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Equity Recognition of Mandatory Accounting Changes: The Case of Transitional Goodwill Impairment Losses[1]

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Abstract

This study investigates if and how the use of the retroactive method to account for a mandatory accounting change affects a firm's measurement and recognition choices. More specifically, we examine if reporting incentives and constraints are associated with the magnitude of transitional goodwill impairment losses reported by Canadian firms following the adoption of a revised standard on purchased goodwill in 2002. Consistent with predictions, our results indicate firms have an incentive to both overstate and understate the magnitude of transitional goodwill impairment losses. We also show that financially literate and independent audit committee members are conservative and do not appear to induce a reduction in the magnitude of reported transitional goodwill impairment losses. Finally, we find that firms' goodwill reporting choices are only influenced by incentives to maximize transitional goodwill impairment losses when a transitional loss is expected.

Key words: Accounting for Goodwill, audit committee, corporate governance, goodwill impairment, mandatory accounting changes.

La constatation aux fonds propres lors
d'une modification comptable
de nature obligatoire :
Le cas de la perte de valeur des écarts d'acquisition

Cette étude s'intéresse à l'impact de l'utilisation de la méthode rétrospective lors d'une modification obligatoire d'une pratique comptable. Plus spécifiquement, nous nous intéressons aux déterminants (motifs et contraintes) de la perte transitoire sur les écarts d'acquisition constatés par les firmes canadiennes suite à l'adoption de la norme No. 3062 en 2002. Nos résultats témoignent qu'il existe des motifs tant pour surévaluer la perte que pour la sous-évaluer. En outre, un comité de vérification formé en majorité de membres indépendants et dotés d'une expertise en finance ou comptabilité agit de façon conservatrice, c'est-à-dire ne semble pas enclin à limiter le montant de la perte. Enfin, lorsqu'une perte de valeur est anticipée, il semble y avoir une motivation de la part des dirigeants d'entreprises de surévaluer la perte, notamment lorsqu'une plus grande proportion de la rémunération des dirigeants est sous forme de primes fondées sur le résultat. Cela vise à assurer un résultat comptable plus élevé pour les prochains exercices.

Mots-clés : Comité de vérification, écarts d'acquisition, gouvernance, perte de valeur, modification comptable obligatoire.

1.   Introduction

This paper investigates if and how reporting incentives and constraints influence firms'
adoption choices when required to use the retroactive method to account for a mandatory
accounting change. More specifically, we examine the reporting incentives and constraints
associated with the magnitude of transitional goodwill impairment losses reported by Canadian
firms following the adoption of revised standards on purchased goodwill. Since 2002, through a
standard jointly developed and implemented (SFAS 142 in the United States; Section 3062 of the
Canadian Institute of Chartered Accountants' Handbook in Canada), American and Canadian
firms must 1) stop goodwill amortization and 2) conduct a two-step impairment test on goodwill
at the same date every year. The standard also requires firms to recognize existing unrecognized
impairment losses as a cumulative effect of a change in accounting principle. The Canadian
context provides a unique opportunity to assess whether such accounting choice matters (Fields
et al. 2001). In contrast to SFAS 142, which requires the cumulative effect method, Section
3062 requires that the retrospective method be used to account for the change in accounting
policy (i.e. adoption write-offs are charged to opening retained earnings rather than net income).
Understanding managers' reporting choices in the context of equity recognition is important
because the retrospective method's usage will rise in future years: In May 2005, the FASB issued
SFAS 154 - Accounting Changes and Error Corrections that requires the use of the retroactive
method to account for changes in accounting principles for financial years starting on or after
December 15, 2005.

We choose to focus on the adoption of SFAS 142/Section 3062 for a number of reasons.
First, significant controversy surrounded the adoption of SFAS 142/Section 3062, mainly
because it leaves significant room for management interpretation, judgment and bias both at the

time of a merger and in future periods, and requires unverifiable estimates of the value of a firm

and its implied goodwill (Massoud and Raiborn 2003; Watts 2003). As such, SFAS 142/Section

3062 is an appropriate environment to test for managerial opportunism with respect to the

recognition of the cumulative effect of mandatory accounting changes in accordance with the

retrospective method. Second, although equity recognition gives managers the opportunity to

protect future operating earnings by maximizing the initial loss (i.e. taking a big bath), they must

also take into consideration the negative impact impairment losses can have on the quality of

their balance sheet and on the future cash flow expectations of market participants (King 2002).

Therefore, it is not clear which incentives will prevail. Third, the decisions made upon the

adoption of the new standards are likely to affect more than one accounting period. Given a

fixed pool of available impairments on a finite horizon[3], adoption write-offs can be seen as

possible facilitators (constrainers) for potential future earnings management because

understating (overstating) the transitional impairment loss leaves room for more (less) significant

subsequent annual impairment losses. Finally, the adoption of SFAS 142/Section 3062 lowered

the impairment threshold and triggered the recognition of significant impairment losses. Prior to

their introduction, goodwill impairment was calculated at the enterprise-level and the fair value

of goodwill was measured on the basis of undiscounted future cash flows.

In a related paper, Beatty and Weber (2006) show that SFAS 142 adoption choices are

associated with both contracting and market incentives relating to the trade-off between the

timing and the presentation of expense recognition on the income statement (i.e. immediate

below-the-line vs. delayed above-the-line recognition) in the United States. On one hand, they

show that firms are more likely to accelerate expense recognition and take a write-off upon

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[3] Overstating (understating) transitional goodwill impairment losses reduces (increases) future available annual impairment losses because firms cannot write-off more than the book value of goodwill, and previous impairment losses cannot be reversed.

adoption when they are riskier and have higher earnings response coefficients on income from operations. On the other hand, they find that firms are more likely to delay expense recognition and less likely to take a write-off upon adoption when 1) they have less slack in their net worth covenant; 2) they have earnings-based bonus plans that do not exclude the effects of special items; 3) they are listed on exchanges with financial-based listing requirements; and 4) the expected write-off would cause them to violate listing requirements.

Our paper differs from Beatty and Weber (2006) in at least two key aspects. First, our study examines adoption choices made by firms required to use the retrospective method rather than the cumulative effect method. Both anecdotal and empirical evidence suggest both implementation methods are perceived differently even though neither has an effect on above-the-line earnings. According to Karleff (2003), the retrospective method has the potential to mute the impact and attention paid to negative events because they are buried in the past and do not appear on the income statement, contrary to the cumulative effect method. Hence, there is a perceived benefit in bypassing the income statement to report negative events. Consistent with such a view, Gujarathi and Hoskin (1992) and Balsam et al. (1995) show that when provided with a choice between the cumulative effect and the retrospective method to account for mandated accounting changes, managers tend to choose the cumulative effect method when the effect of the change is positive (i.e. income-increasing). In contrast, they prefer the retrospective method when the cumulative effect of the change is negative (i.e. income-decreasing). Finally, equity recognition provides firms with the opportunity to be less forthcoming when it comes to disclosing the effect of the change in accounting policy in their quarterly earnings press releases;

close to 50% of our sample firms do not even mention the transitional goodwill impairment test in their quarterly earnings press releases[4].

Second, we rely on a more comprehensive reporting framework to explain the magnitude of reported transitional goodwill impairment losses. Managers' ability to act opportunistically depends - at least partially - on the effectiveness of the audit committee's monitoring. There were many reasons to expect that this transitional goodwill impairment test would be subject to intense scrutiny by audit committees. SFAS 142/Section 3062 applied to financial years starting on or after January 1, 2002, a period marked by increased pressures on audit committees to better constrain earnings management and financial statement fraud, and the revision of corporate governance standards worldwide in accordance with that objective. The adoption of SFAS 142/Section 3062 was highly publicized and criticized. Finally, reported transitional goodwill impairment losses were significant.

Consistent with Fields et al. (2001), we hypothesize that the magnitude of reported transitional goodwill impairment losses is a function of contracting and asset pricing incentives. We expect financial ratio target deviation, CEO turnover and bonus considerations to be associated with larger transitional goodwill impairment losses, while the value of in-the-money exercisable stock options and the need for financing are associated with lower transitional goodwill impairment losses. We also expect firms with a higher proportion of independent and financially literate directors on the audit committee to record lower abnormal transitional goodwill impairment losses, i.e., beyond what could be predicted with standard economic determinants.

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[4] For example, Gerdau Ameristeel made no mention of the adoption of Section 3062 in its first quarter earnings press release, even though it reported an adoption write-off of 68.6 million dollars, i.e. 100% of the opening balance of goodwill, 3 times the EBITDA and more than 60 times the loss for the quarter. The press release issued on April 24, 2002 is available at www.sedar.com.

