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## Accounting for Goodwill in an Australian Context

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*This article empirically documents the impact of regulation of goodwill accounting practice in Australia. Using a sample of 84 firms over the period 1983 to 1989, this study investigates changes in accounting practice in response to both professional regulation (AAS 18) and statutory-backed regulation (AS RB 10 13). Evidence presented reveals that the diversity of accounting practice was reduced after the imposition of AAS 18, and was reduced further after the imposition of ASRB 1013. The findings support the contention that statutory regulation was relatively more effective than professional regulation in the promotion of uniformity of practice. Previous writers have suggested that the effectiveness of the regulation was limited because firms avoided the application of the goodwill standards by making discretionary changes to their treatment of identifiable intangibles. This study confirms that the average balance of identifiable intangible assets increased subsequent to the imposition of accounting regulation.*

This article is motivated by the international controversy surrounding the regulation of accounting for goodwill. Recent moves for regulatory change in the United Kingdom by the Accounting Standards Committee, and in the international arena through the International Accounting Standards Committee (IASC), have focused attention on the long-running goodwill debate. The British and international accounting regulators have made proposals consistent with the more conservative goodwill accounting rules in the United States and in Australia. The history of accounting for goodwill in Australia provides an opportunity to examine the impact of accounting regulation in promoting uniformity of practice. This paper documents and compares pre- and post-professional regulation (AAS 18) practice and includes an examination of post-statutory regulation (ASRB 1013) practice. The results of this study may be of interest to the accounting profession and to international regulators of accounting, as it provides information regarding the effectiveness of standard setting for goodwill accounting in the Australian context. Regulators in the United Kingdom, in particular, may be able to use such information as input into the decision making process with respect to the proposals for accounting for goodwill.

Accounting standards for the corporate sector in Australia emanate from two sources: the professional bodies and the Accounting Standards Review Board (ASRB). Historically, it has been the two professional bodies (the Australian Society of Accountants, now the Australian Society of Certified Practising Accountants, and the Institute of Chartered Accountants), through their joint standard-setting body, the Australian Accounting Research Foundation (AARF), which have issued accounting standards. At time of writing, 28 of these Australian Accounting Standards (AASs) have been issued. Members of the Australian accountancy profession are required to conform with Australian Accounting Standards by Professional Statement (APS) I- Conformity with Accounting Standards, which states that: The Australian accountancy profession requires members who assume responsibilities in respect of the preparation, presentation or audit of financial statements to support the Statements of Accounting Standards approved by the profession.

Penalties for noncompliance with APS I are limited to potential disciplinary action being taken against members of the professional bodies. There is no direct requirement for corporate managers or directors to comply with AAS standards. More recently, some accounting standards in Australia have received statutory backing via the Accounting Standards Review Board, a body formed in 1984 by virtue of the Australian Companies Acts and Code. The ASRB had the power to approve accounting standards emanating from the AARF or other sources. Conformity with “approved” accounting standards was required by s.269(8A) of the Companies Code. Sanctions for noncompliance were the criminal penalties specified in s.276 against directors. Auditors were required to report any noncompliance with approved accounting standards and were subject to s.570 criminal sanctions for failure to do so. The only exceptions to the requirements to conform with approved accounting standards were where such compliance would not present a true and fair view under s.269 of the National Companies and Securities Commission (NCSC) Companies Code or where s.273 exemptions were expressly granted by the NCSC. The existence of these exceptions and a lack of resources for the monitoring bodies presented barriers to the effective enforcement of approved accounting standards (see Langfield-Smith, 1990).

In 1991, major changes to the legislative system governing the reporting requirements of Australian companies were made. The Australian Securities Commission Act (1989) and the Corporations Act (1989) replaced the former Companies Acts and Code. The body responsible for supervising the administration of companies legislation in Australia, the NCSC, was replaced by the Australian Securities Commission (AX) and the ASRB has since been replaced by the Australian Accounting Standards Board (AASB). Like the ASRB, standards approved by the AASB have statutory backing. All standards previously approved by the ASRB now have effect as if they had been approved by the AASB. To date, a total of 27 AASB standards exist. Since these changes occurred subsequent to the test period used in this study, all future references to legislation or regulation will be made to the legislative and regulatory bodies extant during the period 1983 to 1989, that is, the NCSC, the Companies Acts and Codes, and the ASRB.

