Macrothink Institute™

International Journal of Accounting and Financial Reporting
ISSN 2162-3082
2015, Vol. 5, No. 1

The Effect of Audit Quality and Audit Committees on Goodwill Impairment Losses

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Accepted: December 01, 2014

DOI: 10.5296/ijafr.v5i1.6666 URL: http://dx.doi.org/10.5296/ ijafr.v5i1.6666

Abstract

Using a sample of 528 firm-year observations, drawn from the top 500 U.K. listed firms, this study examines the effect of audit quality and audit committee (hereafter: AC) characteristics on goodwill impairment losses recorded following the mandatory adoption of IFRS3 "*Business Combinations*". The hypothesis investigated is that managers disciplined by effective ACs and auditors are less likely to act opportunistically but instead use their accounting discretion to convey their private information resulting in the recognition of higher amounts of existing goodwill impairments that better reflect the underlying performance of the firm. Shareholders will not expect ACs and auditors to constrain accounting choices (e.g., goodwill impairments) used credibly by managers. After controlling for economic factors and financial reporting incentives, empirical results reveal that audit quality and AC characteristics do not seem to have a significant effect on the recognition of goodwill impairments. Although ACs are expected to act as a monitoring device, the monitoring incentives of AC directors may be hampered by the joint board responsibility for the quality of financial reporting. The results also suggest that the formation of ACs does not always necessarily imply effective monitoring as ACs may fall short of doing what are generally perceived as their duties (Sommer, 1991). These results may be of interest to

standard setters, regulators and policy makers.

Keywords: Goodwill Impairment, Audit Committees, Audit Quality, Corporate Governance

1. Introduction

ACs and auditors have a major role in monitoring the integrity of financial statements of a company and examining their role in constraining opportunistic behavior is of primary interest. The belief that having the financial statements audited by an external independent party serves as a monitoring activity to reduce managerial opportunism in agency settings arising from the separation of corporate ownership and control is grounded in agency theory (Jensen and Meckling, 1976). ACs have also been examined and viewed by prior studies as effective governance mechanisms in monitoring and constraining managerial opportunism(e.g., Jensen and Meckling, 1976; Dechow et al., 1996; Abbott et al., 2004; Chtourou et al., 2001; Xie et al., 2003;Agrawal and Chadha, 2005). The primary purpose of the board's AC isto "monitor the integrity of the financial statements of the company, and any formal announcements relating to the company's financial performance" (FRC, 2003, p. 16).The UK Combined Code (FRC, 2003, p. 16) recommends that all listed companies "*should establish an audit committee of at least three members, who should all be independent non-executive directors. The board should also satisfy itself that at least one member of the audit committee has recent and relevant financial experience*".

This study examines the effect of audit quality and AC characteristics on goodwill impairment losses recorded following the mandatory adoption of IFRS 3 *Business Combinations* in Europe in 2005. IFRS 3 prohibits the amortization of goodwill acquired in a business combination and instead requires goodwill to be tested for impairment annually or more frequently if events or changes in circumstances indicate that the asset might be impaired, in accordance with IAS 36 *Impairment of Assets*(IASB, 2004). Despite the standard setters' contention that the impairment-only approach will improve the information content of acquired goodwill, this approach has been criticized primarily on the grounds of the managerial discretion inherent in the process of testing goodwill for impairment (e.g., Watts, 2003; Massoud and Raiborn, 2003). By exercising discretion inherent in IFRS 3, managers may, depending on their reporting incentives, overstate, understate, or simply not recognize an existing economic impairment loss by being selective with respect to the underlying choices they make when testing goodwill for impairment. This discretion may be used to convey managers' private information about future cash flows. Alternatively, it may be used opportunistically to extract rents from other contracting parties resulting in impairments that are less reflective of the firm's underlying economics (Abughazaleh et al., 2011).

Given the complexity in conducting goodwill impairment testing and prior evidence on the effect of ACs and auditors in monitoring and constraining managerial opportunism (e.g., Dechow et al., 1996; Abbott et al., 2004; Chtourou et al., 2001; Xie et al., 2003;Agrawal and Chadha, 2005), impairment compliance levels may be positively associated with audit quality and AC characteristics. Accordingly, this study hypothesizes that managers disciplined and monitored by effective AC s and auditors are less likely to act opportunistically but instead

use their accounting discretion to convey their private information resulting in the recognition of existing goodwill impairments that better reflect the underlying performance of the firm. Goodwill impairments that are positively associated with effective governance mechanisms (i.e., ACs and auditors) may be interpreted as being consistent with managers acting efficiently as opposed to them acting opportunistically. Shareholders will not expect ACs and auditors to constrain accounting choices used credibly by managers. A sample of 528 firm-year observations, drawn from the top 500 U.K listed firms is used to test the above hypothesis where goodwill impairments are regressed against audit quality and AC characteristics. Economic factors of impairment and proxies for managers' use of discretion are controlled for in the equation.

