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FACTORS EXPLAINING MANAGEMENT PREFERENCES OF ACCOUNTING FOR GOODWILL PRIOR TO THE IMPLEMENTATION OF IFRS 3

A Cross-Country Study*

Emita W. Astami
Bambang Hartadi
Greg Tower

This study provides evidence on the cross sectional relationship between firm economic variables and management preferences in the selection of an accounting technique for goodwill. It examines goodwill accounting policy disclosures in the 2000/2001 annual reports of 269 listed companies in the five countries: Australia, Hong Kong, Indonesia, Malaysia, and Singapore. The key focus is management's choice of accounting techniques for the treatment of goodwill.

The results show that accounting practices for goodwill vary significantly across country of origins and across industry groups. Two economic variables significantly explain management preferences of accounting for goodwill. The finding shows that the higher a company's financial leverage ratio the company managers prefer to write off goodwill immediately against income or to capitalize and amortize it in a sorter period of time. The higher a company's size,

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the more likely the company would write-off of goodwill to balance sheet reserves. Thus, this study provides empirical evidence that management preferences of accounting for goodwill have economic consequences.

Keywords: *accounting for goodwill; costly contracting theory; a cross-country study*

Introduction

This study examines factors that affect management's choice of accounting techniques for the treatment of goodwill. To achieve its objective this study conducted two steps of analysis. *First*, it investigates the effects of industry and country of reporting on management's choice of accounting techniques for the treatment of goodwill. *Second*, it examines its economic determinants. Using annual reports for the year 2000/2001 from listed companies in five countries including Australia, Hong Kong, Indonesia, Malaysia, and Singapore, this study scrutinizes the relationships between the explanatory variables and accounting choice for the treatment of goodwill. The explanatory variables derived from the traditional Costly Contracting Theory are size, leverage, and profitability. This study provides empirical evidence regarding the relationships between economic variables and managers' preferences for the treatment of goodwill based on a cross-country study.

This study is carried out based on the five countries located in the Asia Pacific region. Five quite different nations are selected. There are four reasons for the country selection. *First*, in each sampled country there is an established stock exchange requiring listed companies to publish their annual reports. *Second*, annual reports published by companies in each country have English versions available. *Third*, diversity across these five nations regarding financial attributes is sufficient to expect that any variation will be measurable if the factors are significant explanatory values. Australia, Hong Kong and Singapore are considered as developed markets while Malaysia and Indonesia are emerging markets (Saudagaran and Diga 1997). Thus, diversity is again enhanced. Finally, the accounting professions in all five countries are members of International Accounting Standards Board; therefore, they are expected to follow International Accounting Standards (IAS)/International Financial Reporting Standards (IFRS). Thus, the crite-

ria of country selection above are expected to provide diversity for the sample yet all these countries are fully compliant (or moving towards) the IFRS.[1] In this study, the primary research question is:

What are the factors that explain management's choice of accounting techniques for the treatment of goodwill?

The remainder of the paper is organized as follows. Section 2 outlines the accounting for goodwill followed by Section 3 which provides the theoretical framework and develops the hypotheses. Section 4 describes the research approach followed by Section 5 that discusses the empirical findings and their implications. Section 6 concludes the paper by addressing the contributions of the study and ideas for future research.

Accounting Treatments of Goodwill

The long-lived debate has culminated in the impairment test of accounting for goodwill by replacing IAS 22 with IFRS 3.[2] This new standard prohibits the amortization of goodwill. Instead, goodwill must be tested for impairment at least annually in accordance with IAS 36 Impairment of Assets [IFRS3.54].

Prior to IFRS 3, the treatment of goodwill is a controversial and an increasingly important financial reporting issue. IAS [22.20] states that:[3]

Goodwill is the difference between the cost of the acquisition and the acquiring enterprise's share of the fair values of the identifiable assets acquired less liabilities assumed.

Previous studies such as Wines and Ferguson (1993) and McCarthy and Schneider (1995) note that the controversy regarding goodwill in the accounting profession has existed since early 1900s, not only in the US, but internationally as well. They argue that the main issue is whether goodwill should be recognized as an asset, and then if goodwill is recognized as an asset, further controversy exists regarding its treatment and link to the income statement. That is whether goodwill should be amortized, and if so, what method should be used and for how long (Brookes 1995).

According to IAS 22, that is superseded by IFRS 3 effective 1 January 2005, the treatment of goodwill is as follows:

Goodwill arising on the acquisition should be recognised as an asset and amortised over its useful life. There is a rebuttable presumption that the useful life of goodwill

[1] Australia and Indonesia did not allow the unusual use of direct write off to reserve but it was allowed in Hong Kong, Singapore, and Malaysia. Overall, it is felt that the sampled companies still had a wide range of accounting policies to choose from.

[2] IFRS 3 superseded IAS 22 on 31 March 2004.

[3] http://www.iasplus.com/standard/ias22.htm (accessed on 22 May 2004).

will exceed 20 years. [IAS 22.44] IAS 22 indicates that the 20-year maximum presumption can be overcome "in rare cases" –for instance if the goodwill is so clearly related to an identifiable asset or group of identifiable assets that it can reasonably be expected to provide benefits over the entire life of those related assets. Amortisation will normally be on a straight-line basis. [IAS 22.50]

Goodwill is subject to the general impairment requirements of IAS 36. [IAS 22.55] If the amortisation period exceeds 20 years, recoverable amount must be calculated annually, even if there is no indication that it is impaired. [IAS 22.56] Non-amortisation of goodwill based on an argument that it has an infinite life is not permitted by IAS 22.

