ELSEVIER

Critical Perspectives on Accounting 18 (2007) 191–210

CRITICAL PERSPECTIVES ON ACCOUNTING

www.elsevier.com/locate/cpa

History repeats itself: The failure of rational choice models in corporate governance

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Received 3 July 2005; accepted 30 November 2005

Abstract

Conventional proposals to reform corporate governance based on the rational model of decision making may be insufficient in preventing future corporate debacles. Typically underestimated are the pressures from conflicts of interest and bias on reputational intermediaries. Judgements and choices made by auditors during professional engagements may not strictly adhere to the rational model of decision making. This is of significance with regard to the gatekeeper function of auditors and relevant legislation. A discussion on earnings management elaborates by suggesting that strictly numerical measures are not a reliable guide to the quality of corporate governance. It is suggested that our understanding of monitor behaviour in corporate governance would be improved by placing it on psychologically more realistic foundations. Some of these foundations are introduced.

JEL classification: B49; G38; M40; K42

Keywords: Audit; Earnings management; Monitor failure; Rational choice; Bias; Behavioural economics

1. Introduction

This essay is concerned about the apparent ease with which existing systems of corporate governance can be undermined. We ask whether reforms based on the standard monitoring model of corporate governance are sufficient to prevent corporate scandals from occurring

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doi:10.1016/j.cpa.2005.11.010

in the future. Or are these reforms little more than cosmetic sticky plaster to give the appearance of having righted the corporate ship whilst leaving it still fundamentally flawed? The somewhat pessimistic conclusion we reach is that they are insufficient. It seems inherent in human nature to gamble imprudently, to cheat and to lie in order to give the appearance of being able to reach unattainable goals, or to cover up the fact that some were missed. Thus, whilst the mavericks of the corporate world may need a few years to find their way through the new rules, once they do, further scandals are inevitable.

During the second half of the 1990s, exceptionally bright people ran exceptionally successful companies, or so it appeared, and helped create exorbitant expectations amongst investors. For a short while this induced an atmosphere that indicated the suspension of economic laws on risk and return. However, increasingly aggressive financial reporting could maintain the mirage of ever increasing earnings only for so long. The subsequent deluge of corporate collapses tarnished the reputation of the corporate system and that of the monitoring system designed to prevent fraud (Coffee, 2003a; Clarke et al., 2003).

Enron was the biggest corporate scandal and one of the biggest corporate collapses in history. Even more worrying was that this was quickly followed by aftershocks of equal magnitude such as WorldCom, Parmalat and the collapse of Germany's Neuer Markt, revealing something rotten in the state of the corporate world.[1] These scandals, predictably, led to a great deal of soul searching by policy makers, commentators, accountants and academics on both sides of the Atlantic. One result of this has been the Sarbanes-Oxley Act of 2002 in the United States and various legislative and regulatory efforts in Europe and elsewhere aimed at preventing a repeat of such debacles.[2]

Corporate scandals typically lead to changes in legislation.[3] Generally, what are seen as specific and/or unique causes of a scandal are met with specific changes to particular rules, laws and codes of best practice. That is, technical fixes are sought for presumably technical issues. The problem with this is, that a few years down the road, trust in corporate governance is likely to again be tested by the recurrence of similar misdeeds. Only a decade before the Enron cohort of frauds, for example, the United States was engulfed in the Saving and Loans debacle, and the junk bond saga. The United Kingdom suffered a string of corporate debacles in the late 1980s and early 1990s, including the collapse of BCCI, the Maxwell group of companies, and Polly Peck. More recently UK authorities were investigating the pensions disaster at insurer Equitable Life. Clarke et al. (2003) discuss four decades of corporate collapses in Australia, and elsewhere, commenting on the familiar patterns of the observed cases and the subsequent legislative responses. Thailand, at the centre of the

[1] The 1997/1998 Asian financial crisis, rooted in dismal corporate governance, had preceded this of course. Entire economies were pushed towards financial meltdown as the result of fraudulent or highly impudent management of firms and a lack of supervision.

[2] A small selection include the United Kingdom's Company Law Reform White Paper of March 2005 (see also the New Draft Clauses and Explanatory Material, September 2005); Italy's 2004 Reform of Company Law; Germany's German Corporate Governance Code of 2002 (Also the 2003 Grundsatzkommission Corporate Governance. More recently, the 2004 Draft Law of the Integrity of the Companies and the 2004 Bilanzrechtsreformgesetz); France's 2003 Loi sur la Sécurité Financière (LSF); Australia's Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Bill 2003 (CLERP 9), and the Prudential Regulation Authority (APRA) governance regulations expected to take effect from 1 January 2006.

[3] Banner (1997) argues that most major legislation regulating securities markets followed a sustained crash.

1997/1998 Asian financial crisis, had a decade earlier bailed out much of its banking and finance sector, only to repeat the exercise in the late 1990s.

The safeguards, rules and sanctions put in place after a wave of scandals often prove inadequate in preventing the next cohort of frauds. The Sarbanes-Oxley Act, for example, in large parts elaborates standards of existing law which had either not been fully enforced, or were deemed not sufficiently visible (Cunningham, 2003). Ferrarini and Giudici (2005) make a similar argument with regard to enforcement of corporate governance rules in Italy, emphasizing that law on the books can be very different from its application and enforcement. Clarke et al. (2003) argue that many standards-setting exercises fail to address the core problems of corporate governance failures.

