



*MACQUARIE GRADUATE SCHOOL OF MANAGEMENT*

**MGSM WORKING PAPERS IN MANAGEMENT**

**TRANSPACIFIC INDUSTRIES – A CASE STUDY IN PROFIT  
QUALITY THROUGH THE EXAMINATION OF IMPAIRMENT  
DISCLOSURES**

**Tyrone Carlin  
The University of Sydney**

**Nigel Finch  
Macquarie Graduate School of Management  
Macquarie University**

**Guy Ford  
Macquarie Graduate School of Management  
Macquarie University**

**MGSM WP 2009 - 1  
February 2009**

**Disclaimer**

Working papers are produced as a means of disseminating work in progress to the scholarly community, in Australia and abroad. They are not to be considered as the end products of research, but as a step towards publication in scholarly outlets.

© Copyright: Tyrone Carlin, Nigel Finch & Guy Ford

**Research Office**

Macquarie Graduate School of Management  
Macquarie University  
Sydney NSW 2109  
Australia

Tel +61 2 9850 7732

Fax +61 2 9850 9019

Email [research@mgs.edu.au](mailto:research@mgs.edu.au)

URL <http://www.mgs.edu.au/research>

**Associate Dean of Research Professor Richard Badham**  
**Research Administrator Mrs Kerry Daniel**

ISSN 1445-3029    Printed copy  
1445-3037    Online copy

**MGSM WP 2009-1**

**Title: Transpacific Industries – A Case Study in Profit Quality Through the Examination of Impairment Disclosures**

**\* Corresponding Author**

Nigel Finch  
Director of the Centre for Managerial Finance  
Macquarie Graduate School of Management  
Macquarie University NSW 2109 Australia

Phone: +61 2 9850 9030

Fax: +61 2 9850 9019

Email: [Nigel.Finch@mgs.edu.au](mailto:Nigel.Finch@mgs.edu.au)

# TRANSPACIFIC INDUSTRIES – A CASE STUDY IN PROFIT QUALITY THROUGH THE EXAMINATION OF IMPAIRMENT DISCLOSURES

**TYRONE M CARLIN**  
*The University of Sydney*

**NIGEL FINCH \***  
*Macquarie Graduate School of Management*

**GUY FORD**  
*Macquarie Graduate School of Management*

## ABSTRACT

This paper examines the profit quality of a goodwill-intensive firm, Transpacific Industries Group Limited (ASX:TPI), by specifically focusing on critical judgements and disclosures relating to goodwill impairment. The term “profit quality” is synonymous with terms such as “creative accounting” and “earnings management” and refers to the degree of aggressiveness or conservatism in the underlying estimates of a firm’s accounting disclosure.

By examining the impairment disclosures made in accordance with AASB 136 – Impairment of Assets, an assessment is made of the reasonableness of a variety of critical assumptions, such as CGU growth rates and discount rates. This assessment is useful in judging the robustness of the firm’s impairment testing methodology and its ability to promptly recognise an impairment charge, should an impairment event occur.

The paper catalogues ten issues relating to critical accounting judgements that ultimately undermine the profit quality of TPI, and the paper concludes with the view that TPI’s methodology and approach to impairment testing is disingenuous, suggesting that TPI is applying a degree of aggressiveness to profit recognition.

**Keywords:** Impairment, goodwill, AASB 136, profit quality, Transpacific Industries

**JEL classification:** M40, M41

### \* Corresponding Author

Nigel Finch is a Director of the Centre for Managerial Finance and a Lecturer in Accounting and Finance at

MGSM (Macquarie Graduate School of Management)

Macquarie University NSW 2109 Australia

Phone: (02) 9850 9030

Fax: (02) 8080 8381

nigel.finch@mgsim.edu.au

## **INTRODUCTION**

The term “profit quality” refers to the acceptability of the accounting principles as applied and the degree of aggressiveness or conservatism of the company’s accounting principles and underlying estimates<sup>1</sup>. Profit quality can be assessed by critiquing the reasonableness of any critical accounting judgements made by the management in preparing the financial accounts and reviewed by the external auditor.

This paper will examine the profit quality of a goodwill-intensive firm, Transpacific Industries Group Limited (ASX.TPI), by specifically analysing critical accounting judgements and disclosures relating to goodwill impairment, primarily from its 2007 audited financial statements.

The structure of this paper is as follows. Section 1 provides a brief overview of TPI highlighting the dominance of goodwill in its 2007 balance sheet. Section 2 demonstrates the importance of prompt detection and recognition of impairment by examining the case of Waste Management Inc. Section 3 is the main section of this paper and examines the impairment testing practice of TPI and critiques a variety of the key assumptions and disclosures. Section 4 examines the sensitivity of TPIs 2007 earnings to an impairment expense. Section 5 provides a brief note on audit quality before offering a conclusion to the paper.