Prior to 1983, there existed diverse corporate goodwill accounting practice in Australia, which exposed the profession to criticism with regard to the “reliability” and “comparability” of financial statements (see, for example, Standish, 1972; Miller, 1973; Gibson and Francis, 1975; Goodwin, 1986; Kirkness, 1987). The Australian accounting profession first moved to standardize the accounting treatment of goodwill by issuing an exposure draft (ED 23) in May 1983. In March 1984, the accounting standard AAS 18- Accounting for Goodwill was issued to apply in respect of any accounting period ending on or after March 31, 1985. Ninety-one submissions on the exposure draft (ED 23) were received, which, at that stage, was double the typical number of responses to exposure drafts (40 to 50 was the usual number of responses).

Diversity of goodwill accounting practice continued despite the imposition of AAS 18 (see, for example, Kirkness, 1987; Carnegie and Gibson, 1987; Williams and Carnegie, 1989). In April 1988, the ASRB issued ASRB 1013, an “approved” accounting standard relating to goodwill, with application to all companies with financial years ending on or after 19 June 1988.

Both accounting standards mandate the use of the purchase method, which requires the capitalization of purchased goodwill with systematic amortization over a period not exceeding 20 years. All business combinations are required to be treated as an acquisition with an acquirer and acquiree. There is no provision for the use of merger accounting (pooling of interests), as is permitted in the United States and in the United Kingdom. Both AAS 18 and ASRB 1013 define purchased goodwill as the future benefits from unidentifiable assets, measured as the excess of the cost of acquisition incurred by the company over the fair value of the identifiable net assets

acquired. This study replicates and extends the post-professional regulation (AAS 18) research by documenting accounting practice with respect to goodwill across the seven-year timeframe, 1983 to 1989. The survey period spans the introduction of both the professional (AAS 18) and statutory (ASRB 1013) regulations.

Purchased goodwill, as defined by AAS and ASRB 1013, is a residual amount, representing future benefits arising from unidentifiable assets. One possible way to mitigate the impact of the goodwill accounting regulation is for affected firms to record identifiable intangible assets (for example, trademarks or patents) acquired but not previously brought to account (Williams and Carnegie, 1989). The effect of such a course of action would be to reduce the amount of goodwill to be recognized. Although an identifiable intangible asset is then recorded in place of goodwill, the allowable accounting treatment for identifiable intangible assets and, in particular, the amortization of such assets is equivocal in Australia. The accounting treatment of identifiable intangible assets such as patents, brand names, and trademarks is not specifically covered by any existing accounting standard. The accounting profession has issued Australian Accounting Guidance Release AAG .%-Accounting for Intangible Assets Recognised in Accordance with Statement of Accounting Standards A AS 18 "Accounting for Goodwill, " and Exposure Draft (ED)49-Accounting for Identifiable Intangible Assets.

The accounting guidance release and exposure draft assert that where identifiable intangible assets are recognized, they should be subject to amortization. However, AAG 5 and ED 49 are not binding as accounting standards and ED 49 has now been withdrawn. To investigate whether the accounting treatment of identifiable intangible assets changed in response to the goodwill regulation, this study will also examine the corporate treatment of identifiable intangible assets during the period 1983 to 1989.

The second section of this article describes several national practices in accounting for goodwill and recent international moves for regulatory change. A brief outline of pre- and postregulation practice in accounting for goodwill in Australia is given in the third section. In the fourth section, the research questions addressed by this study are articulated, while the fifth section describes the sample selection criteria and the manner of classification of sample firms, survey results, and statistical tests. The last section discusses the findings and implications of the study.

## VARIOUS NATIONAL PRACTICES IN ACCOUNTING FOR GOODWILL

The mandated accounting treatment of goodwill in the United States is determined by Accounting Principles Board Opinion (APB) No. 16- Accounting for Business Combinations, and Accounting Principles Board Opinion No. 17-Intangible Assets. APB 16 requires that a business combination be accounted for as either the purchase of one business by another or as a pooling of interests of the businesses involved. Where the purchase method of accounting for business combinations is used, the treatment of any resultant goodwill must be capitalized and amortized, using a straight-line basis over a period not exceeding 40 years, in accordance with APB 17. The amortization period in Australia is limited to 20 years. APB 16 allows the use of the pooling-of-interests method where there is a continuation of ownership interests and sets out certain criteria which must be satisfied before this method may be applied. The accounting treatment of goodwill becomes a nonissue where the pooling of interests method is applied. This method does not usually give rise to any goodwill, unless the pooling consideration exceeds the precombination reserves of the selling company. Australian companies are unable to employ the pooling-of-interests method, which could avoid the creation of goodwill balances, as the use of this method is precluded by AASB 1015-Accounting for the Acquisition of Assets.