Prior to the implementation of IFRS 3, the treatments of goodwill vary among countries. Table 1 highlights the treatment of goodwill based on IASB rules and each nation.

The observed variation in the goodwill treatment between companies may be a result of the differences in companies' financial attributes. The immediate write off of goodwill to balance sheet reserves means that the company's reported income figures would never be adversely affected by amortization of goodwill. For example, Weetman and Gray (1991) find that profits under UK GAAP were 10.2 percent lower than under US GAAP based on 41 UK companies in 1986 because of differences in their accounting treatment for goodwill. McCarthy and Schneider (1995) suggest that for many goodwill-reporting firms in the US, goodwill is a significant contributor to debt/equity and debt/assets ratios. At the other extreme, Miller (1973) contends that the least harmful approach would be to write off goodwill immediately against income. The debate continues; this leads to variation in practice.

The International Accounting Standards Committee[4] (IASC) revised IAS 22 (Business Combinations) and issued IAS 38 (Intangible Assets) in 1998. Other standard setters also have recently changed their position. For example, the US recently changed its position on goodwill requiring goodwill to be capitalized and carried forward, subject to impairment test,[5] instead of periodic amortization.

Goodwill is one of companies' key intangible assets. Zingales (2000) argues that intangible assets are one of the main drivers of companies' performance. Furthermore, goodwill differs from other categories of physical and financial assets, for example its perceived higher level of risk and uncertainty has significant impact on the level of agency costs. The above dis-

[4] As stated earlier, the International Accounting Standards Board has superseded the IASC.

[5] This is a crucial fundamental change to the accounting treatment for goodwill and is further discussed in the implication section.

Table 1. **National and IASB Rules Placement for Accounting for Goodwill**

National and IASB rules	Rule placement	Treatment of goodwill
IASB Rules	IAS 22 Business Combination	Goodwill should be carried out at cost less any accumulated amortization and any impairment losses. The straight-line method should be adopted unless there is persuasive evidence that another method is more appropriate in their circumstances. The amortization for each period should be recognised as an expense.
Australia	AASB 1013 Accounting for Goodwill	Goodwill is amortized to income over period not to exceed 20 years.
Hong Kong	SSAP 30 Business Combination	Write off goodwill to reserves balance sheet in the year of acquisition or amortized it.
Indonesia	PSAK 22 Accounting for Business Combinations	Goodwill is amortized to income over period of 5 years or more but not to exceed 20 years.
Malaysia	MASB 21 Busniess Combination	Write off goodwill to reserves balance sheet in the year of acquisition, write off goodwill to income statement in the year of acquisition, or amortized it.
Singapore	SAS 22 Business Combination	Goodwill is recognized as assets and amortized by using straight-line method for a period of 5 years. Other methods of the treatment of goodwill and amortization up until 20 years are allowable if justifiable.

Source: Various sources

cussion indicates that the treatment of goodwill is a crucial financial reporting issue.

Theoretical Framework and Hypotheses Development

This study utilizes costly contracting theory (Watts and Zimmerman 1986) to identify factors that might explain management preferences for particular accounting treatments of goodwill. Costly contracting theory (Watts and Zimmerman 1990) derives from Jensen and Meckling (1976) which concerned with the agency relationship attribute to contracts and Coase (1937) that focused on transaction cost reduction. These theories recognize that there are incentives for

efficient and opportunistic choices of accounting methods depending on the completeness of contracts.

The presence of contracting cost leads researchers to generate testable hypotheses that explain and predict accounting choice. Wong (1988) suggests that based on economic theory there is no reason to believe that the manager as an agent will always act in the best interest of the principal. Hence, the agent may not act in the best interests of the principal in that the agent may make some decisions that maximize the agent's own wealth rather than that of the owner. Scholars such as Ball (1989) and Indjejikian (1999) believe that managers are likely to have a comparative advantage in selecting an efficient set of accounting policies and thus the suppliers of capital do not wish to eliminate all accounting discretion. Warfield et al. (1995) argue that since contracting and monitoring are costly, not all of managers' opportunistic behavior is eliminated nor is the latitude available in the selection and application of accounting techniques entirely removed. Costly Contracting Theory has been the most extensively employed in the accounting literature to explain management's choice of accounting policies. It hypothesizes that managers utilize the opportunity available in both the contracts and accepted accounting procedures in their self-interest.

This paper examines the three standard costly contracting theory hypotheses mainly interpreted in terms of opportunistic management behavior. This assumes that management preferences for accounting choice will be driven by a self-interest desire to maximize management compensation, to alleviate the tightness of debt covenant restrictions and to minimize the possibility of regulatory interference (Watts and Zimmerman 1990).

Profitability

Where there are management compensation schemes based on accounting profits, which are affected by the choice of goodwill accounting, there will be preference for methods not impacting adversely on reported profit. This is the immediate write-off to reserves methods.

Costly contracting theory suggests that management compensation agreements help reduce the conflict of interest between company managers and stockholders. Compensation agreements that pay bonuses based on accounting income will influence management's choice accounting methods. Thus, company profitability might be a factor affected by management's choice of accounting methods. Watts and Zimmerman (1986) note that the bonus plan hypothesis has been tested in several studies, that is, *ceteris paribus*, managers of firms with bonus plans are more likely to choose accounting procedures that shift reported earnings from future periods to the current period. Accordingly, if part of managers' remuneration is derived from incentive plans and management incentive schemes are related to ac-

counting earnings, then it is expected that management have incentives to use accounting methods that increase accounting earnings (Hagerman and Zmijewski 1979).