## **SECTION 1 – TRANSPACIFIC INDUSTRIES GROUP LIMITED**

Transpacific Industries Group Limited (ASX.TPI) is a diversified waste management company that was listed on the Australian Securities Exchange (ASX) in May 2005. Although TPI has assets in excess of \$4 billion, its market capitalisation is only around \$2.6 billion<sup>2</sup> plus the company owes in excess of \$2.3 billion in debt finance. TPI has grown rapidly through numerous acquisitions, and at the time of writing, TPI was in the early stages of a hostile all-scrip takeover of its latest acquisition target, DoloMatrix International Limited (ASX.DMX), a company with a market capitalisation of around \$45 million that specialises in the treatment of hazardous waste.

TPI held total assets of \$4,027 million at 30 June 2007, with intangible assets of \$2,480 million dwarfing all other asset classes and representing 61.5% of total assets. These intangible assets comprised: goodwill (\$2,275 million); patents and licenses (\$75 million); and other intangibles including customer contracts (\$129 million), with goodwill alone representing 56.5% of total assets.

---

<sup>1</sup> Schilit H., (2002), *Financial Shenanigans: How to Detect Accounting Gimmicks and Fraud in Financial Reports*, 2<sup>nd</sup> Edition, McGrath Hill, New York, p. 255.

<sup>2</sup> Source: Aspect Huntley as at April 2008.

The dominance of goodwill in the capital structure of TPI will pose a risk to future profitability, should an impairment event occur. As such, any assessment of the profit quality for TPI (and therefore the likelihood of future earnings) should involve an assessment of the robustness of the impairment testing methodology that TPI have adopted, and the sensitivity of earnings to an impairment expense. This assessment is the focus of this paper, starting with an appreciation of the significance of prompt impairment recognition in underscoring profit quality.

## **SECTION 2 – THE SIGNIFICANCE OF IMPAIRMENT**

The failure of a firm to promptly recognise an impairment charge will lead to overstating current profit and permitting larger book values to accumulate on the balance sheet than would otherwise be the case. Waste Management Inc. (WMI.NYSE) provides a particularity noteworthy case of poor profit quality and the failure to promptly recognise an impairment charge.

WMI provides comprehensive waste management and environmental services across North America. The company grew rapidly through multiple acquisitions and by 1998 was embroiled in a high-profile accounting scandal<sup>3</sup>, which ultimately led to a major drop in its share price. In 1997, WMI recognised a special charge for asset impairment and also restated its financial statements for 1994, 1995 and 1996 as a result of pursuing an aggressive approach to profit recognition and a legacy of unrealistic assessments regarding the expected asset utilisation of its acquired waste management assets<sup>4</sup>. Prior to the recognition of WMI's impairment expense, the acquired assets comprised the majority of its book value, and the avoidance of impairment over this four year period resulted in US\$1.7 billion in inflated earnings and overstated assets by an equivalent amount.

This scandal would have been avoided if the management and auditors of WMI (Arthur Anderson) had adopted realistic assumptions regarding the utility of its assets. With the benefit of hindsight, there is little doubt that WMI's assets were impaired. However, if WMI had adopted practices that emphasised the importance of profit quality, this impairment would likely have been recognised sooner and progressively over the assets economic life, rather than as a scandalous one-off shock that ended up wiping off 75% of the market capitalisation of the company, instigating a string of legal actions relating to fraud and accounting irregularities, and driving the share price from \$56 a share down to a low of \$13<sup>5</sup>.

---

<sup>3</sup> WMI was the biggest case in accounting fraud before Enron, and the first time in 20 years the US Securities and Exchange Commission had sued a major accounting firm, in this case, WMI's auditor Arthur Anderson.

<sup>4</sup> Mulford C. W. & Comiskey E. E., (2002), *The Financial Numbers Game: Detecting Creative Accounting Practices*, John Wiley and Sons, New York, p. 223-224.

<sup>5</sup> WMI share price was \$56.50 in April 1999 and collapsed to \$13.68 by March 2000 as investors began to understand the extent of the accounting irregularities and the fraud committed by the company and its auditors.

While the determination of an impairment charge against an asset is ultimately a judgement reserved exclusively to the management and auditors of a firm, the objective of assessing profit quality is to form a view as to the likelihood that an impairment expense will be promptly recognised should an impairment event occur, rather than overstating profit and asset values and giving a misleading impression of the financial performance of the firm.

While internal factors that will likely lead to an impairment charge, such as changes in how a company employs its assets, are difficult for an outsider to objectively assess, there are many readily observable external factors that can trigger an impairment event. These external factors include a decline in general business conditions, changes in technology, and declining market values of assets<sup>6</sup>. Increases to interest rates and other market rates of return may also be an indication of impairment to an asset<sup>7</sup>.

Given the current macro-economic environment of increasing interest rates, declining rates of return in credit and equity markets, a slowdown in many of the worlds leading economics, growing inflation, increases in the price of commodities, and increases in the cost of essential business inputs such as oil and wages, there is a confluence of external events that will continue to apply downward pressure on asset values and create conditions that will see an ever increasing probability of impairment events occurring in the foreseeable future.

By focusing on profit quality and understanding the mechanisms a firm uses to monitor internal and external factors that may likely lead to an impairment charge, an assessment can be made of the robustness of the impairment testing methodology used by the firm and its auditors. Central to this enquiry is forming a sound judgement as to the reasonableness of any critical accounting assumptions. An assessment of TPIs impairment testing methodology and the critical assumptions will be the focus of the next section.