After controlling for economic factors and proxies for managers' use of discretion, empirical results reveal that audit quality and AC characteristics do not seem to play an effective role in driving the recognition of goodwill impairment losses. Although ACs are expected to act as a monitoring device, the monitoring incentives of AC directors may be hampered by the collective board responsibility for financial reporting quality.

Prior literature has extensively examined the relationship between ACs and earnings management proxied by aggregate accruals; however, to the best of the authors' knowledge, there has been no study examining the influence of a wide range of AC characteristics on goodwill impairments. The study also contributes to the extant empirical research on goodwill write-offs (Lapointe-Antunes et al., 2008; Verriest and Gaeremynck, 2009; Abughazaleh et al., 2011) by examining the effect of audit quality and AC characteristics on firms' compliance with goodwill impairment testing rather than focusing on the monitoring role of general board characteristics (e.g. Abughazaleh et al., 2011). These results may be of interest to standard setters, regulators and policy makers.

The remainder of this paper is organized as follows. Section 2 reviews prior relevant studies and develops the research hypothesis. Section 3 explains the research design employed to empirically test the hypothesis. Section 4reviews descriptive statistics and empirical results and section 6 concludes the study.

2. Literature Review and Hypothesis Development

ACs have been viewed and examined by prior studies as effective governance mechanisms in monitoring and constraining managerial opportunism (e.g., Dechow et al., 1996; Abbott et al., 2004; Chtourou et al., 2001; Xie et al., 2003; Agrawal and Chadha, 2005). The primary purpose of the board's AC is to "monitor the integrity of the financial statements of the company, and any formal announcements relating to the company's financial performance" (FRC, 2003, p. 16). The AC is also responsible for reviewing the company's audit process and internal financial controls. The AC's existence, independence, activity, financial expertise, and size have been examined by prior studies as effective corporate governance mechanisms for the AC to carry out its monitoring activities effectively. Dechow et al. (1996) provide evidence that firms subject to SEC enforcement actions for allegedly manipulating earnings are less likely to have an AC. On the other hand, Beasley (1996) and Peasnell et al. (2005) find that the mere presence of an AC has no affect on the likelihood of financial statement

fraud and accrual-based earnings management, respectively. In terms of AC independence, Chtourou et al. (2001), and Klein (2002) provide evidence that firms with a higher percentage of independent directors on their ACs are less likely to be associated with accrual-based earnings management. In addition, Abbott et al. (2004) and Ebrahim (2007) find that the presence of a completely independent AC is negatively associated with financial misstatement and accrual-based earnings management, respectively. In contrast, Klein (2002) and Chtourou et al. (2001) find no association between accrual-based earnings management and whether the AC is composed entirely of independent non-executive directors. In terms of AC activity, it has been argued that active ACs that meet more frequently are likely to be in a better position to monitor issues such as earning management (Xie et al., 2003). Xie et al. (2003) and Ebrahim (2007) provide evidence that ACs that meet more frequently are associated with lower levels of accrual-based earnings management. Similarly, Abbott et al. (2004) find that active ACs are less likely to be associated with financial misstatements. In terms of the financial experience of AC members, prior studies provide evidence that firms with financially competent AC members are less likely to be associated with financial misstatements (Agrawal and Chadha, 2005; Abbott et al., 2004) and accrual-based earnings management (Xie et al., 2003). Finally, in terms of AC size, Abbott et al. (2004) and Agrawal and Chadha (2005) find no significant association between AC size and the likelihood of financial misstatement. Similarly, Xie et al. (2003) finds no association between AC size and accrual-based earnings management.

