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Samanthala Hettihewa
University of Ballarat

Christopher S. Wright
University of Ballarat

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A Review of Dominant and Emerging Issues in Corporate Earnings Management

Samanthala Hettihewa and Christopher S. Wright

The form and means of corporate earnings management (CEM) have evolved and become ever more sophisticated; however, in substance, CEM remains the misinforming of the users of an organization's financial statements, via the strategic abuse of timing, reorganizing, reclassifying, and/or omitting of material information. Thus, even though CEM rarely involves outright deception, it is a fundamental breach of trust. As such, CEM is

Samanthala Hettihewa, Ph.D., is a senior lecturer in finance, School of Business, University of Ballarat, Ballarat, Victoria, 3353, Australia.

Christopher S. Wright, Ph.D., is a visiting researcher, Centre for Regional Innovation and Competitiveness, University of Ballarat, Victoria, 3353, Australia.

immensely damaging to the primary role of financial statements (i.e., the creation and/or maintenance of informed trust between organizations and their key stakeholders).

This study is structured as follows. After discussing the importance of CEM, this article elaborates on the definitions, key concepts in the CEM literature with a focus on CEM evolution, incentives, and motivations. The discussion also includes the important proximal causes of CEM and the flow-on effects of CEM; for example, the short-term survival needs of firms during economic downturns likely increases their incentive to engage in CEM (Healy & Wahlen, 1999). In counter-point, domestic and international business partners are aware that the *bad acts* of their managers (such as CEM) may have contagion or spill-over implications for their suppliers, customers, creditors, auditors, financial analysts, etc. Compounding the current mix of diffi-

culties and complexities of the global economy is the rise of protectionism; as evidenced by the ongoing difficulties in recent World Trade Organization discussions.¹ Finally, the balance of the study follows a description of the specifications of various CEM models, listing each model's strengths and weaknesses, along with conclusions and suggestions for future research.

Uncertainty in the global economic and finance markets in 2008 and 2009 (e.g., a global credit crisis compounded by rollercoaster volatility in interest rates, consumer prices, and prices of commodities, food-stuffs, and oil) heightened the importance of the corporate sector's need to show its survivability via solid profitability, competitiveness, market share, and access to inputs. Bourgeois (1985) commented on strategic goals and economic performance in volatile environments. Research on the reality of how performance is communicated

to stakeholders has addressed such important concepts as

- Are the *agency problem* and its *cost* important?
- Does *manager wrongdoing* cause lasting harm to investor relations and financial public relations?
- Have the CEM issues been satisfactorily recognized and addressed?
- What are the future directions left for researchers to focus on?

This descriptive study examines the development of extant CEM literature over last few decades, with the intent of identifying trends by tracking dominant issues, thinking, views, motivation, and activities in CEM. This imposition of order on the large and rapidly expanding volume of CEM research is a prerequisite to gathering the trends in CEM understanding into an underlying theory of CEM. This CEM-research taxonomy should provide insight on the current and potential direction of the expanding volume and variety of CEM incidents and help regulatory bodies in their efforts to tighten and improve reporting standards and regulations.

The Importance of CEM

The importance of research on CEM arises

because earnings on financial statements are a vital input into resource-allocation decisions. Consistent with this importance, business ethics and agency issues² are among the most frequently investigated issues in financial management and accounting. The potential of managers to use CEM to gain wealth, recognition, and/or other benefits at a potentially unfair cost to stakeholders has long been a worry of governments, private sector regulators, investors, practitioners, analysts and researchers; however, the nature, extent, motivation for and consequences of CEM have been formally investigated and modeled in CEM empirical literature, only in the last few decades (Coughlan & Schmidt, 1985; MacNichols & Wilson, 1988; Natarajan, 1999).

The systematic study of CEM practices by managers has evolved into a dynamic and rapidly growing body of empirical literature (McNichols, 2000; Beneish, 2001; Watts & Zimmerman, 1990). Using *agency theory* and the associated assumption of *managerial opportunism* Watts and Zimmerman (1978) sought to identify, explain, and predict the circumstances under which managers are most likely to manipulate earnings (Dechow, Sloan, & Sweeney, 1995, 1996) and found that CEM can be very pervasive, under certain

conditions. The misleading perceptions of value arising from CEM has the potential to significantly misallocate resources, in both domestic and international economies—e.g., Kellogg and Kellogg (1991) and Dechow et al. (1996) noted that firms who engaged in CEM had significantly higher costs of capital.

While fraud, mismanagement of funds and misleading information are not new to the corporate sector, more and more companies are being accused of unethical behavior (e.g., HIH Australia in 2001, Procter & Gamble in 1985, Worldcom in 2002, Enron and Arthur Anderson in 2002),³ are only a fraction of the many large formerly well-respected firms that have had regulators investigate their behavior.⁴

Despite the difficulties of ascertaining the accounting devices used in CEM to enhance compensation, raise capital, avoid covenant default, or influence regulatory outcomes (Beneish, 2001), many attempts have been made to definitively identify and describe their nature. While past and current empirical findings on CEM are often derived from samples of large U.S. firms, there is an awareness of the economies of other nations (Boonyanet & Julavittayanukool, 2008 (for Thailand); Inoue and Thomas, 1996; Herrmann et al., 2003; Watabe, 2008 (for Japan); Habib, 2005 (for

Bangladesh); Singh, 2008 (for Fiji), etc.). While the form and methods of CEM have evolved over time and become ever more sophisticated, the substance of CEM remains *in a twisted grey area* between truth and an outright lie. One CEM fundamental remains unchanged; its intent is a search for an unfair advantage from financial statement users. Further, CEM truth-twisting usually involves timing, reclassifying, omission and/or exaggeration of financial information.