### **SECTION 3 – THE IMPAIRMENT TESTING METHODOLOGY ADOPTED BY TPI**

Goodwill on the balance sheet of TPI is tested at least annually for impairment using a value-in-use approach in accordance with the Australian Accounting Standard, AASB 136 – *Impairment of Assets*. This accounting standard was first adopted by TPI in their 2006 financial year and replaces the previous methodology<sup>8</sup> that amortised acquired goodwill over

---

<sup>6</sup> Mulford C. W. & Comiskey E. E., (2002), *The Financial Numbers Game: Detecting Creative Accounting Practices*, John Wiley and Sons, New York, p. 223.

<sup>7</sup> AASB136 – *Impairment of Assets*, para. 12(d).

<sup>8</sup> AASB 1013 – *Accounting for Goodwill* was the relevant Australian Accounting Standard for accounting periods ending on or after 30 June 1996. The main revision of AASB 1013 was that goodwill is amortised on a straight-line basis over a maximum period of 20 years. AASB 1013 was superseded by AASB 136 – *Impairment of Assets* for annual reporting periods beginning on or after 1 January 2005. The main revision of AASB 136 was the abandonment of compulsory goodwill amortisation and the introduction of an impairment testing regime.

a straight-line basis over a period of 5 to 20 years from the date of acquisition<sup>9</sup>. While the application of this new and highly technical 92-page accounting standard may introduce a number of challenges for both the firm and its auditor (Bentleys MRI) to implement, the disclosures required under the standard provide some interesting insights into critical accounting judgements and ultimately the quality of TPIs profit.

Essentially the impairment testing methodology applies two critical steps to assess impairment for which the accounting standard requires explicit disclosure in the financial accounts. These steps are:

1. The allocation of all goodwill to individual Cash-Generating Units (CGU), and,
2. Determining the recoverable amount of each CGU using a discounted cash-flow method.

In accordance with AASB 136 – *Impairment of Assets*, where the recoverable amount of a CGU is greater than its book value, no impairment charge is recognised. However, where the recoverable amount of a CGU is less than its book value, this difference will represent the impairment charge which will be written-off in the current period. This will have the effect of reducing profit by the full amount of the impairment charge and simultaneously reducing the book value of the remaining goodwill.

Given the significant amount of goodwill on the balance sheet of TPI, the robustness of any impairment testing is crucial in determining the quality of any reported profit and the likelihood of a future impairment charge. To assess the robustness of this process, the remainder of this section will examine how the impairment test was applied by TPI in its FY07 audited financial accounts by examining disclosures regarding each of the two critical steps identified above.

---

<sup>9</sup> Transpacific Industries Group Limited, 2005, Annual Report at 30 June, Note 1(M)(i), p. 43.

## Step 1 – The allocation of all goodwill to individual Cash-Generating Units (CGU)

For the purpose of impairment testing, all goodwill acquired in a business combination shall be allocated to each Cash-Generating Unit (CGU) that is expected to benefit from any synergies of combination<sup>10</sup>. Each CGU will represent the lowest level within the entity at which goodwill is monitored for internal purposes<sup>11</sup>, and shall not be larger than a segment as determined in accordance with AASB 114 – *Segment Reporting*<sup>12</sup>.

TPI identifies \$2,275.464 million in goodwill<sup>13</sup>, however only \$1,982.628 is allocated to CGUs. Although AASB 136 – *Impairment of Assets* requires all goodwill to be allocated, what is curious to note is that an amount of \$292.836 million was not able to be allocated with the explanation that “There are no other individual cash generating units with significant goodwill”.<sup>14</sup> Does this imply that: (a) both the company and its auditor are of the view that \$292 million is not a significant amount for impairment testing purposes, or; (b) that no CGUs have, or are likely to have, received benefit from any synergies as a result of the goodwill incurred in prior acquisitions, or; (c) the unallocated goodwill is not relevant to management for the purpose of monitoring or internal decision-making? Either way, the first observation in assessing the process TPI have taken to the allocation of goodwill to CGUs is that it is not fully-compliant with the accounting standard.

Holding aside the critical issues of the unallocated goodwill, TPI did identify three CGUs (being, Transpacific Industries Group (NZ) Ltd, Baxter Group Ltd and Transpacific Cleanaway Ltd). Its financial accounts also made explicit disclosure of six unique business segments<sup>15</sup> (being, Liquid waste management, Energy, Industrial solutions, Commercial vehicles, Solid waste management, and Other including manufacturing and biosolids) and three geographic segments<sup>16</sup> (being, Australia, New Zealand and South East Asia). Given that a CGU shall, by definition, be no larger a segment, it may be reasonable to conclude that there should be at least three CGUs if the acquired goodwill was held in distinct geographic locations, or at least six CGUs given the business mix. The fact that only three CGUs have been identified (one geographic and two business) may suggest that the process of defining each CGU for impairment testing purposes may also be erroneous or non-complaint.

While some commentators have identified the apparent aggregation of CGUs as an issue of prime significance when assessing profit quality under impairment testing<sup>17</sup>, certainly the most significant finding from this assessment of TPIs disclosure regarding allocation to

---

<sup>10</sup> AASB136 – *Impairment of Assets*, para. 80.

