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Directors' duties of care and the value of auditing☆

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ABSTRACT

This paper uses court's decision in ASIC v Healy (The Centro Case) as a natural experiment through which to empirically examine, and demonstrate, the importance of strengthening directors' duties of care. The Centro decision strengthened directors' duties of care by requiring them to make an independent assessment of auditors' reports, rather than merely relying on auditors' statements. It also required them to have a base level of financial literacy and to look for, and notice, obvious issues, especially ones that are important in the context. The paper assesses the impact of the Centro case by analyzing whether Centro increased the market value of auditing expenditure. The results are positive: the strengthened directors duties are associated with higher CARs for firms that spend more on auditing. Further, after Centro, auditing expenditure had a more positive relationship with market values. Overall, the results demonstrate the importance of strengthening directors' duties of care.

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1. Introduction

Oversight and scrutiny by the board of directors is typically regarded as essential for effective corporate management (Masulis and Mobbs, 2011, 2012). Directors' duties to the company are a core part of these oversight obligations. However, if the directors bear few obligations to the company, or their duties are insufficiently stringent, then such oversight could be lacking. Against this backdrop the decision in *ASIC v Healy*[1] (the Centro case) comes as a "wakeup call" to directors (Katz and McIntosh, 2011a, 2011b). The Centro decision requires that directors make an independent assessment as to the reliability of auditors' reports even when those reports are by a reputable auditor (in Centro's case, PWC). In so doing, the case held that directors cannot merely rely on their auditor and mandated that directors have at least a minimal degree of financial literacy and to scrutinize parts of the financial reports that are especially important in the circumstances. This position represents a significant strengthening of the position in Australia, could help to guide future developments in the U.S. and the interpretation of comparable provisions in the UK Companies Act 2006. However, there is a dearth of empirical evidence on the

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[1] *ASIC v Healey* (2011) 83 ACSR 484.

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benefits of strengthening directors' duties and on the extent to which they complement auditing expenditure.[2] Thus, this paper uses the Centro decision on 27 June 2011 as a natural experiment by which to examine the importance of directors' duties and of directorial oversight of auditing.

Directors are under a duty to exercise skill and care.[3] This can have follow-on implications for the extent to which directors can rely on information from third parties. This paper examines the impact strengthening the duty of care and uses a legal-change in Australia as a natural experiment. In Australia the duty of care is compatible with them soliciting information from third parties and (to a degree) relying on that information.[4] However, in so doing, directors must believe on reasonable grounds that the third party is a relevant expert[5] and must form an independent judgment as to the validity of that information.[6] Prior to *ASIC v Healy*[7] (the Centro case), it appeared to be sufficient to satisfy this duty to hire a high quality auditor (PWC in the Centro case). However, in Centro, the court held that directors would violate their duty if they were to merely rely on an auditor's report without forming an independent judgment as to the validity of that report, which includes an analysis of the reliability of that report. Thus, Centro clarified directors' duties and posited that the duties contained a higher standard than was previously believed.

The Centro decision presents a unique experimental environment through which to empirically analyze the importance of strengthened directors' duties. While directorial oversight is often regarded as essential for good corporate governance, prior studies have not analyzed the role of those directors' duties. One recent exception is examination of directors' duties to creditors in equity–debt holder conflicts (Becker and Stromberg, 2012). This paper empirically examines the importance of strengthening directors' duties and monitoring obligations. The paper assesses the extent to which strengthened directorial oversight complements the auditing function. It does this by analyzing the impact of the Centro decision on the value of auditing services. To do this, we collect data on auditing expenditure and corporate governance from SIRCA and on corporate level data from FinAnalysis. We obtain a sample of around 770 firms for which we can obtain all necessary variables in both the year of the Centro decision (2011) and the preceding year. We then analyze the value-implications of auditing.

We start by performing an event-study analysis. We hypothesize that firms who spend more on auditing will receive a more positive market reaction on the announcement of the Centro decision. This is for several reasons. First, we anticipate that the increased directorial oversight will enhance the auditing function, thereby increasing the value of auditing for all firms. Second, given that the Centro case involved a situation of directorial complacency arising out of the use of an expensive auditor (PWC), we expect that firms who similarly spend large amounts of auditing (and thus, risk complacency) would experience the greatest benefits from Centro. Finally, firms who spend more on auditing are likely to have more complex auditing needs (after controlling for firm size and auditor quality). These firms are precisely the firms who would benefit from additional oversight. We find supportive evidence: firms who spend more on auditing experience a significantly more positive reaction to the Centro announcement than do other firms (even after controlling for other governance, firm, and industry factors).

We then assess the market-value of auditing. To do this, we analyze the relationship between the firms market value (as proxied by its Tobin's Q) and the expenditure on auditing both before and after the Centro decision. We find that auditing expenditures are associated with significantly greater market values after Centro as compared to before. This highlights that the increased directorial oversight complements the auditing function and enhances firm value.

The remainder of this paper proceeds as follows. The next section outlines the legal environment. Then, the paper presents the empirical hypotheses as to which firms are likely to benefit the most from the Centro decision. Thereafter, the study presents the data and then the empirical analysis. Finally, the paper concludes that strengthening directors' duties can be valuable and important for companies, especially those that had relatively weaker oversight.

2. The legal environment

2.1. The Centro decision and the Australian legal environment

The Centro case was a decision of the Federal Court of Australia on 27 June 2011. It involved an action brought by the regulator, the Australian Securities and Investments Commission (ASIC) for (inter alia) breach of the statutorily prescribed directors' duties. The statutory provisions apply in all states in Australia. The presently relevant duty was the duty of care. Directors are under a duty to exercise care and skill in their oversight; this is under both common law[8] and statute.[9] The Australian statutory provision is substantially similar to the corresponding UK statute[10] and states that directors must "discharge their duties with the degree of care and diligence that a reasonable person would exercise if they were […] a

[2] An exception to this is the examination of the role of directors duties to creditors in equity-debtholder conflicts: (Becker and Stromberg, 2012).
[3] This duty is under both common law and under statute: *Corporations Act 2001* (Cth) Section 180.
[4] *Corporations Act 2001* (Cth) Section 189.
[5] *Corporations Act 2001* (Cth) Section 189(a)(ii).
[6] *Corporations Act 2001* (Cth) Section 189(b)(ii).
[7] *ASIC v Healey* (2011) 83 ACSR 484.
[8] *Daniels v Anderson* (1995) 37 NSWLR 438; *Permanent Building Society (in liq) v Wheeler* (1994) 11 WAR 187.
[9] *Corporations Act 2001* (Cth) Section 180.
[10] See the Companies Act 2006 (UK)

director or officer of a corporation in the corporations circumstances; and, […] occupied the office held by, and had the same responsibilities within the corporation, as the director or officer":[11] This duty can allow directors to delegate some actions to third parties,[12] including auditors. Directors are also permitted to rely on information from other parties.[13] However, directors are required to believe on reasonable grounds that the action (i.e. the auditing) is "within the person's professional or expert competence", and the reliance should be both in good faith and following an independence assessment of the information.[14]

