change in net revenue for firm i in year t,
- \(PPE_{it}\) = property, plant and equipment for firm i in year t,
\[ \alpha, \beta_1, \beta_2 = \text{coefficient parameters}, \]
\[ \varepsilon_{it} = \text{error term for firm i in year t}. \]

The NDA are calculated using the estimated parameters obtained from equation (2):

\[
\frac{\text{NDA}_{it}}{A_{it-1}} = \frac{\text{TA}_{it}}{A_{it-1}} - \hat{\alpha} \left( \frac{1}{A_{it-1}} \right) + \hat{\beta}_1 \left( \frac{\Delta \text{REV}_{it} - \Delta \text{AR}_{it}}{A_{it-1}} \right) + \hat{\beta}_2 \left( \frac{\text{PPE}_{it}}{A_{it-1}} \right) \]

(3)

where,

\[ \Delta \text{AR}_{it} = \text{change in accounts receivable for firm i in year t}, \]
\[ \hat{\alpha}, \hat{\beta}_1, \hat{\beta}_2 = \text{coefficient parameters estimates} \]

Consistent with other recent studies, change in accounts receivable is not included in estimating the parameters but is included in calculating non-discretionary accruals (Ashbaugh et al., 2003).

Finally, TDA are calculated as the difference between TA and NDA

\[
\text{TDA}_{it} = \left( \frac{\text{TA}_{it}}{A_{it-1}} - \frac{\text{NDA}_{it}}{A_{it-1}} \right) \]

(4)

4.3 Model specifications

The following regression model is applied to evaluate the association between earnings management, proxied by total discretionary accruals, and the corporate governance variables of CEO duality, independent non-executive directors and audit committees, and different control variables:

\[
\text{TDA}_{it} = \alpha + \beta_1 \text{CEO}_{it} + \beta_2 \text{PENED}_{it} + \beta_3 (\text{PENED} \times \text{CEO})_{it} + \beta_4 \text{AUDCOM}_{it} \\
+ \beta_5 \text{MB}_{it} + \beta_6 \text{DEBT}_{it} + \beta_7 \text{OCF}_{it} + \beta_8 \text{BIG5}_{it} + \beta_9 \text{SIZE}_{it} + \beta_{10} \text{YEAR01} \\
+ \beta_{11} \text{YEAR02} + \beta_{12} \text{IND1} + \beta_{13} \text{IND2} + \beta_{14} \text{IND3} + \varepsilon_{it} 
\]
where,

\[ TDA_{it} = \text{total discretionary accruals for firm i in year } t, \]
\[ \text{CEO} = \text{dummy variable: 1 if the CEO and the chairman of the board of directors are the same person and 0 otherwise}, \]
\[ \text{PENED} = \text{proportion of independent non-executive directors on the board of directors}, \]
\[ \text{PENED}*\text{CEO} = \text{interaction variable between the proportion of independent non-executive directors and CEO duality}, \]
\[ \text{AUDCOM} = \text{dummy variable: 1 if the firm has audit committee and 0 otherwise}, \]
\[ \text{MB} = \text{ratio of market value of common equity to book value of common equity}, \]
\[ \text{DEBT} = \text{ratio of total debt to total assets}, \]
\[ \text{OCF} = \text{operating cash flow}, \]
\[ \text{BIG5} = \text{dummy variable: 1 for big 5 auditor; 0 for non-big 5 auditor}, \]
\[ \text{SIZE} = \text{natural log of total assets}, \]
\[ \text{YEAR01} = \text{dummy variable: 1 if year } = 2001; 0 \text{ if year } = 2000 \text{ and 2002}, \]
\[ \text{YEAR02} = \text{dummy variable: 1 if year } = 2002; 0 \text{ if year } = 2000 \text{ and 2001}, \]
\[ \text{IND1} = \text{dummy variable: 1 if industry is utility; 0 if industry is conglomerate, transport and property}, \]
\[ \text{IND2} = \text{dummy variable: 1 if industry is transport; 0 if industry is conglomerate, utility and property}, \]
\[ \text{IND3} = \text{dummy variable: 1 if industry is property; 0 if industry is conglomerate, utility and transport}, \]
\[ \varepsilon = \text{residual term}. \]

### 4.3.1 Explanatory variables

CEO duality is measured by use of a binary variable which is equal to 1 if an individual holds both the positions of chairperson and CEO and 0 otherwise. Similarly a binary measure of 1 is used when there is an audit committee and 0 otherwise. A positive association between total discretionary accruals and CEO duality is expected due to weaker governance control from entrenchment. On the other hand, a negative association between total discretionary accruals and the existence of an audit committee is expected as the integrity of the financial
statements of the firm and the firm’s internal financial control system are closely monitored by the audit committee.

Consistent with prior research (Weisbach, 1988; Brickley et al., 1994), directors are classified as insiders or outsiders. Insiders include current employees of the firm and persons affiliated with the firm who are either former employees or relatives of the CEO. Outsiders (independent non-executive directors) have no ties to the firm beyond being a board member. The Listing Rules in Hong Kong require listed companies to disclose in their annual report to shareholders its directors and to state whether they are executive or non-executive. They are also required to provide brief biographical details of their directors and to state if they are related. The proportion of independent non-executive directors on the board is determined by an examination of the profile of directors included in the annual reports. A negative association between total discretionary accruals and the proportion of independent non-executive directors on the board of directors is expected due to more effective monitoring of managerial behavior by an independent board.

In order to examine whether the proportion of independent non-executive directors on the board of directors moderates the association between CEO duality and total discretionary accruals, an interaction variable between the proportion of independent non-executive directors and CEO duality (PENED*CEO) is included.