<sup>11</sup> AASB136 – *Impairment of Assets*, para. 80(a).

<sup>12</sup> AASB136 – *Impairment of Assets*, para. 80(b).

<sup>13</sup> Transpacific Industries Group Limited, 2007, Annual Report at 30 June, Note 13, pp. 58-59.

<sup>14</sup> *ibid.*

<sup>15</sup> Transpacific Industries Group Limited, 2007, Annual Report at 30 June, Note 28, p. 86.

<sup>16</sup> Transpacific Industries Group Limited, 2007, Annual Report at 30 June, Note 28, p. 88.

<sup>17</sup> See for example, Carlin T. M., Finch N., & Ford G., (2007), “Goodwill Impairment - An Assessment of Disclosure Quality and Compliance Levels by Large Listed Australian Firms” SSRN, <http://ssrn.com/abstract=963078>.



CGUs is that 12.8%<sup>18</sup> of the entire goodwill balance was unallocated to any CGU, and as such, could not have been tested for impairment when determining the 2007 profit.

The claim by TPI that this \$292.836 million in unallocated goodwill is not “significant” is also difficult to accept given this amount is equivalent to 2.84 times the value of the 2007 profit of \$103.055 million, and is \$23.722 million greater than the entire life-time profit<sup>19</sup> of TPI since it listed.

## Step 2 - Determining the recoverable amount of each CGU using a discounted cash-flow method

The recoverable amount of the three CGUs that were tested for impairment have been based on a value-in-use model. The critical estimates disclosed by TPI in relation to the discounted cash-flow method that underpins under this model are: (i) the growth rates assumed for each CGU, and (ii) the discount rate used to value each CGU. Both of these critical estimates will be discussed below.

### *(i) Assumptions regarding TPIs growth rate*

In forecasting cash flows for each CGU, TPI has assumed one single set of growth assumptions for all CGUs, “...Cash flows are extrapolated over 10 years using a 3% growth rate for the first 3 years and nil growth thereafter”<sup>20</sup>. While TPI claim that these growth assumptions are “conservative”<sup>21</sup>, it raises questions regarding the reasonableness of this critical accounting assumption. Specifically, how reasonable is it to assume that each CGU will experience precisely the same growth profile over the next 10 years, and how reasonable is it to assume that each CGU will also enjoy stability in cash flows in every year from year 4 onwards?

When benchmarking CGU growth expectations with similar firms, TPIs positive growth rate assumptions may not in fact be aggressive rather than conservative as they have described them. For example, in 2007 Amcor Limited (ASX.AMC) had \$1,328 million in goodwill (around two-thirds of the value of TPIs goodwill) and made the following disclosure in relation to its thirteen CGUs embedded within 6 business segments and 5 geographic segments “... forecasts are extrapolated beyond four years based on growth rates representing a maximum of 7% in specific high growth sectors to negative 24% in particular low growth sectors. Generally the average growth rates applied were prudent at

---

<sup>18</sup> \$292.836 million in goodwill unallocated to a CGU as a percentage of the \$2,275.464 million in total goodwill.

<sup>19</sup> The lifetime profit since TPI listed on 3 May 2005 is \$269.114 million. This comprises \$8.675 million (FY2004), \$22.881 million (FY2005), \$47.475 million (FY2006), \$113.405 million (FY2007) and \$76.678 million (HY2008).

<sup>20</sup> Transpacific Industries Group Limited, 2007, Annual Report at 30 June, Note 13, p. 58.

<sup>21</sup> *ibid.*

between 2% positive and 2% negative”<sup>22</sup>. AMCs explicit assumptions have incorporated the prospect of negative growth across some of the CGUs, and this assumption has been factored into their model for assessing the recoverable amount of each CGU.

The question to ponder when reflecting on robustness of TPIs growth rate assumptions is what is the probability that TPI will not experience negative growth in cash flows in any of its CGUs over the next ten years? A high growth (or no negative growth) assumption will have the effect of increasing the value-in-use of the recoverable amount, thereby avoiding the chance of an impairment expense. Factoring in the probability of negative growth is a more conservative assumption that will lead to a lower recoverable amount, rigorously challenging the existing book value of goodwill.

(ii) Assumptions regarding TPIs discount rate

The other critical estimate used in the TPI value-in-use model is the discount rate. Here, TPI have assumed the same discount rate for each of the three identified CGUs. This would suggest that management have assumed that each of the three CGU have the same risk, regardless of market segment, emerging technologies, competition intensity, success in extracting synergies from previous acquisitions, reputational risks, political and legislative risks, environmental and geographic risks, and myriad other factors.

TPI has used a pre-tax discount rate of 7.5%<sup>23</sup> to fully reflect the risks in the cash flows for each CGU. At the time of preparing the 2007 financial accounts for TPI<sup>24</sup>, the RBA cash rate was 6.5%<sup>25</sup>, meaning that TPI had factored in only 100 basis points above the then risk-free rate to fully reflect the risks in the ten-year cash flow projections from TPIs recent acquisitions<sup>26</sup>. The question to consider when contemplating profit quality, is how reasonable is the discount rate assumptions applied by TPI?