Definition, Evolution, Incentives, and Motives in CEM

Since the 1980's, many studies on the concept of CEM have defined it in a variety of ways. This lack of a general agreement on the definition of CEM may be due to differing interpretations of empirical evidence. Beneish (2001), for example, lists three very different definitions, to illustrate the lack of a consensus definition of CEM:

1. Per Beniesh (2001 pp. 4) "Earnings management is the process of using specific steps within Generally Accepted Accounting Principles (GAAP) to be able to bring about the wanted [but not necessarily *true and fair*] level of reported earnings."

2. Earnings management is an intervention used to obtain personal gain through the external financial reporting process (Beneish, 2001; Schipper, 1989), and
3. Earnings management is a process whereby managers use their discretion to determine final outcomes in financial reports to enhance the reported underlying economic performance of a company or influence contractual outcomes (Healy & Wahlen, 1999), by magnifying the signal in reported earnings.

The above examples of the many definitions used to describe CEM, all have in common the underlying fact that all are actions taken by management to maneuver financial information so as to gain benefit at an unfair cost to stakeholders. As such, these example definitions demonstrate the existence of an agency problem between managers and the stakeholders (including non-manager owners).

The Evolution of CEM

The central theme of research on CEM as financial reporting phenomena has evolved. Specifically, in the 1970s and early 1980s, investiga-

tions on accounting choice determinants suggested that managers altered earnings reports for their own benefit and that their choice of means depended on regulatory and con-tractual incentives (Holthausen & Leftwich, 1983; Watts & Zimmerman, 1986, Bowen et al., 1995). After the mid-1980s, accruals became a fertile focus in the study of CEM because

1. The use of accruals is a generally accepted accounting practice,
2. Accruals are used to create true and fair financial statement by allocating revenues and costs to their appropriate period, and
3. If the reasoning behind an accrual is obscure, a CEM component can grafted on in such a way as to make it likely that investors will be unable to determine the effect of that CEM component on reported earnings (Beneish, 2001).

The CEM research themes are still evolving and, as the next subsection notes, current research tends to be focused more on the ends (incentive and motivation) of CEM than on its means.

CEM Incentives and Motivations

Chan et al., (2006), DeGeorge et al., (1999) and Burgstahler and Dichev (1997) suggest that changes in the means and methods of CEM in different eras flow with changes in how the different aspects of reported earnings are managed in those eras. In the 1990's, CEM literature gained importance, as the volume of CEM increased exponentially. Specifically, insider trading, a newly researched CEM determinant a decade earlier, became a prominent explanation for CEM. In the late 1990s, researchers began to focus on the penalties faced by managers after earnings manipulations are discovered. In the early 21st Century, accounting standards have become the main focus of regulatory bodies and CEM researches are focusing on how the theoretical foundations of earnings management can be used to strengthen the use of mandatory disclosure regulations to enhance manager awareness of the risks and the personal consequences of fraudulent behavior (Gelinas, 2007).

A three-way information-asymmetry gradient has been found between the managers and the controlling and non-controlling investors (Beneish, 2001); particularly at the time of initial public offerings (IPOs). Leland and

Pyle (1977) argue that prospects for value growth can be inferred from the relative amount of equity retained by insiders. As a result, a main CEM research focus of regulatory bodies, in the past two decades, has been on equity- and/or insider-trading. Others highlight the importance and role of auditor reputation on the offer price (Datar et al., 1991). Researchers have also studied the importance of earnings management in the context of IPOS and other research has looked at this area in the context of seasoned equity offerings. Lin et al. (2008), investigating the effect of the structure of compensation committees on CEM and executive (CEO) compensation incentives, found strong evidence that seasoned, equity-offering firms engaged in positive earnings management, to finance additional capital (Rangan, 1998; Shivakumar, 2000). They also found that CEOs exercise stock options to gain profits around seasoned equity offerings, when their stock prices are higher.

Earlier research (e.g., Teoh et al., 1998) suggests that a returns performance enhanced with CEM will tend to be negatively correlated with subsequent earnings (particularly if CEM occurred at the time of a major share issue). However, research indicates

that market participants do not fully incorporate the implications of unexpected accruals in their valuations. Thus, it is likely inappropriate to assert that intentional CEM at the time of a security issuance can be wholly successful in misleading investors (Beneish, 2001).

Insider trading is a relatively new means for managers to capture the gains from their CEM exercises. Beneish (1999 and 2001, p. 10) noted that "...managers of firms with earnings overstatements that violate GAAP are more likely to sell their stock appreciation..." Also, his hypothesis was based on previous insider trading research, where he examined the issue of manipulation incentives that are related to insider trading. It was found that many managers consider the provision of timely insider-information to investors to be acceptable and that they (the managers) should be rewarded for giving this service (i.e., by being able to profit from trading on that insider information). Current research suggests that, if the penalties imposed on managers engaging in and/or facilitating insider trading are not significant, they will be seen as more of a tax on CEM than a deterrent. It was found, that the U.S. Securities Exchange Commission (SEC) was less

likely to impose penalties on managers in firms with earnings overstatement if those managers had not sold their shares, as part of a firm security offering.

