

1-1-1995

Determinants of the decision to capitalize finance leases by lessees : Australian evidence

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DETERMINANTS OF THE DECISION TO CAPITALIZE FINANCE LEASES BY LESSEES: AUSTRALIAN EVIDENCE

By

Salleh Hassan

B.Bus(Hons) ASA

A Thesis Submitted in Partial Fulfilment of the
Requirements for the Award of

Master of Business (Accounting)

at the Faculty of Business,
Edith Cowan University

Date of Submission: 3 July 1995

ABSTRACT

The objective of this study is to examine the economic factors motivating Australian listed lessee firms to adopt capitalization or footnote disclosure of their finance lease commitments from 1985 to 1987 as permitted by the transitional provision of AAS 17. Six research hypotheses are developed from the economic consequences perspective. It is hypothesised that the decision to capitalize finance lease commitments is positively related to firm's: (1) corporate structure, (2) size, (3) political visibility, (4) financial performance, and (5) overseas association, and negatively related to (6) debt contract financial constraints. Support for these hypotheses would be construed as suggesting that capitalization is a means for lessee firms to reduce or mitigate agency and/or political costs and concurrently as a signal to the market that they are high quality firms. A pooled multivariate cross-sectional analysis for 1985 to 1987 was performed incorporating sensitivity analysis to determine the "best" logistic regression model. This model was then assessed to determine its validity and predictive efficacy. Taken as a whole, i.e., from 1985 to 1987, the sample consists of 314 lessee firms selected from the Australian Graduate School of Management (AGSM) Annual Report File; 67 firms in the capitalizer group and 314 firms in the non-capitalizer group. The results provide consistent evidence that lessee firms adopted the capitalization as a response to the perception by the media as being politically visible firms and concurrently as a signal to the market that they are high quality firms. Even though the "best" model is significant, valid in terms of generalisable beyond the sample, and efficacious in their predictive accuracy, it exhibits only modest explanatory power. The evidence of this study also questions the usefulness of a lengthy transitional period.

DECLARATION

"I certify that this thesis does not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text."

Date: 3 July 1995

ACKNOWLEDGMENTS

I would like to thank God for His guidance in achieving my goal without any particular major difficulty.

I would also like to thank my parents, brothers and sisters who have unfailingly stood by my side throughout these years, providing support, inspiration and encouragement.

Special thanks to my supervisor, Theo Christopher, for his insights, encouragement, and devotion of time. I am also grateful to Prof. Steve Hunter of International and Community Affairs, and Assoc. Prof. Colin Dolley of School of Accounting, for their invaluable assistance at the commencement of this masters course.

Finally, but most importantly, thanks are due to my wife Nor'aini for her unceasing encouragement, support, assistance, advice, patience, and love, for whom I dedicate this thesis.

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CHAPTER 1

INTRODUCTION

This study examines the economic factors motivating Australian listed lessee companies to adopt capitalization or footnote disclosure of their finance lease¹ commitments during the period 1985 to 1987, as permitted by the transitional provision of accounting standard AAS 17: Accounting for Leases (Australian Accounting Research Foundation [AARF], Accounting Standards Board [ASB], 1984).

Background of the study

The measurement and disclosure aspects of leases, especially finance leases, were vexing and contentious issues in Australia (Roberts, 1980; Whittred & Zimmer, 1992). Even though the provisions of AAS 17 became mandatory on or after 1 January 1988, Morris & Carnegie (1988) and Morris (1990) reported that there were a number of listed lessee companies which had adopted the standard during the phase-in period from 1985 to 1987. This decision concerning the choice of the adoption date represents viable research opportunities.

Wilkins and Mok (1991) analysed lessee firms' discretionary finance lease accounting policy choice (i.e., either capitalization or footnote disclosure) during the first year (1985) of the phase-in period. In summary, the univariate findings of their study indicate that whilst leverage, interest coverage, increase in profits, and increase in interest coverage influence managements' choice of finance lease disclosure, profits, increase in leverage, size, industry, and audit firm do not appear to influence the

¹ Originally, AAS 17 defined a finance lease as "a lease which effectively transfers from the lessor to the lessee substantially all the risks and benefits incident to the ownership of the leased property." (para 5) However, the revised AAS 17 and also ASRB 1008 (AARF, ASB, and Accounting Standards Review Board [ASRB], 1987) defines a finance lease as any lease which is not an operating lease. Thus, a finance lease is a lease that effectively (in the economic rather than legal sense) represents the purchase of an asset.

accounting policy choice. "managers make capitalization decisions aimed at maximising near term profits and minimising accounting measure of financial risk" (p. 177). In a later study, Wilkins and Mok (1993) conclude that "capitalization has a material and significant impact on Australian ... firm financial statements and key financial performance indicators" (p. 58).²