The determination of an appropriate discount rate for impairment testing purposes must be derived in accordance with AASB 136 – *Impairment of Assets*. Specifically the rate will be a “pre-tax discount rate”<sup>27</sup>, that reflects the “risks specific to the (CGU) asset”<sup>28</sup>, and the rate shall be “independent of the entity’s capital structure and the way the entity financed the purchase of the asset”<sup>29</sup>. AASB 136 – *Impairment of Assets* implies that

---

<sup>22</sup> Amcor Limited, 2007, Annual Report at 30 June, Note 18, p. 82.

<sup>23</sup> Transpacific Industries Group Limited, 2007, Annual Report at 30 June, Note 13, p. 58.

<sup>24</sup> The 2007 TPI accounts were signed by the Chairman on 21 September 2007.

<sup>25</sup> On the 8 August 2007, the RBA cash rate increased by 25 basis points to 6.50%.

<sup>26</sup> TPIs 2006 financial accounts assumed a pre-tax discount rate of 7.0% which was also 100 basis points over the then RBA cash rate of 6.0% (effective from 2 August 2006).

<sup>27</sup> AASB136 – *Impairment of Assets*, para. 55.

<sup>28</sup> AASB136 – *Impairment of Assets*, para. 55(b).

<sup>29</sup> AASB136 – *Impairment of Assets*, para. A19.

WACC<sup>30</sup> cannot be used for determining the recoverable amount of a CGU because it is composite of the particular funding structure for the firm or asset in question<sup>31</sup>, but rather a pre-tax CAPM<sup>32</sup> should be used to take into account the specific asset risk of each CGU.

The calculation of the Capital Asset Pricing Model (CAPM) is shown at Equation 1, below:

$$\text{CAPM} = r_f + \beta(\text{MRP}) \quad (1)$$

where:

$r_f$  = the risk-free rate  
 $\beta$  = the beta (or riskiness) of the firm or asset  
 MRP = the market risk premium

To determine how reasonable a 7.5% pre-tax discount rate may be, consider a conservative set of assumptions for each of the three CAPM variables which are described in Table 1 below:

**Table 1 – Conservative CAPM assumptions used to assess the TPI discount rate**

|                           |   |
|---------------------------|---|
| <b><math>r_f</math></b>   | Assume a <b>risk-free rate of 6.25%</b> at 30 June 2007, being the RBA cash rate for the period 8 November 2006 to 8 August 2007, rather than the 6.50% at the time the financial accounts were signed by TPI and its auditor, Bentleys MRI.  |
| <b><math>\beta</math></b> | Assume a <b>beta of 1.0</b> , that is TPI is no more or less risky than the aggregate risk of the ASX stock market. TPIs volatility (its risk) is in fact much higher than the aggregate of the whole market. Goldman Sachs JBWere apply a beta of 1.25 when valuing TPI, Wilson HTM assume 1.10 for TPI, Aspect Huntley assume 1.20 for TPI, and Risk Measurement Services <sup>33</sup> assume 3.0. |

<sup>30</sup> Weighted Average Cost of Capital (WACC) is the average of the cost of funding from all sources (debt and equity) proportionally weighted by their respective use.

<sup>31</sup> See for example, Carlin T. M., Finch N., & Ford G., (2007), "An Examination of Disclosure Quality of Goodwill Impairment Testing in a Post - IFRS Environment – A Stakeholder Perspective" SSRN, <http://ssrn.com/abstract=1031840>.

<sup>32</sup> Capital Asset Pricing Model (CAPM).

<sup>33</sup> For 2007, Risk Measurement Services at the Australian School of Business have calculated the levered beta of TPI at 3.0 using advanced statistical techniques to measure variance and co-variance over sixty months of stock price and index data.

|            |   |
|------------|---|
| <b>MRP</b> | Assume a <b>market risk premium of 6.0%</b> which represents the expected return on the market over and above the risk-free rate. This assumption is consistent with the assumptions of key analysts following TPI (eg. Goldman Sachs JBWere and Wilson HTM) as well as the leading academic literature <sup>34</sup> . |
|------------|---|

Relying on the conservative assumptions from Table 1 would imply a discount rate for TPI of 12.25% (being, 6.25% + [1.0 x 6.0%])<sup>35</sup>. CAPM assumes the beta to be an after-tax observation, so the discount rate of 12.25% is also an after-tax estimate. To gross up the after-tax discount rate to a pre-tax discount rate, as required by the accounting standard<sup>36</sup>, the after-tax discount rate is divided by one minus the marginal corporate tax rate of 30%<sup>37</sup>. This would imply a before-tax discount rate for TPI equivalent to 17.50%<sup>38</sup>. The 7.5% before-tax discount rate that TPI are using to test for impairment is a staggering 1,000 basis points less than the rate calculated using even the most conservative CAPM assumptions outlined in Table 1 above.