Debt Contracts and related compensation agreements have also been considered in accounting research on CEM. However, the varied results of studies on economic consequences have encouraged many researchers to shift their research focus to the accounting choices being made by firms that experienced technical default. Although the results of such studies are mixed, with regard to whether managers make accounting choices to increase income, researchers argue that managers are more likely to make choices that avoid covenant default. In related studies, research suggests that managers are more likely to alter reported earnings to increase compensation and the findings show that managers are more likely to report a decrease in earnings to increase future compensation (Healy, 1985); however, other researchers argue that the result obtained by Healy (1985) can be attributed to a skewed experimental design (Holthausen, 1995).

The perception and importance of CEM associated with a change in CEO, has varied over the last few decades. Incentives

to manipulate earnings prior to and after change in CEO and also contrasting those with routing and non-routing CEO changes, were heavily investigated. During the 1980s, CEO changes in U.S. firms were clearly linked with poor performance. Coughlan and Schmidt (1985); Warner et al., (1988); and Weisbach (1988) found incentives for incumbent CEOs to engage in CEM existed if they were concerned with being *bumped*, thus poor performance has been linked with CEO tenure or other horizon issues, such as planned retirement. Dechow and Sloan (1991) suggested that CEO management of current period income is done at a cost to future income streams and that some of their decisions have real-world negative impacts, as opposed to mere shifting between periods.

DeAngelo (1988), Strong and Meyer (1987), Francis et al., (1996), and Cotter et al., (1998), found evidence of CEM by incoming CEOs, via such things as write-downs to form secret reserves that will enhance future reported earnings. Dechow and Sloan (1991) and Murphy and Zimmerman (1993), linked decision in accounting-policy choices and real-investment with CEO changes. Pourciau (1993), in focusing on non-routing CEO changes using U.S. based data, found that the

motivations for income manipulation differ depending on the circumstances of the CEO change. Healy (1985) showed that the relatively smaller bonuses of Australian CEOs reduced their incentive for CEM. Wells (2002) in extending prior work (that mainly focused on U.S. market) included the Australian market and changed the mechanical classification method (from a focus on announcements at the time of the CEO change or succession process) and found the prior research findings were still applicable to Australian firms. Specifically, even though formal compensation payments are not used in Australia, implicit incentives to manipulate income still exist because the past performance is reflected in compensation generally.

Job-security performance is a significant motivating factor to alter or *smooth* earnings, so as to support current and perceived future performance. This conclusion is based on the assumption that poor performance can cause job or status loss and that satisfactory performance in the current year does not make up for previous poor performance. Therefore, it is argued that managers have reason to use accounting tools to increase discretionary accruals

during the period in question. It is further argued that managers make their accounting choices based around current and expected future performance. Fudenberg and Torole (1995) suggest that because incumbency rents accrue to managers, poor performance may result in dismissal, and current earnings bear more weight than future earnings, managers have significant incentive to shift earnings to enhance performance and to make accounting choices to support their decisions and/or to create reporting flexibility for future periods.

These incentives can cause one of two equal but opposite outcomes: 1) if current earnings are low and perceived future earnings are high, managers may choose an accounting method that will increase discretionary accruals in that period (i.e., borrowing from future earnings); 2) if current earnings are high, but expected earnings in the future are low, managers may use methods to decrease the current-year discretionary accruals (i.e., saving current earnings in a secret reserve, for use in the future).

Previous research suggests that current performance is a deciding factor, when managers choose to smooth earnings. However, expectations may make future performance sufficient important for

managers to create *hidden reserves* and engage in other income smoothing tactics. Expectations of competitor behavior may also be important determinant of CEM, for example: earnings management may be more likely, if it is expected that competitors will manage earnings (Bagnoli & Watts, 2000).

Some researchers have argued that the incentive for income smoothing lies in the need for job security as performance is measured by both current and future performance; e.g., good performance leads to future job security and bad performance to possible dismissal (Defond & Park, 1997). It is argued that managers base their decision for income smoothing around their performance; that is, if a firm's future performance is expected to be poor, the manager shifts current earnings to future earnings in order to reduce the possibility of dismissal. In other words, managers may seek to borrow from future earnings to enhance today's reported performance. The opposite choice will be made if current earnings are high but expected future earnings are low (Defond & Park, 1997). In other words some managers save current earnings against the possibility of poor performance in the future. Other managers, recognizing that profits cannot rise forever,

create periodic bad years that are followed by a succession of good years.

Above-normal gains on stocks in efficient markets are theoretically impossible and such gains require a performance surprise or other anomalies. Further, when stock markets are undergoing rapid growth, investors tend to be highly reliant on analyst forecasts, for portfolio selections. These propositions have encouraged researches over the past decade, to search for a relationship between share prices and the management of earnings forecasts that enhance the opportunity for performance surprises. Bernhardt and Campello (2007), examining the relationship between managed analyst forecast and the associated value consequences to firms, found a value premium for firms exceeding their forecast earnings. Not surprisingly, they also found earnings forecasts to be increasingly pessimistic over the forecast horizon; suggesting that firms may have been seeking to increase the opportunity for pleasantly surprising the market. Thus, the reward of positive earnings-surprises may be encouraging some managers to engage in the management of earnings expectations rather either creating real earnings or the less sophisticated use CEM. They also found that firms that were able to manage

the consensus down in the last two weeks before the earnings announcement produced more than twice as many positive as negative earnings surprises. Matsumoto (2002) studied the different mechanisms used by firms to meet the market's earnings expectations. Bartov et al. (2002), also found that firms have incentives to manage their earnings forecasts. As with any form of CEM there is always the potential for unfair gain from reversing the above strategy so as to sell-short, after creating an unwarranted positive expectation.