Alternatives accounting for goodwill result in different reported profits. Immediate write-off of goodwill to balance sheet reserves results a higher reporting profit compared to the capitalization-based followed by amortization approach. Gore et al. (2000) suggest that when there are management compensation schemes based on accounting profits influenced by the effects of goodwill accounting, there is a preference for methods not impacting adversely on reported profits. This is immediate write off to reserves methods which is the most income-increasing technique. Thus, the following hypothesis is tested:

H1: A firm's profitability is positively associated with the use of income-increasing techniques for the treatment of goodwill.

Financial Leverage

Dhaliwal et al. (1982) argue that accounting methods are associated with financial leverage because of the existence of restrictive covenants in the firm's credit agreements. The closer a business is to breaching an accounting based debt constraint, the more likely it is for management to adopt accounting methods that increase income (Watts and Zimmerman 1986). Debt agreements usually include covenants restricting the level of financial ratios such as leverage, liquidity, and profitability. Due to these constraints, management is expected to use income-increasing accounting methods in order to reduce the possibility of covenant violations and avoid the possible costs of renegotiation of debt agreement. Therefore, managers of firms with high leverage ratios are more likely to choose accounting methods that increase reported income. This concept can be directly linked to the examination of management's selection for the treatment of goodwill. Where a firm has accounting-based debt covenant restrictions based on income statement-based ratios, the firm will prefer methods that do not reduce profits. This is the immediate write-off to reserves methods. Skinner (1993) suggests that in a case where a firm can only capitalize and amortize its goodwill, the firm would be expected to amortize it for the longest period permitted. For example, Hall (1993) suspects that there is potentially an opportunistic motive for choosing a longer period of amortization of goodwill to mitigate debt-contracting costs. Therefore, the following hypothesis is tested:

H2: A firm's financial leverage position is positively associated with the use of income-increasing techniques for the treatment of goodwill.

Political Visibility (Measured by Size)

This paper suggests that the capitalization-based followed by amortization approach would be preferred by large firms since it reduces profit com-

pared to an alternative method which is the immediate write-off to reserves. Watts and Zimmerman (1978) argue that management's preferences for accounting methods depend upon the relative income effects of the methods and the political visibility (size) of the firm. They suggest that larger firms tend to adopt accounting methods that reduce or delay the reporting of income.

This size hypothesis is based on the assumption that large firms are more politically sensitive and have relatively larger wealth transfers imposed on them (political costs) than smaller firms (Watts and Zimmerman 1986). The hypothesized relationship between firm size and income effect of the firm's accounting methods has been supported by empirical evidence such as Watts and Zimmerman (1978); Hagerman and Zmijewski (1979); Bowen et al. (1981); Skinner (1993); and Dhaliwal et al. (1999). Large firms have an incentive to choose accounting methods that reduce net income in order to avoid profit-threatening regulation. Large firms will prefer capitalization-based approach for goodwill treatment since it reports a lower profit compared to the immediate write-off to reserves. Linking this concept to the study focus, the following hypothesis is tested:

H3: A firm's size is negatively associated with the use of income-increasing techniques for the treatment of goodwill.

Control Variables

Three control variables are also examined. The relationship between ownership structure and financial accounting has also been hypothesized based on the separation of company management and ownership. Niehaus (1989) suggests that these relationships are based on two grounds: (i) a potential conflict of interest between managers and shareholders arises over accounting method choices, and (ii) a firm's ownership structure in part determines the resolution of potential incentive conflicts. Thus, when there is a high level of ownership concentration these majority shareholders can also control the production of the firm's accounting information and reporting policies. Smith and Watts (1992) believe that corporate policy, including accounting choice, vary across firms as a function of the investment opportunity sets (IOS). Myers (1977) suggests that the market value of a firm consists of two categories. These are the future growth opportunities and assets-in-place (AIP). Skinner (1993) suggests links between the IOS and accounting choice. The links may be a direct relationship, between IOS and the accepted set of accounting procedures, and an indirect link through the firm's contracts between them. Therefore, this study includes the level of ownership concentration, IOS, and AIP as control variables.

Research Approach

Data was collected from a random sample of 442 listed companies' annual reports for fiscal year ends ranging from December 2000 to September 2001. As shown in Table 2, in the year of study, total listed companies from the five countries was 3.387 (Astami and Tower 2006). In the end of 2000, 150 letters asking the latest companies annual reports were sent out to companies in each country studied. Then, from 442 reports received only annual reports of companies reporting goodwill were selected. Based on this purposive sampling, the reports analyzed include 83, 102, 84, 93, and 80 annual reports of companies listed in the stock exchanges of Australia, Hong Kong, Indonesia, Malaysia, and Singapore, respectively.[6] Of the 442 companies' annual reports examined 269 or 61 percent provided information regarding goodwill. Table 2 shows the percentages of companies reporting goodwill and providing their accounting treatment for goodwill.