Reconstructing CAPM may be one technique to examine the appropriateness of the discount rate, but another approach is to compare the discount rate assumptions of TPI against a benchmark discount rates of its peers. This was undertaken by constructing a benchmark sample of listed firms that met each of the following selection criteria:

- (a) goodwill was as an element of firm capital, and,
- (b) the firm had adopted AASB 136 – *Impairment of Assets* to test for impairment, and,
- (c) the firm operated in the Commercial Services and Supplies sector, and,
- (d) the firm was a constituent in the ASX All Ordinaries Index (ASX.XAO), and,
- (e) the firm had adopted a value-in-use approach to impairment test some or all CGUs, and
- (f) the firm had provided disclosure of the discount rate(s) used for impairment testing.

<sup>34</sup> See for example, Officer, R., (1989), 'Rates of Return to Shares, Bond Yields and Inflation Rates: A Historical Perspective', in Ball, R., Brown, P, Finn, F and Officer, R. (eds), *Share Markets and Portfolio Theory, 2nd edition*, University of Queensland Press, Brisbane.

<sup>35</sup> The 12.25% after-tax discount rate assumes a beta of 1.0. However, the after-tax discount rate would be equivalent to 12.85% using Goldman Sachs JBWere beta assumptions, and 13.75% using Wilson HTMs beta assumptions.

<sup>36</sup> AASB136 – *Impairment of Assets*, para. 55.

<sup>37</sup> While this is standard practice, however some commentators note that this approach is an oversimplification and will only lead to consistency on a before and after-tax basis when cash flows are in perpetuity and there is no growth in these cash flows. Given that TPI have assumed no growth in cash flows in years 4 to 10, this approach may be reasonable. See, Lonergan, W., (2006), 'A Valuation Dilemma', *National Accountant*, August/September.

<sup>38</sup> Calculated as, 12.25% / (1 - 0.30).

In total, 32 firms met the criteria above and were included in the sample (excluding TPI). Across the sample the weighted average pre-tax discount rate<sup>39</sup> used for impairment testing was 12.03%, with a standard deviation of 2.64%, as compared to TPIs actual pre-tax discount rate of 7.5%. It is also noteworthy that a number of firms adopted pre-tax discount rates of 17% or more. For example, Coffey International Limited (ASX.COF) used 17.0%, Corporate Express Australia Limited (ASX.CXP) used 18.5%, and Macmahon Holdings Limited (ASX.MAH) used 17.7%.

In observing even the most conservative assumptions under CAPM, and benchmarking TPIs before-tax discount rate with other listed firms, it is apparent that TPIs discount rate is abnormally low. The significance of the discount rate in determining the recoverable amount of goodwill cannot be underestimated. A lower discount rate will result in a higher recoverable amount; hence it is less likely that an impairment expense will be recognised. Whereas, the higher the discount rate, the lower the recoverable amount, hence it is more likely that an impairment expense will be recognised resulting in a write-down in profit and assets.

As we are entering an economic cycle that may provide many external triggers for a goodwill impairment event, the ability for the company and its auditors to recognise impairment in a timely manner (therefore providing quality in their profit disclosure) will depend greatly upon the rigour and the assumptions underpinning their impairment testing methodology. While this section has so far critiqued issues of *judgement* regarding the critical estimates TPIs management and auditors (Bentleys MRI) have adopted in the impairment testing methodology, the next section will examine issues of *fact* – specifically the sensitivity of TPIs actual earnings to any impairment expense.

---

<sup>39</sup> The discount rate for each CGU is weighted by proportion of goodwill allocated to each CGU.

## SECTION 4 – THE SENSITIVITY OF TPIs EARNINGS TO AN IMPAIRMENT EXPENSE

Contemplating the 2007 book value of goodwill of \$2,275.464 million, and the 2007 full year profit of \$103.055 million for TPI, an assessment can be made of the relative sensitivity of its earnings to a goodwill impairment charge.

Table 2 below shows the impairment expense that would be recognised had the 2007 book value been overstated by between 1% and 5% of the recoverable amount, as well as the percentage of 2007 profit that would be written-off as a result of such an impairment charge.

**Table 2 – Goodwill impairment and TPI earnings sensitivity as at 30 June 2007**

| <b>2007 book value overvalued by</b> | <b>Impairment charge (\$ million)</b> | <b>% of 2007 profit written-off</b> |
|--------------------------------------|---------------------------------------|-------------------------------------|
| 1%                                   | \$22.755                              | 22.1%                               |
| 2%                                   | \$45.509                              | 44.2%                               |
| 3%                                   | \$68.264                              | 66.2%                               |
| 4%                                   | \$91.019                              | 88.3%                               |
| 5%                                   | \$113.773                             | 110.4%                              |

For TPI, a high rate of leverage exists in these calculations due to the large amount of goodwill on the balance sheet compared to a relatively small profit. Using the analysis in Table 2 above, it is apparent that TPIs profitability is highly sensitive to even a small decline in value with a 1% decrease in goodwill value equating to a 22.1% decrease in profit. Assuming the 2007 book value of goodwill was overvalued by little as 4.53% compared to its recoverable value, this would be enough to write-off all of the 2007 profit.

A decline in the book value of the goodwill by 4.53% would be the appropriate annual rate of impairment if the acquired assets had an equivalent economic life of 22.08 years. If the economic life was less than 22.08 years, the annual rate of impairment would arguably be higher than 4.53%. While it is impossible to tell today what the useful life<sup>40</sup> will be of the goodwill acquired in any of TPIs premium acquisitions, what is certain is that if the acquired goodwill yields an equivalent economic life of 22.08 years or less, it is inevitable that a minimum impairment charge equal to the entire 2007 profit would be recorded against some future earnings.