Watts and Zimmerman (1986), Gaver and Gaver (1993), Bizjak et al. (1993), and Skinner (1993) have emphasized the possibility of higher opportunistic behavior by managers in growth firms. The difference between the market value of equity and
the book value of equity approximate the value of investment opportunities. Because growth firms have more intangible assets that are not recorded but priced by the market, this measure represents the value of the firm as a proportion of non-growth opportunities. The market to book value of equity ratio depends on the extent to which a firm’s return on existing assets and expected future investments exceed the required rate of return on equity (Gaver and Gaver, 1993). The higher the ratio, the higher the firm’s growth opportunities is expected. A positive association between total discretionary accruals and the firm’s growth opportunities is expected given the possibility of higher opportunistic behavior by managers in growth firms.

4.3.2 Control variables

Given that CEO duality, the proportion of independent non-executive directors, audit committee and the growth opportunities of firms are not the sole factors affecting discretionary accruals, several control variables are introduced to isolate other contracting incentives that have been found to influence managers’ accounting discretion. These control variables are leverage, operating cash flow, audit quality, size, and industry. Inclusion of these control variables in the regression analysis isolates the impact of other factors influencing earnings management and will highlight the association between earnings management and the explanatory variables.

Managers are more likely to exercise their accounting discretion when the firm is closer to default on debt covenants (Press and Weintrop, 1990; DeFond and
Consistent with the debt covenant hypothesis, this study expects that managers of firms with a higher total debt to total assets ratio are more likely to adopt aggressive earnings management techniques to avoid debt covenant violations (Watts and Zimmerman, 1986).

Past studies reveal that accruals and operating cash flow are strongly negatively related (Becker et al., 1998). The firm’s operating cash flows are included as a control variable in the model.

Becker et al. (1998) find that clients of lower quality auditors (proxied by non-Big 6 – non-big 5 auditors for the period under review) report discretionary accruals that are higher than the discretionary accruals reported by clients of Big 6 auditors. Lower audit quality is also found to be associated with a greater level of “accounting flexibility”. Therefore, a dummy variable, BIG5, is used to control for the effect of auditor quality on discretionary accruals. Consistent with Becker et al. (1998), auditor quality is expected to be negatively associated with total discretionary accruals.

Inclusion of firm size is motivated by the size hypothesis (Watts and Zimmerman, 1978, 1986 and 1990), which conjectures that managers of large firms are more likely to exploit latitude in accounting discretion to reduce political attention. Smith and Watts (1992) suggest that firm size is positively related to various types of corporate governance controls such as debt covenants, dividend policy and
management compensation. Firm size measured by natural log of total assets is included as a control variable.

Industry is also a variable used to control for the exogenous affects on the individual firm’s performance. It is likely that specific industries adopt particular corporate governance practices. Therefore it is expected that there would be an association between earnings management and industry type. The industry variable is categorized according to WorldScope into utility, conglomerate, transport and property for each of the firms in the sample.

4.4 Summary

In this chapter the research methods to test the hypotheses developed in chapter 3 are explicated. The method for collecting the data is described along with the variables of interest in this study. Finally the method for analyzing the data is described. The following chapter demonstrates the results from testing the hypotheses using the methods described in this chapter.
5.1 Introduction

The results of the study are presented and discussed in this chapter. This chapter is organized as follow. The first two sections of the chapter provide an account of the tests carried out that explore the descriptive content of the data for the total sample. The third section presents and discusses the results of testing each individual hypothesis for the sampled firms.

5.2 Descriptive statistics

Descriptive statistics on variables used in the regression test are provided in Table 1.

(The insert Table 1 here)

The mean of absolute value of total discretionary accruals and positive discretionary accruals are 0.103 and 0.091 respectively. On average 28.5 percent of directors are non-executive directors. This indicates that a significant proportion of corporate board members are executive directors. The firms are almost equally divided between CEO duality and non-duality (46.9 percent versus 53.1 percent). The result is consistent with the findings in Gul and Leung (2004) which showed that 54 percent of the sample of firms for 1996 has CEO duality. Not all firms have audit committees, audit committees are found in approximately two-third of the firms.
This is expected as the establishment of audit committee is only encouraged by the Hong Kong Stock Exchange as a best practice, and the requirement to have an audit committee is only mandatory in 2004.

The average ratio of total debt to total assets is 10.2 percent. The range is very wide, but the median value shows that 50 percent of the sample observations have slightly over 4 percent debt. Cash flow from operations ranges from a negative flow of 0.914 to a positive flow of 0.901. The size of the sample firms varies significantly, and the average asset size is HK$11,593 million (US$1,486 million). There is a significant variation among firms for the market to book ratio, the median for this ratio is 63.6 percent. Over 92 percent of the sample firms are audited by the big 5 auditors.

The correlation results on different variables are provided in Table 2.

(Insert Table 2 here)

As expected Table 2 reveals significant correlation between a number of variables. The correlated results indicate that the absolute value of total discretionary accruals is significantly negatively associated with the size of the firm, the firm’s cash flow from operations and big 5 auditors, but is significantly positively associated with the firm’s market to book ratio. These results suggest that earnings management is relatively lower in large firms, when the economic performance (proxied by the firm’s operating cash flow) is positive, and when the firms are audited by big 5
auditors, and is relatively higher in firms with higher growth opportunities. The results also show that income-increasing discretionary accruals are significantly negatively associated with the size of the firm and the firm’s cash flow from operations.

The absolute value of total discretionary accruals and income-increasing discretionary accruals are not significantly associated with CEO duality, the proportion of independent non-executive directors and audit committee.