In goodwill impairment context, Lapointe-Antunes et al. (2008) find that independent and financially literate AC members effectively constrain managerial opportunism with respect to transitional goodwill impairment losses in Canada, resulting in the recognition of existing impairments the better reflect the firm's economic attributes. Verriest and Gaeremynck (2009) examine goodwill impairments for a limited sample of European listed firms following the adoption of IFRS 3. They find that firms with stronger corporate governance mechanisms measured by the amount of independent members on the board are more likely to engage in goodwill impairment. Finally, using a sample similar to the one examined in this study, Abughazaleh et al. (2011) also find that goodwill impairments are strongly associated with effective board governance mechanisms and conclude that managers are more likely to be exercising their accounting discretion to convey their private information about the underlying performance of the firm rather than acting opportunistically when they test goodwill for impairment. However, in their study, Abughazaleh et al. (2011) do not examine the role of monitoring by ACs on goodwill impairments.

The belief that having the financial statements audited by an external independent party serves as a monitoring activity to reduce managerial opportunism in agency settings arising from the separation of corporate ownership and control is grounded in agency theory (Jensen and Meckling, 1976). Watts and Zimmerman (1983, p. 615) argue that auditing will reduce managerial opportunism only if the market expects the auditor to have a certain degree of independence. Hence, the value of auditing in reducing managerial opportunism is expected to vary with the quality (type) of the auditor. Becker et al. (1998) find that lower audit quality is associated with more accrual-based earnings management. More recent studies in developed countries find no association between measures of earnings management and the

type of auditor (e.g., Peasnell et al. 2005; Agrawal and Chadha, 2005). Similarly, Riedl (2004) finds no evidence of an association between asset impairments and the type of auditor.

This study examines the effect of audit quality and AC characteristics on firms' compliance with goodwill impairment testing mandated by IFRS 3 and expects that managers disciplined by effective auditors and ACs are more likely to avoid opportunism and use their accounting discretion to convey their private information, resulting in the recognition of existing impairments that better reflect the firms' underlying economics. The hypothesis investigated is that goodwill impairments will be strongly associated with economic indicators of impairment and have significant positive associations with auditor and AC characteristics. If both of these hold, then impairments are less likely to be opportunistic. Shareholders will not expect boards to constrain accounting choices credibly used by managers to signal their private information about future cash flows.

3. Research Design

3.1 Sample firms

This study uses a sample similar to that used by Abughazaleh et al. (2011); however, AC and auditor characteristics are examined rather than focusing on general board proxies. Table 1 presents the sample construction process. First, the top 500 UK listed firms by total market capitalization as listed by the Financial Times at 30 March 2007 are selected for the 2005 and 2006 financial years. This results in 1000 firm-year observations. 254 observations belonging to the Financials industry are excluded since their financial reporting processes tend not to conform with other industries. The distinction between financials and non-financials is based on the Industry Classification Benchmark system as given by the London stock Exchange (LSE). The exclusion of the financial institutions results in 746 firm-year observations (373 firms). 80 observations listed on the London Stock Exchange's Alternative Investment Market (AIM) are further excluded since they are required to adopt IFRS based reporting for the first time after the 1st of January 2007 and were still amortizing goodwill according to the provisions of the previous UK GAAP, FRS 10. In addition, firms listed on the AIM are not required to comply with the provisions of the UK Combined Code on corporate governance which may affect the availability of the necessary corporate governance variables required to run the tests. This process results in 666 firm-year observations (333 firms). Finally 87 observations with no positive goodwill balances and 51 observations that do not have necessary data to run the tests are excluded. These procedures result in a final sample that consists of unbalanced data of 528 firm-year observations, comprised of 109 write-off (20.6% of sample) and 419 non-write-off observations (79.4% of sample), representing 84 and 246 firms, respectively. The final sample consists of 256 observations belonging to the 2005 financial year comprised of 60 write-off and 196 non-write-off observations; and 272 observations belonging to the 2006 financial year comprised of 49 write-off and 223 non-write-off observations.

Financial data for sample firms is obtained from the Hemscott Premium Database, supplemented by the firms' annual reports when necessary. Corporate governance variables are hand-collected from the firms' annuals reports. Finally, financial statements prepared in a

currency different from pounds sterling are translated into pounds using the exchange rate at the balance sheet date.