It may be useful to reflect on the fact that under AASB 1013 – *Accounting for Goodwill*, the now superseded Australian Accounting Standard which TPI had adopted up until 2006, the

---

<sup>40</sup> For annual reporting periods beginning on or after 1 January 2005, AASB 136 – *Impairment of Assets* now mandates that for accounting purposes, goodwill no longer has a maximum 20 year life, but now has an indefinite life.

assumption by TPI and its auditor, Bentleys MRI, was that the acquired goodwill had an effective useful life of between 5 to 20 years from the date of acquisition<sup>41</sup>.

An examination the financial disclosures regarding dollar values of goodwill and amortisation expense from the 2004 and 2005 financial accounts for TPI can provide an approximation of the effective amortisation rate that has been used historically and the judgments TPI had made about the effective life of goodwill at that time. These approximations are shown in Table 3 below.

**Table 3 – TPI effective goodwill amortisation rates at 30 June 2004 and 30 June 2005.**

| <b>Description</b>                                  | <b>2005</b> | <b>2004</b> |
|---|-------------|-------------|
| Goodwill at year end (\$ million)                   | \$61.438    | \$30,039    |
| Amortisation expense (\$ million)                   | \$2.827     | \$2.447     |
| Effective amortisation rate (%) <sup>42</sup>       | 4.40%       | 7.53%       |
| Effective life of goodwill (years)<br><sub>43</sub> | 22.73 years | 13.28 years |

The sensitivity analysis demonstrates that TPI profit is highly vulnerable to just a small decline in goodwill value, and that a decline of just 4.53% is sufficient to write-off the entire 2007 profit. While it uncertain as to exact amount of impairment in any future year, the data in Table 3 demonstrates that effective annual declines in the value of goodwill of 4.40% and 7.53% in 2005 and 2004 respectively have already been justified by TPI management and its auditor, Bentleys MRI.

With respect to the crucial role of the auditor in verifying the assumptions used in impairment testing, the next section of this paper will provide a brief overview of audit quality, a related concept to profit quality, before providing a conclusion to the paper.

---

<sup>41</sup> Transpacific Industries Group Limited, 2005, Annual Report at 30 June, Note 1(M)(i), p. 43.

<sup>42</sup> The effective amortisation rate is calculated as the amortisation expense divided by the sum of the goodwill at year end and the amortisation expense.

<sup>43</sup> The effective life of goodwill is calculated as one divided by the effective amortisation rate.

## SECTION 5 – A NOTE ON AUDIT QUALITY

While there is little doubt that the application of the AASB 136 – *Impairment of Assets* is challenging for management, its introduction has also been challenging for auditors. The standard is highly-complex, draws upon many aspects of applied valuation, and requires auditors to challenge the forward-looking assumptions of management. This is a radical departure to the previous goodwill accounting regime of capitalise-and-amortise using a straight-line method. Approaching the issue of impairment testing from an audit perspective requires a particular depth of expertise, often referred to as “audit quality”, that some commentators claim is often absent in small (non Big 4) audit firms<sup>44</sup>. Small firms like TPIs auditor, Bentleys MRI.

For obviously reasons, audit quality is near impossible for an outsider to objectively assess because they cannot observe the audit process. However, a gauge of audit firm experience can be derived by reviewing the frequency, concentration and diversity of client engagements across the auditors’ client list. Drawing upon a sample of 200 of the largest industrial firms listed on the ASX with significant goodwill that is impairment tested under the Australian standard, Bentleys MRI audits only one firm; TPI.

The majority of audit work (the expertise claimed as “audit quality”) dealing with this complex issue across the large firm sample rests with Big 4 audit firms<sup>45</sup> who together audit 173 firms from the 200 sample (86.5%). Several non Big 4 firms do have multiple clients across this sample, suggesting they may have garnered more experience for the purposes of impairment testing from dealing with a larger and more diverse client base than Bentleys MRI. For example, Grant Thornton audits 4 firms from the sample, so does Pitcher Partners and PKF. William Buck audits 3 firms from the sample and Howarth, DTT and RSM Bird Cameron each audit 2 firms from the large firm sample.

---

<sup>44</sup> The most commonly studied factor of audit quality has been audit firm size. See for example, Deangelo, L. E. (1981), Auditor Size and Audit Quality, *Journal of Accounting and Economics*, Vol. 3, Iss. 3, 183-199; Lennox, C. S. (1999), Audit Quality and Auditor Size: An Evaluation of Reputation and Deep Pockets Hypotheses, *Journal of Business Finance & Accounting*, Vol. 26, Iss. 7/8, 779-805; Teoh, S. H. & Wong, T. J. (1993), Perceived Auditor Quality and the Earnings Response Coefficient, *The Accounting Review*, Vol. 68, Iss. 2, 346-366.

<sup>45</sup> Big 4 firms are KPMG, Deloitte, PricewaterhouseCoopers and Ernst & Young.