As mergers and acquisitions became ever more common, researchers have started examining their effect on CEM. Several researchers tested empirically the general perception of there being incentives for CEM in the year preceding the announcement and completion of a deal. Koumanakos (2005) looked at data from the Athens Stock Exchange (from 2001-03) and found weak evidence (from a European-capital-market context, and consistent with earlier U.S. studies) that listed acquiring firms tended to manipulate earnings upward just prior to initiation and completion of the transaction. Ben-Amar and Missonier Piera (2008), investigating 50 Swiss firms in an effort to identify the CEM used in

friendly takeovers during the period 1990-2002 found a considerable incentive for downward-earnings management, during the year preceding the transactions.

Erickson and Wang (1999), examining the manipulation of accounting earnings in the period prior to the announcement and completion of stock merges, found that in quarters prior to the merge, acquiring-firms manage earnings upward in an attempt to increase the share value preceding the merger. They, also, found that the acquiring company's accounting manipulations before the merger were positively related to the relative size of the deal.

The effect of government policies on the incentive of managers to engage in earnings management (e.g., to encourage government: price control, pricing, or other related policies) are heavily researched (Jones, 1991; Navissi, 1999). Lim and Matolcsy (1999, p. 131) found significant "...income reducing earnings management in companies... subjected to the greatest scrutiny during a situation of price controls" in 1970s in the Australian market. Navissi (1999) found New Zealand (NZ) manufacturing companies, during a period of general price inflation, used income decreasing CEM to show financial difficulties after a price

freeze by the NZ government.

Gelinas (2007) noted that disclosure regulations can create incentives for CEM and suggested that mandatory disclosure is not an appropriate strategy to constrain CEM if the production of information is costly to firms and if information asymmetry exists between managers and investors. Gelinas (2007) suggests that the traditional self-interest agency model is too narrow and that a wider and broader model (with moral considerations and relaxing the agency model classical assumption that individuals are risk-averse) would provide a better understanding on CEM.

Auditor conservatism plays an important role in CEM (Nelson et al., 2000). Specifically, literature on auditor/client conflicts appeared around 1980 and became a popular after 1990. While research in this area mainly focuses on factors influencing managers, it is important to note that auditors can greatly influence management's choice of accounting tools. Auditors appear to be a significant influence in the choice of accounting packages during the earnings management process (Chen et al., 2001). The literature also supports the idea that auditors tend to engage in a more conservative choice in

accounting package, whereas, managers may be less conservative. In examining the literature in this area, it can be seen that the research focus has been two-fold, with: 1) The first focus on the client's choice of auditor, choice of accounting, and the effect those choices have on the auditor; and 2) The second focus on the effect of the threat of litigation on auditors, the specific risk factors of their clients, and the accounting choices of their clients (Stice, 1991).

Bannister and Weist (2001) suggest that auditors tend to use conservative accounting methods and that this tendency is more evident if a firm is under the scrutiny of the regularity bodies (e.g., SEC, ASX, or FTSE).⁵ It is argued that this conservatism arises out of two main causal factors: 1) litigation against auditors can result from their negligence; and 2) the SEC scrutinizes the performance of auditors and can take action against any malfeasance (with the potential for serious reprimands, sanctions, or penalties being imposed on audit firms and/or individuals).

Researchers found that when an audit firm is employed, both the audit firm and client have differing accounting-choice agendas, with regards to earnings management. Specifically, risk-averse auditors tend to restrict

their clients on the types and/or magnitude of accounting choices they use in CEM (Lys & Watts, 1994). Bannister and Weist (2001) found conclusive evidence in their study that auditors were conservative in their choice of accounting procedure in earnings management. Frankel, Johnson and Nelson (2002) used U.S. data to examine the association between the provision of non-audit fees and earnings management; they also considered the non-audit to total fee ratio and the stock market reaction to unexpected component of that ratio. Their findings suggest that business entities that purchase more non-audit services from their auditors are more likely to meet analysts' forecast and to also report larger absolute discretionary accruals. Findings suggest there is a positive association between small earnings surprises and the magnitude of discretionary accruals while there is a negative association between non-audit fees and share values (Frankel et al. 2002; Magee & Tseng, 1990).⁶

Chia, Lapsley and Lee (2007), in their study of the effect of *firm choice of auditors in constraining CEM*, during the Asian financial crisis (in 383 Singapore-listed service firms), found that such firms engaged in income-decreasing CEM and that only the Big-6 auditing

firms could significantly constrain CEM. Craswell et al. (1995) looking at audit-quality differentiations, found significant premiums earned by Big-6 auditing firms, over non-auditing firms. Francis et al., (1999) and Krishnan (2003), note that Big-6 audit firms can improve the quality of financial statements (via restrictions on accrual CEM).⁷

Job-security and incumbency rent affect manager accounting choices by putting a premium on current and expected future performance. Fudenberg and Torole (1995) set their assumptions around the notions that incumbency rents accrue to managers, poor performance risks dismissal and current reported earnings have more weight than current reports of potential future earnings. Therefore, managers have significant incentive to make accounting choices to shift earnings so as to make the reports of current financial outcomes add luster to their managerial stewardship.