In the United Kingdom, the required accounting treatment of goodwill is specified in Statement of Standard Accounting Practice (SSAP) 22- Accounting for Goodwill, and SSAP 23-Accounting for Acquisitions and Mergers. These standards were issued by the United Kingdom's standard-setting authority, the Accounting Standards Committee (ASC). Similar to the position in the United States, SSAP23 allows the use of the pooling-of-interests method where the business combination is by way of merger. Where an acquisition rather than a merger takes place, SSAP 22 permits the use of two alternative treatments of purchased goodwill. Goodwill may either be capitalized and amortized over its estimated useful life, a period not to exceed 20 years, or written-off immediately against reserves. The latter is the preferred treatment under the standard and most predominant method employed by business, both prior and subsequent to the standard (Nobes, 1992).

The regulations in place in the United Kingdom allow more discretion than either the United States or Australian regulations. However, the accounting profession in the United Kingdom has issued Exposure Draft (ED) 47- Accounting for Goodwill and ED 48-Accounting for Acquisitions and Mergers, which indicate an intention to adopt more stringent accounting requirements. ED 47 states that the existing recommendation of SSAP22, with a preferred treatment of immediate write-off against reserves, is inappropriate. The proposed treatment under the exposure draft is the capitalization of goodwill with amortization over a period of 20 years, or a period not exceeding 40 years where sufficient justification is given for the longer amortization period. ED 48 limits the application of pooling of interests so that fewer mergers will qualify for the use of the pooling method.

The impetus for regulatory change in the United Kingdom has been international pressure for the adoption of the capitalization with amortization method of accounting for goodwill, as used in the United States (Holgate, 1989/ 1990). This pressure culminated in the issue of Exposure Draft (ED) 32- Comparability of Financial Statements by the IASC in January 1989. ED 47 refers to the influence of ED 32-Comparability of Financial Statements. One of the proposed changes is a tightening of the existing requirements of International Accounting Standard (IAS 22)- Accounting for Business Combinations.

ZAS 22 presently allows the use of the pooling-of-interests method and alternative accounting treatments of goodwill where the purchase method is employed. Purchased goodwill may be capitalized and amortized or immediately written-off against reserves. The International Accounting Standards Committee (IASC) has now issued an exposure draft dealing directly with proposed changes to ZAS 22. The exposure draft restricts the use of the pooling-of-interests method and proposes that goodwill arising on acquisition be capitalized and amortized to income on a systematic basis over its useful life. This period should not exceed five years unless a longer useful life (which cannot exceed 20 years) can be justified. These moves for regulatory change regarding accounting for goodwill, in the United Kingdom and in the international arena, are consistent with attempts by the IASC to promote the international harmonization of accounting practice.

Regulators seem to be moving toward the more conservative treatment of goodwill required in Australia. In fact, the IASC's proposal for a usual amortization period of five years is more restrictive than the Australian position. The proposed changes in the United Kingdom have been met by strong corporate opposition and demands for the modification of ED 47 (Unwin, 1990; Nobes, 1992). However, given the international pressure for uniformity, it is unclear how regulators in the United Kingdom will react. An examination of the effectiveness of similar regulation imposed in Australia may provide regulators with an insight as to the likely corporate reaction to any regulatory changes in the United Kingdom.

## PRE- AND POSTREGULATION PRACTICE IN ACCOUNTING FOR GOODWILL

Studies of Australian preregulation practice have documented a lack of consensus as to the appropriate accounting treatment of goodwill (for example, Standish, 1972; Miller, 1973). The most common accounting treatment of goodwill found by Gibson and Francis (1975) was immediate lump-sum write-off (to extraordinary items through the profit-and-loss account or to reserves) in the consolidated accounts. Goodwin (1986) surveyed the annual reports of 157 companies that had acquired subsidiaries during the years 1980 to 1983.