CEO duality is significantly negatively associated with firm size and audit committee, suggesting that it is relatively common for the positions of the chairman of the board and CEO to be held by the same individual in small firms, and it is not common for CEO duality firms to establish an audit committee. The proportion of independent non-executive directors is significantly negatively associated with the size of the firm, suggesting that the proportion of independent non-executive directors on the board is relatively higher in small firms than in large firms. This is expected as the board size of small companies is generally smaller than large firms and the Listing Rules of the Hong Kong Stock Exchange require the appointment of at least two non-executive directors on the board irrespective of the size of the board. Audit committee is significantly positively associated with firm size, suggesting that it is relatively common for large firms to have an audit committee. Firm size is significantly negatively correlated with the ratio of the firm’s market to book ratio, suggesting that small firms have greater investment opportunities.
5.3 Univariate test results

T-tests are used to evaluate the differences in discretionary accruals between firms with CEO duality and CEO non-duality, firms with a higher and lower proportion of independent non-executive directors, high-growth and low-growth firms, and firms with and without an audit committee. The high and low group for non-executive directors and growth opportunities are based on the median value of the sample.

(Insert Table 3 here)

The results indicate that high-growth firms have significantly higher earnings management, proxied by the absolute value of total discretionary accruals, compared to low-growth firms. The results, however, do not show any significant difference between the absolute value of total discretionary accruals for firms with CEO duality and CEO non-duality, for firms with high and low proportion of independent non-executive directors on the board, and for firms with and without an audit committee.

5.4 Regression results

As a first step, tests are carried out to ascertain whether the dependent variable violates the assumptions of normality. The tests for skewness and kurtosis show that the data does not conform to the normal distribution. However, as the sample size is sufficiently large (N = 755), the multiple regression tests are considered robust and valid despite not conforming to the normal distribution (see also Wooldridge, 2003, p. 166).
Regressions were performed on the absolute value of total discretionary accruals as the dependent variable, because the use of both positive and negative discretionary accruals reflects earnings management. Regressions were performed on positive or income-increasing discretionary accruals as the dependent variable to obtain further insight into the motivations for upward adjustment of reported earnings.

The regression results on the absolute value of total discretionary accruals and income-increasing discretionary accruals are presented in Table 4.

(Insert Table 4 here)

The results in Table 4 indicate that there is a significant positive association between the absolute value of total discretionary accruals and CEO duality. This result suggests that firms with CEO duality are likely to be engaged in earnings management, which supports H1. In order to determine whether CEO duality firms are more likely engaged in opportunistic earnings management, regressions were performed on firms that used positive discretionary accruals. The results again show a significant positive association between income-increasing discretionary accruals and CEO duality.

The regression results on the absolute value of total discretionary accruals and positive discretionary accruals show that the PENED coefficient is positive and insignificant. This finding suggests that there is no significant association between the proportion of independent non-executive directors and earnings management.
These results thus do not support H2 that firms with a greater proportion of independent non-executive directors are less likely to engage in earnings management.

The results show that the interaction of the proportion of independent non-executive directors and CEO duality (PENED*CEO) are negatively and significantly related to the absolute value of total discretionary accruals and income-increasing discretionary accruals. Therefore, firms with CEO duality and higher proportion of independent non-executive directors on the board have lower earnings management. These results suggest that the proportion of independent non-executive directors on the board weakens the positive relationship between CEO duality and earnings management thus supporting H3.

To evaluate whether the moderating effect of the proportion of independent non-executive directors on the association between CEO duality and earnings management is associated with the growth opportunities of the firm, the observations are divided into two groups based on the median value of the firm’s ratio of market value to book value of common equity. Firms with ratio above the median value are regarded as high-growth firms and those below the median value low-growth firms. The regression results on the absolute value of total discretionary accruals and income-increasing discretionary accruals are presented in Table 5.

(Insert Table 5 here)
The results in Table 5 indicate that the coefficient of CEO duality is positive and significant for high-growth firms. Consistent with the total sample, the PENED coefficient for high-growth firms is positive but insignificant. However the coefficient of the interaction variable, PENED*CEO, is negative and significant. These results suggest that high-growth firms with CEO duality are likely to engage in earnings management. These results also support H4 that the moderating effect of the proportion of independent non-executive directors on CEO duality and earnings management is only significant for high-growth firms. A separate test on income-increasing discretionary accruals shows consistent results.

The regression results on the absolute value of total discretionary accruals and income-increasing discretionary accruals in Table 4 show that the audit committee coefficient is negative and insignificant. This finding suggests that there is no significant association between the existence of an audit committee and earnings management. These results thus do not support H5(a) that firms with an audit committee are less likely to engage in earnings management.

The regression results on the absolute value of total discretionary accruals and income-increasing discretionary accruals in Table 5 show that the audit committee coefficient for high-growth firms is negative and insignificant. This finding suggests that there is no significant association between the existence of an audit committee and earnings management in high-growth firms. These results thus do not support H5(b) that the audit committee is more important as a monitor of earnings management when the firm has high growth opportunities.
To evaluate whether the moderating effect of the proportion of independent non-executive directors on the association between CEO duality and earnings management is associated with the existence of an audit committee, the observations are divided into two groups for firms with and firms without an audit committee. The regression results on the absolute value of total discretionary accruals and income-increasing discretionary accruals are presented in Table 6.

(Insert Table 6 here)

The regression results on the absolute value of total discretionary accruals in Table 6 show that the coefficient of CEO duality, PENED and the interaction variable, PENED*CEO are not significant for firms with an audit committee. However, the regression results on income-increasing discretionary accruals indicate that the coefficient of CEO duality and PENED are both positive and significant, while the coefficient of the interaction variable, PENED*CEO, is negative and significant. Although the positive association between the proportion of independent non-executive directors and earnings management is inconsistent with prior studies, the results support H6 that the moderating role of independent non-executive directors on the positive relationship between CEO duality and earnings management is only significant for firms with an audit committee.

5.5 Summary

The results of the hypotheses developed in chapter 3 are reported in this chapter. The results demonstrate the relationship between CEO duality and earnings
management, the moderating effect of the proportion of independent non-executive directors on the relationship between CEO duality and earnings management, and the moderating effects of audit committee and the growth opportunities of the firm.
CHAPTER 6
CONCLUSIONS

6.1 Summary of findings

This study examines the role of various corporate governance variables in earnings management in Hong Kong during the period 2000 to 2002. Specifically, this study examines whether CEO duality (when the chairman and the CEO is the same person), the proportion of independent non-executive directors on corporate boards and the existence of an audit committee impact the managerial behavior of earnings management. It also examines whether independent non-executive directors moderates the relationship between CEO duality and earnings management.