The Centro case strengthened the presumed obligations on directors.[15] The Centro case involved a case brought by the Australian Securities and Investment Commission (ASIC) following the failure of Centro. The case concerned the preparation of financial statements. ASIC claimed pursued two major flaws: the misclassification of around AUD 2 billion short term liabilities as long term liabilities and the failure to disclose liabilities of around USD 1.75 billion that arose after the balance-sheet-date. One of the "big four" audit firm, PriceWaterhouseCoopers (PWC) prepared the financial reports. The directors had relied on PWC to prepare audited financial reports and they argued that they were entitled to do so. ASIC pursued a case against the directors for breach of directors' duties. The issue was whether directors would breach this duty by merely relying on third party financial statements.

The court made findings in two presently relevant respects. First, the court considered the nature of directors' duties and the extent to which they could rely on third parties. The court held that directors due breach their duty if they merely rely on third party financial statements. The court held that "the objective duty of competence requires that directors have the ability to read and understand financial statements"[16] and "the Act imposes ultimate responsibility for those matters upon the directors in a way that they cannot delegate".[17] That is, while the directors can engage a third party to prepare financial reports, they must independently scrutinize those reports and they bear responsibility for inaccuracies in financial reports. Further, in other judgments, the court had held that directors cannot merely rely on the business judgment rule[18] to claim that such reliance was a 'genuine business judgment' as such business judgments can pertain only to corporate matters, not to statutory obligations,[19] such as the preparation of financial reports. The finding is largely in line with the argument that directors should also bear some liability for misstatement and non-disclosures in (inter alia) financial reports.[20]

Second, the court made findings in relation to the presumed level of financial literacy of directors. Directors' duties require directors to acquire a basic level of skill.[21] The court held that directors "[require] a knowledge of accounting practice and accounting standards"[22] However, subsequently qualified this to state that directors are not required to be familiar with every accounting standard,[23] know all accounting standards or accounting rules,[24] check the accuracy of all figures or accounting assumptions, or to be experts in accounting standards such that they can pick errors. [25] Subsequently, the impact of the court's decision was to require that directors have a basic level of financial literacy and be able to notice obvious issues, especially ones that are important in the context, such as the classification of liabilities for a financially precarious company (Gibson and Brown, 2012).

The Centro case had a significant impact upon the presumed ambit of directors' duties, creating a substantial shift in the interpretation of directors' duties (Hill, 2012; Leung and Webster, 2012; Sharp, 2012). The case continued the upward trajectory in the standard of care expected of directors (Hill, 2012, 2013). Heretofore, it was assumed that it was sufficient to use an auditor and that it was not necessary to have detained regard to the content of the reports so produced (Katz and McIntosh, 2011a), and there had been a dearth of analysis of the director's ability to rely on third party information (Lowry, 2012). However, the Centro case presents the first exploration of the ability to rely on information from third parties and delegate the production of financial reports.

The decision on the directors' liability was followed by a decision on the directors' penalties. The Corporations Act 2001 (Cth) Sections 1317 J and 1318 empower the court to make a impose range of penalties. The penalties are discretionary (Hill, 2012). The court imposed an AUD 30,000 fine on Centro's former CEO, disqualified the executive directors from being directors for two years, and recorded declarations of contravention against the non-executive directors (without imposing additional penalties). Notably, the court did not exonerate the non-executive directors (a decision that the court could have

[11] *Corporations Act 2001* (Cth) Section 180.
[12] See e.g. *Daniels v Anderson* (1995) 37 NSWLR 438; Corporations Act Section 198D(1)(d).
[13] *Corporations Act 2001* (Cth) Section 189.
[14] *Corporations Act 2001* (Cth) Section 189(a)(ii), 189(b)(i) and 189(b)(ii).
[15] For a useful summary see: Dunn (2011).
[16] *ASIC v Healey* (2011) 83 ACSR 484 at [124].
[17] *ASIC v Healey* (2011) 83 ACSR 484 at [125].
[18] Enshrined in statute in *Corporations Act 2001* (Cth) Section 180(2).
[19] See *ASIC v Fortescue Metals Group Ltd.* (2011) 190 FCR 364 at [198]. See also Varzaly (2012).
[20] On the desirability of rendering directors liable for such misstatements, see e.g. Wan (2009).
[21] *Hall v Poolman* (2007) 65 ACSR 123; *ASIC v McDonald* [2009] NSWSC 287.
[22] *ASIC v Healey* (2011) 83 ACSR 484 at [206].
[23] *ASIC v Healey* (2011) 83 ACSR 484 at [203].
[24] *ASIC v Healey* (2011) 83 ACSR 484 at [211].
[25] *ASIC v Healey* (2011) 83 ACSR 484 at [259].

made). This is important for additional contraventions could lead to the director being banned from holding future directorships.[26]

2.2. Implications for the US and the UK

Findings in relation to the interpretation of Australian laws could help to guide the interpretation of like provisions in the US and the UK.

The UK law is substantially similar to the Australian law.[27] Under the *Companies Act* 2006 (UK) Section 174, "a director of a company must exercise reasonable care, skill and diligence". There is no prohibition on basing decisions on information obtained from third parties, such as expert reports and/or auditors' reports. However, Under Section 173, directors must "exercise independent judgment". This has a similar effect to the Australian requirement that directors form an independence view of the reliability of third-party information.

The Centro decision is unlikely to have major implications for the United States. The US regulatory scheme has emphasized directors' responsibilities for supervision more than for day-to-day management (Frankel, 2008; Leung and Webster, 2012). Such a supervisory role is manifested in regulations such as the *Sarbanes-Oxley Act of 2002* (SOX), which require that directors remain informed about financial statements and the actions of auditors (Fairfax, 2005), which also reflects similar, prior, case law requirements.[28] Post-SOX case-law has emphasized the importance of such oversight (Burch, 2006; Heller, 2007). Indeed, there is evidence that by mandating changes in board-composition and audit-committee-composition, SOX enhanced oversight in companies that were previously relatively worse governed (Arping and Sautner, 2010, 2013). This background suggests that the Centro decision connects with a trend towards enhanced board-oversight in the United States. However, there are several barriers to the Centro case being directly applicable to the US.