The recurrence of scandals points to a potential inadequacy of legislative responses, and gives rise to the question whether more fundamental issues are being neglected. Typical responses to corporate fraud, such as stronger penalties and additional layers of oversight/regulations, have been tried in the past with little success (Coffee, 2003a; Clarke et al., 2003). Even strong enforcement of strict laws, while no doubt deterring some wrongdoing, may not ensure the convergence of interests between principal and agent.[4] Often missing in the corporate governance discussion is a proper recognition of the effects of bias in the decisions of monitors and gatekeepers.

These issues would also appear to be of relevance to another important, but often ignored issue—namely the question to whom the corporation should ultimately be accountable. The compatibility of shareholder maximization and long-term sustainability of the firm, and indeed that of an entire economy, deserves a thorough discussion. Lazonick and O'Sullivan (2000) and O'Sullivan (2000) identify the significant shortcomings of the shareholder maximization version of corporate governance, and question whether this in fact improves the long-term performance of corporate enterprises.[5] The rate of return on corporate stock may be a poor measure of a firm's performance, especially over longer periods, and also tends to neglect the discussion on other stakeholders.[6] The question to whom the corporation should ultimately be accountable is an important one. However, it would seem that effective monitoring is required irrespective of the economic aims of a firm. If this interpretation is correct, then it should be useful to have an adequate understanding of agent motivation and choice behaviour within a corporate setting.

The paper proceeds as follows. Section 2 outlines potential explanations for a breakdown in corporate governance. The rational model of decision making and behavioural decision

[4] 'Principal' and 'agent' generally refers to the separation of ownership and control. The principal-agent problem arises whenever a principal hires an agent to perform certain tasks, which highlights the necessity of aligning the interests of these two parties (Smith, 1776). Berle and Means (1932) referred to the alignment of the interests between management and the holders of the firm's capital. More broadly defined, 'principal' need not necessarily be equated with ownership (especially share ownership).

[5] Further examples of research on the impact of different corporate governance structures on executive behavior and/or organizational performance include Core et al. (1999) and Gompers et al. (2003).

[6] Not that the Japanese model, supposedly being more supportive of long-term investment activities of corporations, necessarily provides a better guide to long-term firm performance. We cannot possibly do justice in this short essay to the rich field of research that discusses the question whether an emphasis on 'shareholder value' allows for the perpetuation of societal prosperity. Engelen (2002) may serve as an introduction to some of these issues. For an elaboration and critique of shareholder theory and practice, see O'Sullivan (2000).

theory are introduced. Section 3 discusses the issue of earnings management, and suggests that the rational actor assumption is at the very heart of controversies with regard to its definition and measurement. Section 4 strongly cautions against the exclusive use of the rational model of decision making in explaining agent behaviour in corporate governance. We argue that this model's interpretation of human choice behaviour provides an inadequate understanding of crucial aspects of the choice behaviour of monitors and gatekeepers. Section 5 concludes the discussion, and suggests that the use of psychologically more realistic assumptions could result in better policy recommendations.

2. Some reasons for the breakdown in corporate governance

Williams (2004) identifies the colonization of accounting by what he calls positive economic science (PES) as one possible cause for the frequent involvement of auditors in corporate fraud. For Williams, the failure of accounting to prevent cases like Enron is a moral issue. He notes that while the application of neoclassical economics to accounting may have introduced an appearance of scientific rigour, this has not made accounting better at preventing financial misrepresentation and fraud. It may possibly have changed the interpretation of the accounting function from one with a strong emphasis on moral and legal values, to one that relies on technical mechanisms (Williams, 2004). The role of accounting in corporate governance may not be served by the adoption of seemingly scientific methods, if the models on which these are based miss crucial elements of human nature.

An over-reliance on technical means to superficially verify compliance with given standards may come at the cost of seeking out and preventing earnings manipulations and outright fraud. Revisions of accounting standards, procedural rules, and sanctions have generally not improved the quality of accounting (Clarke et al., 2003). Too much trust may be placed in developing mathematical models to estimate compliance with technical guidelines such as the Generally Accepted Accounting Principles (GAAP). Such reliance may take accounting away from a moral and legal role, and exposes auditing to the danger of irrelevance in the detection and prevention of fraud (Williams, 2004). One thing is for certain, the accounting profession as a whole has failed in detecting and preventing the more recent cases of corporate misdeeds.

Many of the assumptions regarding an auditor's conduct are based on the rational model of decision making, which has dominated and shaped the economic analysis of choice for much of the past 50 years. Rational-choice theory assumes that the individual is a self-interested expected utility maximizer, and has well-defined, stable and consistent preferences or tastes. Further assumed is the strict application of these preferences to final outcomes (but not to changes). The individual is deemed to apply exponential discounting to future outcomes, and consistently adheres to a number of normative decision-making rules (axioms). These rules include the perfect definition of a problem and knowledge of all alternatives, the identification of all relevant criteria and their accurate weighting, and finally the accurate computation and choice of the alternative with the highest expected value (Friedman, 1957; Rabin, 2002).

Monitors and gatekeepers are typically assumed to be rational actors (Shleifer and Vishny, 1997; Prentice, 2000). Members of the board of directors and external auditors, for example,

are thought to care about their reputation, future incomes, and their prospects in the job market. This ideally disciplines their actions through a rational cost-benefit calculus. A well-known United States judicial expression of the trust in reputation as a deterrent to fraudulent behaviour was Judge Easterbrook's position in the DiLeo v. Ernst Young case.[7] The position held that it would be irrational (and preposterous) for an auditor to sacrifice reputation for a negligible financial reward. Hence, the opinion held that the auditor could not possibly have contributed to the fraud in question.