Our initial sample comprises all firms listed on the Toronto Stock Exchange (TSX) with a positive goodwill balance at the end of the year preceding the adoption of Section 3062. Our analyses are based on a final sample of 331 firms that adopted Section 3062 in 2002 or 2003. We use a censored regression model that first controls for the economic impairment of goodwill to test our predictions.

Empirical results show a significant association between reported transitional goodwill impairment losses and managers' reporting incentives and constraints. We find firms accelerate the recognition of transitional goodwill impairment losses to minimize deviation from industry median ROE and ROA; as well as when they experience a change in CEO. In contrast, firms delay the recognition of underlying impairment losses to avoid further deviation from industry median leverage, when there are sizable unrealized gains on exercisable executive stock options, or when they subsequently issue new debt or equity capital. Our findings also indicate that financially literate and independent audit committee members are conservative and do not appear to reduce the magnitude of reported transitional goodwill impairment losses. Furthermore, we find that expectations of a transitional goodwill impairment loss may drive some firms' goodwill reporting choices. For instance, if a transitional loss is expected, we show that there is incentive to record higher transitional goodwill impairment losses when a higher proportion of top executives' compensation is bonus-based because it shields future income from operations.

Standard setters are interested in understanding managers' reporting choices to determine how the discretion afforded by accounting standards may be exploited. ABP Opinion No. 20 – Accounting Changes has often been criticized for increasing the implicit costs incurred by users forced to deal with variation in the manner firms implement new standards and analyze incomparable financial reports (Gujarathi and Hoskin 1992; Hirst et al. 2004). When the FASB

issued SFAS 154, it required the use of the retroactive method to account for a change in accounting policy to enhance financial information's consistency between periods, as well as its usefulness by facilitating analysis and the understanding of comparative accounting data (FASB 2005). However, the retroactive method may also mask managers' opportunistic reporting practices - if sufficient discretion is afforded by the newly promulgated standard and used by managers - because the cumulative adjustment flows directly into opening equity (Hirst et al. 2004). By showing that Section 3062's adoption choices are associated with both contracting and asset pricing incentives, our results provide insight into the potential costs and benefits of SFAS 154.

Our study also contributes to accounting literature in the following ways. First, we reveal managers' opportunistic behaviour in a context where they cannot choose between alternative implementation methods, and develop a set of reporting incentives tailored for the retrospective method. Second, we provide empirical evidence consistent with Beatty and Weber (2006) in an institutional setting unlike their own. There has been a recent trend towards increased harmonization of accounting standards across the world[5]. Previous research examines the causes and consequences of adopting or complying with IAS/IFRS. Nevertheless, whether and how the institutional environment influences the adoption of individual accounting standards will become a question of increasing importance as greater international harmonization is achieved. Finally, we show that governance mechanisms, such as the audit committee, can constrain managerial opportunism with respect to transitional goodwill impairment losses. This type of focus on a single accrual provides a more powerful test of governance effectiveness.

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[5] The Financial Accounting Standards Board and the International Standards Board have been working closely together since 2002 to reduce the differences between US GAAP and IAS/IFRS. In Canada, the Accounting Standards Board has announced that Canadian GAAP will be gradually replaced by IAS/IFRS (full harmonization is planned for 2011). Finally, most European countries have been required to comply with IAS/IFRS since 2005.

The rest of the paper is organized as follows. Section 2 provides background information and reviews prior research. Section 3 develops the research hypotheses. Models and variables are presented in section 4. Results are presented in Section 5. Lastly, Section 6 concludes and highlights future research avenues.

2.   Background

Accounting for Accounting Changes

Accounting changes can be reported using either the cumulative effect, the retrospective or the prospective method.[6] Issued in 1971, APB Opinion No. 20 – Accounting Changes required that the effect of a voluntary change in accounting principle be reported using the cumulative effect method. The accounting treatment for mandatory accounting changes was outlined in each newly issued pronouncement, with the cumulative effect method becoming increasingly popular during the 90's. While the FASB was able to select a method that would minimize firms' costs of implementing new standards (Balsam et al. 1995), the standard was often criticized for increasing the costs incurred by users pressed to deal with non-comparable financial reports (Gujarathi and Hoskin 1992; Hirst et al. 2004).

SFAS 154 - Accounting Changes and Error Corrections superseded APB No. 20 in May 2005. SFAS 154 was issued as part of the FASB's short-term convergence project with the International Accounting Standards Board. In essence, it requires that the effect of voluntary and

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[6] The cumulative effect method calls for the cumulative effect of the change on net assets at the beginning of the period in which the change is made to be included in net income of the period of the change. The retrospective method requires that the cumulative effect of the change on periods prior to those presented be reflected in the reported carrying amounts of assets and liabilities as of the beginning of the first period presented, and that a corresponding adjustment be made to the opening balance of retained earnings as if the new principle had always been applied. Finally, the prospective method applies the new accounting policy to transactions occurring after the date at which the policy is changed and does not require any adjustment to prior periods or the period in which the change is made.

mandatory accounting changes be reported using the retrospective method.[7] SFAS 154 is

expected to improve financial reporting by enhancing the consistency of financial information

between periods, thus reducing the costs incurred by users who no longer have to deal with

variations in the way firms implement accounting changes (FASB 2005). However, if a new

standard relies extensively on discretionary assumptions, the retroactive method may encourage

managerial opportunism because the cumulative adjustment flows directly to opening retained

earnings, thus masking managers' reporting choices (Hirst et al. 2004). One such standard is

SFAS 142/Section 3062 on purchased goodwill. We examine the contracting and asset pricing

incentives associated with the magnitude of transitional goodwill impairment losses reported by

Canadian firms following the adoption of this revised standard in 2002.

Accounting for Goodwill

SFAS 142/Section 3062 requires 1) the elimination of goodwill amortization and 2)

conducting a two-step impairment test on goodwill at the same date every year. Firms must

initially compare the fair value of each reporting unit with its book value. If there is excess book

value, the implied fair value of goodwill is calculated by deducting the fair value of net assets -

excluding goodwill - from the fair value of the reporting unit. The implied fair value of goodwill

is then compared with its book value and any excess is recorded as a write-off. SFAS

142/Section 3062 applies to financial years starting on or after January 1, 2002. A transitional

impairment test must be conducted before the end of the second quarter of the adoption year to

apply the change in accounting policy. The cumulative effect method must be used to account

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[7] The prospective method can be used when it is impracticable to determine the cumulative effect of applying the change to all prior periods. SFAS 154 also states that its guidance may be superseded by transition guidance in new pronouncements.

for the change in the United States whereas in Canada, the use of the retroactive method is

prescribed. Annual impairment losses are charged to income from operations in both countries.

The impairment approach removes the "write-off recognition" choice by forcing firms to

test goodwill for impairment every year, while still leaving them with considerable discretion

regarding the timing and measurement of impairment losses. Firms' discretion concerning

transitional losses can be exercised in two ways: either they overstate the transitional impairment

loss and record a write-off greater than the necessary economic impairment, or they understate or

simply do not recognize the necessary impairment. Managers may have incentives to maximize

the transitional loss (i.e. take a bath) because it is not recognized on the income statement.

Alternatively, they may want to delay impairment recognition until future periods because of the

negative impact transitional loss can have on the quality of the balance sheet and on the future

cash flow expectations of market participants. They may also want to delay if they believe fair

values will rise.

The first source of managerial discretion is the allocation of the opening goodwill balance

to the different reporting units. A reporting unit is defined as an asset group constituting a

business in which discrete financial information is available (FASB 2002). It is possible to

allocate the goodwill generated by a specific acquisition to more than one reporting unit. If they

have incentives to maximize (minimize) the transitional loss and/or future annual losses,

managers can choose to allocate a greater portion of goodwill to reporting units with a smaller

(greater) fair value. The second source of managerial discretion is the assessment of the fair

value of both the reporting unit as a whole and its identifiable assets and liabilities. Managers

can and must make use of their judgement to forecast future performance, choose appropriate

discount rates, estimate the replacement value of a given asset, etc. when they assess the fair

value of a reporting unit and its identifiable assets and liabilities. As such, it has been argued that they have the flexibility to calculate both impairment and non-impairment within the same period, based on the underlying assumptions they select (Massoud and Raiborn 2003).