Classification Scheme for the Treatment Methods of Goodwill

The dependent variable measures the choice for goodwill treatments. In line with Skinner (1993) the treatments of goodwill are classified into income increasing (decreasing) tendency, as a measure of their impact on the reported income. The treatment methods of goodwill are categorized and assigned values ranging from 0 (the most income-decreasing technique) to 2 (the most income increasing technique). The detailed classifications as also done by Astami and Tower (2006) are as follow:

1. A value of 0 for the immediate writes off of goodwill to the income statement in the year of acquisition.
2. A value of .5, 1, and 1.5 for amortiz-

Table 2. **Sample Companies from Each Country Studied**

Countries	Sampled Listed Companies			Sample Reporting Goodwill	
	Number of listed companies	Number of sample	%	n	%
Australia	1.410	83	6	55	66
Hong Kong	746	102	14	88	86
Indonesia	316	84	27	17	20
Malaysia	529	93	18	49	53
Singapore	386	80	21	60	75
Total	***3.387***	***442***	***13***	***269***	***61***

[6] The annual reports examined were those studied in Astami and Tower (2006).

ing goodwill for less then 10 years, 10 to 19 years, and 20 years or more, respectively.

3. A value of 2 for the immediate writes off of goodwill directly to balance sheet reserves in the year of acquisition.

The first and last choices are the most extreme. Direct write-off of Goodwill directly to a reserve is income increasing in the sense that it completely eliminates any goodwill expense from impacting on the Income Statement, thus, it will never decrease profit and the use of write off against the balance sheet as the most income increasing (see Endnote 1). Those in the middle will reduce income over a longer timeframe.

Country and Industry Effects

In addition to examining the relationships between economic variables linked to the traditional Costly Contracting Theory and management preferences of accounting techniques for the treatment of goodwill this study also scrutinizes the effects of country of origins and industry classifications.

Accounting Techniques for the Treatment of Goodwill Across Countries

The country, in whose stock exchange the firm is listed and is based, is chosen as the control variable. Country of reporting is key societal factor used as a broad descriptor to represent different economic, legal, and political systems. Several empirical accounting studies (such as Andrews et al. 1989; Tower et al. 1999; Street and Gray 2002) indicate that the country within which the company operates affects the financial reporting system of the company. Thus, it would be expected that management's choice for accounting techniques for the treatment of goodwill also differ across countries. Table 3 summarizes management preferences in the selection of an accounting technique for goodwill classified based on the country of reporting.

Table 3 indicates the variations of managements' selection of goodwill treatments across countries of study. The mean score of the goodwill treatment method of overall companies is 1.52 out of 2. Indonesian companies employed far more income-decreasing techniques for the goodwill with the mean score of 1.09 out of 2, whilst, Hong Kong companies interestingly used the most income-increasing technique for goodwill with a mean score of 1.91 out of 2 scale.

Overall, of 269 companies in the sample with a stated goodwill approach, 117 or 43.5 percent wrote off goodwill totally in the year of acquisition. This suggests that nearly half of the transaction being against equity reserves in the balance sheet. These direct write offs are an extreme use of an income-increasing accounting policy in that direct write off to a reserve will never reduce the profit figure of this directly written off goodwill. Another six companies wrote off goodwill in the year of acquisition

Table 3. **The Treatments for Goodwill Across Countries for the Year Ends 2000/2001**

Policy	Assigned score	Australia		Hong Kong		Indonesia		Malaysia		Singapore		Total	
		n	%	n	%	n	%	n	%	n	%	n	%
WR*	2	0	0	80	90.9	0	0	12	24.5	25	41.7	117	43.5
A1*	1.5	43	78.2	3	3.4	10	58.8	24	49.0	16	26.7	96	35.7
A2*	1	5	9.1	2	2.3	1	5.9	5	10.2	0	0	13	4.8
A3*	.5	7	12.7	3	3.4	5	29.4	5	10.2	17	28.3	37	13.8
WI*	0	0	0	0	0	1	5.9	3	6.1	2	3.3	6	2.2
Total		***55***	***100***	***88***	***100***	***17***	***100***	***49***	***100***	***60***	***100***	***269***	***100***
Mean score		***1.33***		***1.91***		***1.09***		***1.38***		***1.38***		***1.52***	

*Definition of acronyms:
WR: Immediate write off of goodwill directly to balance sheet reserves in the year of acquisition;
A1: Amortize goodwill for 20 years or more;
A2: Amortize goodwill for 10 to 19 years;
A3: Amortize goodwill for less then 10 years;
WI: Immediate write off of goodwill to the income statement in the year of acquisition.

directly to the income statement. There surprisingly are only slightly more than half of the companies (146 or 54.3%) that amortized goodwill. The majority of these companies amortized it for 20 years period or more. Systematic long-term amortization of goodwill was used most in Australia (78.2%), Indonesia (58.8%), and Malaysia (49%).

Table 3 reveals that the most startling treatment comes from the Hong Kong sample with 90.9 percent of the companies writing off goodwill to balance sheet reserves in the year of acquisition, while some companies (41.7%) in Singapore also did the same thing. Conversely, none of companies from Australia and Indonesia sample did so. None of companies from Hong Kong and Australia wrote off goodwill to the income statement in the year of acquisition. A technique for amortizing goodwill systematically in 20 years period or more (A1) is the most common practice in Indonesia (58.8%) and Malaysia (49%). However, the distributions of the scores of each country were different. None of Singapore companies used the A2 technique (10-19 years of amortization). This seems to indicate that companies in Singapore tended to choose methods that were either the more income increasing or the more income decreasing techniques.