The presumed independence of an auditor may, however, be a myth (Briloff, 2004). Ideally, the audit provides a reliable opinion on the true financial condition of the firm. However, this ignores the fact that financial statements are drawn up by the senior management of a firm, to which auditors affix their signature. In doing so, the auditor gives the financial statement an aura of respectability, which it may not deserve. In a similar vein, Bazerman et al. (2002) claim that true auditor independence is near impossible as the result of unconscious bias during the corporate auditing process, even where the auditor tries to give a neutral opinion.

The assumption that people will actually behave in ways that maximize the mathematical construct of expected utility is at odds with a large body of evidence from psychology and behavioural research.[8] In particular, the rational model of human decision making has been criticised as being potentially misleading with regard to judgement and choice behaviour (Kahneman and Tversky, 1979; Simon, 1955; Tversky and Kahneman, 1974; Rabin, 2002).[9] With the concept of 'bounded rationality', Simon (1955) provided an early alternative to the strictly rational model. Subsequent findings from cognitive psychology and behavioural research indicate that judgement, decision making and behaviour are not exclusively based on logical reasoning. Instead, human judgement and choice is also subject to numerous heuristics and cognitive biases (Fischhoff, 2002; Kahneman and Tversky, 1979; Nisbett and Ross, 1980; Tversky and Kahneman, 1974). Bias may also be due to affect (Slovic et al., 2002), visceral factors (Loewenstein et al., 2001; Schelling, 1984), and pressures towards conformity with the group or authority (Asch, 1952; Janis, 1972). Divergence from utility maximization over time adds a temporal dimension to this literature (Laibson, 1997; Schelling, 1978; Strotz, 1955; Thaler, 1981). These influences may lead to systematic violations of the normative assumptions central to the rational model of decision making. This challenges the view of the individual as a strictly rational actor, and suggests that judgement and decision making may be better understood by investigating actual decision-making processes.

Heuristics (mental shortcuts, or rules of thumb), for example, are useful simplifying strategies that serve as mechanisms for quickly coping with complex situations. Generally, heuristics provide good outcomes. On occasion, however, the very same heuristics which

[7] DiLeo, 901 F.2d at 629. The aiding and abetting claim against the defendant auditor was discarded on the grounds that it would have been irrational for the auditing partner to have acquiesced to the fraud for a gain smaller than the potential loss from a ruined reputation.

[8] Rabin (2002) provides an overview to the integration of psychology and economics in order to achieve a greater degree of realism in the economic analysis of human choice behaviour. For a good introduction to behavioural economics see Camerer et al. (2004).

[9] Institutional economics has a long tradition of fundamental criticisms to some of the core assumptions of mainstream economics, in particular with regard to the strict assumptions about rationality and utility maximization.

allow for quick decision making, may cause faulty decision processes and bias (Nisbett and Ross, 1980). Correcting for bias is an imperfect process (Kunda, 1990). Individuals often continue to be subject to bias even when its operation is clearly demonstrated to the individual, where the concept of bias is clearly understood, and where individuals are explicitly instructed to avoid bias (Babcock et al., 1995). Bias typically enters at the perception stage (when people form an opinion or judgement on a matter) and tends to reflect the individual's prior beliefs. Motivation can affect reasoning through a biased choice of cognitive processes in order to reach the desired conclusions (Kunda, 1990).

A reliance on specific mental shortcuts can lead to systematic biases in judgement (Tversky and Kahneman, 1974). Assessments and decisions are frequently made on the basis on how similar a given instance is to an earlier experience ('Representativeness', Tversky and Kahneman, 1974), and on the ease of recollection of earlier experiences of a similar type ('Availability', Tversky and Kahneman, 1974). At other times, judgment is unduly influenced by first impressions. This can lead to situations where decision makers focus on an initial value (an 'anchor'), properly adjust their responses after receiving additional information, but typically do so insufficiently ('Anchoring and Adjustment', Slovic and Lichtenstein, 1971). Historical precedent, the formulation of a problem, and random information can result in an initial value or belief. Even extreme initial values can form an anchor that individuals insufficiently adjust for when subsequent information allowing updating becomes available (Slovic and Lichtenstein, 1971; Tversky and Kahneman, 1974).

The literature on escalation of commitment shows that decision makers can become over-committed to prior decisions, increasing allocations of resources to failing projects (Staw, 1976). Individuals who confront negative consequences (on earlier views or actions) tend to cognitively distort these to a more positively looking outcome. They also regularly go to great lengths, including taking higher risk positions and hiding losses, in order to avoid recognizing a loss (Bratton, 2002; Krawiec, 2000). This is further strengthened by tendencies towards belief perseverance, the bias towards the status quo. Prior beliefs and expectations filter and shape perception in a way as to support and preserve these earlier held views (Nisbett and Ross, 1980). This can lead to self-serving attributions and motivated reasoning, in order to avoid or reduce cognitive dissonance (Festinger, 1957). Individuals tend to selectively filter out and overweight information that supports a view, and discount evidence that contradicts their initial opinion (Lord et al., 1979). This reflects both the selective attention and differential weighting of information of cognitive processes (e.g. hypothesis confirmation; Snyder, 1984), and also motivational accounts such as cognitive dissonance theory (Festinger, 1957). Such biased assimilation of information typically leads to attitude polarization, where a prior belief is reinforced (McHoskey, 1995).[10]

This bias also operates at the group level where it can be reinforced by social pressures. It is uncomfortable to be the sole dissenting voice in a group. Groupthink describes a situation where bright people in highly cohesive groups can make very bad decisions (Janis,

[10] In an investigation on self-serving bias in auditing, King (2002) shows that social pressure to conform to group norms can counter-balance self-serving bias. King (2002) criticizes Bazerman et al. (2002) who conclude that auditors find it difficult to be independent due to unconscious bias. However, pressure to conform to norms may also reinforce individual bias, or indeed induce it. Whether group pressure works to lessen or to enhance bias would appear to depend on what norms the group emphasizes. See Janis (1972) and Staw (1976).