Earnings-increasing CEM tends to be more pervasive than income-decreasing CEM—possibly because managers are likely to engage in income increasing management to hide poor performance and higher performance allows managers to sell their equity contingent wealth at higher prices (Beneish, 2001).

Burgstahler and Dichev (1997) attributed the

asymmetry favoring reports of increases in small-earnings (vs. decreases) to CEM, rather being a reflection of the underlying distribution of earnings changes. Some studies have found incentives for managers to maintain continuous increases in earnings (e.g., Berth et al., (1995) found that firms with a consistent pattern of earnings-increases tended to command higher price-to-earnings-multiples).

Income smoothing can be an important CEM goal. Specifically, the length of a string of earnings-rises can feed into perceptions of managerial competence. As a result, a break in a pattern of consistent earnings growth tends to impose an average of a 14 percent negative abnormal stock return on a firm, in the period the pattern is broken (DeAngelo, 1996). Burgstahler and Dichev (1997) point out that there is more incentive for managers to highlight increases in earnings and, as a result, tend to avoid reporting decreases. They also suggest there is a pervasive incentive for managers to minimize reporting decreases in earnings. Two incentives are suggested for this phenomenon: 1) transaction costs are decreased when managers do not report decreases and/or losses in earnings; and 2) per pro-

spect theory, the largest gains in utility appear when earnings move from a relative or absolute loss to a gain.

Two components of earnings commonly used by managers to avoid the reporting of losses are operating cash flow and working-capital changes. Specifically, increases in earnings change working capital. For example, increased cash sales tend to increase the cash from operations. However, that net effect is uncertain, as there is also a drop in inventory (another component of working capital); If there is a credit sale then cash from operations is not increased, but there is an increase in receivables and a reduction of inventory.

CEM Hypotheses in the Literature

A wide and varied range of motivations for CEM are suggested in the empirical studies to explain why managers manipulate earnings. Three basic hypotheses tested relevant to CEM in the literature (Watts & Zimmerman 1990; Dechow et al. 1996) are the 1) *Bonus-plan (executive compensation) hypothesis*; 2) *Leverage hypothesis*; and 3) *Political cost or "firm size" hypothesis*.

1. **The bonus plan hypothesis** is concerned

with whether firms with accounting-based bonus plans are more likely to adopt accounting methods that increase reported earnings (Watts & Zimmerman, 1978; Hagerman and Zmijewski, 1979). Most of the evidence in the literature appears to be consistent with this hypothesis (Christie, 1990; Healy, 1985). Later research improved the power of tests by using *private* data on firm's bonus plans; including refinements in methodology (Gaver et al., 1995; Holthausen, Larcker, & Sloan, 1995).

2. **The leverage hypothesis** suggests managers try to avoid technical defaults of loan covenants because they worry it may reflect badly on them, if it increases the firm's cost of capital. The empirical evidence in the literature, across a broad range of accounting policy choices, is generally consistent with the leverage hypothesis with few exceptions (Christie, 1990; Press & Weintrop, 1990; Duke & Hunt, 1990). DeFond, Jambalvo (1994), and Sweeney (1994) found that managers manipu-

late earnings to or above what was reported in the year before.

- The political cost hypothesis** suggests that the decision to use income-decreasing accounting changes is a function of firm size and influence (Watts & Zimmerman, 1978); e.g., Wong (1988) looked at large export firms in NZ and found that, if they wanted to reduce the chances of income-tax reform, they tended to use accounting methods that increased their apparent tax rates; and Jones (1991) found that firms, seeking government relief, often manipulated accruals to reduce reported earnings.

Assumptions on type of choice. Models of managers' decision to use accounting choices to facilitate CEM are based on an assumption that managers, expecting poor performance in the next earning period (e.g., it will be less than the stakeholder median expectations) are worried that the poor performance will cause them grief (termination, reduced bonuses, delayed promotion, etc.). Morck et al., (1989) and Blackwell et al., (1994) show that such an assumption is reasonable; that the likelihood of

management dismissal varies inversely with the stakeholder perceptions of the quality of managerial stewardship. As a result of these fears, it is argued that when firms have good current performance and expect poor future performance, their managers will engage in income-decreasing accruals. Conversely, if the current performance is poor and expected future performance is good, the firm's managers are likely to engage in income-increasing accruals. In further support of these assumptions, it was found that predictions with regard to discretionary accruals are more accurate if they are based on both current and future performance than if they are based on current performance, alone. These findings support the premise that the income smoothing motive arises, at least in part, from concerns about job security (Defond & Park, 1997).

Privately vs. publicly held banking organizations. After the late 1990s, there is an increasing emphasis on CEM in the banking industry. The belief that stakeholder perceptions of public bank performance tended to rely more on earnings-based benchmarks than their perception of the performance of privately held banks, caused researchers to empirically test if publicly held banks have a greater incentive to report steadily increasing

earnings. Beatty et al. (2002), examining 1987-1998 data for differences in earnings management incentives between publicly held and privately held banks, found (even after controlling for bank size, cash flows and differences in the types of loans written) that private banks with earnings near zero are significantly more likely to report losses than public banks with earnings near zero; they also found that public banks reported relatively fewer small earnings declines, were more favorable to using loan provisions and security gains to abolish small earnings decreases, and reported longer strings of consecutive earnings increases.