The most popular accounting treatment adopted by these companies over the three-year period was the treatment of goodwill as a negative balance netted off against shareholders' funds (described in this paper as a cumulative deduction of goodwill from shareholders' funds). In 1983, only 10.4% of the companies surveyed capitalized goodwill with subsequent systematic amortization while 20% retained their goodwill balance without any write-off. Kirkness (1987) examined the goodwill accounting methods used by a sample of firms over the period 1980 to 1985. He identified five separate methods used to account for positive goodwill:

1. Capitalization of goodwill as an asset with no amortization;
2. Capitalization of goodwill as an asset with unsystematic amortization;
3. Capitalization of goodwill as an asset with systematic amortization;
4. Goodwill is deducted cumulatively from shareholders' funds in the balance-sheet (i.e., goodwill is treated as a negative equity item); and
5. Goodwill is written off immediately, either to retained earnings (or some other reserve) or as an extraordinary item in the income statement.

Kirkness (1987) found that capitalization with systematic amortization, the method ultimately required by the accounting regulations, was the least popular, with less than 6% of sample companies using this method prior to regulation. Kirkness documented that firms began to react to the potential regulation in 1983, the year that the exposure draft was issued, with a decline in the use of the potentially "outlawed" methods (capitalization without systematic amortization and cumulative deduction from shareholders' funds) and an increase in the use of immediate write-off and capitalization with systematic amortization. In 1984, there was an increase in the number of firms using the immediate write-off method, and in the following year a number of firms wrote-off their goodwill balances under the transitional provisions of the standards.

By 1985, an increased number of sample firms were using the treatments prescribed by AAS 18. However, 45% of the firms surveyed still used other methods, with more than half of these firms accepting an audit qualification for noncompliance.

A direct comparison between 1974 and 1985 goodwill accounting practices was made by Carnegie and Gibson (1987), who concluded that much of the diversity of practice existing in 1974 remained in 1985, with 46% of companies surveyed indicating an intention to adopt policies other than capitalization with systematic amortization. The most significant finding was that revaluation of the assets of the company being acquired prior to acquisition was prevalent in 1985. Revaluation of the assets before acquisition is consistent with AAS 18, which states that the assets acquired should be recognized at fair values; however, revaluation results in a reduction in the amount recorded as goodwill, eliminating the need for consolidation adjustments to fair values.

Williams and Carnegie (1989) conducted a survey of annual reports of 75 large Australian public companies to determine whether the requirements of AAS 18 had been adopted by 1987. They found evidence of gradual acceptance of the requirements of AAS 18, with the percentage of firms using capitalization with systematic amortization increasing from 46.2% in 1985 to 62.7% in 1987.

There was also a decrease in the number of firms using a lump sum write-off to reserves or retained profits. However, the use of a lump sum write-off as an extraordinary item remained popular, with 25.4% persisting with this method in 1987, despite the fact that AAS 18 only allows such write-offs where a "bad buy" has been made. Williams and Carnegie also conjectured that the gradual acceptance of the standard may actually reflect the fact that firms have "undone" the impact of the standard by making discretionary changes to their accounting treatment of other intangibles in order to avoid the application of the accounting standards by, for example, bringing previously unrecognized identifiable intangibles, such as trademarks, to account. In surveying the 1986 and 1987 annual reports of the 100 largest listed Australian companies, Carnegie and Kallio (1988) examined the use of the "avoidance" technique (i.e., recognition of identifiable intangible assets previously not brought to account). The purpose of their examination was to resolve whether Australian Accounting Guidance Release 5 (AAG 5), released

in April 1988, had deterred firms from recognizing identifiable intangible assets without amortization. They found the predominant practice to be the capitalization of identifiable intangible assets with amortization. However, 35.4% of those firms disclosing an accounting policy did not amortize all or some of their identifiable intangible assets.

To summarize, studies subsequent to the issue of AAS 18 have found that there was some reduction in diversity of practice after the imposition of the standard but that diverse practice was still prevalent. There is also evidence that firms may have been able to lessen the impact of AAS 18 by recognizing identifiable intangible assets previously not brought to account.

## RESEARCH QUESTIONS

Positive accounting has considered the role of accounting numbers in the contracting process (Watts and Zimmerman, 1990). Empirical evidence indicates that the existence of a management remuneration plan tied to accounting earnings, or a debt contract which specifies accounting-based leverage constraints, are important determinants of a firm's choice of accounting method (Watts and Zimmerman, 1990). Accounting data also represent a means of mitigating information asymmetries which may exist between the management of the firm and the capital market. Incentives for managers to provide accounting information that enables the share market to accurately value the firm have more recently been the focus of a number of empirical studies (Holthausen, 1990).