1972). Typically observed are shared illusions, a sense of invulnerability, presumptions of unanimity, self-censorship, and taboos against antagonizing members of group conspire towards accepting the status quo. These combine to favour the strong discounting of, and limited search for, alternative interpretations.

Research on corporate governance is increasingly turning to the findings of psychology and behavioural economics for answers (Hanson and Kysar, 1999; Jolls et al., 1998; Prentice, 2000). Langevoort, for example, discusses reasons why securities brokers may exploit the trust clients place in them (1996) and investigates why corporations commit securities fraud (1998). More recently, he analyses sub-optimal monitoring (2001a) and examines the tendency of board of directors to acquiesce to management decisions (2001b). Coffee (2001, 2002) elaborates the acquiescence rationale with regard to reputational intermediaries, and defines conditions under which the watchdog role is likely to fail. In particular he asks under what conditions a gatekeeper, such as an auditor, might deem it rational to reduce, rather than preserve, reputational capital. Bebchuk and Fried (2003) dispute the independence of directors in view of pressures from managerial power. These authors strongly question the broad applicability of what they call "the optimal contacting approach", where managers are provided with efficient incentives to maximize firm value. A thorough analysis by Prentice (2000) investigates whether it is always irrational for an auditor or an auditing firm to audit recklessly or fraudulently.

Like everybody else, auditors are subject to behavioural and cognitive influences. They tend to satisfice (Simon, 1955), rather than optimize. This may be inconsistent with, say, Bayesian notions of probability, but is entirely rational from a cognitive cost-benefit perspective as it economizes on the cost of analysis (Asare and Wright, 1997). Auditors use rules of thumb, or heuristics, to guide them, even when objective methods could be more effective (McDaniel and Kinney, Jr., 1995). Auditors have been found to be subject to cognitive dissonance and escalation of commitment (Weick, 1983). Waller and Felix (1984) suggest that auditors display a strong tendency to seek and use confirmatory rather than disconfirmatory evidence.

Memory is critically important to avoiding audit errors, and overconfidence in their memories can lead auditors to commit reckless errors by failing to check working papers before reaching conclusions (Ramsay, 1994). General audit experience may not improve memory (Johnson, 1994). Unfortunately, there seems to be little correlation between auditors' confidence in their ability to make going-concern judgments and their accuracy in doing so (Kida, 1980). Auditors seem to display overconfidence in their abilities (Kent and Weber, 1998) and possibly also in their ethics (Cohen et al., 1995). Auditors are susceptible to a number of other heuristics, including the representativeness heuristic (Kellogg and Kellogg, 1991; Smith and Kida, 1991; Uecker and Kinney, 1977), anchoring and adjustment (Bedard and Wright, 1994; Bonner and Pennington, 1991; Hirst and Koonce, 1996), and availability (Bonner and Pennington, 1991; Haynes and Kachelmeier, 1998).

Bias in the auditor/client relationship can severely compromise the independence of an external audit (Bazerman et al., 2002). There is some evidence that legislators and standard setters are starting to recognize bias as a much more serious problem than might previously have been assumed. The 2002 Statement on Auditing Standards No. 99 (SAS 99) by the American Institute of Certified Public Accountants, for example, highlights the persistence of bias in auditing. The Sarbanes-Oxley Act also goes some way in mitigating bias in

auditing by, for e.g., making rotation mandatory, and prohibiting the provision of certain services. However, the punitive legislation incorporated in the Act is evidence of a long-established, but possibly ineffective, tradition of raising the cost of crime. Of course, there should be penalties for breaking the rules, but past experience shows how easily individuals 'rationalize' such risks away. Regulations that merely serve up more of the same, higher fines, stronger penalties and the like, have failed in the past and it is difficult to see why they should work now.

Deviations from the outcomes predicted by the rational model of decision making are also relevant to research on the concept, detection and measurement of earnings management. The following section will argue that the numerical measures typically used in efforts to detect and measure earnings management are of dubious value.

3. Earnings management

The issue of earnings management is as important as it is controversial. Irregularities in the financial statements are frequently at the center of corporate scandals. Yet earnings management can occur without violating Generally Accepted Accounting Principles (GAAP) or breaching relevant laws, and hence does necessarily involve fraud in the legal sense.[11] The controversy does not end here, as the detection and measurement of earnings management is also a matter of considerable discussion (Dechow et al., 2003). There does not even seem to exist a uniform definition of earnings management in the academic literature. Nor is there any agreement in the literature on whether earnings management is widespread or has a large effect on aggregate reported earnings.