Perception of ethics and CEM. Elias (2004) used a survey of 583 Certified Public Accountants (CPAs) in public accounting, academia and industry to examine the relationship between perceptions of CEM and corporate ethical values, and found that CPAs employed in organizations with strong ethical standards considered CEM as more unethical. They, also, found that perceptions of corporate values were affected by gender, age, job title and demographic factors.

Boards of directors and corporate governance have an important influence on how CEM is perceived. Chtourou and Bedard

(2001), investigated whether an organization's corporate governance practices have an effect on the quality of its publicly announced financial information. They examined the relationship between audit committee and director boards characteristics and the extent of CEM in the U.S. market in 1996. After grouping their study subjects into relatively high and relatively low levels of discretionary accruals, they found that CEM is related to some of the governance practices by the audit committee and board of directors and that income-decreasing CEM is greatly reduced by one or more members having financial expertise. Kanagaretnam, Lobo, and Whalen (2007), sought to determine if firms with high corporate governance have lower information asymmetry around quarterly-earnings announcements in the equity market, by using bid-ask spread and depth to find the relationship to board independence, board structure, and board activity. They found that the changes in the bid-ask spread, at the time of earnings announcements, are negatively related to factors such as: board independence, board activity, and the percentage stock holdings of directors and officers.

Model Specifications and Weaknesses

A Variety of Methodologies

Although the aggregate accruals approach has been the most commonly used method for more than a decade, there are alternatives. Recent CEM studies have looked at specific accruals (e.g., provision for bad debt) or focused on specific sectors (e.g., the claim loss reserve in the insurance industry). McNichole (2000) asserts that among other methods, the most popular and widely used alternatives to identify and evaluate the presence CEM involve the use of

- Aggregate accruals, with regression to calculate expected and unexpected accruals,
- Specific accruals such as the provision for bad debt, or accruals in specific sectors such as the insurance industry and the claim loss reserve, and
- Discontinuities in the earnings flow and/or the distribution of earnings.

Reported earnings can be accrual based or cash-flow based. The main challenge faced by CEM researchers is their inability to clearly identify and

measure the fraction of accruals arising from CEM. This is because such accounting actions are, by their nature, less than transparent. Therefore, previous research is largely subjective, with models being based on judgment of the intent behind accruals and other discretionary estimates in reporting earnings. In other words, assumptions and judgment are used in testing both incentives to manage earnings and in the validity of accrual models. The explosive growth of research in accrual-based CEM has two main causes.

1. The principal product of Generally Accepted Accounting Principles (GAAP) is accruals and if earnings are managed it is more likely that the CEM occurs on accrual rather than on the cash flow part of earnings, and
2. Difficulties in measuring the effect of various accounting choices; thus, if CEM is considered to be an unobservable component of accruals, it is possible that investors will be unable to determine the effect of CEM on reported earnings.

There are two main perspectives on CEM: *Opportunistic perspective* and *information perspective*. The opportunistic perspective suggests that managers seek to mislead investors; whereas, the information perspective argues that managers use their discretion when providing information to investors on their personal view as to a firm's future cash flow. There has been much research on the opportunistic perspective but limited for the information perspective with regards to CEM (Beneish, 2001).

Starting with Healy (1985) and DeAngelo (1988), there were many attempts to measure and analyze total accruals and changes in accruals. Jones (1991) introduced a regression approach to control for nondiscretionary variables (e.g., changes in sales, property, plant, and equipment, which influence accruals). Many researchers contributed to this aggregate accrual approach, by adding a variety of nondiscretionary variables into the regression analysis.

Disagreements as to how aggregate accruals in CEM models has led to alternatives (e.g., the specific accrual model where researchers focus on a particular area such as the provision for bad debt or focus on a specific sector such as the insurance industry). McNichols (2000, p. 333) suggest that

specific- accrual models have three advantages: 1) Researchers "...can develop intuition for the key factors that influence the behavior of the accrual, exploiting his or her knowledge of generally accepted accounting principles..."; 2) They "...can be applied in industries whose business practices cause the accrual in question to be a material and a likely object of judgment and discretion..."; and 3) "...the relationship between the single accrual and explanatory factors [can be estimated] directly." However, this approach (because of its focus on a particular industry) requires a large investment of time and effort to gain knowledge that is specific to a given industry rather than being generalizable across many industries. A related issue is the high costs arising from the approaches need for more knowledge and often specific knowledge on the entity, its industry, and business environment.⁸

Weaknesses in the Research Designs Based on Aggregate Accruals

In using the accrual models it can be seen that there is a considerable amount of imprecision in the estimating discretionary accruals, especially if they are aggregated. As a result, some accrual models cause earnings to be randomly decomposed into discretionary and non-discretionary components.

Bernard and Skinner (1996) use discretionary accruals as a proxy and that the accruals-based tests can provide evidence that CEM exists. However, this approach requires that the measured error in the discretionary accrual proxy not be correlated with the partitioning factors in the research design.

Other researchers have used alternative methodology in the study of CEM. One such group examined the discontinuities in the distribution of reported earnings around three thresholds. The thresholds used are zero earnings, last year's earnings and this year's analysts' expectations. It is suggested that, looking at determinants of earnings behavior through this *view* is useful to determine which firms are likely practicing CEM. However, this approach does little to portray the form and extent of CEM (Beneish, 2001).