Table 1

Sample Construction*

	Firm-Year Observations
Top 500 UK listed firms by market capitalisation (as listed by the *Financial Times* at 30 March 2007) for the 2005 and 2006 financial years.	1000
(-) observations belonging to the *Financials* industry	(254)
(-) observations listed on the *Alternative Investment Market*	(80)
(-) observations with no positive goodwill balances	(87)
(-) observations with insufficient/ missing data	(51)
Final Sample	**528**
Goodwill impairers	109 (20.6 %)
Non goodwill impairers	419 (79.4 %)
Observations belonging to the 2005 year	256
Observations belonging to the 2006 year	272

* This table presents the construction process for the final sample used to examine the determinants of IFRS 3 goodwill impairment losses.

3.2 Model and Variables

To empirically examine the effect of audit quality and AC characteristics on goodwill impairments, this study adopts a multivariate-pooled tobit regression model similar to that used by Abughazaleh et al. (2011); however, audit quality and AC characteristics are used instead of general board proxies. A tobit regression is used rather than an OLS. The tobit is a censored regression model where observations on the dependent variable are unobservable below some threshold (Maddala, 1983; 1991). Firms that experience an increase in the economic value of goodwill are not allowed to record the increase, causing the distribution of the dependent variable to be censored at zero. OLS produces biased and inconsistent estimates when the dependent variable is censored (Greene, 1997; Gujarati, 2003).

The model controls for the time period by adding a year-end dichotomous variable (*YEND*) that takes the value of 1 for the 2005 year-end firm observations, and 0 for the 2006 year-end firm observations. Data on goodwill impairments, audit quality and ACs are hand-collected from the annual reports of the sample firms, while firm-specific financial variables are collected from the Hemscott Premium Database, supplemented by the firms' annual reports when necessary. Finally, financial statements prepared in a currency different from pounds sterling are translated into pounds using the exchange rate at the balance sheet date. The following model is used to implement the analysis:

$$GIL = = \alpha + \beta 1 B/M + \beta 2 GWA + \beta 3 CGU + \beta 4 \Delta\ TURNOVER + \beta 5 \Delta\ OCF + \beta 6\ ROA + \beta 7 DEBTRATIO + \beta 8 BATH + \beta 9 SMOOTH + \beta 10 \Delta CEO + \beta 11 AUDITOR + \beta 12 ACSIZE + \beta 13 ACINDEP + \beta 14 ACACTIVITY + \beta 15 ACEXPERTISE + \beta 16 YEND + \beta 17 SIZE + e$$

Where:

GIL = firm *i*'s reported goodwill impairment loss (expressed as a positive number) deflated by total assets at the end of *t* -1

B/M = firm *i*'s book value of equity (adjusted for goodwill write-offs) divided by market value of equity at the end of *t*

GWA = firm *i*'s opening carrying value of goodwill deflated by total assets at the end of *t* -1

CGU = a dichotomous variable equal to 1 if firm *i* has more than one cash generating unit at the end of *t*, and 0 otherwise

Δ ***TURNOVER*** = the change in turnover for firm *i* from period *t* -1 to *t* deflated by total assets at the end of *t* -1

Δ ***OCF*** = the change in operating cash flows for firm *i* from period *t* -1 to t deflated by total assets at the end of *t* -1

ROA = the return on assets for firm *i*at the end of *t* -1 (measured as pre-tax profit divided by total assets)

DEBTRATIO = firm *i*'s total debt at the end of *t* -1 divided by total assets at the end of *t* -1

BATH = the change in firm *i*'s pre-write-off earnings from *t* -1 to *t* deflated by total assets at the end of *t* -1, when this change is below the median of non-zero negative values of this variable, and 0 otherwise

SMOOTH = the change in firm *i*'s pre-write-off earnings from *t* -1 to *t* deflated by total assets at the end of *t* -1, when this change is above the median of non-zero positive values of this variable, and 0 otherwise

Δ ***CEO*** = a dichotomous variable equal to 1 if firm *i* experiences a change in CEO in *t* -1 or *t*, and 0 otherwise

AUDITOR = a dichotomous variable equal to 1 if the firm is audited by a big 4 auditor, and 0 otherwise

ACSIZE= the number of members on the AC

ACINDEP = dichotomous variable equal to 1 if the AC is composed solely of independent non-executive directors, and 0 otherwise

ACACTIVITY = the number of meetings of the AC during the financial year.