Relationship to Prior Research

Our study relates to the three subsets of the literature on the determinants of accounting choices. First, most recent papers on mandatory accounting changes examine the determinants of firms' accounting choices when a choice exists between alternative implementation methods. Gujarathi and Hoskin (1992) investigate managers' preferences concerning the adoption of SFAS 96. Balsam et al. (1995) examine a broader set of mandatory accounting changes. Both studies find that firms with a positive cumulative effect of the change in accounting policy tend to choose the cumulative effect method. Conversely, firms with a negative cumulative effect prefer the retrospective method. Ramesh and Revsine (2000), D'Souza (1998), and D'Souza, et al. (2000) examine the determinants of firm preferences for immediate recognition versus amortization over a 20-year period of net accumulated postretirement benefit obligation upon the adoption of SFAS 109. They show that firms select the method that reduces regulatory and employee benefit costs. Finally, Beatty and Weber (2006) show that SFAS 142 adoption choices are associated with contracting and market incentives. These incentives relate to the trade-off between the timing and the presentation of expense recognition on the income statement (i.e. immediate below-the-line vs. delayed above-the-line recognition) in the United States. In contrast to these papers, we investigate factors affecting the reporting of transitional goodwill impairment losses for a set of firms required to use the retrospective method.

Second, prior findings show asset and goodwill write-offs are used to smooth earnings and/or take "earnings baths" after controlling for the economic factors likely driving the impairment (Strong and Meyer 1987; Zucca and Campbell 1992; Francis et al. 1996; Segal 2003; Zang 2003). Riedl (2004) finds write-offs reported in the post-SFAS 121 regime have significantly lower associations with economic factors and higher associations with "big bath" reporting behaviour relative to those reported in the pre-SFAS 121 regime. This is consistent with firms relying on the standard as a means of justification for making reporting decisions that potentially mislead financial statement users regarding the economic value of assets. Our study is inspired by existing research on asset and goodwill write-offs because contracting and asset pricing incentives are used to explain the magnitude of the transitional goodwill impairment losses. It differs however, because we use a set of reporting incentives that have been adapted to equity recognition.

Finally, adopting a corporate governance perspective, there is evidence that firms with a higher percentage of independent directors on their audit committees are less likely to restate their earnings (Agrawal and Chadha 2005). Furthermore, firms with independent and financially literate audit committee members are less likely to belong to a high discretionary accruals group (Bedard et al. 2004) and are associated with lower discretionary accruals (Klein 2002; Xie et al. 2003). In contrast to these studies, we examine the role played by the audit committee in reducing managerial opportunism with respect to a single accrual, transitional goodwill impairment losses. Our approach is consistent with Healy and Wahlen (1999) and McNichols (2000) who advocate the importance of focusing on specific accruals to further our knowledge of the determinants of accounting choices. In addition, Canada likely presents a more powerful setting in which to test the role played by the audit committee in constraining managerial

13

opportunism because until 2004, and in contrast to the United States, its approach to governance

was principle-based. Hence, it is possible to observe greater variability in the corporate

governance attributes of Canadian firms[8].

3.   Hypothesis Development

Financial Ratio Target Deviation

Prior research shows firms' financial ratios within the same industry have a tendency to

converge at the industry's mean value (e.g. Lev 1969; Davis and Peles 1993; Wu and Ho 1997).

Therefore, when deciding upon accounting choices, managers will likely consider how far these

decisions will steer their firm's financial profile off industry targets. In making their choice,

managers will trade off the relative cost of deviating from the target ratio and the cost of making

a sub-optimal economic decision to reach this target (Wu and Ho 1997). ROE is likely the most

commonly examined ratio in the literature due to its contribution to the comprehension of overall

firm performance and its use in the residual income valuation model[9]. Considerable attention

has also been given to ROA and leverage; ROE's components (DuPont formula).

Negative deviations from target ROE, ROA or leverage may affect a firm's value, credit

rating or executive compensation. For instance, financial statement and ratio analysis is an

important part of the fundamental study required for equity valuation (Nissim and Penman 2001;

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[8] The Toronto Stock Exchange (TSX) only *recommended* that the board of directors be constituted with a majority of individuals who qualify as independent directors, and that the firm had an audit committee composed of outside non-management directors, with no mention of their required competence. In both cases, the application of the definition of independent director to the circumstances of each individual was believed to be a responsibility of the board of directors.

[9] For example, Mann (2004) states: "It doesn't get the same treatment as earnings per share, it doesn't gain much cult status like free cash flow, and you'll never, ever hear the folks on Bubblevision using the term. But ROE matters. It shows how good a company is at generating money based on the retained shareholder equity, also known as money that the company could return to you. A consistently low ROE is a sign that the company's management isn't effectively deploying the resources at its command. Moreover, *relative* return on equity within an industry can tell investors which companies are well run, and which are not. Ever wonder why **Ralph Lauren** was such a lousy investment for so many years even though *everyone* seemed to have one or two pieces of Polo clothing in their closets? Look no farther than a chronically anemic ROE."

Walker and Wang 2003). [10] In addition, the disclosure of profitability and liquidity ratio targets

by credit rating agencies such as Standard and Poor's, Moody's and Dun & Bradstreet exerts

pressure on firms to stay competitive by preventing their ratios from deviating drastically from

the industry norm (Wu and Ho 1997). Finally, a significant portion of executive compensation is

rooted in accounting-based performance measures such as ROE and ROA (e.g. Craighead et al.

2004). Thus, sub-par performance in that regard negatively affects executives' wealth. Because

transitional goodwill impairment losses reduce assets and equity equally without affecting net

income, they directly increase the value of ROE, ROA and leverage (debt-to-equity or debt-to-

assets). Therefore, provided they perceive the costs of deviating from target ROE and ROA to

be larger than the potential decrease in market value that an unexpectedly high transitional

goodwill impairment loss can cause, firms with lower than target ROE and ROA may have

incentives to maximize transitional goodwill impairment losses. A decision like this would bring

these ratios' values towards the industry norm. Similarly, to minimize expected financing or

bankruptcy costs, firms with higher than target leverage may have incentives to minimize

transitional goodwill impairment losses. This leads to our first research hypothesis:

H_{1a}:   *Firms with lower than target ROE (ROA) record higher transitional goodwill*

   impairment losses.

H_{1b}:   *Firms with higher than target leverage record lower transitional goodwill*

   impairment losses.

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[10] Prior research demonstrates that financial ratios, including ROE, ROA and leverage, provide information about future profitability and firm value (e.g. Ou and Penman 1989; Ou 1990; Nissim and Penman 2001; Fairfield et al. 2003; Nissim and Penman 2003). Walker and Wang (2003) more specifically demonstrate how a deviation from target profitability can cause a reduction in firm value.

Change in CEO

CEOs who made the acquisition decision are less likely to record a transitional goodwill impairment loss because doing so suggests the acquisition price may have been too high or that they failed to realize the promised synergies from the acquisition. For example, Harbert (2002) states: "If the company's current CEO is responsible for acquisitions that have now declined in value, they may not want to admit to their shareholders that they made a mistake". However, incoming CEOs can use transitional goodwill impairment losses to 1) blame predecessors for poor acquisitions; 2) send a signal to investors that bad times are behind the firm and that better times will follow and 3) protect current and future operating earnings (e.g. Elliott and Shaw 1988; Riedl 2004; Zucca and Campbell 1992). They can count on the fact that the transitional impairment test is compulsory as a means used to justify their decision. This allows us to draw our second hypothesis:

> H_2: *Firms that experience a change in CEO record higher transitional goodwill impairment losses.*

Compensation

Since transitional goodwill impairment losses do not affect net income, they have no immediate impact on accounting performance-based incentive payments. However, immediate transitional goodwill impairment losses reduce the potential magnitude of future annual impairment losses, as well as the resulting decrease in accounting performance. Managers whose compensation is structured with a higher proportion in bonuses would then have incentives to maximize the transitional loss. This allows us to draw our third hypothesis:

H₃: *Firms where a higher proportion of managers' compensation is paid in bonuses record higher transitional goodwill impairment losses.*

Increased use of stock-based compensation along with other equity incentives over the past decade have raised concerns they may persuade managers to increase (the) short-term stock price(s) in order to subsequently benefit from selling shares or exercising options (Cheng and Warfield 2005). Cheng and Warfield (2005) show there is a significantly higher incidence of meeting or just beating analyst forecasts in firms with higher managerial equity incentives. Furthermore, Lev (1992) suggests that in cases where managers have incentives to manage the stock price, they will delay or accelerate the disclosure of good and bad news so that it moves in the desired direction. In other words, they will try to minimize stock price (and the exercise price) when stock options are granted and maximize it when options can be exercised[11].