Since the introduction of aggregate accruals models, a large number of studies have been undertaken, using a variety of related methodologies (Jones, 1991). McNichole (2000) noted that, during the period 1993-99, many studies (45.5%) used residuals from aggregate accrual models, nearly 20 percent of the studies used specific accruals, 7.3 percent of researchers used total accruals and a similar fraction engaged in asset

sales and asset write-offs, 9.1 percent used accounting changes, 3.6 percent used unusual gains/(losses), and another 3.6 percent focused on incidents of accounting enforcement by SEC (the rest used distribution of earnings change in research and development expenditure from prior year and other methodologies).

Variable- and Model-Specification Issues

Collins and Hribar (2002) examined the gap between *Empirical Procedures* and *Institutional Knowledge of the Behavior of Accounting Accruals*. In the absence of earnings manipulations, if receivables are a firm's only accrual, it is important to identify the relationship between receivables and the change in its sales. Receivables can also be affected by credit policy changes. It is important to note that changes in receivables arise from both real and discretionary effects. In the absence of CEM there are number of other factors that contribute to relationship between firm's sales and receivables (e.g., revenue recognition policy and working capital management). Lower receivables and discretionary-accruals levels can result from selling receivables through factoring or securitization.

Channel stuffing is a form of CEM where downstream distributors are

pressured to make early purchases. However, the impact of this discretionary accrual depends on how the customer behaves in paying for the products. Estimated discretionary accruals can be influenced by customers when they accelerate purchasing behaviour due to anticipated price increases. However, this cannot be considered as CEM, unless management creates or influence the anticipation. Researchers found that using firm size as an independent variable creates numerous methodological problems, in CEM models (Christie et al., 1993).

Throughout the 1990s and 2000s, Burgstahler and Dichev (1997) and other researchers examined the frequency of annual earnings realization was examined by using the region-above-zero earnings and last-year's earnings to determine which was greater. DeGeorge et al. (1999) examined the frequency of quarterly-earnings realizations above/(below) zero earnings and last quarter's earnings and found that it was possible to make strong predictions about the behavior of earnings in narrow intervals. The idea was to test for discontinuities due to the exercise of discretion. Their findings suggest that earnings are often managed to obtain earnings targets, especially

positive ones. Myers and Skinner (2000) consider the number of consecutive earnings increases, to see whether it is greater than expected in the absence of CEM. Different studies use different proxies for discretionary accruals, for example: Healy (1985) uses total accruals, DeAngelo (1988) uses changes in total accruals, and Collins and Hribar (2002) use current asset and liability accounts less depreciation to proxy accruals (giving them larger sample sizes, over a longer period of time). Non-current accruals do not reflect year-specific discretion; therefore current accruals are a more accurate measure of year-by-year discretionary behavior, than what is provided by aggregate accruals (Jones, 1991).

The most widely used model in studies of aggregate accruals is the Jones (1991) model (based on the suggestion made by Kaplan, 1985) that changes in a firm's economic condition and manager discretion results in accruals. The model relates total accruals to the change in sales and the level of gross property, plant and equipment. Two assumptions are made with the use of this model: 1) a firm's economic environment is linked to changes in its sales or sales growth; which 2) results in changes in working capital or current accruals. In

examining the extant accruals model, it can be seen that the model fails to distinguish between accruals that result from managerial discretion and those that result from changes in the firm's economic performance. This failure is problematic, as it is not possible to definitively link changes in accruals to efficient operating decisions or (CEM) reporting considerations (Beneish, 2001).

Dechow et al. (1995) use a modified Jones model to track residuals from a regression of total accruals on change in sales and property, plant and equipment, where revenue is adjusted for change in receivables in the period. Kang and Sivaramakishanan (1995) use residuals from regression of non-cash current assets less current liabilities on lagged levels adjusted for increases in revenue expenses and plant and equipment. MacNichols and Wilson (1988) use the residual provision-for-bad-debts as the proxy for discretionary accruals. This component of bad debt was estimated as the residual from a regression of the provision for bad debts on the allowance beginning balance and current and future write off. Petroni (1992) found that a claim-loss reserve estimation error measured at a five-year development of loss reserves of property casualty insurers in using discretionary accrual proxy.

When measuring residual allowance for loan losses, Beaver and Engel (1996) use the residuals, from a regression of allowance for loan losses on loan net charge-offs. Unlike other studies Beneish (1997) focuses on indices, using days in receivables index, gross merging index, asset quality index, depreciation index, selling general and administrative expense index and total accrual to total assets index as the proxies in the specific accrual model. Beaver and McNichols (1998) use serial correlation of one-year development of loss reserves of property casualty insurers. In the recent literature, the issue of how accruals behave in the absence of earnings management is considered an important issue as many studies were carried out by modeling non-discretionary accruals and inferring discretionary accruals. Researchers find that if management manipulates accruals, there is a negative correlation between non-discretionary and discretionary accruals as a result of an attempt to smooth out the income series. The Petroni et al. (2000) approach is to model the discretionary component of accruals based on management's incentives to exercise discretion. By doing that the study allows for separation of the estimation error in the discretionary accrual part from that in the

estimate of non-discretionary accrual component.