The value of accounting numbers as a benchmark in contract specification is a direct function of the credence placed on accounting numbers by the contracting parties. The existence of an accounting profession with professional standards and statutory regulations enhances the value and reliability of accounting numbers as a contracting technology by setting certain professional bounds that result in what may be termed generally accepted accounting principles (GAAP). The GAAP represent a "specialised form of case law" (Ball, 1991), which sets a precedent that may be utilized by the contracting parties. Ball (1991, p. 9) draws an analogy with the legal precedent provided in common law:

Contract law provides that a substantial body of precedent, too costly to explicitly write into individual contracts, is “read into” and is thus implicit in all contracts. Rather than formulating detailed accounting rules to determine each contractual outcome, GAAP is commonly specified as the mechanism for calculating contractual pay-offs (Whittred and Zimmer, 1986). Thus, a set of financial statements certified with an unqualified audit report suggests that the firm’s accounting technology is appropriate within the bounds of GAAP, although not necessarily identical to any exact accounting model.

Accounting regulation tightens the bounds of GAAP if certain accounting practices are removed from the set of generally accepted accounting practices. An accounting regulation which removes one or more accounting choices from GAAP can, therefore, impose costs on affected firms if outcomes from existing contracts are impacted by that regulation. For example, the capitalize-and-amortize rules embodied in AAS 28 are income-reducing for a firm which previously wrote off goodwill immediately to reserves. Compliance with AAS 18 for such a firm could feasibly send the firm into technical default of any income-based debt contract constraint and might result in a “noisy” signal to the capital market. The intensive lobbying effort by firms in response to the initial exposure draft (ED 23) suggests that the impending regulation would impose such costs on affected firms.

It follows that corporate reaction to the goodwill regulation will depend on the extent to which existing contracts are impacted by the decrease in the available accounting set, the costs of noncompliance, and the cost of employing discretionary choices which avoid the application of the regulation. Firms might react to the imposition of regulation in one of the following ways:

1. Adopt the capitalization of goodwill with systematic amortization so as to comply with the accounting regulation.
2. Make no changes to accounting practice and bear the costs of noncompliance with the accounting regulation.
3. Adopt a practice of valuing identifiable intangible assets so as to lessen the impact of the regulation.
4. Adjust investment decisions to avoid the purchase of goodwill or adopt the practice of making takeover arrangements in such a manner to avoid the recognition of goodwill.

To determine the extent to which firms would be prepared to bear any costs of noncompliance with the accounting regulations, it is necessary to consider the magnitude of the penalties for breach of accounting standards in Australia. Since AAS 18 is a professional requirement, while ASRB 1013 carries legislative penalties for noncompliance, the costs of noncompliance with AAS 18 are lower than for a breach of ASRB 1013 (Anderson and Zimmer, 1992).

Indeed, prior research has already indicated that AAS 18 was not successful in eliminating diverse practice with respect to accounting for goodwill. This study examines both the post-AAS 18 and the post-ASRB 1013 periods. Therefore, the first two research questions to be addressed by this article are:

1. To what extent did AAS 18 reduce the diversity of corporate goodwill accounting practice?
2. To what extent did ASRB 1013 reduce the diversity of corporate goodwill accounting practice?

Writers including Curran (1989) and Carnegie and Kallio (1988) contend that the practice of recognizing identifiable intangible assets arose as a means to avoid the application of AAS 18. Prior to AAS 18, there may have been little incentive to expend resources to identify intangible assets because the accounting treatment of all intangibles was not regulated and such assets could be included in the residual value of goodwill. If the imposition of AAS 18 did create an increased incentive for firms to recognize identifiable intangible assets, then it could be expected that the average balance of identifiable assets recorded by firms would increase in the postregulation period. Further, if the recognition of identifiable intangibles (for example, trademarks) was successful as a means of avoiding the application of the regulations, then it may be that the average amount of goodwill recorded by firms decreased. Thus, the third and fourth research questions investigated by this study are:

3. Did the amount of identifiable intangible assets, as a proportion of total assets, increase after the imposition of AAS 18 or ASRB 1013?
4. Did the amount of goodwill, as a proportion of total assets, decrease after the imposition of AAS18 or ASRB 1013?

## RESEARCH DESIGN

A random sample of 100 firms was selected from the Australian Graduate School of Management (AGSM) annual-report file for the year ended June 30, 1983. This file, which includes the annual reports of the top 500 Australian industrial and mining public companies by market capitalization, is continually updated to compensate for delistings, mergers, and takeovers. Although this represents a size bias, the AGSM annual-report file consists of a broad cross-section of Australian industries and is the most readily available data source.