Transitional goodwill impairment losses would reduce the value of managers' stock options if recording a loss greater than the market anticipated triggered a decline in expectations for future cash flows and stock price[12]. Efendi et al. (2005) suggest managers are likely more sensitive to this decrease in the value of their options when they are not only exercisable with a profit (i.e. in-the-money), but that the existing profit is significant compared to their wealth (i.e. deep in-the-money). As such, our fourth hypothesis is:

H₄: *Firms where the value of in-the-money exercisable options held by top executives is higher record lower transitional goodwill impairment losses.*

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[11] Empirical studies generally support the stock price management hypothesis. Yermack (1997) finds that stock options are generally granted shortly before higher than expected quarterly earnings are announced, and followed by favourable stock price movements. Aboody and Kasznik (2000) show that unfavourable (favourable) stock movements generally occur before (after) stock options are granted. They also find that the granting of stock options is preceded by negative but insignificant abnormal returns and followed by positive and significant abnormal returns, consistent with managers accelerating (delaying) the announcement of bad (good) news prior to the grant.
[12] The results obtained by Segal (2003) and Zang (2003) are consistent with this hypothesis.

Need for Financing

Prior research suggests managers have incentives to inflate share price and lower the cost of equity capital preceding an equity issuance (Lang and Lundholm 2000). Similarly, firms have incentives to portray better financial situations prior to the issuance of new debt in order to minimize their risk profiles and lower their cost of debt capital (Legoria et al. 2000). Means to do so may include accruals management (e.g. Teoh et al. 1998; Legoria et al. 2000), financial statement fraud (e.g. Dechow et al. 1996; Richardson et al. 2003) and increased disclosure (Lang and Lundholm 2000). Thus, firms planning on raising new capital may want to avoid any negative market reaction to the announcement of a transitional goodwill impairment loss or any reduction in the quality of their balance sheet caused by a transitional goodwill impairment loss. This leads to our fifth hypothesis:

H_5:   *Firms planning on raising new debt or equity capital in the near future record lower transitional goodwill impairment losses.*

Internal Monitoring by the Audit Committee

Even though Canadian managers may have incentives to use discretion - afforded by Section 3062 - to influence the magnitude of transitional goodwill impairment losses, their ability to do so ultimately depends upon the constraints they face. In that regard, the audit committee has been identified as one of the primary constraints placed upon managerial opportunism[13]. Independence and financial competence are considered essential characteristics for an audit committee to fulfill its oversight role. Prior research supports the assertion that independent and financially literate audit committee members are better able to constrain

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[13] For example, in 1998, Arthur Levitt, former Chairman of the SEC, identifies "qualified, committed, independent and tough-minded audit committees as the most reliable guardians of the public interest" when it comes to earnings management.

managerial opportunism (e.g. Klein 2002; Xie et al. 2003; Bedard et al. 2004). Accordingly, the

presence of independent and financially competent audit committee members should limit

managers' ability to exploit the discretion afforded by the impairment approach and to record

transitional goodwill impairment losses that differ from existing economic impairment. Thus, our

sixth hypothesis:

> H_6:   *Firms with a higher proportion of independent and financially literate audit*
>
> *committee members record lower abnormal transitional goodwill impairment*
>
> *losses.*

4.   Methodology

Sample and Data

Sample firms are drawn from Compustat. They are required to be listed on the Toronto

Stock Exchange (TSX), to have a positive goodwill balance at the year-end preceding the

adoption of Section 3062 and to report under Canadian GAAP[14]. Observations with no

information available on the stock exchange, the goodwill balance or the financial year-end in

Compustat are completed manually. This leaves 417 firms. Financial data is obtained from

Compustat, Canadian Financial Markets Research Centre, CanCorp Financials,

FinancialPost.com, StockGuide as well as sample firms' annual reports. Target ratios are found

in the Canadian edition of Dun & Bradstreet Industry Norms & Key Business Ratios.

Information about audit committees, manager compensation and changes in top management is

obtained from firms' proxy statements and FP's Directory of Directors. Finally, the December

2002 Edition of the TSX Review is used to verify which firms are cross-listed in the United

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[14] A TSX listing ensures adherence to the same governance regulation.

States. Overall, complete data is available for 331 firms. Table 1 summarizes the sample selection procedure.

{Insert Table 1 here}

Models and Variables

The following multivariate tobit model is used to assess the determinants of transitional goodwill impairment losses[15]:

$TGIL_i = \alpha_0 + \lambda_1 GOODWILL_i + \lambda_2 EXCGWILL_i + \lambda_3 RUNITS_i + \lambda_4 ROE1_i + \lambda_5 ROE3_i + \lambda_6 CDEBT_i$
$+ \beta_7 DEVROE_i (DEVROA_i, DEVLEV_i) + \beta_8 CHANGE_i + \beta_9 PERBONUS_i + \beta_{10} ITMEXERC_i$
$+ \beta_{11} FIN_i + \beta_{12} AC_i + \beta_{13} AC*NEG_i + \beta_{14} OWN_i + \beta_{15} SIZE_i + \beta_{16} CLIST_i + IND_i + \varepsilon_i$ (1)

Where:

			Prediction
TGIL	=	Reported transitional goodwill impairment loss deflated by lagged total assets	
GOODWILL	=	Opening balance of goodwill deflated by lagged total assets	+
EXCGWILL	=	Difference between the market value and the book value of the firm at the end of the year preceding the adoption of Section 3062 deflated by lagged total assets	-
RUNITS	=	Number of reporting units among which the opening balance of goodwill is split or of operating segments if not disclosed	+
ROE1	=	Return-on-equity for the year preceding the adoption of Section 3062	-
ROE3	=	Annualized return-on-equity for the third and second year preceding the adoption of Section 3062	-
CDEBT	=	Percentage of acquisitions financed entirely with cash and/or debt in the five year period preceding the adoption of Section 3062	-
DEVROE	=	1 if pre-TGIL adoption year ROE is lower than industry median, 0 otherwise	+

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[15] A tobit specification is appropriate when the dependent variable is censored (Greene 2003, p. 761). The assumed latent variable of our model is the change in the economic value of goodwill, be it positive or negative. All firms with a positive goodwill balance must apply the transitional goodwill impairment test. However, firms that experienced an increase in the economic value of their goodwill cannot disclose or book the increase. Instead, they report a zero transitional loss and the existing increase is not observable.   Thus, the distribution of the dependent variable is censored at zero. Using an OLS model in situations where the dependent variable is censored produces biased and inconsistent coefficients (Gujarati 1995, p. 573).

DEVROA	=	1 if pre-TGIL adoption year ROA is lower than industry median, 0 otherwise	+
DEVLEV	=	1 if pre-TGIL adoption year D/E is higher than industry median, 0 otherwise	-
CHANGE	=	1 if there is a change in CEO in the year preceding or the year of adoption of Section 3062, 0 otherwise	+
PERBONUS	=	Average percentage of top paid executives' compensation paid in bonus for the adoption year	+
ITMEXERC	=	Average value of in the money exercisable stock options for the top paid executives as at the adoption year year-end divided by their total annual compensation for that same year	-
FIN	=	1 if the firm raised new debt or equity capital in the year following the announcement of the transitional impairment test being completed, 0 otherwise	-
AC	=	Proportion of financially literate and independent directors on the audit committee in 2002	-
*AC*NEG*	=	AC*1 if EXCGWILL < 0, 0 otherwise	+
OWN	=	1 if no external shareholder controls more than 20 percent of outstanding votes (i.e. the firm is widely-held), 0 otherwise	?
SIZE	=	Natural logarithm of lagged total assets	?
CLIST	=	1 if the firm is cross-listed in the United States, 0 otherwise	?
IND	=	Industry dummies, from 1 to 10 based on TSX Indices	?

The dependent variable is the reported transitional goodwill impairment loss, expressed as a positive number.[16] Six variables are included in the model to proxy 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[17]. First, we include three variables to proxy for the

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[16] In an ideal world, the dependent variable would be the sum of the differences between the fair value of the goodwill of each reporting unit and their book value, and the recorded impairment loss. However, unless each reporting unit is also a public firm or the researcher can access private data, the information necessary to estimate the fair value of each reporting unit is not publicly available. Consequently, similar to Beatty and Weber (2006), we use the recorded transitional goodwill impairment loss as our dependent variable and include economic impairment proxies in the model. Nevertheless, if some missing impairment variables are related to the discretion proxies, then the coefficients and the results of our tests could be biased.

[17] Economic activity could also map into the value of goodwill at the macro and industry levels (Riedl 2004). To capture macro-economic effects, Riedl (2004) includes the change in GDP in his model. Because this paper uses a cross-section of firms all reporting transitional goodwill impairment losses in the same two-year period (2002-2003), they are all subject to the same change in macro-economic activity. As such, it is not necessary to control for the

characteristics of goodwill (*GOODWILL, EXCGWILL, RUNITS*). A firm having a greater

amount of goodwill in its asset composition might incur more goodwill impairment because the

relative amount of goodwill exposed to the impairment test is greater. The excess fair value of

goodwill (*EXCGWILL*) measures the expected impairment at the firm-level. The firm is treated

as one reporting unit, i.e. as though it had been purchased in a business combination. Its market

value at year-end of the year preceding the adoption is assumed to proxy for the fair value of the

reporting unit. The fair value of the net book assets - excluding goodwill - is assumed to be

equal to their book value. We expect firms with higher excess fair value of goodwill less likely

to incur transitional goodwill impairment losses. Finally, a firm with more reporting units might

incur higher transitional goodwill impairment losses because existing losses cannot be netted

against one another (Schneider 2001).