Two main differences between the Australian and US position limit the applicability of the Centro decision. The first key difference is that the US law separates the federally governed disclosure regime and state governed directors' duties (Hill, 2012), potentially reducing the direct applicability of the Centro decision (which operates in a system where both directors' duties and disclosure are federal issues).

The second issue is that US courts have been more accommodating towards directors. Second, and as a consequence of the first difference, some states have created director-friendly laws. The main state in question is Delaware, which both has a track-record of director-friendly laws and has attracted many companies to incorporate in Delaware due to those laws (Macey, 2002; Subramanian, 2004; McCahery and Vermeulen, 2005; Hamermesh, 2006). The relevant legal background starts with *Smith v Van Gorkom*.[29] *Smith v Van Gorkom* concerned a situation where directors had approved a takeover on the advice of the CEO in the space of one board meeting and after failing to make further inquiries, obtain a valuation to determine if the takeover-price was reasonable. The court in *Smith v Van Gorkom* held that the directors had breached their duty of care. One of the considerations was that the directors had failed to make an independent assessment of the desirability of the transaction. However, amendments to the Delaware corporate law[30] effaced this ruling, stating that it is not a breach of duty if the director relied in "good faith" on the provided information, and "reasonably believes [the matters] are within such other person's professional or expert competence". This differs from the Australian and UK positions in that that Delaware law does not explicitly require the directors to make an independent assessment of the information. Further, additional cases have assessed the presence of a breach by reference to concepts of 'gross negligence', 'intentionally shirk[ing]' and 'ignor[ing] their duty'.[31] Thus, it is arguable that, at least in Delaware, relying on a high quality auditor (i.e. PWC in Centro) would be enough to satisfy the director duties.

The foregoing discussion suggests that the Centro decision is apt to influence the law surrounding the UK *Companies Act*; however, is unlikely to be efficacious in the US. However, notwithstanding its lack of direct applicability in the US, a finding that Centro was beneficial can help to indicate ways in which the US law could develop to enhance directors' duties and encourage shareholder wealth creation.

3. Hypotheses

The main impact of the Centro case is to strengthen monitoring and oversight (Golding, 2012; Hill, 2012). The Centro case specifically refers to the responsibility of directors in relation to financial reports. This specifically increases directors' oversight of financial reports. This is similar in spirit to the requirement for managers to personally sign-off on financial reports under the *Sarbanes-Oxley Act* of 2002. This should increase the value of audited financial reports by complementing those reports with an additional layer of directorial scrutiny.

The expectation is that companies with more complex auditing needs and who spend more on auditing will benefit more from the greater oversight. This is for several core reasons: First, Centro is likely to have increased directorial oversight

[26] *Corporations Act 2001* (Cth) Section 206C.
[27] For a full consideration of the UK position, see e.g. Hood (2013).
[28] Francis v United Jersey Bank 432 A 2d 814 at 822-823 (1981)
[29] *Smith v Van Gorkom* 488 A 2d 858 (Horsey J) (Del, 1985).
[30] Found in Delaware General Corporation Law, 8 Del C ch 1 (2012) Section 141(e).
[31] *In re The Walt Disney*, 907 A 2d 693, 772 (Del Ch, 2005).

especially for companies using expensive auditors. The Centro case involved a large and expensive auditor (PWC). Companies who use a cheaper auditor would be aware that the auditor produces relatively lower quality reports; and thus, would scrutinize that auditor. However, companies who spend relatively more on auditors could become complacent as to the quality of that auditor. Given that Centro's auditor was PWC, Centro highlighted the need for oversight even when using an expensive auditor. Thus, Centro would have the most benefit for those companies who were using an expensive auditor. Second, even if Centro had a uniform percentage-value-impact for both expensive and cheap auditors, Centro would still have a larger dollar impact for companies who use an expensive auditor. Say Centro increased the value of auditing services by *x%* (i.e. by improving oversight of such services) and the company spends $*D* on such services. Then, the value-benefit of Centro is $*Dx*. Thus, firms who spend more on auditing obtain a higher benefit. Third, firms with higher auditing expenses likely have more complex auditing needs (after controlling for firm size and auditor quality). Thus, all else equal, firms with greater auditing expenditure will need greater directorial oversight and will benefit more from the Centro decision.

This background has empirical implications. The overarching expectation is that companies that spend more on auditing will benefit the most from the Centro case. This, as indicated, is because Centro is expected to increase auditing-oversight (thereby complimenting and increasing the value of, auditing services) and because firms with higher auditing expenditures have more complex auditing needs. There are two major empirical implications from this.

The first implication is that firms with greater auditing expenditure will experience a more positive market-reaction on the announcement of the Centro-decision, reflecting the immediate increase in value. A common proxy for this is the cumulative abnormal return (CAR) earned around the announcement of the event (here the Centro decision). This is the return that the firm earns less the expected return that the firm would earn simply owing to prevailing market conditions. Hypothesis 1 captures this prediction.

> *Hypothesis 1: Companies that spend more on auditors experience a more positive market reaction on the announcement of the Centro decision.*

The second implication is that the Centro case will increase the value of auditing expenditures. That is, if the increased oversight increases the efficacy of auditing, then, after Centro, there should be a stronger relationship between auditing expenditure and the firm's market value. Hypothesis 2 captures this prediction.

> *Hypothesis 2: Centro increases the value of auditing expenditure.*

4. Data and empirical set-up

The aim is to examine which companies benefit the most from the Centro decision and to assess whether Centro increased the market value of auditing. The study uses two inter-related samples.

The first sample is an event-study sample. This is a relatively standard way to assess the value-implications of a particular event (Fuller et al., 2002; Masulis et al., 2007; Harford et al., 2012), in this case, the Centro decision. The event study sample analyzes how the event (the Centro decision) influences firms. The event study involves examining how an event (here the Centro decision) influences a corporations stock returns and operating performance. The event is the Centro decision on 27 June 2011. This calls for measures of the hypothesized auditing variables, stock performance, operating performance, and for control variables with which to mitigate issues of spurious correlation.

The second sample is closely related to the first sample. The second sample is a firm-year panel dataset. This sample analyzes how the relationship between auditing expenditure and market value changes after the Centro decision. The sample analyzes market values between 2010 and 2012 (i.e. one year either side of Centro) as a function of lagged regressors (i.e. from 2009 to 2011). The tight time-frame presents extraneous events from before Centro from influencing the results and ensures a balanced time-frame either side of the Centro decision. The measure of firm value is the firm's Tobin's Q (hereafter, *Q*).