In addition, goodwill is less likely to be an issue for small companies as they are infrequently involved in takeovers. The only limitation on selection was that each firm must have survived until 1989. Firms were included in the sample even if they had no goodwill balance in order to obtain a representative sample. After deleting firms for which an annual report for each year was not available or that had materially changed balance sheet dates throughout the period, 84 firms remained.

The annual reports for sample firms were inspected and sample firms classified according to their accounting treatment of goodwill. The classification scheme developed by Kirkness (1987) was employed, except that immediate write-off through the profit-and-loss account and immediate write-off to reserves are treated as separate categories:

- A Capitalization with systematic amortization
- B Capitalization without systematic amortization.
- C Immediate write-off through profit-and-loss account
- D Immediate write-off to retained earnings or reserves
- E No goodwill balance and no goodwill written-off during the financial period
- F Goodwill recorded as a cumulative deduction from shareholders' funds (i.e., goodwill is treated as a negative equity item)

The criteria for determination of accounting policy in each year were based primarily on an examination of the accounts to identify the existence of any goodwill balance, goodwill amortization, or goodwill write-off. In some cases, it was necessary to rely on accounting policy

notes where inadequate disclosure was made. Interpretation of the accounting treatment was necessary in cases where firms failed to disclose the goodwill-accounting-policy choice.

A secondary objective for this study is to examine whether firms have avoided the application of the regulation by recognizing relatively more identifiable intangible assets (for example, trademarks or brand names) in the post-regulation period. Accordingly, the relative amount of identifiable intangible assets was determined for each sample firm in each sample year. If the recognition of identifiable intangible assets by the firm was employed solely as a means of reducing the goodwill balance, it follows that the amount of goodwill recognized by the firms would have decreased, without impacting on the total intangibles balance. The measures for identifiable intangible assets (IIR), goodwill (GWR), and total intangibles (IR) are presented as ratios of the total book value of assets.

The seven-year survey period, 1983 to 1989, was chosen to capture goodwill accounting practice in three separate states: (1) in the absence of regulation, (2) with professional regulation (AAS 18) in place, and (3) after the imposition of the statutory regulation (ASRB 1013). Two separate groups of statistical tests were conducted, first, to determine the aggregate effects of the accounting standards and second, to identify any gradual shifts in accounting policy mapping to the progressive introduction of regulation for each of the seven years. These testing periods can be summarized as follows:

**Group 1**

1983 and 1984 -	preregulation
1985, 1986, and 1987 -	postprofessional regulation (AAS 18)
1988 and 1989	poststatutory regulation (ASRB 1013)

**Group 2**

1983 -	Preregulation
1984 -	Preregulation'
1985 -	Response to professional regulation (AAS 18) with transitional arrangements
1986 -	Response to professional regulation (AAS Z8) without transitional arrangements
1987 -	Response to professional regulation (AAS 18)
1988 -	Response to statutory regulation (ASRB ZOZ3)
1989 -	Response to statutory regulation (ASRB 1013)

The Appendix contains the statistical results and a discussion of the tests conducted.

**DISCUSSION**

This article provides empirical evidence of the corporate reaction to the regulation of accounting for goodwill in Australia. The following conclusions are drawn in relation to the four research questions developed earlier. Research questions 1 and 2 asked to what extent AAS Z8 and ASRB 1013 reduced the diversity of corporate goodwill accounting practice. Figure A. 1 in the Appendix indicates that the diversity of accounting practice for goodwill was significantly reduced between 1983 and 1989. The reduction in diversity was significant using preregulation, postprofessional regulation, and poststatutory regulation time periods (Figure A.1) and on a year by year basis (Figure A.2). Figure A.2 documents that the number of firms using capitalization with systematic amortization increased, while the number of firms using

Accounting for Goodwill in an Australian Context 35 capitalization without systematic amortization decreased in years subsequent to the imposition of regulation in 1985. The practices of immediately writing off goodwill to reserves and the use of a cumulative deduction from shareholders' funds declined in each postprofessional regulation year and were eliminated with the introduction of the statutory regulation. The use of "immediate write-off through the profit-and-loss account" fluctuated and reached a peak in 1985, which could be due to firms "clearing the decks" with the introduction of the professional regulation. By 1989, less than 5% of firms immediately wrote off their goodwill through the profit-and-loss account.