ACEXPERTISE = the number of financially competent AC members divided by the total number of AC members

YEND = a dichotomous variable equal to 1 for the 2005 year-end firm observations, and 0 otherwise

SIZE = the natural logarithm of total assets at the end of *t*-1

Similar to Riedl (2004), Lapointe-Antunes et al. (2008) and Abughazaleh et al. (2011) the dependent variable *GIL* is firm i's reported goodwill impairment loss (expressed as a positive number) deflated by total assets at the end of t _ 1. Similar to Abughazaleh et al. (2011), six variables are used in the model to control for the economic impairment of goodwill. These variables are measured at the firm level and attempt to capture the actual impairment of firm-wide goodwill. The first three variables are intended to proxy for the characteristics of goodwill (*B/M*, *GWA*, *CGU*). The first proxy, *B/M*, treats the whole firm as one cash-generating unit. Firms with a higher book-to-market ratio are expected to report more goodwill impairment losses. The second proxy, *GWA*, is measured as the opening carrying value of goodwill deflated by total assets at the end of t _ 1. A firm with a greater amount of goodwill in its asset composition may report more goodwill impairment losses because the relative amount of goodwill exposed to impairment tests is greater (Zang, 2008). Therefore, the study expects a positive association between goodwill impairment losses and *GWA*.

The third variable, cash-generating units *CGU*, is a dichotomous variable equal to 1 if firm *i* has more than one cash generating unit at the end of *t*, and 0 otherwise. On one hand, firms with more than one cash-generating unit are expected to carry out more impairment tests and thus may report higher goodwill impairment losses because an existing loss in one unit cannot be netted against an increase in another unit (Schneider, 2001). Managers of firms with multiple cash-generating units may also have more flexibility to use their write-off discretion to overstate goodwill impairments (take a bath or smooth reported income) by allocating the greater part of goodwill to cash-generating units that are expected to decrease in value. Alternatively, this discretion may be used to understate or avoid goodwill impairments by allocating the greater part of goodwill to cash-generating units that are expected to increase in value and hence lower the probability of recognizing goodwill impairment losses. As a result, the current study does not predict a sign on *CGU*. Similar to Abughazaleh et al. (2011), the next three economic variables (*ΔTURNOVER, ΔOCF, ROA*) control for firm-specific past performance and firm-specific change in performance. The first variable, *ΔTURNOVER*, captures accrual-related performance attributes (Riedl, 2004). In

addition, it represents a gross measure of firm performance, which reflects more of the recoverability of goodwill's value. The second variable, *ΔOCF*, captures cash-related performance attributes (Riedl, 2004). In addition, it represents a net measure of performance, which reflects more of the return on investment in goodwill (Riedl, 2004). Cash flows are expected to be a key economic driver that determines the amount of any goodwill impairment loss since value-in-use estimates are highly dependent on cash flow projections. Generating lower cash flows than expected increases the likelihood that impairment charges will be required. The third variable, *ROA*, captures the firm's prior profitability. It is expected that the poorer the firm's past performance, the greater the magnitude of reported goodwill impairment losses. As a result, the study predicts a negative sign on *ΔTURNOVER, ΔOCF,* and *ROA*.

Similar to Abughazaleh et al. (2011), four variables are used to control for incentives managers may face in recording goodwill write-offs (*DEBTRATIO,BATH, SMOOTH, ΔCEO*). The first variable, *DEBTRATIO*, is measured as the firm's total debt at the end of t _ 1 divided by total assets at the end of t _ 1. Total debt is collected from the Hemscott Premium Database and defined as the sum of short-term (debt in current liabilities) and long-term debt. Highly leveraged firms are less likely to record goodwill impairments to avoid the costly violations of debt covenants (Riedl, 2004). Consequently, the current study predicts a negative sign on *DEBTRATIO*.

The second variable, *BATH*, is measured as the change in firms' pre-write-off earnings from t _ 1 to t deflated by total assets at the end of t _ 1, when this change is below the median of non-zero negative values of this variable, and 0 otherwise. The third variable, *SMOOTH*, is measured as the change in firms' pre-write-off earnings from t _ 1 to t deflated by total assets at the end of t _ 1, when this change is above the median of non-zero positive values of this variable, and 0 otherwise. Similar to Riedl (2004) and Abughazaleh et al. (2011), the current study expects a negative (positive) association between reported goodwill impairment losses and *BATH* (*SMOOTH*). Similar to previous studies (e.g., Lapointe-Antunes et al., 2008; Abughazaleh et al., 2011), the fourth variable, *ΔCEO*, is a dichotomous variable equal to 1, if the firm experiences a change in CEO in t _ 1 or t, and 0 otherwise. The *ΔCEO* variable is hand-collected from the sample firms' annual reports. The current study expects a positive association between reported goodwill impairment losses and *ΔCEO*.