The primary focus of financial reporting is to provide "information about an enterprise's performance by measures of earnings and its components" (FASB, 1978, SFAC 1, para. 43).[12] Thus, financial reports can provide important information about the economic performance of a firm and serve as a guide to a firm's value. In contrast, the wide scope of managerial judgement inherent to existing accounting rules, enables managers to report firm performance in ways that can obscure the firm's true financial situation. Empirical research on corporate governance frequently investigates quantifiable relationships between various measures of corporate performance and specific remedies to agency problems. These include the number and independence of directors on a company board or board committees, and the independence of external auditors (DaDalt et al., 2003; Jones, 1991; Peasnell et al., 2000).It is conceivable that earnings management could play a positive role. Managers might, for example, manage earnings to convey privileged information to the market (Healy and Palepu, 1993), or to reduce political costs (Watts and Zimmerman, 1986). Unidentified earnings management has also been found to enjoy lower capital costs (Dechow et al., 1995), with the potential to benefit selected shareholders, at least in the short run. Finally, managers

[11] Jiambalvo (1996) discusses a range of forms of earnings management. Holthausen et al. (1995) discuss actions including changes in expenditures on research and development, and capital expenditures, as means of earnings manipulations.

[12] Qualitative Characteristics of Accounting Information, Statement of Financial Accounting Concepts No. 1, Financial Accounting Standards Board (1978).

and existing shareholders may benefit from manipulation of (new) investors' perceptions of the firm's value (Kellogg and Kellogg, 1991). Such potentially more benign forms of earnings management come at the cost, however, of increasing the risk that the practice mutates into a more malicious form.

Earnings management is typically inferred if actual earnings differ from expected earnings in the direction favoured by the identified incentive (Dechow et al., 1995; Jones, 1991). One typical methodology estimates earnings before any earnings management is deemed to have occurred, comparing this with actually reported earnings. This approach defines accruals as the difference between earnings and cash flows from operations, decomposing total accruals into expected (or non-discretionary) accruals and abnormal (or discretionary) accruals. The rationale for accrual accounting is the attempt to match costs with related revenues, to better reflect underlying economic performance (Statement of Accounting Concepts No. 1, FASB, 1978, para. 44). As such, the advantage of accruals based accounting should be the minimization of noise in the cash flow of a firm (Dechow, 1994). This can make financial data more meaningful, but introduces judgement and assumptions with regard to future cash flows. Earnings are subject to future revisions if actual cash flows differ from earlier projections. Using accruals accounting provides senior management with opportunities for earnings management. As a result, accruals are prone to both deliberate and unintentional error, which introduces noise to this measure of financial performance. Sloan (1996) suggests that accruals are less persistent than cash flow, due to the greater subjectivity of accruals. The magnitude of this error, in turn, reduces the informational benefit of accruals (Palepu et al., 2000). High levels of accruals may indicate low-quality, i.e. non-persistent-earnings (Dechow and Dichev, 2002). Richardson et al. (2004b) show that less reliable categories of accruals lead to lower earnings persistence.

Accrual prediction models generally use the assumption that forecast errors represent earnings management (DaDalt et al., 2003; Dechow, 1994; Jones, 1991; Peasnell et al., 2000).[13] A number of proxies and control variables are used to distinguish between the normal accrual needs of the firm and abnormal accruals, and to adjust for business cycle patterns. The residual (unexplained or unexpected) component of total accruals is then interpreted as evidence of earnings management.[14] Event-specific earnings management studies typically test the mean abnormal accruals across event firms and test whether the mean is significantly different from zero. A mean significantly different from zero is interpreted as being consistent with earnings management. The literature includes studies on the relative value relevance of cash flows versus accruals (Dechow, 1994; Holthausen and Watts, 2001; Rayburn, 1986; Wilson, 1987); the pricing of discretionary versus nondiscretionary accruals (Guay et al., 1996); tests of earnings management and income smoothing (DeAngelo, 1986; Dechow et al., 1995; Jones, 1991); and the market's mispricing of accruals (Bradshaw et al., 2001; Sloan, 1996; Hribar and Collins, 2002; Richardson et al., 2004a).

The accuracy of popular accruals prediction models in detecting earnings management has repeatedly been questioned.[15] It is recognized that existing techniques for measuring

[13] See Thomas and Zhang (2000) for a comparison of accrual prediction models.

[14] A somewhat simpler approach looks at changes in total accruals as a proxy for unexpected accruals.

[15] See in particular Dechow et al. (1995), for a detailed discussion of strengths and weaknesses of several competing models.

earnings management tend to misclassify some nondiscretionary accruals as discretionary (Bernard and Skinner, 1996; Dechow et al., 1998; Healy and Wahlen, 1999). In general, accruals prediction models estimate discretionary accruals with considerable imprecision (Dechow et al., 1995; Dechow and Skinner, 2000; Thomas and Zhang, 2000).[16] The misclassification of nondiscretionary accruals as discretionary, and the imprecision in estimating discretionary accruals, can lead to the false detection of earnings management (Dechow et al., 1998). Guay et al. (1996) re-examine the models earlier investigated by Dechow et al. (1995), and find that all models under investigation (e.g. DeAngelo, 1986; Jones, 1991) estimate discretionary accruals imprecisely. Controlling for major unusual accruals events (e.g. mergers and acquisitions) may lead to a more refined measure of abnormal accruals, but potentially serious estimation errors remain (Bernard and Skinner, 1996; Hribar and Collins, 2002).