The results support the contention that regulation has been effective in reducing the diversity of practice. In 1989, the proportion of sample firms using an accounting method contrary to the requirements had reduced to 8.4%. The most significant changes took place after the imposition of the statutory regulation with the number of firms using capitalization with systematic amortization increasing significantly in 1988 and 1989 (Figure A.2).

Research questions 3 and 4 asked whether the proportion of identifiable intangible assets/goodwill, as a proportion of total assets, increased/decreased after the imposition of AAS 18 or ASRB 1013. Figure A.3 shows that the proportion of total assets represented by identifiable intangible assets increased significantly in both the postprofessional regulation and poststatutory regulation periods. The extent to which the discretionary change, that is, the recognition of identifiable intangible assets previously not brought to account, avoided the application of the requirements of the regulation was considered with an examination of the measures of goodwill and total intangible assets. Both measures were found to have increased significantly in years subsequent to the imposition of regulation in 1985 (Figure A.3). It is of interest, however, that the most significant increase in the proportion of total assets recorded as goodwill was isolated to the poststatutory regulation period (Figure A.4). There was no significant increase subsequent to the issue of the professional standard. The results reported in the Appendix must be interpreted with at least two caveats in mind. First, the sample used in this study consists of larger Australian companies and the results may not be generalizable to small firms. Second, any changes in the levels of goodwill, identifiable intangible assets, and total intangibles held by sample firms could be attributed to factors other than the imposition of goodwill accounting regulations. The main contribution of this article is the confirmation that the regulation of accounting for goodwill in Australia has been effective in promoting uniformity of practice. The use of discretionary changes to the accounting treatment of identifiable intangible assets has not enabled firms to avoid the impact of the application of the regulation. The comparison of the relative effectiveness of professional and statutory regulation revealed that the statutory regulation was relatively more effective. Where companies have incentives to avoid the requirements of accounting standards, it would seem that the sanctions carried by the legislative backing of "approved" accounting standards are most likely to ensure compliance.

The results of this study may signal to international standard setters that the imposition of the proposed changes to the accounting standard in the United Kingdom is likely to result in uniformity of practice. However, there is some evidence that Australian corporations recognized a greater proportion of their assets as identifiable intangible assets after the regulation of goodwill.

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## APPENDIX: STATISTICAL ANALYSIS AND RESULTS

Figure A.1 reports the number of the sample firms using the six isolated accounting methods in each of the three time periods: preregulation, postprofessional regulation and poststatutory regulation. The hypothesis that the proportional distribution of firms using each accounting policy is equivalent across the different time periods is rejected, as significant differences in accounting policies are obtained using a chi-square test of homogeneity.

Five cells of Figure A.1 have expected values of less than five, so it is possible that the chi-square statistic is overstated. This test is repeated after combining the accounting policies into four categories so that no cell has an expected value of less than five. The measure is reclassified into four different accounting policies, capitalization with systematic amortization, capitalization without systematic amortization, noncapitalization of goodwill (policies C, D, and F combined) and no goodwill. The hypothesis that the proportional distribution of firms using each accounting policy is equivalent across the different time periods is still able to be rejected, as significant differences are obtained once again.

Policy	Pre REG	Post AAS	Post ASRB
A	16 (9.5)	47 (18.7)	61 (36.3)
B	24 (14.3)	23 (9.1)	9 (5.4)
C	20 (11.9)	35 (13.9)	15 (8.9)
D	10 (6)	7 (2.8)	0 (0)
E	93 (55.4)	137 (55.4)	83 (49.4)
F	5 (3)	3 (1.2)	0 (0)
Total	168*	252*	168*

- A Capitalization with systematic amortization
  - B Capitalization without systematic amortization
  - C Immediate write-off through profit and loss account
  - D Immediate write-off to retained earnings or to reserves
  - E No goodwill balance and no goodwill written off during the financial period
  - F Goodwill recorded as a cumulative deduction from shareholders' funds
- \* Pre REG = 1983 + 1984  
 Pest AAS = 1985 + 1986 + 1987  
 Post ASRB = 1988 + 1989

$$\chi^2 = 55.55 \text{ df} = 10 \text{ p} < 0.01$$

**Figure A.I. Accounting Policy Choice by Form of Regulation  
(percentages in brackets)**

The results of tests conducted over each of the seven years, 1983 to 1989, are reported in Figure A.2. The hypothesis that the proportional distribution of firms using each accounting

policy are equivalent across the different years is rejected. The chi-square statistic may be overstated because 14 cells have expected values of less than five. This test is also repeated using the accounting policies reclassified into four different accounting policies. A chi-square test remains significant at 0.01. Thus, the hypothesis that the proportional distribution of firms using each accounting policy are equivalent across the years is still able to be rejected.