Next, we control for past firm and acquisition performance (*ROE1, ROE3, CDEBT*).

Similar to Francis et al. (1996), we control for both long- and short-term firm performance by

including annualized return-on-equity in the model for the third and second year preceding

(*ROE3*), as well as the year preceding (*ROE1*) the adoption of Section 3062. It is important to

adequately control for firm performance because certain proxies for manager incentives (e.g.

DEVROE, *DEVROA* and *ITMEXERC*) could also be viewed as proxies for firm performance.

We predict that the poorer the firm's past performance, the greater its magnitude of reported

transitional goodwill impairment losses will be (e.g. Francis et al. 1996; Zang 2003). Prior

research shows acquiring firms' performance is usually higher following cash transactions than it

is following share-for-share swaps (e.g. Loughran and Vijh 1998; Ghosh 2001). Hence, the

financing method for prior acquisitions is likely to constitute a good predictor of economic

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change in GDP. We control for industry effects by including industry dummies in the model. We also suppose that
they are already reflected in the excess fair value of goodwill, through the market value.

impairment, with the percentage of cash transactions being negatively related to transitional goodwill impairment losses.

Five (or six) variables are included in the model to proxy for manager incentives to over- or understate transitional goodwill impairment losses (*DEVROE* (*DEVROA*, *DEVLEV*), *CHANGE*, *PERBONUS*, *ITMEXERC*, *FIN*). Pre-TGIL ROE is measured by dividing adoption year income before extraordinary items by adoption year shareholders' equity plus the reported write-off. Pre-TGIL ROA is measured by dividing adoption year income before extraordinary items by adoption year total assets plus the reported write-off. Pre-TGIL D/E is measured by dividing adoption year total liabilities by adoption year shareholders' equity plus the reported write-off. Industry matching is based on four-digit SIC codes. *PERBONUS* is the average percentage of top paid executives' compensation remunerated in bonus for the adoption year**.** *ITMEXERC* meanwhile, is the average value of in-the-money exercisable stock options for top paid executives at the adoption year's year-end, scaled by their total annual compensation for the adoption year. Total adoption year compensation is calculated by adding the minimal value of the options granted during the year to salary and bonus (re. Smith and Zimmerman 1976).

AC captures the financial competence and independence of audit committee members. Consistent with governance regulations in Canada and the United States along with prior research, we consider audit committee members with professional accounting or financial designations (CA, CGA, CMA, CPA, CFA) and/or experience in corporate financial management (e.g. CEO, CFO) financially literate (Agrawal and Chadha 2005; Xie et al. 2003). Director independence is measured according to firms' disclosure in their 2002 proxy statement. Directors who are not blockholders and who are qualified as outsiders by management are considered independent, unless any other relationship with the firm is otherwise disclosed in the

proxy statement. In order to differentiate between firms where write-offs are not expected and those where they are, and test for H$_6$, we built an interaction term equal to $AC*1$ if $EXCGWILL$ is lower than zero and 0 otherwise. If independent and financially literate audit committee members effectively constrain managerial opportunism with respect to transitional goodwill impairment losses, the transitional goodwill impairment loss should be neither overstated nor understated. In other words, their role should be to make sure no loss is recognized when $EXCGWILL$ is positive and that one is recognized when $EXCGWILL$ is negative. If this is the case, then β_{12} should be negative and significant, and ($\beta_{12} + \beta_{13}$) should be positive and significant.

Finally, three control variables are included in the model (OWN, $SIZE$ and $CLIST$). OWN is an indicator variable taking the value of one if no external shareholder controls more than 20 percent of outstanding votes (i.e. the firm is widely-held), and 0 otherwise[18]. Contrary to the United States, a high proportion of Canadian firms are closely-held, and prior research shows that their reporting incentives tend to differ (Hogler and Hunt 1993). Firm size is included as a control variable to proxy for various aspects of the firm. We measure firm size as the log of total lagged assets. We also control for cross-listing in the United States because cross-listed firms must reconcile their Canadian GAAP figures with US GAAP in a note to the financial statements.

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[18] Twenty percent is the level at which shareholders can have a significant influence over a firm's strategies and policies according to GAAP. Dhaliwal et al. (1982) and Craighead et al. (2004) use the same cutoff. The use of different cutoffs does not change the results.

5. Results

Descriptive Statistics

Table 2 reports the size and industry distribution of transitional goodwill impairment losses recorded by sample firms. Industry membership is determined concurrently with TSX Indices as given by Compustat. Table 2 reveals that 24% of sample firms (78 firms) record a transitional goodwill impairment loss. On average, write-offs represent 1.49% (6.34%) of the total assets of sample (TGIL) firms. They result in sample (TGIL) firms writing-off an average of 10.09% (42.80%) of their goodwill balance. Thus, according to these statistics, the adoption of the impairment approach effectively triggered the recognition of significant impairment losses. Table 2 also reveals that the number of firms recording a transitional goodwill impairment loss and the relative importance of these losses vary by industry. The late 90's were marked by a wave in mergers and acquisitions, especially in the information technology and telecommunications industries. Furthermore, significant purchase premia were paid as a result of the Internet bubble. SFAS 142/Section 3062 was introduced after the bubble burst in 2000 and significant transitional goodwill impairment losses were expected in these industries as a result. Consistent with this expectation, Table 2 reveals that the telecommunications, consumer discretionary (a significant number of media firms are included in this category), information technology and health care industries show the highest percentage of TGIL firms.

{Insert Table 2 here}

Table 3 compares expected write-offs in the absence of reporting incentives and constraints with sample firms' actual behaviour. In the absence of reporting incentives and constraints, we expect firms with market value of equity exceeding book value of equity (i.e. *EXCGWILL* is positive) not to record a write-off. Conversely, we expect firms with market

values lower than the book value of equity (i.e. *EXCGWILL* is negative) to record a transitional goodwill impairment loss. The first row of Table 3 shows there are 97 firms whose market value is lower than the book value of equity. Among the 97 firms expected to record a write-off, only 38 (39%) actually reported a transitional goodwill impairment loss, a finding that suggests some managers did exercise some discretion by delaying the recognition of underlying goodwill impairments. The second row of Table 3 indicates there are 234 firms with market values exceeding the book value of equity. 40 (17%) of these firms actually recorded a write-off, consistent with big bath behaviour. Table 3 has to be interpreted with caution because it captures the impairment of firm-wide goodwill. Nevertheless, a likelihood-ratio Chi2 test rejects the null hypothesis of independence between *EXCGWILL* and *TGIL* ($p < 0.000$). Overall, Table 3 provides evidence consistent with the existence of incentives to both understate and overstate transitional goodwill impairment losses.

{Insert Table 3 here}

Table 4 presents disclosure statistics. SFAS 142/Section 3062 imposes disclosure requirements on firms to ensure they share their private information about goodwill with investors. Four of the main requirements are to disclose 1) the goodwill balance separately on the balance sheet; 2) the facts and circumstances leading to the impairment and the amount of the impairment loss (in the case of the transitional test, firms have to confirm that they conducted the test and discuss the result); 3) the changes in the aggregate carrying amount of goodwill during the period; and 4) the changes in the carrying amount of goodwill for each reporting unit or segment. We build a four-point disclosure score based on these four requirements and present the number of firms that met each requirement as well as their mean disclosure score. Sample

firms are grouped according to whether they booked a write-off or not and a test of differences in means is performed to compare their disclosure behaviour.

The first column of Table 4 shows 86% of zero-TGIL firms and 91% of TGIL firms disclose the carrying amount of goodwill separately on the balance sheet. The two groups do not significantly differ ($p < 0.227$). The second column shows that 76% of zero-TGIL firms and 100% of TGIL firms confirm they conducted the transitional impairment test and discuss the results. TGIL firms are significantly more forthcoming ($p < 0.000$). According to the third column, 59% of zero-TGIL firms and 76% of TGIL firms disclose the changes in the aggregate carrying amount of goodwill. Once again, TGIL firms are significantly more forthcoming ($p < 0.007$). When it comes to disclosing changes in the carrying amount of goodwill for each reporting unit or segment, the fourth column shows only 25% of zero-TGIL firms and 41% of TGIL firms meet this requirement. The difference between the two groups is significant ($p < 0.005$). Finally, zero-TGIL firms' mean disclosure score is 2.45 whereas TGIL firms' is 3.08. The difference between the two groups is significantly different from zero ($p < 0.000$). Overall, Table 4 shows that sample firms tend to disclose only general information about goodwill. This makes it difficult for outsiders to understand changes in the goodwill's carrying amount at the reporting unit level. TGIL firms disclose significantly more information than zero-TGIL firms; potentially to mitigate the negative effects of recording a transitional goodwill impairment loss.