## CONCLUSION

Goodwill will continue to dominate the balance sheet of TPI and this asset class is likely to grow as the company continues with its acquisition-fuelled growth strategy. While TPI has mounted an all-scrip takeover of DMX, it has also announced that it has secured a further \$400 million to fund even more cash acquisitions<sup>46</sup>. As the goodwill builds up, so too does the risk of a significant future impairment that will shock earnings, and TPI investors.

Throughout this paper, a catalogue of ten issues relating to critical accounting judgements, financial disclosures and observations about the profit quality of TPI were identified. These ten issues have been summarised below:

1. The dominance and growing value of goodwill on the balance sheet poses a significant risk to shareholders should an impairment event occur.
2. A confluence of external events in the economy is increasing the probability of an impairment event in the short-term.
3. A significant amount of goodwill (greater than the life-time earnings of TPI) was not impairment tested in 2007 and this may be non-compliant with the accounting standard.
4. The allocation of goodwill to CGUs and the process of defining CGUs may be non-compliant with the accounting standard.
5. TPI may have made a rather naive set of assumptions regarding growth rates in CGUs which could possibly lead to the over-valuation of their recoverable amounts, thereby avoiding impairment.
6. Assuming the same discount rate for all CGUs regardless of the business or geographic segment provides little comfort that the discount rate reflects asset specific risks, and therefore may be non-compliant with the accounting standard.
7. The 7.5% pre-tax discount rate used for impairment testing is grossly understated when compared to CAPM (17.50%) or peer comparison (12.03%), which could possibly lead to the over-valuation of their recoverable amounts, thereby avoiding impairment.
8. The relatively small profit (compared to the goodwill value) means the profit for the firm is highly sensitive to even a small decline in goodwill with a 1% decrease in goodwill value equating to a 22.1% decrease in profit as at 2007.
9. Sensitivity analysis shows that all of 2007 profit would be eroded if the effective life of goodwill turned out be less than 22 years. This is possible, as in prior years, the firm and its auditor had attested that acquired goodwill may have a life as short as only 5 years.
10. The limited exposure of TPIs auditing firm, Bentleys MRI, to audits with similarly large goodwill-intensive Australian firms may also raise issues relating to audit quality.

---

<sup>46</sup> Lindsay, B., (2008), "Transpacific CFO: Around A\$400M Available For Acquisitions", Dow Jones Newswires, 21 January.

Given the analysis herein regarding profit quality and the robustness of critical accounting estimates, the existing TPI impairment testing methodology seems disingenuous towards the task of scrutinising goodwill values, thereby applying a degree of aggressiveness to profit recognition, which in turn undermines the quality of TPIs profit. Perhaps, to draw a parallel from the case of Waste Management Inc., it is unlikely that TPI will recognise any impairment under the stewardship of the existing management team and auditor<sup>47</sup>.

The introduction of AASB 136 – *Impairment of Assets* has had a profound effect on the way a firm can choose to craft its profit, especially firms holding substantial amounts of goodwill on their balance sheet. Yet the approach and the disclosures that a firm and its auditor adopt for impairment testing can be very a useful tool for investors, as it may provide valuable insights into the quality of the number the firm calls its profit.

## REFERENCES

- Carlin T. M., Finch N., & Ford G., (2007), “Goodwill Impairment - An Assessment of Disclosure Quality and Compliance Levels by Large Listed Australian Firms” SSRN, <http://ssrn.com/abstract=963078>.
- Carlin T. M., Finch N., & Ford G., (2007), “*An Examination of Disclosure Quality of Goodwill Impairment Testing in a Post - IFRS Environment – A Stakeholder Perspective*” SSRN, <http://ssrn.com/abstract=1031840>.
- Deangelo, L. E. (1981), “Auditor Size and Audit Quality”, *Journal of Accounting and Economics*, Vol. 3, Iss. 3, 183-199.
- Lennox, C. S. (1999), “Audit Quality and Auditor Size: An Evaluation of Reputation and Deep Pockets Hypotheses”, *Journal of Business Finance & Accounting*, Vol. 26, Iss. 7/8, 779-805.
- Lindsay, B., (2008), “Transpacific CFO: Around A\$400M Available For Acquisitions”, *Dow Jones Newswires*, 21 January.
- Loneragan, W., (2006), “A Valuation Dilemma”, *National Accountant*, August/September.
- Officer, R., (1989), “Rates of Return to Shares, Bond Yields and Inflation Rates: A Historical Perspective”, in Ball, R., Brown, P, Finn, F and Officer, R. (eds), *Share Markets and Portfolio Theory, 2nd edition*, University of Queensland Press, Brisbane.
- Schilit H., (2002), *Financial Shenanigans: How to Detect Accounting Gimmicks and Fraud in Financial Reports*, 2<sup>nd</sup> Edition, McGrath Hill, New York.
- Teoh, S. H. & Wong, T. J. (1993), “Perceived Auditor Quality and the Earnings Response Coefficient”, *The Accounting Review*, Vol. 68, Iss. 2, 346-366.

---

<sup>47</sup> In the case of Waste Management Inc., it took a shake-up of the board and auditors by large outside investors to recognise the impairment charges and ultimately improve the profit quality of the firm.