Country of Origin Effects

Table 4 shows the results of the one way ANOVA (Panel A), and the post hoc tests (Panel B). Table 4 (Panel A) shows the highly significant differences exist among the means of assigned score for goodwill treatment methods in the five countries with a *p*

Table 4. **Univariate Analysis of Goodwill Treatment Choices Across Countries**

Panel A: One-way ANOVA				
Significant at .000*				
Panel B: One-way ANOVA– Tukey's Post Hoc Tests				
Country	**Hong Kong**	**Indonesia**	**Malaysia**	**Singapore**
Australia	.000*	.390	.984	.985
Hong Kong		.000 *	.000 *	.000 *
Indonesia			.215	.201
Malaysia				1.000

* Highly significant at $p < .01$ level; ** Significant at $p < .05$ level.

*** Moderately significant at $p < .10$ level.

value of .000. Table 4 (Panel B) summarizes the results of post hoc Tukey's test that tests pairwise multiple comparisons to determine which means differ. It suggests that the mean of the goodwill treatment methods of the Hong Kong companies was highly significant different from those of all other four countries' with a *p* value of .000. Amortizing their goodwill, using less income-increasing techniques for the treatment of goodwill, is much more common practices for the other four countries. Thus, there are clearly very strong country differences.

Accounting Techniques for the Treatment of Goodwill Across Industry Groups

It has been argued that firms with high systematic risk, or which are highly capital intensive, or which are in highly concentrated industries, prefer to use income decreasing accounting techniques (Hagerman and Zmijewski 1979). However, they did not find that the variables had a consistent relationship with the income effect of the accounting methods they examined. Watts (1992) suggests that

Table 5. **Goodwill Treatment Choices Across Industry Groups for the Years end 2000/2001**

Policy	**WR***		**A1***		**A2***		**A3***		**WI***		**Mean Score**
Assigned score	**2**		**1.5**		**1**		**.5**		**0**		
Industry	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	
Core	53	100	37	69.8	10	18.9	1	1.8	3	5.7	2	3.8	1.73
Chemicals	20	100	12	60.0	6	30	1	5.0	0	0	1	5.0	1.70
Services	25	100	14	56.0	6	24	2	8.0	3	12.0	0	0	1.62
Property	26	100	16	61.6	5	19.3	1	3.8	3	11.5	1	3.8	1.62
Resources	35	100	12	34.2	13	37.1	3	8.6	7	20.0	0	0	1.43
Diverse	18	100	4	22.2	11	61.1	0	0	3	16.7	0	0	1.44
Retail	60	100	16	26.7	28	46.7	3	5.0	11	18.3	2	3.3	1.38
Food	32	100	6	18.7	17	53.1	2	6.3	7	21.9	0	0	1.34
Total	269	100	117	43.5	96	35.7	13	4.8	37	13.8	6	2.2	1.52

*Definition of acronyms:

WR: Immediate write off of goodwill directly to balance sheet reserves in the year of acquisition;
A1: Amortize goodwill for 20 years or more;

A2: Amortize goodwill for 10 to 19 years;

A3: Amortize goodwill for less then 10 years;

WI: Immediate write off of goodwill to the income statement in the year of acquisition.

accounting choice varies by industry indicating that it is an important firm characteristic. Industry placement can affect accounting policy choice. The reason is that differing industries are subject to different pressure and expectations. Additionally, an Asia Pacific viewpoint, Chong et al. (2000) note that the choice of accounting measurement policy is affected by a hybrid of interacting forces.

Sample companies from the five countries are grouped into eight industry groups based on the International Standard Industrial Classification of all Economic Activities (ISIC Rev. 3.1). In line with the procedure adopted by Williams (1998), this study produced the industry classifications as follows: Core, Resources, Diverse, Food, Chemicals, Services, Retail, and Property groups, respectively. Table 5 presents the distribution of managements' choice of the goodwill treatment methods across the industry groups.

The mean score of goodwill treatments across industry groups ranges from 1.34 to 1.73 out of 2. The highest mean score comes from the core and chemicals industry groups (1.73 and 1.70, respectively) while retail and food industry groups yielded the lowest mean score (1.38 and 1.34, respectively). Table 5 also reveals that the companies tend to fall into two different groups. One group (core, chemicals, services, and property) uses more income-increasing techniques, whereas, the second group (diverse, resources, retail, and food) applies more income-decreasing techniques. The mean score for all 269 companies is 1.52 out of 2.

The majority of companies (31.6% or 37 out of 117 companies) that wrote off their goodwill to reserves come from core companies group. 29.2 percent (28 out of 96 companies) of companies that amortize their goodwill for more than 20 years come from retail group companies. None of companies in the diverse group amortized their goodwill for 10 to 19 years and none of companies in the chemicals industry classification amortized their goodwill for less then 10 years. Companies that wrote off their goodwill directly to their income statement were from four industry groups that were core, chemicals, retail, and property groups.

Industry Effects

Table 6 reports the result of the one way ANOVA (Panel A) and the post hoc tests (Panel B). Panel A, Table 6, indicates that significant differences exist among the means of the accounting scores of the goodwill treatment methods across industry groups with a *p* value of .006. The results of post hoc Tukey's tests (Table 6 Panel B) support the finding that the significant difference exists between the core companies and two other industry groups: food companies group (*p* value of .035) and retail group (*p* value of .014). The majority of companies in the core industry group (69.8%) wrote off their goodwill to reserves in the year of acquisition (most income-increasing), while the majority of companies in the

Table 6 **Univariate Analysis of Goodwill Treatment Choices Across Industry Groups**

Panel A: One-way ANOVA							
Significant at .006*							
Panel B: One-way ANOVA – Tukey's post hoc tests							
Industry	**Resources**	**Diverse**	**Food**	**Chemicals**	**Services**	**Retail**	**Property**
Core	.187	.547	.035 **	1.000	.993	.014 **	.990
Resources		1.000	.998	.630	.881	1.000	.888
Diverse			.998	.834	.967	1.000	.970
Food				.291	.546	1.000	.553
Chemicals					1.000	.282	1.000
Services						.553	1.000
Retail							.560

* Highly significant at $p < .01$ level; ** Significant at $p < .05$ level.
*** Moderately significant at $p < .10$ level.

food and retail industry groups amortized their goodwill in period of 20 years or more (most income-decreasing).