AUDITOR is a dichotomous variable equal to 1 if the firm is audited by a big 4 auditor, and 0 otherwise. Following the hypothesis investigated in this study, a positive association is expected between reported goodwill impairment losses and *AUDITOR*. This variable is hand-collected from the sample firms' annual reports.

Four variables are added to the regression model to examine the impact of monitoring by ACs on IFRS 3 goodwill impairments. The first variable *ACSIZE* equals the number of AC members (Xie et al., 2003). The second variable *ACINDEP* is a dichotomous variable equal to 1 if the AC is composed solely of independent non-executive directors and 0 otherwise. This definition is used to maintain consistency with both prior research (e.g., Abbott et al., 2004; Chtourou et al., 2001; Klein, 2002; Ebrahim, 2007) and the recommendations of the Combined Code (FRC, 2003). Directors' independence is measured according to firms'

disclosures in their annual reports. The third variable *ACACTIVITY* equals the number of AC meetings during the financial year (Xie et al., 2003; Ebrahim, 2007). The fourth variable *ACEXPERTISE* equals the number of financially competent AC members divided by the total number of AC members (Xie et al., 2003). Consistent with the recommendations of the Smith Guidance on ACs (FRC, 2003), an AC member is considered to be "financially competent" if he/she holds a professional accounting qualification (e.g., Chartered Accountant) and/or has experience in corporate financial matters (e.g., a finance director in a listed company). These four variables are hand-collected from the sample firms' annual reports at the end of t. Following the hypothesis investigated in this study and consistent with the recommendations of the Combined Code and results of prior research, the study expects that firms with larger, independent, more active, and financially literate ACs will record higher amounts of existing goodwill impairments that also better reflect the firms' underlying economics and hence a positive sign is predicted on all four variables.

YEND controls for the time period. Finally, *SIZE* is measured as the natural logarithm of total assets at the end of t _ 1, Following prior studies (e.g., Zang, 2008), the current study does not predict a sign on *SIZE*.

4. Empirical Results

Table 2, panel A, presents descriptive statistics for the continuous variables used in the multivariate tobit regression analysis, as well as the results of two-tailed t-tests of differences in means and two-tailed Mann-Whitney U-tests of differences in median. The table reveals that write-off firms exhibit poorer financial performance than do non-write-off firms, reflected in a significantly lower mean and median for *ROA* and significantly lower medians for Δ*TURNOVER* and Δ*OCF*. The table also reveals that that write-off firms have larger ACs than non-write-off firms. The average (median) AC size is 3.734 (3.000) and 3.485 (3.000) for write-off and non-write-off observations, respectively. Mean and median differences are statistically significant at the 5% level. The table also reveals that ACs of write-off firms meet more frequently than ACs of non-write-off firms. ACs of write-off firms meet on average (median) 4.284 (4.000) times per financial year, while ACs of non-write-off firms meet on average (median) 3.962 (4.000) times. The mean difference is statistically significant at the 10% level. In terms of *ACEXPERTIS*E, Table 2, Panel A reveals that the mean (median) percentage of financially competent directors on the ACs of write-off observations is 36.7 % (33.3 %); for non-write-off firms, this percentage is 36.2 % (33.3 %). None of these differences is statistically significant. In terms of firm size, write-off firms are larger than non-write-off firms as reflected by the significantly higher mean and median for *SIZE*. However, while univariate differences exist between the write-off and non-write-off firms with respect to *ACSIZE* and *ACACTIVITY*, the multivariate tobit regression offers advantages over this comparison because it controls for the effects and interrelationships between other independent variables and is deemed to be more robust than univariate analyses in detecting significant relationships between the dependent and independent variables. Therefore, the multivariate results are given greater consideration in this study.

Table 2, panel B provides descriptive statistics for the dichotomous variables used in the multivariate tobit regression. The table reveals that write-off firms have more cash-generating

units and experience more CEO changes than non-write-off firms, as reflected by the statistically significant differences on *CGU* and Δ*CEO*. Panel B, also reveals that 97% of the sample firms are audited by big 4 auditing firms. This percentage is 95.4% and 97.4% for write-off and non-write-off observations, respectively. This difference is not statistically significant. Finally, in terms of AC independence, 90% of the sample firms have ACs composed entirely of independent non-executive directors. This percentage is 87.2% for write-off observations and 90.7% for non-write-off observations. This difference is not statistically significant between the two groups of observations.