{Insert Table 4 here}

Table 5 presents descriptive statistics on the variables used in the multivariate analyses. The table shows the mean and median values of the variables for firms recording a transitional goodwill impairment loss (N = 78), firms not reporting a transitional goodwill impairment loss (N = 253) and all sample firms (N = 331). The last two columns show the significance level of

the tests on the differences in means and medians between TGIL and zero-TGIL firms.

Consistent with our expectation, TGIL firms have a higher goodwill balance as of the adoption date than zero-TGIL firms ($p < 0.000$). The excess of the implied fair value of goodwill over its book value is lower for TGIL firms ($p < 0.005$). TGIL firms also split the opening balance of goodwill between more reporting units than zero-TGIL firms ($p < 0.002$). In terms of reporting incentives, TGIL firms' ROE and ROA is more often lower than the industry median ($p < 0.003$ and $p < 0.0019$); more of them experienced a change in CEO ($p < 0.011$). Firms with negative excess goodwill have a lower proportion of financially competent and independent directors on their audit committee ($p < 0.000$). Finally, more TGIL firms are closely-held ($p < 0.034$). Tests of differences in medians produce similar results, except for *ROE3* ($p < 0.056$) and *DEVLEV* ($p < 0.049$). Overall, univariate evidence is largely consistent with our predictions.

{Insert Table 5 here}

Multivariate Results

Table 6 presents the results from the multivariate tobit analyses of the determinants of transitional goodwill impairment losses. A conditional moment test rejects the null of normal errors. Therefore, reported z-statistics are based on robust standard errors. The first column of Table 6 reports coefficients for the model including deviation from target ROE (*DEVROE*), while the second column reports coefficients for the model including deviation from target ROA and leverage (*DEVROA* and *DEVLEV*).

In both columns, the economic impairment variables significantly explain the magnitude of transitional goodwill impairment losses, except for the percentage of acquisitions financed with cash or debt from 1997 to 2001 (*CDEBT*). Consistent with our expectations, the coefficient on *GOODWILL* is positive and significant ($p < 0.000$ and $p < 0.000$) and the coefficient on

EXCGWILL is negative and significant ($p < 0.061$ and $p < 0.044$). Also consistent with our expectations, *RUNITS* is significantly positive ($p < 0.093$ and $p < 0.055$). Finally, *ROE1* ($p < 0.007$ and $p < 0.008$) and *ROE3* ($p < 0.064$ and $p < 0.068$) are negative and significant. *CDEBT* is positive but not significant ($p < 0.852$ and $p < 0.775$). *OWN* is negative and marginally significant ($p < 0.093$ and $p < 0.084$), suggesting widely-held firms tend to minimize transitional goodwill impairment losses. *SIZE* is not significant ($p < 0.202$, $p < 0.133$). Finally, the coefficient on *CLIST* is negative and significant ($p < 0.070$, $p < 0.046$), suggesting cross-listed firms record lower impairment losses.

The coefficients for most of the incentive variables are significant and in the predicted direction. Consistent with H_1, *DEVROE* and *DEVROA* are positive and significant ($p < 0.090$ and $p < 0.049$), implying that firms with lower than target ROE and ROA record higher transitional goodwill impairment losses as a way to reduce deviation from industry median ROE and ROA. Similarly, *DEVLEV* is negative and significant ($p < 0.034$), suggesting firms with higher than target leverage record lower write-offs to avoid further deviation from the industry median. *CHANGE* is positive and significant ($p < 0.008$ and $p < 0.017$). Thus, consistent with H_2, firms that experience a change in CEO record higher transitional goodwill impairment losses. H_3 is not supported as *PERBONUS* is positive, but not significant ($p < 0.493$ and $p < 0.474$). Consistent with H_4, *ITMEXERC* is negative and significant ($p < 0.092$ and $p < 0.073$). Hence, firms where top executives hold higher proportions of in-the-money exercisable stock options record lower write-offs, suggesting they might want to avoid a reduction in the value of their options. Consistent with H_5, *FIN* is negative and significant ($p < 0.076$ and $p < 0.085$), providing support for the assumption that firms planning on raising new debt or equity capital prefer to minimize transitional goodwill impairment losses.

As predicted, the sum of *AC* and *AC*NEG* is positive and significant (0.0702 + 0.0036 =

0.0738, p < 0.020; 0.0023 + 0.0615 = 0.0638, p < 0.038). Therefore, higher proportions of

financially literate and independent directors on the audit committee lead to the recognition of a

higher transitional goodwill impairment loss when *EXCGWILL* is negative and a transitional loss

is expected. Contrary to our prediction, *AC* is positive and not significant (p < 0.899 and p <

0.933), suggesting the presence of financially literate and independent directors on the audit

committee does not influence the magnitude of reported transitional goodwill impairment losses

when *EXGWILL* is positive and no loss is expected.

{Insert Table 6 here}

Sensitivity Analyses

We conduct supplementary tests to provide additional support for our results. First, we

explore whether firm behaviour is different when a transitional loss is expected, compared to

when it is not. Using the economic impairment proxies and control variables from Model (1), we

predict a normal transitional goodwill impairment loss and calculate an abnormal loss. We then

regress the computed abnormal transitional goodwill impairment loss on the reporting incentives

and constraint variables for firms expected to record a transitional goodwill impairment loss, and

those not expected to record a loss separately. Once again, we use *EXCGWILL* as our predictor

to decipher whether goodwill is impaired and a transitional loss is expected. The determinants of

abnormal transitional goodwill impairment losses are estimated using robust ordinary least

square regressions.

Untabulated results show that determinants of abnormal transitional goodwill impairment

losses differ depending on whether a transitional loss is expected. We find a positive and

significant association between abnormal transitional goodwill impairment losses and *DEVROE*

(p < 0.014), *CHANGE* (p < 0.049) and *PERBONUS* (p < 0.040) in firms with negative *EXCGWILL*. Conversely, the association between abnormal transitional goodwill impairment losses and *DEVROE* (p < 0.463), *CHANGE* (p < 0.110) and *PERBONUS* (p < 0.245) is not significant for firms with positive *EXCGWILL*. This suggests firms' goodwill reporting choices are influenced by incentives to maximize transitional goodwill impairment losses only when a transitional loss can be expected

We find a negative and marginally significant association between abnormal transitional goodwill impairment losses and *FIN* (p < 0.073) for firms with positive *EXCGWILL*. The association is also negative and marginally significant for firms with negative *EXCGWILL* (p < 0.084). Furthermore, the association between abnormal transitional goodwill impairment losses and *ITMEXERC* is negative and insignificant in both cases (p < 0.466 for firms with negative *EXCGWILL* and p < 0.181 for firms with positive *EXCGWILL*). Overall, this indicates that incentives to minimize transitional goodwill impairment losses for firms that raise debt or equity capital in the year following the adoption of Section 3062 or for firms whose top executives hold higher valued in-the-money exercisable stock options, are not influenced by whether or not firm-wide goodwill appears to be impaired.

Second, given the marginal significance of *ITMEXERC*, we transform our continuous variable into an indicator variable taking on the value of 1 if the average value of in-the-money exercisable stock options for top paid executives at the adoption year's year-end is greater than their total annual compensation for that same year and 0 otherwise to distinguish firms where top executives' stock options are deep in-the-money (Efendi et al., 2005). Inferences are not different from those reported earlier.

Third, some of the proxies for managers' reporting incentives (*DEVROE*, *DEVROA* and *ITMEXERC*) could also be seen as proxies for past accounting and stock performance and thus, qualify as economic determinants. We control for past ROE in the multivariate tobit model in an effort to address potential endogeneity concerns with respect to these variables. However, firm performance can be measured in many different ways and there could be residual performance effects not captured by the *ROE1* and *ROE3* variables. To get more comfortable with respect to the *DEVROE* and *DEVROA* variables, we re-estimate the model using continuous variables not restricted to firms with lower than target ROE or ROA (*DEVROECONT* and *DEVROACONT*). If *DEVROECONT* and *DEVROACONT* are capturing firm performance rather than managerial incentives, then not only should firms with lower than target ROE or ROA record higher transitional goodwill impairment losses, but firms with higher than target ROE or ROA record lower impairment losses. In other words, *DEVROECONT* and *DEVROACONT* should be negatively associated with transitional goodwill impairment losses. Untabulated results show that *DEVROECONT* and *DEVROACONT* are both negative, but not significant ($p < 0.378$ and $p < 0.261$ respectively). This provides additional support for an existing incentive for firms with lower than target ROE and ROA to record higher write-offs.