Dechow et al. (1995), Kasznik (1999), and Thomas and Zhang (2000) found that discretionary accrual estimates correlate with earnings performance, showing a clear relationship with higher (lower) earnings and positive (negative) discretionary accruals. Specifically, CEM was evidenced by increasing earnings for the most profitable firms and by decreasing earnings for the least profitable firms.

It is argued that managers in financial institutions and insurance companies in sectors that require them to balance financial reporting incentives with regulatory constraints, have significant incentives to manage earnings. Further studies in these areas have concluded that regulatory capital and decreasing taxes balance those associated with increasing taxes (i.e., income smoothing; McNichols, 2000). As these studies focus on the discretion associated with particular accruals (e.g., loan loss provisions in the banking industry and claim loss provisions in the insurance industry, bad debt provisions; MicNichols and Wilson, 1988) problems associated with using a model of expectation for aggregate accruals are avoided. According to Petroni (1992), loss reserves

are underestimated by financially weak insurers, relative to companies who have greater financial strength.

Different Views on a Range of CEM Models

- *The DeAngelo Model* (1986) tested for CEM by calculating first differences in total accruals, and by assuming that the first differences have an expected value of zero under the null hypothesis of no CEM. In that the last period's total accruals, scaled by lagged total assets are used, as the measure of nondiscretionary accruals.
- *The Jones Model* is made more descriptive of actual events by relaxing the assumption that nondiscretionary accruals are constant. Jones (1991) recognises this limitation of the model.⁹
- A modification of the Jones model (see Dechow et al., 1995) was designed to measure discretionary accruals with error when managerial discretion is exercised over revenues to eliminate this bias of the Jones Model (1991).
- *The Industry Model*. The Industry Model relaxes the assumption that NDA is constant over time. However, rather than directly modelling

measures of non-discretionary accruals, the Industry Model assumes that the variation in measures of NDA are common across firms in the same industry group (for details, see Dechow and Sloan, 1991).

- Collins and Hribar (2002) depicts that total accruals are the difference between reported net income and operating cash flow where net income is earnings before extraordinary items and discontinued operations.

Conclusion and Suggestions for Future Research

Flowing through the plethora of methods and approaches used by CEM researchers and their all too often conflicting findings, this study found (as a common theme in CEM literature) an ongoing effort to understand

- Why corporate managers manipulate earnings,
- How earnings are manipulated, and CEM effects on stakeholders (in particular), practitioners, and society (in general).

While managers often emphasize the importance of improved earnings in annual reports and in press coverage and CEOs

comment on increased earnings per share as the key objective in their corporate mandate, research findings suggest a diversity of incentives for CEM and researchers and have empirically tested for such incentives, via a variety of statistical techniques, models, and proxies. The research often generates strong evidence for CEM, but has failed to achieve the consensus needed to support a single model and/or to provide practitioners with a solid insight into resolving this issue. Thus, the search for new CEM models continues.

This study found that while the basic purpose of CEM (to gain advantage by misinformation) has remained constant, the methods of CEM have become more sophisticated over the decades. Thus, a simple unified theory of CEM is unlikely to ever become viable as a means of understanding and controlling CEM.

In examining income manipulation, future research needs to focus on resolving the general absence of transparency in the decision-making process of managers engaged in CEM. While specific accruals need further examination to offset problems associated with aggregate accrual models, future research needs to make the intent behind

accruals less obscure; so as to make specific accruals of less use, as a means of CEM. Future research should, also, follow the gain from CEM—perhaps, by carefully considering insider trading (an observable management action, recognized *social-wrong* and often unlawful act) as a means for managers to convert CEM to personal gain. As the business characteristics in different sectors change with time, it is essential to examine not only the CEM behavior but also changes in CEM behavior and techniques. Awareness, through research and education, of basic business ethics, corporate governance, and the socio-economic consequence of CEM may be a remedial step in mitigating CEM. Along those lines, Elias (2004) found that CPAs in organizations with strong ethical standards viewed CEM as more unethical. Thus, a corporate culture with a strong sense of business ethics and an awareness of agency problems and costs is likely to be a sound means of combating CEM and its pernicious effects on business trust.

Endnotes

1. Such as the Doha Development Round WTO discussion—that commenced in Nov 2001, but failed in a related round in Geneva in July-Aug 2008.

2. For details on early literature see Jenson and Meckling, 1976.

3. *Business Week* 2002.

4. For details on ethical practices of firms see Batten, Hettihewa, and Mellor (1997; 1999).

5. Securities Exchange Commission (SEC), Australian Securities Exchange (ASX), Financial Times (and London) Stock Exchange (FTSE).

6. NB: Sarbanes-Oxley legislation, in 2002, ended the mixing of non-audit and audit services for firms listed on U.S. exchanges.

7. The Big 6 Audit firms of 1995 have shrunk to the Big 4; due to a merger in 1998 and the collapse of Arthur Andersen in 2002 (due to its malfeasance with Enron).

8. For more details see McNichole, 2000, pp. 316-335.

9. Many studies were undertaken using the Jones Model (1991) and 'Modified Jones Model'. Dechow et al., 1995, Guay et al., 1996 state that the modified Jones model is superior to other models in isolating the effect of discretionary accruals. Improved versions of this has been used by researchers (Gul et al.,

2003; Heninger, 2001) using cross-sectional modified Jones model in their studies. The cross-sectional (e.g., industry specific parameters) are included in the modified version to obtain better information. Among others, Boonyanet and Julavittayanukool, (2008) used a *Modified Jones Model*.

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