The following sub-sections discuss the variable construction. The study discusses the modeling techniques when presenting the analysis in Section 5. Table 1 contains the variable definitions.

4.1. Auditing variables

The goal is to model the return earned as a function of auditing expenditure. The audit fee data is from SIRCA. SIRCA also provides data on the composition of the firm's audit committee, including information on which directors serve on the audit committee and the independence of those directors. Thus, the study employs an indicator that equals one if the audit committee has a minority of independent directors (i.e. is a minority independent board) and equals zero otherwise, and constructs the natural log of one plus the audit expenditure. All variables are from 2010.

4.2. Stock performance

The measure of the firm's stock performance is its cumulative abnormal return (CAR) earned around the Centro decision. The CAR is basically a summation of the 'abnormal returns' earned over the event period. The 'abnormal returns' are the firm's returns less those of an appropriate benchmark. This ensures that the firm's exposure to market movements does not

Table 1
Variable definitions.

Variable	Definition
Mkt Model CAR (−2,2)	The cumulative abnormal return earned from two days before to two days after the Centro decision (on 27 June 2011). The cumulative abnormal return is the sum of the abnormal returns over the event-window. The abnormal return on day t is the firm's return on day t less the return that would be predicted by a single index market model, with parameters computed over the period 11 days to 210 days before the event. The data is from Datastream
Mkt Model CAR (−5,5)	The market model cumulative abnormal return (as above) earned from five days before to five days after the Centro decision. The data is from Datastream
Mkt Adj CAR (−2,2)	The market adjusted cumulative abnormal return earned from two days before to two days after the Centro decision (on 27 June 2011). The cumulative abnormal return is the sum of the abnormal returns over the event-window. The market adjusted abnormal return is the return that the firm earns less the return earned on the market. The data is from Datastream
Mkt Adj CAR (−5,5)	The market adjusted cumulative abnormal return (as above) earned from five days before to five days after the Centro decision. The data is from Datastream
Audit Fees	The natural log of one plus the firm's audit expenditure in the 2010 financial year. The data is from SIRCA
Minority Indep Audit Committee	An indicator that equals one if a minority of the audit committee is independent and equals zero otherwise. This is from the prior financial year. The data is from SIRCA
Prop Indep Dir	The proportion of directors who are independent and are non-executive. The data is from SIRCA.
Substantial Shareholders %Own	The percentage ownership of substantial shareholders. Substantial shareholders are shareholders who own at least 5% of the company's stock. The data is from SIRCA
Auditor Quality	A proxy for the auditor's quality. This is the auditor's market-share in terms of auditing fees. This is calculated by dividing the total fees earned by the auditor for the firm by the total fees charged by all auditors. The data is from SIRCA
Board Size	The number of directors on the firm's board. This is from the prior financial year. The data is from SIRCA
Independent Chair	An indicator that equals one if the firm's chairperson is an independent director. The data is from SIRCA
Firm Size	The natural log of one plus the firm's book assets. This is from the prior financial year. The data is from Finanalysis
Free Cash Flows	The firm's free cash flows scaled by its book assets. This is from the prior financial year. The data is from Finanalysis
Financial Leverage	The firm's total leverage divided by its book assets. This is from the prior financial year. The data is from Finanalysis
Cash Holdings	The firm's cash holdings divided by its book assets. This is from the prior financial year. The data is from Finanalysis

This table contains the variable definitions. All continuous variables are winsorized at 1%.

drive the results. A higher *CAR* indicates a more positive reaction to the event. Thus, in this case, the expectation is that there will be a higher *CAR* for firms that spend more on auditing and/or firms that have a less independent audit committee. Due to the use of CARs and the focus on a single event-date for the whole sample, any documented results are unlikely to reflect mere market movements.

This study uses two ways to compute the *CAR* earned by firm i over the period from day τ_1 to day τ_2, denoted $CAR_{i,(\tau_1,\tau_2)}$. The cumulative abnormal return is the sum of all abnormal returns earned over the event-period. The 'abnormal return' earned by firm i on day t (denoted $AR_{i,t}$) is the return earned on day t (denoted $r_{i,t}$) less the return that would be expected on day t due to ordinary market movements (denoted $E(r_{i,t})$) . The two methods differ in how they define the expected return. Under the 'market adjusted' method, the expected return on day t is simply the return earned on the market index on day t (per Fuller et al., 2002). Under the 'market model' method, the expected return is the return that would be attributable to ordinary market movements. This is $E(r_{i,t}) = \hat{\alpha} + \hat{\beta} r_{m,t}$, where $r_{m,t}$ is the return on the market index on day t, and $\hat{\alpha}$ and $\hat{\beta}$ are parameters computed over the pre-event period (11 days to 210 days before the Centro decision, as in Masulis et al (2007)) using an OLS estimation of the market model. The $CAR_{i,(\tau_1,\tau_2)}$ is then the sum of the abnormal returns on all days from τ_1 through to τ_2.

A typical event-window is a relatively short time-horizon that goes from a short period before the event-date (to capture any information-leakage or anticipation) to a short period after the event-date (to capture any post-event drift) but does not go for so long that the returns could be attributable to other contaminating factors (Barber and Lyon, 1997; Lyon et al., 1999). In the Australian context, the market is relatively efficient and quickly and accurately responds to market-sensitive announcements, with limited post-announcement drift (in the takeover context, see e.g.,Humphery-Jenner and Powell, 2011). Thus, as they are relatively standard in the literature (Moeller et al., 2004; Masulis et al., 2007; Harford et al., 2012), this paper uses 5-day windows (two days before to two days after the announcement) and 11-day windows (five days before to five days after the announcement). The paper uses stock-market data obtained from Datastream.

4.3. Firm value

The hypothesis is that Centro will increase the relationship between auditing expenditure and firm value. The proxy for corporate value is the firm's Tobin's Q, which is a standard proxy for corporate value (Gompers et al., 2003; Bebchuk et al., 2009). The study uses the firm's market-to-book as a proxy for Tobin's Q.

Table 2
Statistics by audit-committee independence.