To address potential endogeneity concerns with respect to the in-the-money exercisable stock options variable, we add market-based measures (i.e. stock returns) as explanatory variables for reported write-offs. In the absence of controls for market performance, *ITMEXERC* could capture past stock price performance and reflect the fact that better performing firms are less likely to suffer a decrease in the value of their goodwill. Returns are calculated for both the year preceding (*RET1*) and the second and third year preceding the adoption (annualized) (*RET3*). We expect a negative association between past returns and reported write-offs.

Untabulated results remain similar when market-based measures are added to the model. *RET1* (p < 0.910 and p < 0.753) and *RET3* (p < 0.280 and p < 0.218) are positive and not significant.

Fourth, we replace *AC* and *AC*NEG* by two variables to capture the independence of the board of directors (*BOD* and *BOD*NEG*). We expect firms with a more independent board of directors to record lower abnormal transitional goodwill impairment losses. We build a two-point score to capture the independence of the board of directors. One mark is awarded if the majority of directors are independent, with independence measured the same way as that of the audit committee; and one mark is awarded if the CEO is not the chair of the board of directors or if there is an independent lead director. *BOD* is the sum of these two elements. To be able to differentiate between firms where a transitional loss is expected and firms where it is not, we also build an interaction term equal to *BOD*1* if *EXCGWILL* is lower than zero and 0 otherwise. Results (untabulated) are not affected when we replace *AC* and *AC*NEG* with *BOD* and *BOD*NEG*.

Finally, while most asset and goodwill write-offs studies use total assets as a deflator, Chen et al. (2004) argue it is inappropriate to do so because the scaler is a function of goodwill and transitional goodwill impairment losses. Our main inferences are not affected when we re-estimate the tobit model using total market value, sales and goodwill as a deflator.

6. Conclusion

This study investigates whether and how reporting incentives and constraints influence firms' adoption choices when they are required to use the retroactive method to account for a mandatory accounting change. More specifically, we examine the reporting incentives and constraints associated with the magnitude of transitional goodwill impairment losses reported by

Canadian firms following the adoption of revised standards on purchased goodwill in 2002. The Canadian context provides a unique opportunity to extend our knowledge of whether, under what circumstances and how accounting choice matters because Section 3062 requires the use of the retrospective method to account for the change in accounting for goodwill. Understanding managers' reporting choices in the context of equity recognition is important given that the adoption of SFAS 154 requires that the retroactive method be used to account for changes in accounting principles for financial years starting on or after December 15, 2005.

The results of our empirical analyses show an association between the magnitude of transitional goodwill impairment losses and firms' incentives to both overstate and understate them. We find firms accelerate the recognition of transitional goodwill impairment losses to reduce the deviation from industry median ROE and ROA, as well as when they experience a change in CEO. Firms delay the recognition of existing impairment losses to avoid further deviation from industry median leverage, when the value of in-the-money exercisable stock options held by top executives is higher and when they issue new debt or equity capital in the year following the announcement of the completion of the transitional goodwill impairment test. Furthermore, our findings indicate that financially literate and independent audit committee members are conservative and do not attempt to reduce the magnitude of reported transitional goodwill impairment losses, expected or not.

When we examine if firms' reporting behaviour differs depending on whether a transitional loss is expected, we find that firms' goodwill reporting choices are influenced only by incentives to maximize transitional goodwill impairment losses when a transitional loss is expected. In addition, we show that incentive exists to record higher transitional goodwill impairment losses in order to protect future income from operations in firms where a higher

proportion of top paid executives' compensation is remunerated through bonuses when firm-wide goodwill appears to be impaired. However, whether a transitional loss is expected or not does not seem to affect the incentives to minimize transitional goodwill impairment losses for firms that raise debt or equity capital in the year following the adoption of Section 3062, nor for firms where the value of in-the-money exercisable stock options held by top executives is higher.

SFAS 154 was initially criticized because the retroactive method provides managers with the opportunity to hide their discretionary accounting choices through a cumulative adjustment to opening retained earnings (Hirst et al. 2004).   Our results are consistent with such criticisms. In addition, they indicate that the impairment approach has not been entirely successful in forcing increased transparency amongst firms with respect to the underlying economic value of goodwill; consistent with criticisms of Section 3062/SFAS 142. The power of the empirical analyses in this study is limited by a lack of public information on goodwill at the reporting-unit level. Due to this, crude proxies have to be used to measure the actual economic impairment. Any measurement error in these proxies could bias our coefficients and the results of our tests.

As time passes and more data becomes available, future research should examine managers' reporting choices with respect to other accounting changes accounted for using the retroactive method. Potential interest also lies in the impact the introduction of the impairment approach has on the premiums paid by acquiring firms, and on the purchase price allocation decisions they subsequently make. With the adoption of the impairment approach, managers who overpay for their acquisitions have to almost immediately write-off these overpayments against their income from operations. Therefore, it raises the question of whether they will reduce the premiums paid in order to avoid the subsequent write-off.

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Table 1
Sample Selection*

Canadian firms listed in *Compustat Research Insight (January 2004 version)*	1,620
(-) firms not listed on the TSX	(394)
(-) firms with a zero goodwill balance as at the end of 2001	(570)
(-) firms for which it is impossible to complete the data on stock exchange, goodwill or year-end not available in Compustat (acquisitions, bankrupt, etc.)	(239)
Canadian firms listed on the TSX, with a positive goodwill balance as at adoption year year-end	417
(-) firms reporting in US GAAP	(23)
(-) firms with incomplete data	(54)
(-) firms with negative book value	(9)
Final sample	**331**

*This table presents the sample selection procedure.

Table 2
Descriptive Statistics –
Transitional Goodwill Impairment Losses by Industry*

Industry Group**	Number		TGIL/Total Assets (mean)		TGIL/Goodwill (mean)	
	All	TGIL firms	All	TGIL firms	All	TGIL firms
Energy	19	3 (16%)	0.82%	5.22%	10.61%	67.17%
Materials	30	7 (23%)	0.79%	3.38%	11.03%	47.28%
Industrials	66	18 (27%)	0.91%	3.33%	10.80%	39.61%
Consumer Discretionary	56	18 (32%)	1.40%	4.36%	8.71%	27.10%
Consumer Staples	30	1 (3%)	0.04%	1.12%	2.76%	82.92%
Health Care	19	5 (26%)	2.27%	8.63%	17.32%	65.80%
Financials	40	5 (13%)	0.57%	4.57%	5.98%	47.80%
Information Technology	57	15 (26%)	3.61%	13.70%	14.27%	54.22%
Telecommunications	10	5 (50%)	4.40%	8.79%	14.05%	28.09%
Utilities	4	1 (25%)	0.001%	0.00%	0.05%	0.22%
Total	331	78 (24%)	1.49%	6.34%	10.09%	42.80%

* This table reports the size and industry distribution of transitional goodwill impairment losses recorded by the 331 sample firms.
**Industry membership is determined according to TSX Indices, as given by the *Compustat*.

Table 3
Expected vs. Reported Transitional Goodwill Impairment Losses*

	Zero-TGIL firms (N=253)	TGIL firms (N =78)	Total (N = 331)
Negative *EXCGWILL* (MVE < BVE)	59 (61%)	38 (39%)	97
Positive *EXCGWILL* (MVE > BVE)	194 (83%)	40 (17%)	234
Likelihood-ratio Chi2 (p-value)			17.52 (0.000)

* This table compares our expectations of whether sample firms should be recording a transitional goodwill impairment loss in the absence of reporting incentives and constraints with their actual behaviour.

Table 4
Disclosure*

	Total on balance sheet	Facts and circumstances and amount of the loss	Changes in aggregate goodwill	Changes in goodwill by segment or reporting unit	Mean score on 4
Total (N = 331)	288 (87%)	270 (82%)	208 (63%)	94 (28%)	2.60
Zero-TGIL firms (N = 253)	217 (86%)	192 (76%)	149 (59%)	62 (25%)	2.45
TGIL firms (N = 78)	71 (91%)	78 (100%)	59 (76%)	32 (41%)	3.08
Test of differences in means	0.229	**0.000**	**0.007**	**0.005**	**0.000**

* This table shows the number of firms that disclosed the information required by SFAS 142/Section 3062, as well as their mean disclosure score on 4.