An alternative approach assesses attributes in the distribution of earnings in large samples as evidence consistent with earnings management (Degeorge et al., 1999; Dechow and Skinner, 2000; Myers and Skinner, 2002).[17] This approach tries to avoid the problems associated with the direct measurement of accruals, and concentrates instead on differences in earnings distribution patterns. Examples of this work include Burgstahler and Dichev (1997), who find a high incidence of earnings management in order to avoid small annual losses and earnings decreases. Bartov et al. (2002) note an increase in the percentage of firms that meet or beat analysts' estimates for the period 1983–1997. Burgstahler and Eames (1998) and Degeorge et al. (1999) find an unusually high percentage of zero and small positive earnings surprises. Small reported losses and small declines in reported losses have been found to be unusually rare (Burgstahler and Dichev, 1997; Hayn, 1995). Degeorge et al. (1999) find evidence for earnings management being used to meet or beat a simple hierarchy of performance thresholds: First try to avoid reporting losses, then report increases in quarterly earnings, and finally attempt to meet analysts' earnings forecasts. Myers and Skinner (2002) suggest that executives may engage in earnings management in order to maintain a smooth growth history, and to avoid the severe declines in market valuations when such a string is broken.[18]

The difficulty in detecting earnings management and the general failure of predicting it, may be an indication of the potential inappropriateness of the predominant use of positive economic methodology in accounting (Williams, 2004). Despite the relative ease of producing scholarly papers based on empirical analysis of corporate data, this has not resulted

[16] Specifically, Dechow et al. (1995) find that all the models under investigation produced reasonably well-specified tests, but that the power of these tests was low for earnings management of fairly high levels of manipulation (5% of assets). Further, application to firms, which experience extreme financial performance lead to mis-specified tests for all models. Dechow et al. (2000) pick up on the difficulties of trying to detect earnings management through the focus on management's use of discretional accruals. These authors argue that the identification of firms engaging in earnings management would benefit from concentrating on managerial incentives.

[17] Dechow et al. (2000) point to the trade-off this approach makes vis-à-vis to research using discretionary accruals methods. While discretionary accruals models tend to lack power and tend to use small sample sizes, studies on the attributes of earnings distributions (e.g. see Burgstahler and Dichev, 1997) crucially depends on the assumption that the detected empirical irregularities are evidence of earnings management.

[18] "... the existence of many consecutive quarters of growth in earnings-per-share resulting from accruals (rather than from cash flows) is prima facie evidence of earnings management" (p. 1).

in successes when directed at the prediction of earnings management and financial fraud. The preceding sentence presumes a link between earnings management and fraud, which needs some clarification. Earnings management can encompass a broad range of actions that affect reported earnings, not all of them constituting fraud. Accounting based management of financial reports can be within Generally Accepted Accounting Principles (GAAP), and also include practices that clearly violate GAAP. Yet, while there is considerable disagreement in the literature on the damage caused by earnings management, fraudulent statements typically are the most costly form of occupational fraud (Association of Certified Fraud Examiners, 2002, 2004).[19] Cases of massive corporate fraud tend to center on financial statement manipulations (Coffee, 2003b). It is the potential of earnings management to obscure the true financial state of the firm which gives cause for concern (Levitt, 1998).

The detection and measurement of earnings management remains problematic. Questions on the magnitude and frequency of earnings management and its impact on the allocation of resources in the economy have not been settled with great confidence.[20] Research has generally failed to provide significant evidence of systematic attempts to manage earnings, despite the apparent significance of this problem (Dechow et al., 1995, 2003; Healy and Wahlen, 1999; Larcker et al., 2005).[21] If earnings management is widespread, significant, and key to corporate financial fraud, then the difficulty in detection and measurement is hardly encouraging. Getting around this problem may require some rethinking with regard to the causes and motives for earnings management. In a partial answer, Dechow and Skinner (2000) suggest that current research methodologies are not very efficient at identifying earnings management. These authors add that research has focused on particular managerial incentives that are not overly useful in identifying earnings management behaviour.

In light of the definitional issues, it is hardly surprising that the earnings management literature runs into measurement issues. Strictly numerical indicators for measuring the quality of corporate governance have been found lacking in general (Larcker et al., 2005). A more useful approach for research might be to concentrate on managers' incentives to manage earnings, and on the incentives and motivations of their monitors/gatekeepers to acquiesce. Some of the influences on agent judgement and decision making have already been introduced in previous sections. The following section further develops this argument.

4. Critique on using rational-choice concepts in corporate governance

We question a naïve application of the rational choice model of decision making to the behaviour of agents in a corporate governance setting. There is nothing wrong, per se, with the theoretical propositions of the model. What should be objectionable, however, is the

[19] For a discussion of the disparity in views on this topic, see Dechow and Skinner (2000).

[20] This is in addition to the question whether earnings management is a problem of sufficient severity to justify such a wide discussion. See Denis (2001) for an insight to the breath of the literature.

[21] Larcker et al. (2005) show the limited use of strictly numerical tools and benchmarks in assessments of managerial conduct. These authors examined the relationship between a comprehensive set of corporate governance measures and firm performance, and find very limited explanatory power of the typical structural indicators of corporate governance used in academic research for explaining managerial behaviour and firm performance. Larcker et al. suggest instead the use of psychological measures in judging managerial conduct.

assumption that this model is descriptively valid and synonymous with rational behaviour. Of relevance to this essay is the (mostly) unquestioned adoption of accounting of this model of human judgement and choice. One implication of this adoption is the assumption of conscious corruption as the main problem in cases of financial fraud where auditor involvement is alleged. This would also seem to apply to much of the legislation introduced in response to the more recent scandals. As a result, existing and proposed legislative efforts mainly aim at preventing or minimising fraudulent intentions and penalizing legal transgressions. Less attention is focused on the issue of subconscious bias in the judgement and decision-making process of monitors and gatekeepers.