This indicates that the nature of the business in the food industry group is more conservative compared to that of the other groups. Companies in the core industry group tend to use income-increasing techniques possibly because these companies are more aggressive in attracting prospective investors through a higher reported accounting income. Compared to other industry groups, this industry is also perceived as more speculative. Whereas, companies in the food industry group (which are in a more visible industry group with potentially higher political scrutiny) may well choose a more conservative path.

In summary, accounting techniques for the treatment of goodwill varies significantly across countries and industry groups and plausible explanations have been discussed.

Statistical Findings and Implications

The independent variables are measured as follow. In this study, *Prof* is profitability proxied by the ratio of operating profit divided by operating revenues. *Lev* is leverage proxied by total book value of long-term debt divided by total book value of equity. *Size* is measured by total assets at the end of the financial year in US$ and logged to reduce skewness. *Owncon* or the ownership concentration is the percentage of the sum of all the owner-

ship representing 10 percent or more of the total issued share capital. *IOS* or Investment Opportunity Set measures gross property, plant, and equipment (at historic cost) divided by the market value of the firm where market value of the firm is equal to market value of equity plus book value of debt. *AIP* or Assets in Place is the ratio of the book value of total property, plant, and equipment (PPE) to total assets. Table 7 presents the descriptive statistics of the three economic variables derived from the traditional Costly Contracting Theory and the control variables.

The Profitability (Prof) variable indicates that in the year of study the average of the company profitability is negative 2 percent. Financial leverage (Lev variable) is proxied by total book value of long-term debt divided by total book value of equity. The mean of the companies' financial leverage is 13 percent, which is relatively low. The maximum of companies' financial leverages reporting goodwill is 64 percent which is from a company listed in the Jakarta Sock Exchange. Total assets of the overall companies range from US$ 3 million, which is the smallest company, to US$ 13,902 million, which is the largest company, and the average is US462 million. The smallest company is listed on the Singapore Stock Exchange while the largest company is listed on the Hong Kong Stock Exchange. Total assets is highly skewed, therefore it is logged (Tabachnick and Fidell 1996).

Ownership concentration is thought to be an effective monitoring mechanism and reduce opportunistic conduct in respect to management's choice of accounting policies. The mean of companies' ownership concentration for the overall sample companies is 26 percent. The investment opportunity set (IOS) measures gross property, plant, and equipment (at historic cost) divided by the market value of the firm where market value of the firm is equal to market value of equity plus book value of debt. The overall mean of IOS is 44 percent. Among the five countries of study, the mean of IOS of Australian companies is the

Table 7. **The Descriptive Statistics of Explanatory Variables**

Variables	N	Mean	Min	Max	SD	Skewness
Profitability (Prof)	269	-.02	-3.32	.88	.48	-4.2
Leverage (Lev)	269	.13	0	.64	.15	1.33
Total Assets (Million US$)	269	462	3	13,902	1,290	6.6
LogTA (Size)	269	8.08	6.40	10.14	.66	.43
Ownership concentration (OwnCon)	266	.26	0	.98	.21	.47
Investment Opportunity set (IOS)	235	.44	0	1.51	.35	.89
Assets-in-place (AIP)	269	.31	.0005	.84	.27	.59

n: sample size and excluded samples that have any missing values.

Table 8. **Correlation Matrix for the Independent and Control Variables**

Variables	Prof	Lev	Size (LogTA)	OwnCon	IOS	AIP	Country
Prof	1.000						
Leverage	.129	1.000					
Size (LogTA)	.204	.375 **	1.000				
OwnCon	.109	.031	-.063	1.000			
IOS	.194 **	-.077	-.025	.051	1.000		
AIP	.171 **	.228 **	-.073	.011	.588 *	1.000	
Country	.032	-.181 **	-.172 **	.238 **	.199	.156 *	1.000
Ind8	-.193 **	.032	.013	.079	-.195 **	-.128 *	.058

* Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

lowest (40%) whereas that of Malaysian companies is the highest (58%). Assets-in-place (AIP variable) is the ratio of the book value of total property, plant, and equipment (PPE) to total assets. The mean of AIP is 31 percent with a minimum of 0 and maximum of 84 percent.

Table 8 presents the correlation matrix between the independent variables. Table 8 shows that in general the level of correlations between the independent variable are low. The highest correlation exists between IOS and AIP with correlation value of .588. This indicates that concerns about multicollinearity in the forthcoming regression analysis are lessened.

The relationships between the dependent variable and the predictors are examined by using ordinal regression (McKelvey and Zavoina 1975). The equation of the ordinal regression is as follows:

$$P_{Gw\,i} = a + b_1 \text{Prof}_i + b_2 \text{Lev}_i + b_3 \text{Size}_i + bC_1 \text{OwnCon}_i + C_2 \text{IOS}_i + C_3 \text{AIP}_i + e \quad (1)$$

Where, P_{GW} is probability [income increasing (decreasing) accounting policy choice tendency] for the treatments of goodwill.

i is company specific

a is constant

b is coefficient variable

e is the error term

C is coefficient of the control variables

Table 9 shows the statistical results of the determinant factors of the selection of goodwill treatments.