	All [1]	Low Audit Fee [2]	High Audit Fee [3]	Difference [4] = [2] – [3]
Audit Fees	11.993	10.845	13.389	−2.544***
Minority Indep Audit Committee	0.016	0.018	0.014	0.004
Mkt Model CAR (−2,2)	−0.021	−0.027	−0.013	−0.014**
Mkt Model CAR (−5,5)	−0.010	−0.016	−0.003	−0.013*
Mkt Adj CAR (−2,2)	−0.015	−0.019	−0.011	−0.008
Mkt Adj CAR (−5,5)	−0.011	−0.009	−0.013	0.004
Prop Indep Dir	0.719	0.687	0.758	−0.070***
Board Size	6.150	5.118	7.394	−2.277***
Substantial Shareholders %Own	0.325	0.309	0.349	−0.040**
Auditor Quality	0.139	0.063	0.229	−0.165***
Independent Chair	0.790	0.735	0.856	−0.120***
Firm Size	18.664	17.135	20.498	−3.364***
Free Cash Flows	−0.130	−0.247	0.011	−0.258***
Financial Leverage	0.350	0.261	0.458	−0.197***
Cash Holdings	0.221	0.302	0.121	0.181***

This table contains summary statistics audit fee expenditure. The figures in Columns 1–3 are sample averages. Column 4 contains the difference between Columns 2 and 3. Superscripts ***, **, and * denote significant differences in means using a two-sample *t*-test.

4.4. Other controls and governance variables

The event study procedure also calls for control variables for use in a multivariate regression framework to ensure that any relationship between audit fees/independence and *CARs* does not merely reflect spurious correlation. The literature documents several corporate factors that could influence returns earned around a corporate event. These variables include firm size (Moeller et al., 2004, 2005), free cash flows (Jensen, 1986), cash holdings (Harford, 1999), and financial leverage (Maloney et al., 1993). The data for these corporate characteristics is from Morningstar FinAnalysis. Further, because this study examines the role of audit fees/independence it is necessary to control for other relevant corporate governance characteristic. These include an indicator for whether the chair is an independent director, the proportion of independent directors on the board (there is limited evidence that board independence necessarily creates value, especially in Australia, see e.g., Fischer and Swan (2013)), and board size. We also obtain data on the percentage shareholding of 'substantial shareholders' (i.e. blockholders) who own at least 5% of the company's shares, as prior evidence suggests that such blockholders can improve governance (Schultz et al., 2013). The data for governance characteristics is from SIRCA. All continuous control variables are winsorized at 1% to mitigate any issues of outliers and are from the prior financial year (to prevent any concern about firms adjusting in anticipation of the Centro decision and because the Centro decision came out towards the financial-year cut-off date for most companies in Australia).

5. Analysis

This section contains the empirical results. The paper first presents univariate results and correlation statistics. It next presents the results of a multivariate regression that controls for other corporate factors that could influence how the market responds to the Centro case.

5.1. Univariate and bivariate analysis

The paper starts with a univariate and bivariate analysis. The expectation, following Hypothesis 1, is that the average *CAR* should be higher for firms that spend a below average amount on auditing. The univariate statistics are in Table 2. The main result is that the average *CAR* is (usually) significantly higher for firms that spend more on auditing services. Not all differences are statistically significant; however, all have the correct sign.

Several corporate factors differ significantly across the subsamples, highlighting the need to control for these in multivariate tests. Higher audit fees are associated with higher levels of auditor quality. We control for auditor quality in the multivariate regressions (below) and also check that the results hold for the set of firms who use lower quality auditors in Section 5.4. Firms that pay higher audit fees tend to be larger and consequently have larger boards and more independent directors. Consistent with the increased size, they also have higher leverage ratios and lower levels of cash (as large firms have less of a precautionary motive for having large cash holdings).

The pairwise correlation statistics support the summary statistics. The pairwise correlation statistics are in Table 3. The main findings are from Columns A and B. The main finding is that there is a statistically significant, and positive, correlation between *CARs* and audit expenditure. These results are consistent with both Hypothesis 1 and Hypothesis 2. There are also some statistically significant correlations between audit expenditure and the other control variables. We control for

Table 3
Pairwise correlation statistics.

		A	B	C	D	E	F	G	H	I	J	K	L	M	N
A	Audit Fees	1.000													
B	Minority Indep Audit Committee	−0.019	1.000												
		[0.591]													
C	Mkt Model CAR (−2,2)	0.189	−0.042	1.000											
		[0.000]	[0.234]												
D	Mkt Model CAR (−5,5)	0.113	0.005	0.505	1.000										
		[0.001]	[0.890]	[0.000]											
E	Mkt Adj CAR (−2,2)	0.154	−0.041	0.987	0.469	1.000									
		[0.000]	[0.252]	[0.000]	[0.000]										
F	Mkt Adj CAR (−5,5)	0.052	−0.001	0.434	0.931	0.445	1.000								
		[0.147]	[0.969]	[0.000]	[0.000]	[0.000]									
G	Prop Indep Dir	0.264	−0.224	0.084	0.019	0.064	−0.018	1.000							
		[0.000]	[0.000]	[0.018]	[0.590]	[0.073]	[0.625]								
H	Board Size	0.585	−0.046	0.110	0.058	0.082	0.005	0.277	1.000						
		[0.000]	[0.200]	[0.002]	[0.103]	[0.021]	[0.885]	[0.000]							
I	Substantial Shareholders %Own	−0.025	−0.048	0.017	−0.032	0.007	−0.067	0.010	−0.118	1.000					
		[0.485]	[0.178]	[0.638]	[0.369]	[0.834]	[0.060]	[0.789]	[0.001]						
J	Auditor Quality	0.297	−0.009	0.046	0.053	0.034	0.029	0.179	0.132	−0.014	1.000				
		[0.000]	[0.801]	[0.199]	[0.134]	[0.333]	[0.411]	[0.000]	[0.000]	[0.700]					
K	Independent Chair	0.174	−0.176	0.075	0.139	0.059	0.127	0.373	0.158	−0.059	0.080	1.000			
		[0.000]	[0.000]	[0.035]	[0.000]	[0.097]	[0.000]	[0.000]	[0.000]	[0.093]	[0.023]				
L	Firm Size	0.709	−0.049	0.119	0.078	0.067	−0.011	0.276	0.672	−0.081	0.277	0.200	1.000		
		[0.000]	[0.163]	[0.001]	[0.028]	[0.059]	[0.763]	[0.000]	[0.000]	[0.022]	[0.000]	[0.000]			
M	Free Cash Flows	0.304	−0.003	0.108	0.085	0.082	0.007	0.043	0.168	0.113	0.147	0.056	0.470	1.000	
		[0.000]	[0.929]	[0.002]	[0.017]	[0.021]	[0.841]	[0.225]	[0.000]	[0.001]	[0.000]	[0.116]	[0.000]		
N	Financial Leverage	0.299	−0.011	0.103	0.015	0.075	−0.051	0.096	0.219	0.099	0.078	0.006	0.263	0.027	1.000
		[0.000]	[0.747]	[0.004]	[0.676]	[0.035]	[0.151]	[0.007]	[0.000]	[0.005]	[0.028]	[0.872]	[0.000]	[0.449]	
O	Cash Holdings	−0.303	−0.007	−0.043	0.024	−0.015	0.091	−0.043	−0.181	−0.124	−0.063	−0.039	−0.432	−0.388	−0.342
		[0.000]	[0.839]	[0.237]	[0.512]	[0.687]	[0.012]	[0.237]	[0.000]	[0.001]	[0.081]	[0.282]	[0.000]	[0.000]	[0.000]

This table contains pairwise correlation statistics for the variables. Brackets contain *p*-values.