The first hypothesis tests the relationship between CEO duality and earnings management. The findings provide evidence that CEO duality firms are more likely to engage in earnings management. Thus these findings support the argument that when the positions of board chairman and CEO are held by the same individual, the board is less independent and therefore less effective in monitoring managerial behavior of earnings management.

Next, the research investigates the corporate board’s effectiveness in monitoring the managerial behavior of earnings management when independent non-executive directors are present. The results do not show a significant association between the proportion of independent non-executive directors and earnings management. This
finding therefore does not support the proposition that a higher proportion of independent non-executive directors on corporate boards provide a more effective monitoring mechanism in constraining management behavior of earnings management.

Following on from this, the research tests whether the positive relationship between CEO duality and earnings management will be moderated by the proportion of non-executive directors. The results show a significant association between earnings management and the interaction of CEO duality and the proportion of independent non-executive directors, suggesting that the proportion of independent non-executive directors on the corporate board weakens the positive relationship between CEO duality and earnings management. The results also show that this moderating effect is only significant for high-growth firms. The results suggest that when a firm has both CEO duality and high growth opportunities, there is greater likelihood of earnings management, and it is in these instances when board independence is more important.

The research then investigates whether the existence of an audit committee is effective in constraining the managerial behavior of earning management. The results fail to show a significant association between earnings management and the existence of an audit committee. Thus this finding does not support the argument that audit committees are an effective tool for monitoring management behavior. The research then argues a further hypothesis that the audit committee is more important as a monitor of earnings management in high-growth firm. The results
again fail to find that audit committee has a moderating effect. The research finally
tests if the monitoring effect of independent non-executive directors on the
association of CEO duality and earnings management is only significant in those
firms with an audit committee. The finding of the study supports this argument.

6.2 Contribution of the research

The current study has added to the agency literature by examining the board of
directors as a monitoring measure to mitigating the agency problems caused by the
separation of ownership and control in an emerging market. Prior research suggests
that the board of directors is one of the governance mechanisms that limit the
agent’s self-serving behavior (Alchian and Demsetz, 1972; Fama and Jensen, 1983).
Denis and McConnell (2003) comment that for many countries, there is relatively
little empirical evidence on governance mechanisms other than legal protection and
ownership structure and suggest that issues such as board structure provide useful
avenues for further research. This study focuses on the board of directors and its
composition as a monitoring mechanism and examines their relation with earnings
management arising from conflict of interests between management and
shareholders.

Requiring a greater degree of independence on boards has been a central theme in
the corporate governance reform measures in recent years. For example, both the
Sarbanes-Oxley Act and the Listing Rules in Hong Kong require all members of the
audit committee to be independent; the Listing Rules in Hong Kong was revised in
2004 to require a minimum of three non-executive directors instead of two, with a
view to increasing the degree of independence of the board. Prior research on the independence of the board as an effective monitoring mechanism has focused either on CEO duality or the proportion of non-executive directors on the board of directors and its committees.

Prior research suggests that CEO duality signals the absence of separation of decision control and decision management (Fama and Jensen, 1983). Thus the board is less independent (Molz, 1988; Lipton and Lorsch, 1992; Whittington, 1993; Jensen, 1993) and is ineffective to carry out its oversight and governance roles (Vance, 1983; Finkelstein and D’Aveni, 1994). However, prior research into the relationship between CEO duality and earnings management has produced conflicting results. Dechow et al. (1996) find that CEO duality firms are more likely to engage in earnings management. On the other hand, Xie et al. (2003) find that there is no association between CEO duality and earnings management. Prior research has also suggested that independent boards are effective in the monitoring of managerial behavior of earnings management (Dechow et al., 1996; Beasley, 1996; Klein, 2002; Xie et al., 2003; Davidson et al., 2005; Peasnell et al., 2005).

The current study provides some further insight into the monitoring effectiveness of independent non-executive directors by examining the interaction of CEO duality and the proportion of independent non-executive directors on the board. The result of this study does not support the proposition that a higher proportion of independent non-executive directors on corporate boards provide a more effective monitoring mechanism in constraining management behavior of earnings.
management. However the result of the study shows that the positive relationship between CEO duality and earnings management is weakened by the proportion of independent non-executive directors, suggesting that the monitoring role of independent non-executive directors is only effective in CEO duality firms. Hence a greater degree of independence on boards is better served by separating the roles of CEO from the chairperson. The chairman is pivotal in creating the conditions for overall board and individual non-executive director effectiveness. The separation of roles can contribute to the greater achievement of the CEO as well as being important in creating the conditions for effective performance by the non-executive directors.

The particular nature of the chairman’s role would inevitably be shaped by the challenges facing the organization. This study also demonstrates the importance of analyzing the growth opportunities of the organization when studying and implementing corporate governance measures. Prior research suggests that there are higher shareholder/manager agency costs associated with high-growth firms and there is greater need for corporate controls (Noe and Rebello, 1996). Research into the relationship between a firm’s growth rate and the proportion of outside directors has produced conflicting results (Bathala and Rao, 1995; Hossain et al., 2000; Hutchinson, 2002). This study examines the moderating role of independent non-executive directors on the relationship between CEO duality and earnings management in high-growth firms. The result of the study shows that the moderating effect of the proportion of independent non-executive directors on CEO duality and earnings management is only significant for high-growth firms,
suggesting that the growth opportunities of a firm play an important role in its corporate governance. Hence firms with growth options are more likely to use alternate corporate governance controls to align the interests of its managers and shareholders. Further, the evidence supports the conjecture that the effectiveness of corporate governance variables depends on certain firm characteristics.