This paper does not propose to focus on the deficiencies of a particular individual in management, the board, or the external audit team. This would obscure the systematic problems that underlie the frequency of corporate scandals (Clarke et al., 2003; Langevoort, 2003). Any conclusion, which merely places blame on the individual(s) involved, without looking at the deeper causes behind the frauds, seriously misses the point. It also condemns itself to reliving another cycle of scandals just a few years down the road (Coffee, 2003b). Instead, we suggest taking a closer look at decision making within corporate governance. Decisions in corporate governance are often made at the individual level. While the legal and regulatory environment sets the framework within which choices are made, decisions within corporate settings ultimately come down to the individual. Policy recommendations, laws and rules might be more effective if we have a better understanding of how individuals react to a particular risk/reward system.

There is also a clear political aspect in the latest scandals. Changes to the system of corporate governance were major contributors to the latest wave of corporate misconduct. Enron, for one, was highly successful in lobbying for a legal and regulatory environment that suited its immediate objectives. Enron's exemption from oversight in trading certain energy related derivatives, and the ease with which it was able to set up special purpose vehicles, are potential examples of regulatory failure (Coffee, 2003a). Developments that weakened the corporate governance system in the 1990s (as far as the US is concerned) include those that changed the incentives of senior executives and auditors. Other developments frequently mentioned in the literature include the rise equity-based compensation of senior management and the relaxation of the rules on stock option exercise. Also of importance are the increasing provision of consulting services by auditing firms, the Private Securities Litigation Reform Act of 1995, and the Securities Litigation Uniform Standards Act of 1998. The literature on the changing regulatory environment is an important one, and provides one crucial piece to the puzzle (see Coffee, 2003a, 2003b, for a detailed analysis of the changes in the regulatory environment).

It is useful to recall that an economist's model is an abstract simplification of the real world. We have long been taught that assumptions, in general, do not need to be overly valid or realistic as long as the model has reasonably predictive powers (Friedman, 1957). A real and pervasive danger in the use of abstract modelling, however, is to take a simplified theoretical construct and assume that this represents reality. Calabresi and Melamed (1972, p. 1128) commented on this danger by noting that:

> "Framework or model building has two short-comings: The first is that models can be mistaken for the total view of phenomena, like legal relationships which are too

complex to be painted in any one picture. The second is that models generate boxes into which one then feels compelled to force situations which do not truly fit."

With all its advantages, including parsimony and ease of econometric modelling, it has never been claimed by its proponents that the rational actor model represents how people actually act or that its assumptions are highly realistic. Von Neumann and Morgenstern certainly did not make such a claim in their seminal 1944 article, which forms one of the foundations of rational-choice theory.

Rational choice theory may provide an inadequate understanding of crucial aspects of decision making. Primarily, this model would appear inadequate in describing the processes by which judgements and decisions are made, and how new information is incorporated to update prior beliefs. This may require law and economics scholars "*to acknowledge that in some circumstances actual policy decisions should not be based on the assumption that people are rational*." (Arlen, 1998, p. 1768). In addition, the assumption of fixed, well-ordered preferences and perfect information assimilation seem empirically inadequate (Rabin, 2002). It also fails to incorporate the effects of situational and cultural influences on decision making (Archer and Tritter, 2000). Given these shortcomings, it is perhaps not surprising that economists and legal scholars increasingly emphasize an interpretation of rationality that accepts the complexity of human decision making.[22]

Failures in corporate governance appear to occur far more frequently than the presumably high standards of corporate governance in countries with a well-developed system of property rights, law and regulatory agencies might lead us to expect (Turnbull, 2000). In many cases the affected companies issued healthy audit reports just prior to their collapse. This has created an academic literature on an "audit expectation gap", which tries to partially absolve the accounting profession from responsibility in cases of corporate fraud (Guthrie, 1992; Walker, 1991). Under this interpretation, the auditor is seen to be of only secondary importance in the corporate governance setting (Young, 2001). Against this, we would like to ask what, then, is the value of having external audits?

We suggest that the external audit, nonetheless, remains an important component of corporate governance. It is, however, at the time to discard, or at least substantially modify, some assumptions on individual choice making which have guided the accounting profession over the past 40 years. An inflexible reliance of economic theory on the rational model of decision making may lead to over-confidence with regard to the feasibility of independence of external auditors. It is suggested, instead, to base assumptions on decision-making behaviour on psychologically more realistic foundations. Research on decision theory (e.g. Gigerenzer and Todd, 1999), managerial power (Bebchuk and Fried, 2003), and auditor independence (Bazerman et al., 2002) show that the rational model of decision making falls short in explaining real world decision behaviour (see also Jolls et al., 1998; Hanson and Kysar, 1999; Posner, 2003; Parisi and Smith, 2005). The accounting literature has recently re-joined the call for a critical review of the applicability of rational choice theory to auditing and accounting (Briloff, 2004; Williams, 2004).

As already noted, arguments for accounting reform are frequently based on the assumption that auditors are intentionally biased. In contrast, Bazerman et al. (2002) show that a

[22] See, e.g. Jolls et al. (1998).

more fundamental challenge to auditor independence may result from the intrusion of unintentional bias. The American Institute of Certified Public Accountants (AICPA, 2002a) was aware of the potential for bias when it stated in 1988 that: "In the performance of any professional service, a member shall maintain integrity, shall be free of conflicts of interest, and shall not knowingly misrepresent facts or subordinate his or her judgment to others".[23] The underlying assumption, at the time, still being that the auditing process can be impartial and free of bias, presumably if the auditor only 'watches out' for this. Yet, auditors still missed what was going on at Enron and Parmalat, for example.