Table 4
Regression results.

CAR method Window	Market adjusted (−2,2)	Market adjusted (−5,5)	Market model (−2,2)	Market model (−5,5)
Audit Fees	0.013**	0.011**	0.013**	0.011**
	[0.010]	[0.039]	[0.013]	[0.048]
Minority Indep Audit Committee	−0.027	0.003	−0.025	0.014
	[0.366]	[0.949]	[0.428]	[0.700]
Prop Indep Dir	0.010	−0.052*	0.014	−0.037
	[0.595]	[0.053]	[0.478]	[0.185]
Board Size	0.002	0.001	0.001	0.001
	[0.252]	[0.552]	[0.393]	[0.588]
Substantial Shareholders %Own	0.001	−0.017	0.004	−0.009
	[0.909]	[0.261]	[0.747]	[0.587]
Auditor Quality	−0.011	0.004	−0.013	−0.000
	[0.299]	[0.768]	[0.226]	[0.997]
Independent Chair	0.004	0.030***	0.006	0.030***
	[0.598]	[0.007]	[0.510]	[0.009]
Firm Size	−0.009***	−0.007*	−0.007**	−0.005
	[0.005]	[0.053]	[0.028]	[0.178]
Free Cash Flows	0.027**	0.027*	0.029**	0.040**
	[0.018]	[0.081]	[0.013]	[0.020]
Financial Leverage	0.017	0.010	0.023	0.021
	[0.338]	[0.626]	[0.205]	[0.282]
Cash Holdings	0.021	0.043**	0.023	0.045**
	[0.217]	[0.044]	[0.180]	[0.042]
Constant	−0.018	0.006	−0.074*	−0.090
	[0.682]	[0.918]	[0.095]	[0.104]
Observations	767	767	767	767
R-squared	0.119	0.113	0.133	0.108

This table contains the regression results. The regressions are ordinary least squares (OLS) regressions that include industry group dummies. Columns 1 and 2 contains CARs calculated using a market-adjusted approach to computing abnormal returns. Columns 3 and 4 contain CARs calculated using a market model approach to computing abnormal returns. Brackets contain *p*-values and superscripts ***, **, and * denote significance at 1%, 5%, and 10%, respectively.

these variables in the multivariate regressions in order to mitigate concerns about spurious correlation. Further, we use the variance inflation factor (VIF) to check if multicollinearity is a concern. We find that in the regressions, the mean VIF is between 1.5 and 2 (depending on the regression), with no individual VIF exceeding 4, implying that multicollinearity does not contaminate our results.

5.2. Multivariate analysis – the reaction to centro

The multivariate regressions support the hypotheses. The foregoing analysis demonstrates a correlation between the hypothesized variable (audit expenditure). However, such correlations do not eliminate the possibility of spurious correlations. Subsequently, the next set of tests are multivariate regressions. The regressions take the following form.

$$CAR_{i,(\tau_1,\tau_2)} = \alpha + A_i\beta + \sum_{j=1}^{J} x_i^{(j)}\theta^{(j)} + \lambda_{i(k)} + \varepsilon_i \quad (1)$$

Where, $CAR_{i,(\tau_1,\tau_2)}$ is the cumulative abnormal return earned over the window from day τ_1 to τ_2, A represents the auditing variables (i.e. the firm's audit expenditure), $x_i^{(j)}$ represents the j^{th} control variable, $\lambda_{i(k)}$ represents a set of industry fixed effects (as recommended in Gormley and Matsa, 2014; Petersen, 2009). The terms β and $\theta^{(j)}$ represent regression coefficients and ε_i is the error term, computed using White (1980) robust standard errors. The use of industry fixed effects ensures that the results do not merely reflect the market movements of a given industry.

The results are consistent with the hypotheses and are in Table 4. The main finding is that the *CARs* are statistically significantly higher for firms who spend more on auditing. This is consistent with the idea the firms who might benefit the most from improved oversight benefit the most from the Centro decision and that the increased directorial oversight complements the auditing function. These results are economically significant: firms with a minority independent audit committee experienced returns that were 2.4 to 3.2 percentage points greater than did other firms. The regression R-squared values are of a similar, or slightly larger, size to those reported in prior event studies (Moeller et al., 2004; Masulis et al., 2007; Humphery-Jenner and Powell, 2011; Harford et al., 2012).

The coefficients on the control variables are generally statistically insignificant. This suggests that firms in general were not impacted by the Centro decision. Instead, the impact of the Centro decision depended upon the quality and nature of the firm's auditing oversight. The main exceptions to this are the 'cash holdings' and 'free cash flows' variables, which are

positive and are weakly-to-moderately statistically significant. A plausible explanation for this is that there is evidence that managers of firms with high free cash flows (Jensen, 1986), or high cash holdings (Harford, 1999), tend to exercise less discipline when making expenditures, and could engage in self-interested expenditures. The increased oversight (following Centro) could help to reduce such tendencies.