Prior research suggests that the formation of an audit committee would assist the board with its monitoring activities. Prior research into the relationship between audit committee and earnings management has indicated that the mere existence of audit committee is not an effective monitor of management’s opportunistic behavior of earnings management (Beasley, 1996; Davidson et al., 2005; Peasnell et al., 2005). This study adds to the literature by examining the association of the existence of audit committees and earnings management in an emerging market. The result of the study shows that there is no significant association between the existence of audit committee and earnings management. Hence the proposition that the mere existence of audit committee is not an effective monitor of management’s opportunistic behavior of earnings management is supported both in developed and in emerging economies. This would suggest that other corporate governance measures are required in order to enhance audit committee effectiveness.

6.3 Limitation of the research

The fundamental limitation of this study is sample bias and cross-sectional analysis. The sample was not randomly chosen as the data is restricted to financial data available in the WorldScope database. In addition, multiple screens were applied to
the original sample to eliminate firms with missing values for the variables being tested. These screens have the potential to introduce unknown bias into the results. This is partly overcome by having a large sample size over a three-year period. It can be assumed that the archival data is generally reliable.

A crucial limitation of the research was that cross-sectional analysis of the data does not determine causality of association. The results of this study do not show a significant association between the proportion of independent non-executive directors and earnings management. The proportion of independent non-executive directors on the board may change over time. To test the impact of a change in the proportion of independent non-executive directors on earnings management would require a time-series analysis.

This study uses discretionary accruals as a proxy for earnings management. Discretionary accruals are estimated using the cross-sectional modified Jones model. Findings of several studies, which have examined comparative strengths and weaknesses of different methods used in estimating total discretionary accruals indicate that the cross-sectional modified Jones model provides relatively more accurate results (Bartov et al., 2001). Lately, it has been argued that the use of current discretionary accruals and performance-adjusted discretionary accruals is more appropriate to evaluate earnings management (Ashbaugh et al., 2003; Klein, 2002). Using other measures to estimate discretionary accruals may result in different conclusions.
This study only examines the corporate governance variables of CEO duality, independent non-executive directors and audit committees and has not covered other corporate governance variables, such as size of the boards, frequency of board and audit committee meetings, and concentration of ownership, which may also affect the managerial behavior of earnings management.

The results of this study are based on data for the period 2000 to 2002 and may not be transportable to other periods. The establishment of audit committee in Hong Kong, for example, was only a recommended best practice in the period under review. The results of the study are dependent on Hong Kong’s institutional environment with a domination of family-controlled companies and are not generalizable to other jurisdictions.

6.4 Policy implications

The Standing Committee on Company Law Reform in Hong Kong (SCCLR) concluded its four-year corporate governance review in 2004. Many of its recommendations, such as the mandatory requirement for all listed companies to establish an audit committee, the requirement that at least one independent non-executive director on a listed company’s audit committee have some “financial expertise”, and that the number of independent non-executive directors on boards of listed companies should be increased to three, have been reflected in the revisions to the Stock Exchange Listing Rules and the Code on Corporate Governance Practices. The SCCLR also recommended that the number of independent non-executive directors be raised to one-third of the board membership as a long-term objective.
These recommendations would appear to be based on the premise that a higher proportion of independent non-executive directors on corporate boards would improve the board’s monitoring effectiveness.

The findings in this paper, however, suggest that the corporate governance variable of independent non-executive directors would perform its monitoring function effectively only in CEO duality firms. In addition, the results do not show a significant association between the existence of an audit committee and earnings management. Corporate governance is only effective when there is adequate separation of responsibilities between the running of the board and the running of the company’s business. In the Hong Kong market, this would appear to be better served by separating the roles of CEO from the chairperson rather than increasing the proportion of independent non-executive directors on the board.

The findings in this study should also be of interest to policymakers in emerging markets in the Asia-Pacific region because of their similarities in institutional and culture environments.

6.5 Directions for future research
This study fails to find a significant relation between the proportion of independent non-executive directors and total discretionary accruals over a three-year period. However, it would be of interest to find out if there is any correlation between a change in board composition (increase or decrease in the proportion of independent
non-executive directors) and the change in the total discretionary accruals before and after the change in board composition.

In view of the SCCLR recommendations, related issues that are worthy of future research include whether board and audit committee members’ financial sophistication is an important factor in constraining the propensity of managers to engage in earnings management.
REFERENCES


Lawton, P. and E. Tyler. 2001. Report on Division of Duties and Responsibilities Between the Company Secretary and Directors in Hong Kong. The Hong Kong Institute of Company Secretaries.


### Table 1

Descriptive Statistics of Hong Kong Listed Firms for the period 2000-2002

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std Dev.</th>
<th>Minimum</th>
<th>Median</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TDA</td>
<td>755</td>
<td>0.103</td>
<td>0.185</td>
<td>0.000</td>
<td>0.055</td>
</tr>
<tr>
<td>Inc TDA</td>
<td>320</td>
<td>0.091</td>
<td>0.226</td>
<td>0.000</td>
<td>0.042</td>
<td>3.476</td>
</tr>
<tr>
<td>PENED</td>
<td>755</td>
<td>0.285</td>
<td>0.113</td>
<td>0.000</td>
<td>0.286</td>
<td>0.667</td>
</tr>
<tr>
<td>MB</td>
<td>755</td>
<td>1.266</td>
<td>4.554</td>
<td>-15.920</td>
<td>0.636</td>
<td>103.175</td>
</tr>
<tr>
<td>DEBT</td>
<td>755</td>
<td>0.102</td>
<td>0.163</td>
<td>0.000</td>
<td>0.040</td>
<td>1.998</td>
</tr>
<tr>
<td>OCF</td>
<td>755</td>
<td>0.045</td>
<td>0.134</td>
<td>-0.914</td>
<td>0.035</td>
<td>0.901</td>
</tr>
<tr>
<td>SIZE</td>
<td>755</td>
<td>11,593</td>
<td>39,335</td>
<td>19</td>
<td>1,395</td>
<td>495,549</td>
</tr>
</tbody>
</table>