Finally, multicollinearity(O'Connell, 1995) does not appear to be a problem in this study as the highest pair-wise correlation coefficient is 0.625 (untabulated), and the highest variance inflation factor is less than 2.5 (O'Connell and O'Sullivan, 2011).

Table 3 presents the results of the multivariate tobit model examining the impact of monitoring by auditors and ACs on goodwill impairments losses.Results reveal that *ACSIZE* (Z = 1.311), *ACACTIVITY* (Z = 0.930), and *ACEXPERTISE* (Z = 1.514), while all of the correct sign, are insignificant. Contrary to expectations, *AUDITOR* (Z = -0.097) and *ACINDEP* (Z = -1.047) are negative and insignificant. Regarding the other variables, Δ*OCF* (Z = -1.456), and *YEND* (Z = 1.625), while of the correct sign, are not significant; and *CGU* (Z = 1.776), is significant at the 10% level.*ROA* (Z = -2.922) and *BATH* (Z = -3.046) are negative and significant; and *B/M* (Z = 2.286), *SMOOTH* (Z = 2.191), and Δ*CEO* (Z = 2.525) are positive and significant.

After controlling for economic factors, the overall results suggest that managers are exercising discretion in the reporting of goodwill impairment losses following the adoption of IFRS 3, as indicated by the significant coefficients for *BATH*, *SMOOTH* and Δ*CEO*. The results also indicate that auditor and AC characteristics do not seem to play an effective role in driving the recognition of existing goodwill impairment losses. Comparing them with Abughazaleh et al. (2011), the results collectively suggest that board, rather than AC characteristics are likely to be more important in monitoring and constraining managers' opportunistic accounting choices when they review goodwill for impairment. Although ACs are expected to act as a monitoring device, the monitoring incentives of AC directors may be hampered by the collective board responsibility for financial reporting quality. These results contrast with Lapointe-Antunes et al. (2008) who find that independent and financially literate AC members effectively constrain managerial opportunism with respect to transitional goodwill impairment losses in Canada. However, they are consistent with the view of Sommer (1991, p. 91) who argues that having an audit committee as part of the firm's governance structure and having an *effective* audit committee are different matters. Sommer (1991, p. 91) notes that "there is considerable anecdotal evidence that many, if not most, ACs fall short of doing what are generally perceived as their duties." Finally, another possible explanation for the insignificant coefficients on the auditor and AC variables may be that the variability for these measures is quite low as indicated by the univariate analyses.

Table 2- Panel A

Descriptive Statistics – Continuous Variables

	All Sample (n= 528)			Write-Off Observations (n= 109)			Non-Write-Off Observations (n= 419)			Test of Differences (Write-Offs vs Non-Write-Offs)	
Variable*	Mean	Median	SD	Mean	Median	SD	Mean	Median	SD	Mean P-Value	Median P-Value
GIL	0.004	0.000	0.020	0.018	0.003	0.040	0.000	0.000	0.000	< 0.000	< 0.000
B/M	0.331	0.302	0.258	0.362	0.329	0.334	0.323	0.298	0.234	0.254	0.436
GWA	0.190	0.137	0.177	0.197	0.150	0.173	0.188	0.134	0.178	0.646	0.413
Δ TURNOVER	0.113	0.090	0.461	0.075	0.046	0.284	0.123	0.106	0.497	0.328	**< 0.000**
Δ OCF	0.020	0.011	0.098	0.007	0.004	0.130	0.023	0.013	0.087	0.133	**0.036**
ROA	0.084	0.075	0.120	0.060	0.056	0.117	0.090	0.083	0.120	**0.019**	**<0.000**
DEBTRATIO	0.249	0.224	0.191	0.245	0.213	0.159	0.249	0.227	0.198	0.834	0.691
BATH	-0.016	0.000	0.120	-0.017	0.000	0.100	-0.015	0.000	0.124	0.887	0.926
SMOOTH	0.029	0.000	0.057	0.033	0.000	0.071	0.028	0.000	0.052	0.421	0.919
ACSIZE	3.536	3.000	0.901	3.734	3.000	0.997	3.485	3.000	0.868	**0.018**	**0.034**
ACACTIVITY	4.028	4.000	1.552	4.284	4.000	1.856	3.962	4.000	1.457	**0.094**	0.157
ACEXPERTISE	0.363	0.333	0.194	0.367	0.333	0.192	0.362	0.333	0.195	0.810	0.806
SIZE	6.889	6.700	1.577	7.316	7.028	1.698	6.778	6.600	1.526	**0.001**	**0.006**

*Table 2, Panel A, provides descriptive statistics for the continuous variables used in the multivariate tobit regression, as well as the results of two-tailed t-tests of differences in means and two-tailed Mann-Whitney U-tests of differences in medians.