In examining the factors influencing management preferences in the selection of accounting choice for goodwill, this paper carried out ordinal regressions in three different sets of data. *First*, shown in Panel A Table

Table 9. **Results of Ordinal Regressions for the Determinants for Management's Choice of Accounting Techniques for the Treatment of Goodwill**

$$P_{GwI} = a + b_1 Prof_i + b_2 Lev_i + b_3 Size_i + b_4 OwnCon_i + b_5 IOS_i + b_6 AIP_i + e$$

Regression	N	*p*-value and the predicted directionality sign						Overall *p*-value (A)	Pseudo R-Square (B)
		Prof	Lev	Size	OwnCon	IOS	AIP		
Panel A. Five countries: Australia, Hong Kong, Indonesia, Malaysia, and Singapore									
1	269	n.s +	.000* -	.003* +				.000*	.072
2	232	n.s. +	.012** -	.020** +	n.s- -	n.s. -	n.s. -	.032**	.063
Panel B. Hong Kong, Malaysia, and Singapore									
3	197	n.s +	n.s. -	.034** +				.040**	.033
4	170	n.s +	n.s. -	.052*** +	n.s. -	n.s. -	n.s. -	.035*	.034
Panel C. Australia and Indonesia									
5	72	n.s. +	n.s. -	.063*** +				n.s.	.068
6	62	n.s. +	n.s. -	n.s. +	n.s. -	n.s. -	n.s. -	n.s	.101

n: sample size for the regression

A) Significance of -2 Log Likelihood for model fitting information, (B) Pseudo R-Square-Nagelkerke.

* Highly significant at $p < .01$ level. ** Significant at $p < .05$ level.

9, regressions 1 and 2 include all sampled companies from the five countries. Since it can be argued that, among the five countries, voluntary choices of accounting for goodwill were not identical, additional regressions analysis were conducted and shown in Panels B and C. *Second*, Panel B shows the results from regressions 3 and 4 that included sampled companies from Hong Kong, Malaysia, and Singapore as these three countries had similar methods to choose from. *Third*, with a similar reason, regressions 5 and 6 include sampled companies from Australia and Indonesia shown in Panel C. Regressions 1, 3 and 5 examine the influence of the traditional Costly Contracting Theory variables on the goodwill treatment choices. Regressions 2,

4 and 6 examine the influence of the three CCT variables and control variables on the goodwill treatment choice.

The statistical results presented in Panel A, Table 9 shows that the R-square for the first regression that includes solely CCT variables is .072. The statistical analysis shows that there are positive relationships between the Profitability variable and management selection for accounting techniques for goodwill from all regressions carried out. However, this variable is consistently not a significant variable. Thus, H1 is not supported. The results of the statistical analysis from the three data sets (Panels A, B, and C) are consistent.

A possible explanation is that companies with a low profitability figure or in a loss situation have little or no incentive to increase the number. Therefore, accounting policy choices are less important. As suggested by Healy (1985), the upper and lower bounds in compensation contracts provide a manager an incentive toward 'bath-taking' behavior, that is when earnings are already below expectation or are negative for a certain period, managers may expense as many costs as possible in that period in order to have a much better performance in the following period. Another plausible explanation is related to Skinner's (1993) belief that managers' accounting policy choices are a function of firms' long-term but not short term earnings performance.

Regression 1 in Table 9 also indicates that leverage is a highly significant predictor of accounting choice of goodwill treatments with a *p* value of .000. This regression includes the three traditional Costly Contracting Theory variables and it incorporates sampled companies from the five countries. However, the directionality signs are consistently negative indicating that the higher (lower) a company's leverage ratio, the more likely the company selects an income-decreasing (increasing) goodwill treatment method. Leverage does help to predict the goodwill treatment method but Hypothesis 2 is not supported due to the reverse directionality sign. Additionally, Panels A and B show that leverage is an insignificant predictor.

The different finding of this study might be due to the fact that the overall mean of financial leverage of sample companies in this study is low (13%).[7] This shows that, on average, companies were not at all close to violating their debt covenant agreements. Thus, there is no direct motivation to reduce leverage via accounting policy choices. Another plausible explanation is that the immediate write-off of goodwill

[7] In line with Skinner (1993), this study used the ratio of book value of long term debt divided by the book value of total assets to proxy financial leverage. Skinner classified his sample into two categories; firms with accounting-based debt covenants (mean of leverage is 25.1%) and firms without accounting based debt covenants (mean of leverage is 13.8%). However, this study could not actually ascertain the actual firms' debt covenant contracts given the fact that such data is not publicly available information.

into the income statement (in this study it is categorized as the most income-decreasing goodwill technique) will reduce shareholders' equity in the year acquisition, thus, potentially restricting the firms' ability to declare a dividend. Therefore, firms with higher leverage ratios might not need to pursue income-increasing techniques to generate a better reported income because this would lead to a perception that the firms' good performance should result in a higher dividend distribution. This study postulates that the accounting choices decisions may be influenced by a firm's financial difficulties rather than attempts to avoid debt covenant violations.