In the more recent Statement on Auditing Standards No. 99 (SAS 99, AICPA, 2002b), AICPA recognized bias to be a much more persistent problem. SAS 99 reminds auditors that they need to overcome natural tendencies-such as an overconfidence in client statements and suggests an audit be approached with a sceptical attitude and questioning mind. A 'fraud triangle' explicitly outlines the incentives, opportunities and rationalizations when a fraud is being committed. A detailed set of procedures is aimed at increasing the auditor's ability to identify and detect fraud. Steps include communication among engagement partners, with management and the audit committee about the risk of material misstatement, with particular reference to fraud. Consideration of fraud risk factors, accounting estimates for biases, and significant unusual transactions are specifically highlighted. This intuitive approach reflects a comprehensive understanding of the potential for bias in the auditor-client relationship. SAS 99 focuses on new responsibilities and new procedures aimed at improving the likelihood that auditors detect material misstatements. As such, it would appear to be a step in the right direction. How successful SAS 99 will be in actually countering the inevitable bias introduced by the close client/auditor working relationship remains, of course, a matter for future investigation.

Rational choice models of human decision making and conventional numeric measures are unlikely to be a panacea for corporate collapse. This argument extends to the measurement and detection of earnings management. Echoing this sentiment, Larcker et al. (2005), suggest that the structural indicators of corporate governance typically used in academic research are very limited guides to managerial behaviour and firm performance. This underlines the difficulties in measuring corporate governance and suggests that the typical indicators are based on questionable empirical foundations. Enron, as mentioned, scored high on some typical governance metrics (e.g. the separation of the roles of CEO and President; the use of outside directors), and yet failed miserably.

The work on abnormal accruals by Sloan (1996), Palepu et al. (2000), Dechow and Dichev (2002), and Richardson et al. (2004b), shows that specific numeric metrics can still be useful warning signs for impending financial difficulties. Assessing attributes in the distribution of earnings in large samples can provide further evidence consistent with earnings management (Degeorge et al., 1999; Dechow and Skinner, 2000; Myers and Skinner, 2002). The earnings benchmarks hierarchy identified by Degeorge et al. (1999) may provide an additional guide. The same goes for long periods of smooth earnings growth, which may be an indication of efforts to avoid the severe declines in market valuations when such a string is broken (Myers and Skinner, 2002). Callen et al. (2002) find that restating firms tend to have deteriorating

[23] AICPA Code of Professional Conduct, Rule 102—Integrity and Objectivity, adopted 12 January 1988, 2002a

financial performance in the period around the restatement. This identifies inferior financial performance as an additional motivator for aggressive reporting practices of management.

Such metrics may not be foolproof, but they can serve as red flags to potential troubles. However, there is really no alternative to closely examining the financial statements of each individual firm (Larcker et al., 2005). Investors must bear in mind that managers have an incentive to improve the scores of the very benchmarks on which markets focus. Managers are also very good in discovering new instruments, which void the usefulness of existing benchmarks. Finally, users of financial data should be aware of their own biases when interpreting this information, especially the tendency to see what they want to see.

5. Conclusion

A large body of research comments on important aspects of the problem of minimizing the conflicts between principal and agent. However, until fairly recently, the effects of human psychology on judgement and choice behaviour received somewhat less attention in the standard debate on corporate governance. Often ignored, or dismissed as irrelevant, were issues of cognition, perception, heuristics, bias, emotion and affect. This is somewhat odd, as economics and accounting should be concerned with the response of individuals to incentives. It must be valid to ask whether the rational model of decision making is a viable description of how individuals form judgements and make decisions in a corporate environment. This is of particular relevance to the way accounting and auditing are being taught and conducted. It would also seem of importance to legislation in response to corporate scandals.

A time-honoured response to major corporate failures is the establishment of committees of inquiry, changes in legislation, and the recommendation of new laws and codes of best practice. These steps typically react post-hoc to problems, and new waves of corporate debacles tend to shake public confidence in the existing system of corporate governance just a few years later. This, yet again, leads to questions about the adequacy of existing rules, more hearings, reports and proposals for new rules and regulations. The recurrence of waves of fraud should prompt the question whether some crucial elements in human nature are being missed in the standard approach to the agency problem. An over-reliance of legal and economic theory on the rational model of choice behaviour may yield an over-confidence with regard to the feasibility of independence of directors and external auditors. This may also result in over-confidence in the deterrence value of rules and legislation.

There is a growing awareness of the importance of a better understanding of human decision making than is provided by the neo-classical rational choice model alone. Choice behaviour is not solely based on logical reasoning, but is also influenced by biases, schemata, framing, and cognitive and judgmental heuristics (Jolls et al., 1998; Prentice, 2000; Rabin, 2002). If these insights are useful in describing how executive managers and their monitors behave, this would seriously question the efficacy of existing rules and regulations on corporate governance, as these strongly rely on rational actors. At the very least, this would suggest the need for significant modifications to the monitoring model of corporate governance. What is needed is a better understanding of what drives managerial and monitor conduct.

One might finally ask whether massive corporate debacles can happen again, and the sober conclusion is that they can and will. In fact, this is inevitable as long as the inclusion

of crucial features of human nature is being resisted in efforts to keep models of choice behaviour simple. Simple and elegant, unfortunately, do not translate into correct or relevant. Dismissing modifications to models that improve psychological realism is not helpful to economics, or to the accounting profession (both practitioners and scholars). A better understanding of how individuals behave in the real world may at the very least improve our chances of preventing future corporate disasters.

Acknowledgements

I would like to acknowledge the helpful comments of two anonymous referees and also the journal editors, Tony Tinker and David J. Cooper.

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