Table 2- Panel B

Descriptive Statistics - Dichotomous Variables*

Variable**	All Sample (n= 528)	Write-off Observations (n= 109)	Non-Write-Off Observations (n= 419)	Chi-Square Test of Difference (Write-Offs vs Non-Write-Offs)
	Proportion %	Proportion %	Proportion %	
CGU	**80.7**	**90.8**	**78**	**0.003**
Δ CEO	**25**	**35.8**	**22.2**	**0.004**
AUDITOR	**97 %**	**95.5 %**	**97.4 %**	**0.287**
ACINDEP	***90 %***	**87.2 %**	**90.7 %**	**0.274**
YEND	***48.5%***	***55%***	***46.8%***	***0.124***

Table 2, Panel B, provides descriptive statistics for the dichotomous variables used in the multivariate tobit regression, as well as the results of two-tailed Chi Square tests of differences in proportions.

Table 3
Multivariate Tobit analysis

Variable**	Prediction	Coefficient	Z-Statistic	P-Value	VIF
Intercept		-0.1260	-4.594	**< 0.001**	
B/M	+	0.0255	2.286	**0.022**	1.364
GWA	+	0.0249	1.513	0.130	1.160
CGU	**?**	0.0168	1.776	**0.076**	1.263
Δ *TURNOVER*	**-**	-0.0007	-0.101	0.920	1.207
Δ *OCF*	**-**	-0.0505	-1.456	0.145	1.648
ROA	**-**	-0.0885	-2.922	**0.004**	1.649
DEBTRATIO	**?**	-0.0179	-1.007	0.314	1.376
BATH	**-**	-0.0985	-3.046	**0.002**	2.122
SMOOTH	+	0.1132	2.191	**0.028**	1.224
Δ *CEO*	+	0.0158	2.525	**0.012**	1.079
AUDITOR	+	-0.0017	-0.097	0.922	1.262
ACSIZE	+	0.0049	1.311	0.190	1.568
ACINDEP	+	-0.0104	-1.047	0.295	1.206
ACACTIVITY	+	0.0019	0.930	0.352	1.547
ACEXPERTSE	+	0.0238	1.514	0.130	1.151
YEND	**?**	0.0091	1.625	0.104	1.034
SIZE	**?**	0.0020	0.770	0.441	2.212
McFadden's Adjusted R^2	0.139				

*This table presents the results of the multivariate tobit regression analysis used in this study.

5. Conclusion

Using a sample of 528 firm-year observations, drawn from the top 500 U.K listed firms, this study examines the effect of audit quality and AC characteristics on firms' compliance with goodwill impairment testing mandated by IFRS 3. The study hypothesizes that managers disciplined by effective auditors and ACs are more likely to avoid opportunism and use their accounting discretion to convey their private information, resulting in the recognition of existing impairments that better reflect the underlying economics of the firm. AC size, independence, activity, and expertise are used to proxy for AC effectiveness while big 4 auditors are used to proxy for higher audit quality. After controlling for economic factors and financial reporting incentives, empirical results reveal that auditor and AC characteristics do not seem to have a significant effect on the recognition of goodwill impairment losses following the mandatory adoption of IFRS 3. An explanation for this result may be that audit quality and AC characteristics among the largest UK firms are homogenous. Another explanation is that the monitoring incentives of non-executive directors sitting on ACs may be hampered by the joint board responsibility for the quality of financial reporting. These results are consistent with the view of Sommer (1991, p. 91) who notes that "there is considerable anecdotal evidence that many, if not most, ACs fall short of doing what are generally perceived as their duties". However, the study cannot draw definitive conclusions in this respect as the measures used to capture audit quality and AC effectiveness are rather limited. Consequently, the results from this study clearly show that future research needs to

develop more robust measures to proxy for AC effectiveness and audit quality. The findings of this study will be of interest to standard setters (e.g., Murphy et al, 2013), analysts and regulators.

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