Policy	1983	1984	1985	1986	1987	1988	1989
A	8 (9.5)	8 (9.5)	14 (16.7)	15 (17.9)	18 (21.4)	24 (28.6)	37 (44)
B	12 (14.3)	12 (14.3)	9 (10.7)	7 (8.3)	7 (8.3)	6 (7.1)	3 (3.6)
C	10 (11.9)	10 (11.9)	14 (16.7)	10 (11.9)	11 (13.1)	11 (13.1)	4 (4.8)
D	5 (6)	5 (6)	4 (4.8)	2 (2.4)	1 (1.2)	0 (0)	0 (0)
E	46 (54.8)	47 (56)	42 (50)	49 (58.3)	46 (54.8)	43 (51.2)	40 (47.6)
F	3 (3.6)	2 (2.4)	1 (1.2)	1 (1.2)	1 (1.2)	0 (0)	0 (0)
Total	84	84	84	84	84	84	84

- A Capitalization with systematic amortization
  - R Capitalization without systematic amortization
  - C Immediate write-off through profit-and-loss account
  - II Immediate write-off to retained earnings or to reserves
  - E No goodwill balance and no goodwill written off during the financial period
  - F Goodwill recorded as a cumulative deduction from shareholders' funds
- $\chi^2 = 68.0455$   $df = 10$  ( $1 < 0.01$ )

**Figure A.2. Accounting Policy Choice by Year (percentages)**

Tests were conducted (see Figures A.3 and A.4) to determine whether or not the mean levels of identifiable intangibles, goodwill, and intangibles are different for each time period (i.e., preregulation, post-AAS 18, and post-ASRB 1013). The measures of identifiable intangibles (IIR), goodwill (GWR), and intangibles (IR) are all significantly nonnormally distributed so the use of nonparametric tests is indicated. Summary statistics were calculated for each of the measures used in this article. The coefficients of skewness and kurtosis in each year, for the measures for identifiable intangibles (IIR), goodwill (GWR), and intangibles (IR), reveal that these measures may depart significantly from a normal distribution. In order to confirm whether the distribution of these measures are significantly different from a normal distribution, both a chi-square goodness of fit test and a Kolmogorov-Smirnov one-sample test for goodness of fit were conducted. These tests both confirmed that the distribution of each of these measures had a significantly poor fit with a normal distribution in every year. The nonparametric test used is the Kruskal-Wallis one-way analysis of ranks. The hypothesis tested is that the mean level

of each of the measures (identifiable intangibles, goodwill, and intangibles) is equivalent across the different time periods.

As a follow-up to the Kruskal-Wallis one-way analysis of ranks, Mann-Whitney U tests are conducted in order to test for pairwise differences between the mean levels of the variables, preregulation to postprofessional regulation, and postprofessional to poststatutory regulation.

Regulation	IIR	GWR	IR
Pre-Regulation	0.007552	0.005041	0.01259
Post-AAS 18	0.01231	0.007639	0.01995
Post-ASRB 1013	0.02028	0.01133	0.03162
K-Stat (Signif)	0.035	0.002	0.000

IIR = Identifiable Intangible Assets/Total Book Value of Assets  
 GWR = Goodwill Asset Balance/Total Book Value of Assets  
 IR = Total Intangible Assets/Total Book Value of Assets

**Figure A.3. The Mean Balances of Identifiable Intangibles, Goodwill, and Intangibles Scaled by Total Assets**

Variable	Pre Reg to Post AAS Sig. Level (one tail)	Post AAS to Post ASRB Sig. Level (one tail)
IIR	0.035	0.055
GWR	0.402	0.003
IR	0.025	0.004

IIR = Identifiable Intangible Assets/Total Book Value of Assets  
 GWR = Goodwill Asset Balance/Total Book Value of Assets  
 IR = Total Intangible Assets/Total Book Value of Assets

**Figure A.4. Mann-Whitney U Test for Pairwise Differences by Regulation**

**NOTE**

1. ED 23 was issued in 1983 and Kirkness (1987) found that the exposure draft did cause some anticipatory reaction to AAS 18.

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