5.3. Multivariate analysis – market value of auditing

The prediction that the Centro decision enhances auditing suggests that the market-value of auditing expenditure should increase after the Centro decision. This implies that the relationship between auditing expenditure and firm value should increase after the Centro decision. To capture this, the study uses a firm-year panel of data from 2009 to 2011. The regressors date from 2009-2011. The dependent variable is the firm's market value in year $t+1$, so can date from 2010 to 2012. The sample tightly spans the Centro decision to mitigate concerns about extraneous events driving the results (as recommended in Bertrand et al., 2004). The proxy for corporate value is the firm's Tobin's Q (hereafter, *Q*). The study uses two regression techniques: one set of models includes industry effects to account for industry factors.[32] The second set of models uses firm fixed effects to control for unobserved heterogeneity. To examine the relationship between *Q*, auditing expenditure, and the Centro decision, the models use as regressors the auditing expenditure ($\$A$) and a dummy variable for whether the observation post-dates the Centro decision (*C*). The expectation is that the interaction term ($\$A \times C$) will be positive related to firm value. While it is true that the Centro-dummy is effectively a 2011 dummy that can capture other time effects, it is not clear why but for Centro auditing would increase firm value more after 2011. Thus, when combined with the foregoing results, it is likely that a positive and significant interaction term would point towards Centro increasing the value of auditing. The following model captures the regression analysis:

$$Q_{i,t+1} = \alpha + \$A_{i,t}\beta^{(1)} + C_{i,t}\beta^{(2)} + \left(\$A_{i,t} \times C_{i,t}\right)\beta^{(3)} + \sum_{j=1}^{J} x_{i,t}^{(j)}\theta^{(j)} + \lambda_{i(k)} + \varepsilon_i$$

Where, $\$A$ represents the dollar expenditure on auditing, *C* is a dummy variable for whether the observation post-dates Centro (i.e. a 2011 dummy), *Q* represents the firm's Tobin's Q, and $x^{(j)}$ represents the j^{th}th control variable.

The results are in Table 5 and are consistent with expectations. The main finding is that the interaction term (i.e. *Audit Fees* x *Centro Dummy*) is positively and significantly related to *Q*. This suggests that the value of auditing increased following the Centro decision. The coefficient on the individual *Audit Fees* variable suggests a (generally) statistically insignificant relationship between audit expenditure and firm value prior to Centro. Overall, these results are consistent with expectations and the idea that Centro increased the value of auditing by forcing directors to independently analyze audited financial reports.

5.4. Other robustness tests

The results are robust to other model specification issues. Most robustness tests are unreported for brevity. The results are robust in several ways.

Alternative explanations – firm size and auditor quality: One concern is that the reported results might merely be an artefact of large firms spending more on auditors and/or higher quality auditors costing more. That is, the results might merely be a firm-size effect or an auditor-quality effect. Given that the reported models control for firm size and auditor quality (i.e. market share) this is unlikely to be a major concern. Nonetheless, we also analyze and show (in Table 6) that the results are robust to focusing on the sample of small firms (i.e. assets in the bottom 50% of the sample) or of firms that use a lower quality auditor (i.e. auditor market share in the bottom 50% of the sample). These results suggest that the reported findings are not merely a firm-size or auditor-quality effect.

Industry and state effects: The results are robust to industry effects. The reported results use industry fixed effects (based on the company's industry sector). The results are also robust to omitting industry fixed effects or using industry effects at broader 'industry group' level of classification. The results are also robust to clustering standard errors by industry or to using industry-adjusted dependent variables.[33] We also obtain qualitatively similar results if we exclude firms in the financial industry (who are subject to additional regulatory scrutiny, so might be distinguishable from the rest of the sample). The results are robust to controlling for the firm's state of incorporation by using dummies for the state of incorporation. This is unsurprising because, unlike the US, Australia has a federal Corporations Law, which applies in all states. Thus, in this sample, there is no economic reason for believing that the firm's state of incorporation would influence the firm's performance.

Cross-listed firms: the results are robust to excluding companies that re cross-listed in other exchanges. Companies that list on more than one stock exchange are under the securities law regulations of multiple jurisdictions. If those jurisdictions

[32] Using industry effects is generally regarded as econometrically more sound than using industry adjusted measures (Gormley and Matsa, 2014)

[33] Note that the use of industry-adjusted dependent variables can lead to econometrically uninterpretable results, so this paper uses industry fixed effects as suggested in (Gormley and Matsa, 2014)

Table 5
Impact of Centro on the market value of auditing.

Dependent Variable	Q	Q
Column	[1]	[2]
Audit Fees	−0.146	−0.143*
	[0.102]	[0.099]
Centro Dummy	−2.089***	−2.169***
	[0.001]	[0.000]
Audit Fees x Centro Dummy	0.142***	0.148***
	[0.004]	[0.002]
Minority Indep Audit Committee	0.203	0.831
	[0.704]	[0.116]
Prop Indep Dir	−0.694	−0.819
	[0.205]	[0.123]
Board Size	0.019	0.029
	[0.691]	[0.542]
Substantial Shareholders %Own	−0.000	−0.000
	[0.713]	[0.710]
Auditor Quality	−0.406	−0.451
	[0.179]	[0.124]
Independent Chair	0.369	0.186
	[0.135]	[0.440]
Firm Size	−0.039	−0.087
	[0.760]	[0.483]
Free Cash Flows	0.098	−0.179
	[0.580]	[0.311]
Financial Leverage	0.067	0.293
	[0.815]	[0.294]
Cash Holdings	0.824*	1.214***
	[0.057]	[0.004]
Q (lagged)		−0.071***
		[0.000]
Constant	4.098*	5.054**
	[0.093]	[0.033]
Observations	1371	1371
R-squared	0.082	0.139
Number of Firms	747	747

This table contains regression models that examine the impact of Centro on the market value of auditing. The models in Columns 1 and 2 are OLS models that include industry dummies. The models in Columns 3 and 4 are panel models that include firm fixed effects. The dependent variable is the firm's Tobin's Q and post-dates the regressors. The dependent variable dates from 2010 to 2012 and the regressors date from 2009 to 2011. Brackets contain p-values and superscripts ***, **, and * denote significance at 1%, 5%, and 10%, respectively.

have directors' duties that are more onerous, then the Centro case would be less relevant for such companies. The results are qualitatively similar in a sample that excludes such companies.

Thin trading: The results are not merely reflective of small sample of thinly traded companies. One concern in event studies is that thinly traded companies can experience super-normal returns on the announcement of the event, with these returns reflecting both the impact of the event and the value-implications of information that had not yet been incorporated into stock prices (Scholes and Williams, 1977; Dimson, 1979). Further, for thinly traded stocks, market model parameters might be biased and inconsistent. However, this is not likely to be a concern in this sample; the results hold when using market-adjusted returns (which do not suffer from the problems with estimating a market model). Further, the operating performance results suggest that the results are not merely a market-anomaly. Nonetheless, the results also hold when restricting the sample to the 500 largest companies (which are less likely to be subject to thin trading issues).

Outliers: Outliers can be a concern in event studies. The results are unlikely to reflect outliers as the continuous variables are winsorized at 1% (to mitigate the effect of outliers). Further, the results are robust to omitting any observation whose Cook's D influence score is above $4/n$ (the threshold for an observation to be suspected of being an outlier (see e.g., Bollen and Jackman, 1990)). We also obtain similar results if we use a quantile regression (i.e. regression through the median), which is less susceptible to the influence of potential outliers (Frakes, 2007).