### Dichotomous Variables

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>401(53.1%)</td>
<td>354(46.9%)</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>259(34.3%)</td>
<td>496(65.7%)</td>
</tr>
<tr>
<td>BIG 5</td>
<td>57(7.5%)</td>
<td>698(92.5%)</td>
</tr>
<tr>
<td>YEAR01</td>
<td>502(66.5%)</td>
<td>253(33.5%)</td>
</tr>
<tr>
<td>YEAR02</td>
<td>460(60.9%)</td>
<td>295(39.1%)</td>
</tr>
</tbody>
</table>

| [TDA] | = absolute value of total discretionary accruals (scaled by lagged total assets) |
| IncTDA | = income-increasing discretionary accruals (scaled by lagged total assets) |
| PENED  | = proportion of non-executive directors on the board of directors |
| MB     | = ratio of the firm's market value of common equity to book value of common equity |
| DEBT   | = ratio of total debt to total assets |
| OCF    | = cash flow from operations (scaled by lagged total assets) |
| SIZE   | = total assets in millions of Hong Kong dollars |
| CEO    | = dummy variable: 1 if the CEO and the chairman of the board of directors are the same person and 0 otherwise |
| AUDCOM | = dummy variable: 1 if the firm has audit committee and 0 otherwise |
| BIG 5  | = dummy variable: 1 for big 5 auditor; 0 for non-big 5 auditor |
| YEAR01 | = dummy variable: 1 if year = 2001; 0 if year = 2000 and 2002 |
| YEAR02 | = dummy variable: 1 if year = 2002; 0 if year = 2000 and 2001 |
## Table 2

**Pearson Correlation Coefficient between Variables for Hong Kong Listed Firms for the period 2000-2002**

<table>
<thead>
<tr>
<th></th>
<th>[TDA]</th>
<th>Inc TDA</th>
<th>CEO</th>
<th>PENED</th>
<th>AUDCOM</th>
<th>MB</th>
<th>DEBT</th>
<th>OCF</th>
<th>BIG 5</th>
<th>SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>[TDA]</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inc TDA</td>
<td>1.000</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO</td>
<td>0.009</td>
<td>0.080</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PENED</td>
<td>0.027</td>
<td>-0.043</td>
<td>0.066</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUDCOM</td>
<td>-0.029</td>
<td>-0.075</td>
<td>-0.098**</td>
<td>0.002</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MB</td>
<td>0.237**</td>
<td>0.079</td>
<td>-0.073*</td>
<td>0.006</td>
<td>0.028</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEBT</td>
<td>0.033</td>
<td>-0.048</td>
<td>-0.091*</td>
<td>-0.092*</td>
<td>0.073*</td>
<td>0.049</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCF</td>
<td>-0.192**</td>
<td>-0.233**</td>
<td>0.112**</td>
<td>-0.037</td>
<td>0.040</td>
<td>-0.244**</td>
<td>-0.121**</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIG 5</td>
<td>-0.122**</td>
<td>-0.021</td>
<td>0.019</td>
<td>-0.010</td>
<td>0.014</td>
<td>0.001</td>
<td>0.004</td>
<td>0.099**</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.261**</td>
<td>-0.217**</td>
<td>-0.098**</td>
<td>-0.188**</td>
<td>0.111**</td>
<td>-0.123**</td>
<td>0.206**</td>
<td>0.186**</td>
<td>0.203**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

* and ** designate two-tailed statistical significance at the 0.05 and 0.01 level respectively

- **[TDA]** = absolute value of total discretionary accruals (scaled by lagged total assets)
- **Inc TDA** = income-increasing discretionary accruals (scaled by lagged total assets)
- **CEO** = dummy variable: 1 if the CEO and the chairman of the board of directors are the same person and 0 otherwise
- **PENED** = proportion of non-executive directors on the board of directors
- **AUDCOM** = dummy variable: 1 if the firm has audit committee and 0 otherwise
- **MB** = ratio of the firm's market value of common equity to book value of common equity
- **DEBT** = ratio of total debt to total assets
- **OCF** = cash flow from operations (scaled by lagged total assets)
- **BIG 5** = dummy variable: 1 for big 5 auditor; 0 for non-big 5 auditor
- **SIZE** = natural log of total assets
Table 3

Univariate t-tests for Differences in Absolute Value of Discretionary Accruals for Hong Kong Listed Firms for the period 2000-2002

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>p-value for t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CEO</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CEO Duality</td>
<td>354</td>
<td>0.1055</td>
<td></td>
</tr>
<tr>
<td>CEO Non-duality</td>
<td>401</td>
<td>0.1015</td>
<td>0.7733</td>
</tr>
<tr>
<td><strong>PENED</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High PENED</td>
<td>333</td>
<td>0.1053</td>
<td></td>
</tr>
<tr>
<td>Low PENED</td>
<td>422</td>
<td>0.1018</td>
<td>0.7890</td>
</tr>
<tr>
<td><strong>AUCOM</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firms with Audit Committee</td>
<td>496</td>
<td>0.0993</td>
<td></td>
</tr>
<tr>
<td>Firms without Audit Committee</td>
<td>259</td>
<td>0.1112</td>
<td>0.4817</td>
</tr>
<tr>
<td><strong>GROWTH OPPORTUNITIES</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High-growth Firms</td>
<td>378</td>
<td>0.1229</td>
<td></td>
</tr>
<tr>
<td>Low-growth Firms</td>
<td>377</td>
<td>0.0838</td>
<td>0.0036</td>
</tr>
</tbody>
</table>