Table 5
Descriptive Statistics – Variables*

Variable**	TGIL firms (N = 78)		Zero-TGIL firms (N=253)		Both (N=331)		Test of differences	
	Mean	Median	Mean	Median	Mean	Median	Means P > |t|	Medians P > |X|
TGIL	0.0634	0.0357	0.0000	0.0000	0.0149	0.0000		
GOODWILL	0.1969	0.1417	0.1225	0.0707	0.1400	0.0791	**0.000**	**0.006**
EXCGWILL	0.1569	0.0181	0.4855	0.2348	0.4080	0.1413	**0.005**	**0.001**
RUNITS	2.7051	2.0000	2.1779	2.0000	2.3021	2.0000	**0.002**	**0.044**
ROE1	-0.1009	0.0437	1.5786	0.0758	1.1828	0.0623	0.586	**0.056**
ROE3	-0.0482	0.0690	0.0241	0.0928	0.0070	0.0826	0.108	0.256
CDEBT	0.5834	0.7050	0.5586	0.6429	0.5645	0.6667	0.628	0.477
DEVROE	0.7821	1.0000	0.6008	1.0000	0.6435	1.0000	**0.003**	**0.010**
DEVROA	0.6538	1.0000	0.5020	0.0000	0.5378	1.0000	**0.019**	**0.007**
DEVLEV	0.3718	0.0000	0.4506	0.0000	0.4320	0.0000	0.221	**0.049**
CHANGE	0.3974	0.0000	0.2490	0.0000	0.2840	0.0000	**0.011**	**0.016**
PERBONUS	0.1844	0.1376	0.1961	0.1685	0.1933	0.1591	0.638	**0.098**
ITMEXERC	0.3979	0.0158	0.7080	0.1063	0.6350	0.0653	0.197	0.163
FIN	0.2436	0.0000	0.2846	0.0000	0.2749	0.0000	0.480	0.573
AC	0.4842	0.5000	0.4592	0.3333	0.4651	0.4000	0.510	0.731
*AC*NEG*	0.2175	0.0000	0.0957	0.0000	0.1244	0.0000	**0.000**	**0.000**
OWN	0.3590	0.0000	0.4941	0.0000	0.4622	0.0000	**0.034**	**0.050**
SIZE	19.0360	18.8017	18.8309	18.5913	18.8792	18.6719	0.537	0.349
CLIST	0.2308	0.0000	0.2530	0.0000	0.2477	0.0000	0.693	0.805

*This table provides descriptive statistics for the variables used in the multivariate tobit analysis, as well as the results
of tests of differences in means and medians between TGIL and zero-TGIL firms.
**Variable definitions:

TGIL	=	Reported transitional goodwill impairment loss deflated by lagged total assets
GOODWILL	=	Opening balance of goodwill deflated by lagged total assets
EXCGWILL	=	Difference between the MV and the BV of the firm in t-1 deflated by lagged total assets
RUNITS	=	Number of reporting units among which the opening balance of goodwill is split
ROE1	=	ROE in t-1
ROE3	=	Annualized ROE for t-3 and t-2
CDEBT	=	Percentage of acquisitions financed entirely with cash and/or debt in the 5 years preceding the test
DEVROE	=	1 if pre-TGIL ROE is lower than industry median, 0 otherwise
DEVROA	=	1 if pre-TGIL ROA is lower than industry median, 0 otherwise
DEVLEV	=	1 if pre-TGIL D/E is higher than industry median, 0 otherwise
CHANGE	=	1 if there is a change in CEO in t-1 or t, 0 otherwise
PERBONUS	=	Average percentage of top paid executives' compensation paid in bonus for the adoption year
ITMEXERC	=	Average value of in the money exercisable stock options for the top paid executives as at the end of fiscal year t divided by their year t total annual compensation
FIN	=	1 if the firm raised new debt or equity capital in the year following the announcement of the transitional impairment test being completed, 0 otherwise
AC	=	Proportion of financially literate and independent directors on the audit committee in t
*AC*NEG*	=	*AC*1 if *EXCGWILL* < 0, 0 otherwise
OWN	=	1 if no external shareholder controls more than 20 percent of outstanding votes, 0 otherwise
SIZE	=	Natural logarithm of lagged total assets
CLIST	=	1 if the firm is cross-listed in the United States, 0 otherwise

Table 6
Determinants of Transitional Goodwill Impairment Losses*

Variable**	R_H	Pred	Model including deviation from ROE		Model including deviation from ROA and leverage	
			Coeff.	P > z***	Coeff.	P > z***
GOODWILL		+	**0.2783**	**0.000**	**0.2735**	**0.000**
EXCGWILL		-	**-0.0251**	**0.061**	**-0.0265**	**0.044**
RUNITS		+	**0.0080**	**0.093**	**0.0100**	**0.055**
ROE1		-	**-0.0003**	**0.007**	**-0.0003**	**0.008**
ROE3		-	**-0.0354**	**0.064**	**-0.0323**	**0.068**
CDEBT		-	0.0040	0.852	0.0061	0.775
DEVROE	H_1	+	**0.0237**	**0.090**		
DEVROA	H_1	+			**0.0289**	**0.049**
DEVLEV	H_1	-			**-0.0329**	**0.034**
CHANGE	H_2	+	**0.0391**	**0.008**	**0.0349**	**0.017**
PERBONUS	H_3	+	0.0007	0.493	0.0029	0.474
ITMEXERC	H_4	-	**-0.0060**	**0.092**	**-0.0065**	**0.073**
FIN	H_5	-	**-0.0247**	**0.076**	**-0.0230**	**0.085**
AC	H_6	-	0.0036	0.899	0.0023	0.933
*AC*NEG*	H_6	+	**0.0702**	**0.011**	**0.0615**	**0.040**
OWN		?	**-0.0285**	**0.093**	**-0.0296**	**0.084**
SIZE		?	0.0063	0.202	0.0072	0.133
CLIST		?	**-0.0361**	**0.070**	**-0.0390**	**0.046**
INTERCEPT			-0.2201	0.023	-0.2182	0.040
N				331		331
Prob > Chi2				0.000		0.000
McFadden's Adjusted R^2				41.7%		43.9%

*This table presents the results of the multivariate tobit regression examining the determinants of the magnitude of reported TGILs in Canada. Parameter estimates are based on the following model: $TGIL_i = \alpha_0 + \lambda_1 GOODWILL_i + \lambda_2 EXCGWILL_i + \lambda_3 RUNITS_i + \lambda_4 ROE1_i + \lambda_5 ROE3_i + \lambda_6 CDEBT_i + \beta_7 DEVROE_i (DEVROA_i, DEVLEV_i) + \beta_8 CHANGE_i + \beta_9 PERBONUS_i + \beta_{10} ITMEXERC_i + \beta_{11} FIN + \beta_{12} AC_i + \beta_{13} AC*NEG_i + \beta_{14} OWN_i + \beta_{15} SIZE_i + \beta_{16} CLIST_i + IND_i + \varepsilon_i$

** Variable definitions:

TGIL	=	Reported transitional goodwill impairment loss deflated by lagged total assets
GOODWILL	=	Opening balance of goodwill deflated by lagged total assets
EXCGWILL	=	Difference between the MV and the BV of the firm in t-1 deflated by lagged total assets
RUNITS	=	Number of reporting units among which the opening balance of goodwill is split
ROE1	=	ROE in t-1
ROE3	=	Annualized ROE for t-3 and t-2
CDEBT	=	Percentage of acquisitions financed entirely with cash and/or debt in the 5 years preceding the test
DEVROE	=	1 if pre-TGIL ROE is lower than industry median, 0 otherwise
DEVROA	=	1 if pre-TGIL ROA is lower than industry median, 0 otherwise
DEVLEV	=	1 if pre-TGIL D/E is higher than industry median, 0 otherwise
CHANGE	=	1 if there is a change in CEO in t-1 or t, 0 otherwise
PERBONUS	=	Average percentage of top paid executives' compensation paid in bonus for the adoption year
ITMEXERC	=	Average value of in the money exercisable stock options for the top paid executives as at the end of fiscal year t divided by their year t total annual compensation
FIN	=	1 if the firm raised new debt or equity capital in the year following the announcement of the transitional impairment test being completed, 0 otherwise
AC	=	Proportion of financially literate and independent directors on the audit committee in t
*AC*NEG*	=	*AC*1 if *EXCGWILL* < 0, 0 otherwise
OWN	=	1 if no external shareholder controls more than 20 percent of outstanding votes, 0 otherwise
SIZE	=	Natural logarithm of lagged total assets
CLIST	=	1 if the firm is cross-listed in the United States, 0 otherwise

***One-tailed if directional prediction, two-tailed otherwise. Z-statistics are based on robust standard errors.