The result from regression 1 indicates that Size is a highly significant predictor with a *p* value. 003 (see Panel A Table 9) when the regression includes all three Costly Contracting Theory variables. This suggests that Size does help to predict the goodwill treatment method choices. However, the predicted directionality sign is positive indicating that the higher a company's size, the more likely the company selects an income-increasing goodwill treatment method. Thus, H3 is not supported due to the reverse directionality sign. The finding of goodwill treatment method choices in this study is not consistent with the Costly Contracting Theory hypothesis where large companies have an incentive to select more income-decreasing techniques (Watts and Zimmerman 1986). This study shows that larger companies are more likely to select income-increasing goodwill treatments. The most radical is the method to immediately write off the goodwill to reserves in the year of acquisition (Gore et al. 2002). Most (90.9%) Hong Kong companies wrote off their goodwill to reserves balance sheet in the year of acquisition and those companies were the larger companies in the sample.

Although the relevant IAS (IASC 1999) precludes immediate written-off, virtually all the Hong Kong companies pursue this income-increasing technique. Those large companies in Hong Kong may have pursued such an income-increasing technique for goodwill possibly because they had anticipated the change of regulation regarding goodwill treatment. SSAP 30 (Business Combinations) of Hong Kong accounting standards becoming effective for annual financial statements covering periods beginning on or after 1 January 2001[8] regulates that goodwill can no longer be written off immediately in the year of acquisition. Thus, the dramatic goodwill treatment in writing off all goodwill to balance sheet reserves in the year of acquisition is an interesting unique feature of Hong Kong companies before SSAP 30 prohibited this method. This issue also

[8] This study uses companies' annual reports for period end ranges from December 2000 to September 2001. Therefore, the new Hong Kong goodwill rule came into affect after the sample period.

explains the finding that management preferences for the selection of goodwill treatments are significantly different. As also shown in Panels B and C that Size variable is only partially explain accounting choice for goodwill.

To ascertain the robustness of the statistical finding from examining the influence of economic variables on management's selection for an accounting technique for goodwill this study also examines the control variables. However, the level of the ownership concentration as a control variable does not help explain management's choice of accounting policies for goodwill treatment and depreciation methods. In regard to the goodwill treatment choice, this is possibly because the event of company's acquisition is not a routine activity that happens quite often in a particular company. Thus, at the time of the company's acquisition of another company that generated goodwill, there might be a completely different nature or level of the company's ownership structure from that of the year of study. Companies' shareholders composition may have fundamentally changed soon after the goodwill acquisition process is completed. The relationship between two control variables, AIP and IOS as proxy variables for companies' growth opportunities, and goodwill treatment method choices are also analyzed. However these two control variables fail in explaining management's choice of the treatment for goodwill. Growth opportunities may affect management's choice of the treatment of goodwill indirectly, through the firm's contracts (Skinner 1993).[9]

Conclusion

This study reveals very large variances in the accounting practices for goodwill in the 2000/2001 sampled companies across country of origins and industry groups. The key focus of this study is management's choice of accounting techniques for the treatment of goodwill. Country as a key of societal factors explains how management preferences of accounting for goodwill vary across nations. This study also provides additional evidence to back the findings of Watts and Zimmerman (1978); Zmijewski and Hagerman (1981); Foster (1986) and Bowen *et al*. (1995) that firm industry characteristics influence accounting policy choices. Thus, it partially supports the position in the literature that management's accounting policy choices are related to industry-specific concerns by providing empirical evidence.

Statistical analysis indicates that two of the three traditional Costly Contracting Theory variables assist in explaining management preference of accounting techniques for the treatment of goodwill. However, the re-

[9] Skinner (1993) links the IOS to debt contracts and management compensation plans that in turn affect the choice of accounting policies. However, this study could not access such contracts.

sults have to be interpreted carefully. Two economic variables significantly explain management preferences of accounting for goodwill from the five countries data set. The finding shows that the higher a company's financial leverage ratio the company managers prefer to write off goodwill immediately against income or to capitalize and amortize it in a sorter period of time (i.e. amortize it for less then 10 years). A plausible explanation for this finding is that where a company has debt covenant restrictions based on balance sheet ratio, a positive association between capitalization and amortization based preferences and the presence of such restriction can be expected (Gore et al. 2000). However, if debt covenant restrictions are based on income statement-based ratios, companies will prefer methods that do not reduce profits (i.e. immediate write-off to reserves methods). Another finding is that the higher a company's size, the more likely the company would write-off of goodwill to balance sheet reserves. Hence, this study provides empirical evidence based on accounting practices that management preferences of accounting for goodwill have economic consequences.

This paper also provides evidence by countries with like accounting standards. Thus, it shows the important about the extent to which accounting choice for goodwill are voluntary in the various countries affect the explanation of management preferences on accounting for goodwill.

Future research could be pursued in several directions. *First*, this study observes that management's selection of accounting techniques for the treatment of goodwill varies significantly across nations. Country as a key of societal factors could be examined in future research to explain these national accounting differences. The possibilities include exploration of the legal system, tax law, inflation level, level of economic development, and relationship between business enterprises and providers of capital (Doupnik and Salter 1995).

Second, there is also a global movement towards the 'Assets Impairment' rule for goodwill which foregoes systematic annual amortization and replaces it with the need to write down (whatever expense is appropriate) the value of goodwill that exceeds its stated cost value. This new approach, in effect, generates a different accounting policy choices decision: to what degree (if any) does a company write down its goodwill figure? To what extent does a company choose an income-decreasing accounting policy choice? It is an open question that whether the Assets Impairment rule will lead to greater or lesser variance in accounting policy effect on the income statement. Future research can scrutinize the implementation of the new method.

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