CEO Duality = The CEO and the chairman of the board of directors are the same person
CEO Non-duality = The CEO and the chairman of the board of directors are not the same person
High PENED = The proportion of non-executive directors on the board of directors is greater than the median value of the sample
Low PENED = The proportion of non-executive directors on the board of directors is smaller than or equal to the median value of the sample
Firms with Audit Committee = Firms with an audit committee on the board of directors
Firms without Audit Committee = Firms without an audit committee on the board of directors
High-growth Firms = Firms with ratio of market value of common equity to book value of common equity greater than the median value of the sample
Low-growth Firms = Firms with ratio of market value of common equity to book value of common equity smaller than or equal to the median value of the sample
### Table 4

Regression Results on Absolute Value of Discretionary Accruals and Income-increasing Discretionary Accruals for Hong Kong Listed Firms for the period 2000-2002

<table>
<thead>
<tr>
<th></th>
<th>[TDA]</th>
<th></th>
<th>Inc TDA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>t-value</td>
<td>Coeff.</td>
<td>t-value</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.446</td>
<td>6.38</td>
<td>0.341</td>
<td>2.58</td>
</tr>
<tr>
<td>CEO</td>
<td>0.098</td>
<td>2.82</td>
<td>0.223</td>
<td>3.61</td>
</tr>
<tr>
<td>PENED</td>
<td>0.131</td>
<td>1.67</td>
<td>0.202</td>
<td>1.40</td>
</tr>
<tr>
<td>PENED*CEO</td>
<td>-0.320</td>
<td>-2.83</td>
<td>-0.726</td>
<td>-3.57</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>-0.005</td>
<td>-0.37</td>
<td>-0.014</td>
<td>-0.53</td>
</tr>
<tr>
<td>MB</td>
<td>0.007</td>
<td>5.07</td>
<td>0.004</td>
<td>0.84</td>
</tr>
<tr>
<td>DEBT</td>
<td>0.058</td>
<td>1.44</td>
<td>-0.038</td>
<td>-0.51</td>
</tr>
<tr>
<td>OCF</td>
<td>-0.142</td>
<td>-2.78</td>
<td>-0.452</td>
<td>-4.16</td>
</tr>
<tr>
<td>BIG 5</td>
<td>-0.044</td>
<td>-1.80</td>
<td>0.058</td>
<td>0.97</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.025</td>
<td>-5.67</td>
<td>-0.024</td>
<td>-3.02</td>
</tr>
<tr>
<td>YEAR01</td>
<td>0.011</td>
<td>0.65</td>
<td>-0.004</td>
<td>-0.13</td>
</tr>
<tr>
<td>YEAR02</td>
<td>0.008</td>
<td>0.51</td>
<td>-0.041</td>
<td>-1.36</td>
</tr>
<tr>
<td>IND1</td>
<td>0.035</td>
<td>1.05</td>
<td>0.079</td>
<td>1.17</td>
</tr>
<tr>
<td>IND2</td>
<td>0.029</td>
<td>0.76</td>
<td>-0.035</td>
<td>-0.52</td>
</tr>
<tr>
<td>IND3</td>
<td>0.001</td>
<td>0.08</td>
<td>0.003</td>
<td>0.10</td>
</tr>
</tbody>
</table>

F-value          | 8.73   | 3.68          |
Adjusted R²      | 0.126  | 0.105         |
N                | 755    | 320           |

[TDA] = absolute value of total discretionary accruals (scaled by lagged total assets)
Inc TDA = income-increasing discretionary accruals (scaled by lagged total assets)
CEO = dummy variable: 1 if the CEO and the chairman of the board of directors are the same person and 0 otherwise
PENED = proportion of non-executive directors on the board of directors
PENED*CEO = interaction variable between the proportion of non-executive directors and CEO duality
AUDCOM = dummy variable: 1 if the firm has audit committee and 0 otherwise
MB = ratio of the firm’s market value of common equity to book value of common equity
DEBT = ratio of total debt to total assets
OCF = cash flow from operations (scaled by lagged total assets)
BIG 5 = dummy variable: 1 for big 5 auditor; 0 for non-big 5 auditor
SIZE = natural log of total assets
YEAR01 = dummy variable: 1 if year = 2001; 0 if year = 2000 and 2002
YEAR02 = dummy variable: 1 if year = 2002; 0 if year = 2000 and 2001
IND1 = dummy variable: 1 if industry is utility; 0 if industry is conglomerate, transport and property
IND2 = dummy variable: 1 if industry is transport; 0 if industry is conglomerate, utility and property
IND3 = dummy variable: 1 if industry is property; 0 if industry is conglomerate, utility and transport
Table 5

Regression Results on Absolute Value of Discretionary Accruals and Income-increasing Discretionary Accruals for Hong Kong Listed High-growth and Low-growth Firms for the period 2000-2002

<table>
<thead>
<tr>
<th>Low-growth Firms</th>
<th>High-growth Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>[TDA]</td>
<td>Inc TDA</td>
</tr>
<tr>
<td>Coeff.</td>
<td>t-value</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.434</td>
</tr>
<tr>
<td>CEO</td>
<td>-0.011</td>
</tr>
<tr>
<td>PENED</td>
<td>0.063</td>
</tr>
<tr>
<td>PENED*CEO</td>
<td>0.020</td>
</tr>
<tr>
<td>AUDCOM</td>
<td>0.012</td>
</tr>
<tr>
<td>DEBT</td>
<td>0.056</td>
</tr>
<tr>
<td>OCF</td>
<td>0.123</td>
</tr>
<tr>
<td>BIG 5</td>
<td><strong>-0.083</strong></td>
</tr>
<tr>
<td>SIZE</td>
<td><strong>-0.021</strong></td>
</tr>
<tr>
<td>YEAR01</td>
<td>-0.016</td>
</tr>
<tr>
<td>YEAR02</td>
<td>-0.004</td>
</tr>
<tr>
<td>IND1</td>
<td>0.000</td>
</tr>
<tr>
<td>IND2</td>
<td>-0.045</td>
</tr>
<tr>
<td>IND3</td>
<td>-0.006</td>
</tr>
<tr>
<td>F-value</td>
<td>4.35</td>
</tr>
<tr>
<td>Adjusted R(^2)</td>
<td>0.104</td>
</tr>
<tr>
<td>N</td>
<td>377</td>
</tr>
</tbody>
</table>