Event windows: the results are robust to using a longer or shorter event-window. The reported results use a short event-window to compute cumulative abnormal returns. This is in line with prior literature. Nonetheless, the results are robust to examining longer event horizons (i.e. up to 100 days after the announcement). These results are unreported for brevity and because the short run returns better mitigate concerns about contaminating events influencing the event returns.

Table 6
Robustness to small firms and firms with low auditor quality.

CAR estimation technique	Market adjusted	Market adjusted	Market model	Market model	Market adjusted	Market adjusted	Market model	Market model
Window	(−2,2)	(−5,5)	(−2,2)	(−5,5)	(−2,2)	(−5,5)	(−2,2)	(−5,5)
Sample	Small firms				Low auditor quality firms			
Audit Fees	0.015**	0.012*	0.016**	0.013*	0.015**	0.013**	0.016**	0.015**
	[0.017]	[0.094]	[0.018]	[0.091]	[0.015]	[0.047]	[0.015]	[0.036]
Minority Indep Audit Committee	−0.031	0.005	−0.028	0.020	0.008	0.039	0.013	0.048
	[0.432]	[0.923]	[0.509]	[0.690]	[0.683]	[0.378]	[0.547]	[0.297]
Prop Indep Dir	0.039	−0.053	0.045	−0.036	0.026	−0.039	0.029	−0.029
	[0.155]	[0.145]	[0.112]	[0.350]	[0.291]	[0.230]	[0.243]	[0.403]
Board Size	0.004	0.003	0.004	0.002	0.001	0.001	0.001	0.002
	[0.173]	[0.482]	[0.240]	[0.571]	[0.605]	[0.710]	[0.703]	[0.629]
Substantial Shareholders %Own	−0.025	−0.032	−0.024	−0.025	−0.004	0.005	−0.002	0.012
	[0.319]	[0.284]	[0.351]	[0.438]	[0.849]	[0.856]	[0.917]	[0.650]
Auditor Quality	−0.023	−0.007	−0.032	−0.024	−0.010	−1.069	−0.112	−1.498
	[0.325]	[0.817]	[0.189]	[0.425]	[0.990]	[0.295]	[0.892]	[0.163]
Independent Chair	−0.000	0.038**	0.000	0.034*	−0.001	0.026	0.002	0.031*
	[1.000]	[0.024]	[0.989]	[0.055]	[0.936]	[0.102]	[0.892]	[0.069]
Firm Size	−0.010*	−0.008	−0.007	−0.003	−0.011**	−0.007	−0.009*	−0.004
	[0.097]	[0.257]	[0.263]	[0.719]	[0.021]	[0.180]	[0.069]	[0.409]
Free Cash Flows	0.037**	0.035*	0.038**	0.047**	0.037**	0.031	0.037**	0.043**
	[0.016]	[0.067]	[0.015]	[0.025]	[0.019]	[0.104]	[0.021]	[0.044]
Financial Leverage	0.036	0.021	0.046*	0.038	0.028	0.005	0.035	0.017
	[0.167]	[0.475]	[0.081]	[0.160]	[0.272]	[0.858]	[0.169]	[0.495]
Cash Holdings	0.030	0.040	0.034	0.051*	0.038*	0.050*	0.038*	0.045
	[0.198]	[0.140]	[0.145]	[0.076]	[0.076]	[0.068]	[0.077]	[0.115]
Constant	−0.040	−0.180	−0.101	−0.290**	−0.032	−0.049	−0.077	−0.100
	[0.694]	[0.140]	[0.334]	[0.021]	[0.630]	[0.530]	[0.270]	[0.233]
Observations	394	394	394	394	403	403	403	403
R-squared	0.191	0.164	0.201	0.169	0.136	0.161	0.146	0.162

This table contains OLS regression models where the dependent variable is the firm's cumulative abnormal return around the announcement of the Centro decision. The column header indicates the dependent variable and the sample under analysis. Columns 1–4 examine small firms (book assets in the bottom 50% of the sample) and Columns 5–8 examine firms with lower auditor quality (auditor market share in the bottom 50% of the sample). Table 1 contains the variable definitions. The models also include industry dummies and use robust standard errors. Brackets contain p-values and superscripts ***, **, and * denote significance at 1%, 5%, and 10%, respectively.

6. Conclusion

Oversight by directors is often regarded as essential to ensuring proper management. However, such oversight is useful only if the directors are under stringent duties vis-à-vis the firm. One aspect of this oversight is the duty to exercise care and skill. A live issue is then the extent to which directors can rely on third parties in the preparation of financial reports; and thus, the degree of independent oversight that directors must exercise. Heretofore, the degree of oversight that was required was relatively unclear. Centro clarified the directors' duties and mandated that directors must form an independent judgment of the accuracy and correctness of financial reports, notwithstanding the use of a high quality auditor.

This paper analyzes the impact of the clarification directors' duties in the Centro case. This paper uses an event-study framework to test whether the increased oversight associated with the Centro case increases the value of auditing services. The results show that firms who spend more on auditing receive a more positive market reaction to the Centro decision that do other firms. This is for several reasons. First, to the extent that Centro increases the degree of oversight exercised at all firms, then the additional oversight will benefit all firms to some extent. Second, given that firms who spend more on auditing could become complacent vis-à-vis that auditing; and thus, spend less time scrutinizing (as was the case in Centro itself), the increased oversight-requirements would force heretofore complacent directors to engage in additional monitoring. Third, firms that spend more on auditing often have more complex financial-statements (after controlling for firm size and auditor quality). These are precisely the type of firms that would benefit from increased monitoring. Complementing the market-reaction findings, the results also show that the value of auditing increases after Centro. These results highlight that the additional directorial oversight complements the auditing function.

The findings in this paper have important implications for corporate regulation. The results suggest that shareholder wealth can be improved by strengthening director duties in the context of their duty of care. Prohibiting directors from blindly following third-party information forces them to scrutinize such information. This should lead to directors making decisions that are more informed, and should reduce the incidence of directorial mistakes. Thus, the value-creating benefits of requiring such independent decision-making could shape the interpretation of the UK *Companies Act*[34] and represent a beneficial development in Australian law.

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[34] The court must interpret the *Companies Act 2006* in order to give effect to the provisions of the Act. However, it is strongly arguable that the purpose was to enhance oversight and that the legislature intended an interpretation that would operationalize this purpose. One such interpretation, which this study shows to be effective, is to follow a Centro-esque approach to the interpretation of provisions in the Companies Act that are qualitatively similar to those in the Australian *Corporations Act 2001* (Cth) Section 180.

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