| **[TDA]** | absolute value of total discretionary accruals (scaled by lagged total assets) |
| **Inc TDA** | income-increasing discretionary accruals (scaled by lagged total assets) |
| **CEO** | dummy variable: 1 if the CEO and the chairman of the board of directors are the same person and 0 otherwise |
| **PENED** | proportion of non-executive directors on the board of directors |
| **PENED*CEO** | interaction variable between the proportion of non-executive directors and CEO duality |
| **AUDCOM** | dummy variable: 1 if the firm has audit committee and 0 otherwise |
| **DEBT** | ratio of total debt to total assets |
| **OCF** | cash flow from operations (scaled by lagged total assets) |
| **BIG 5** | dummy variable: 1 for big 5 auditor; 0 for non-big 5 auditor |
| **SIZE** | natural log of total assets |
| **YEAR01** | dummy variable: 1 if year = 2001; 0 if year = 2000 and 2002 |
| **YEAR02** | dummy variable: 1 if year = 2002; 0 if year = 2000 and 2001 |
| **IND1** | dummy variable: 1 if industry is utility; 0 if industry is conglomerate, transport and property |
| **IND2** | dummy variable: 1 if industry is transport; 0 if industry is conglomerate, utility and property |
| **IND3** | dummy variable: 1 if industry is property; 0 if industry is conglomerate, utility and transport |
Table 6
Regression Results on Absolute Value of Discretionary Accruals and Income-increasing Discretionary Accruals for Hong Kong Listed Firms with and without Audit Committee for the period 2000-2002

<table>
<thead>
<tr>
<th></th>
<th>Firms without Audit Committee</th>
<th></th>
<th>Firms with Audit Committee</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[TDA]</td>
<td>Inc TDA</td>
<td>[TDA]</td>
<td>Inc TDA</td>
</tr>
<tr>
<td></td>
<td>Coeff.</td>
<td>t-value</td>
<td>Coeff.</td>
<td>t-value</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.568</td>
<td>3.13</td>
<td>0.368</td>
<td>1.03</td>
</tr>
<tr>
<td>CEO</td>
<td>0.139</td>
<td>1.92</td>
<td>0.313</td>
<td>2.12</td>
</tr>
<tr>
<td>PENED</td>
<td>0.069</td>
<td>0.39</td>
<td>-0.020</td>
<td>-0.05</td>
</tr>
<tr>
<td>PENED*CEO</td>
<td>-0.468</td>
<td>-2.01</td>
<td>-0.872</td>
<td>-1.85</td>
</tr>
<tr>
<td>MB</td>
<td>0.013</td>
<td>2.10</td>
<td>0.067</td>
<td>2.27</td>
</tr>
<tr>
<td>DEBT</td>
<td>0.050</td>
<td>0.50</td>
<td>0.075</td>
<td>0.49</td>
</tr>
<tr>
<td>OCF</td>
<td>-0.350</td>
<td>-2.99</td>
<td>-0.702</td>
<td>-2.36</td>
</tr>
<tr>
<td>BIG 5</td>
<td>0.056</td>
<td>0.99</td>
<td>0.211</td>
<td>1.44</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.039</td>
<td>-3.39</td>
<td>-0.039</td>
<td>-1.80</td>
</tr>
<tr>
<td>YEAR01</td>
<td>0.041</td>
<td>1.10</td>
<td>0.063</td>
<td>0.89</td>
</tr>
<tr>
<td>YEAR02</td>
<td>0.005</td>
<td>0.12</td>
<td>-0.085</td>
<td>-1.08</td>
</tr>
<tr>
<td>IND1</td>
<td>0.002</td>
<td>0.03</td>
<td>-0.037</td>
<td>-0.15</td>
</tr>
<tr>
<td>IND2</td>
<td>0.029</td>
<td>0.35</td>
<td>-0.163</td>
<td>-1.03</td>
</tr>
<tr>
<td>IND3</td>
<td>-0.001</td>
<td>-0.01</td>
<td>0.023</td>
<td>0.29</td>
</tr>
<tr>
<td>F-value</td>
<td>3.37</td>
<td>2.45</td>
<td>11.42</td>
<td>5.43</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td></td>
<td></td>
<td>0.107</td>
<td>0.223</td>
</tr>
</tbody>
</table>

[TDA] = absolute value of total discretionary accruals (scaled by lagged total assets)
Inc TDA = income-increasing discretionary accruals (scaled by lagged total assets)
CEO = dummy variable: 1 if the CEO and the chairman of the board of directors are the same person and 0 otherwise
PENED = proportion of non-executive directors on the board of directors
PENED*CEO = interaction variable between the proportion of non-executive directors and CEO duality
MB = ratio of the firm's market value of common equity to book value of common equity
DEBT = ratio of total debt to total assets
OCF = cash flow from operations (scaled by lagged total assets)
BIG 5 = dummy variable: 1 for big 5 auditor; 0 for non-big 5 auditor
SIZE = natural log of total assets
YEAR01 = dummy variable: 1 if year = 2001; 0 if year = 2000 and 2002
YEAR02 = dummy variable: 1 if year = 2002; 0 if year = 2000 and 2001
IND1 = dummy variable: 1 if industry is utility; 0 if industry is conglomerate, transport and property
IND2 = dummy variable: 1 if industry is transport; 0 if industry is conglomerate, utility and property
IND3 = dummy variable: 1 if industry is property; 0 if industry is conglomerate, utility and transport