Significance of the study

A unique characteristic of AAS 17 was that it had a transitional provision, which allowed firms to choose the implementation time between the standard's operative date and its mandatory date. However, early compliance with the standard was encouraged. The implication of the transitional provision was it allowed firms to be selective and it provided an opportunity for these firms to time compliance with the standard to their advantage. For example, for earnings management effects (including income smoothing).³

Wilkins and Mok (1991) were the first to analyse the economic determinants motivating lessee firms to either capitalize their finance lease commitments or to disclose these commitments via footnote disclosure in the first year of the transitional period. This study attempts to extend and refine the study by Wilkins and Mok in two aspects. First, this study employs a combination of contracting theory and signalling theory approaches, to be discussed in Chapter 4, and consequently a different set of independent variables than those used by Wilkins and Mok. Second, it performs a

² These findings should be interpreted with care. This is because it is not clear whether the effects (either positive or negative) on lessees' financial statements and key financial performance indicators are the result of capitalization of finance lease commitments only. It is plausible that other factors contributed to such changes. For example, there is evidence to indicate that firms use a portfolio of accounting policies rather than single accounting policy in reporting their financial positions and performances (Zmijewski & Hagerman, 1981).

³ Earnings management refers to managers' decisions in changing or selecting accounting policies that would increase their compensation or reduce the probability of debt covenants violations. The objective of income smoothing is to reduce earnings fluctuations (Pincus & Wasley, 1994; Watts & Zimmerman, 1990).

pooled cross-sectional analysis of the characteristics for capitalizers and non-capitalizers during the whole phase-in period (i.e., 1985 to 1987). These extensions are deliberated in Chapter 5.

Objective of the study

The main purpose of this study is to explain managements' decisions regarding finance lease accounting choices for the whole phase-in period (1985 to 1987). The result of a pooled analysis would provide evidence of any variation between the two groups of firms, i.e., the capitalizers and footnote disclosers, throughout the transitional period. The findings of this study complement the findings of Wilkins and Mok (1991) and expand the accounting policy choices literature by providing another perspective, through contracting and signalling theory, to the understanding of managements' choices in finance lease accounting.

Contribution of the study

Besides providing an understanding of managements' motives in finance lease accounting policy choices, this study makes a contribution in two aspects. First, this study proposes that a better understanding of managements' accounting policy choices can be achieved by explicitly including signalling theory into the economic consequences framework in developing the research hypotheses. A combined contracting-signalling theory of the economic consequences paradigm will better explain the phenomenon than a separate contracting theory or signalling theory analyses. Second, the findings of this study will also provide a preliminary view on the usefulness of a lengthy transitional (or phase-in) provision in an accounting standard. Whilst there is a cost/benefit argument supporting such provision (Langer & Lev, 1993), there is also a claim that a transitional provision provides firms with opportunity to indirectly manipulate their income (Pincus & Wasley, 1994).

Organisation of the study

This thesis is organised as follows. The next chapter discusses the nature and prevailing situation of accounting for leases. Chapter 3 presents the review of the related literature of this study. Specifically, it critically analyses previous similar studies as appeared in the literature. Chapter 4 deliberates the theoretical framework and also the formulation of the relevant hypotheses of this study. Following this, Chapter 5 describes the research method, which includes a discussion on sample selection, definition of variables, data sources, and research design. Chapter 6 reports and deliberates the results of the statistical analyses performed in this study. Chapter 7 is the final chapter of this thesis. It provides the summary and conclusions of this study. It also presents alternative plausible hypotheses, limitations and implications of this study, and suggestions for future research.

CHAPTER 2

LESSEE'S ACCOUNTING FOR LEASES

Introduction

This chapter discusses the various aspects of lease accounting. First, an overview of the development of a lease accounting standard in Australia. Second, a description of the main features of the Australian accounting standard AAS 17. Third, a summary of the debate on the accounting treatment of finance lease commitments, between capitalization or footnote disclosure. This discussion will be supported by empirical evidence where available.

Development of lease accounting standard

Accounting for leases has been a particularly contentious and vexing issue as reflected by the discussion it generated in the professional and academic journals during the period from the late 1970's into the mid-1980's (e.g., AARF, 1979; Long, 1985; Reilly, 1984; Roberts 1980; Roberts 1981; Wise & Wise, 1985; Woodhams, 1985). An accounting standard on leases was considered relevant and appropriate because of the following reasons. First, leasing had grown in significance in firms' capital structure over the years (Bazley, Brown & Izan 1985; Harris, 1983). Second, prior to 1985, there was a diversity of practices in the reporting of lease transactions in the annual reports of lessees and lessors (Harris, 1983; Stevenson, 1984). Third, the influence of overseas developments and implementation of leasing accounting standards - the International Accounting Standards Committee (IASC) issued IAS 17 in 1982; the Financial Accounting Standards Board (FASB - USA) issued SFAS No. 13 in 1976; the Canadian Institute of Chartered Accountants (CICA - Canada) issued s.3065 of CICA Handbook in 1978; and the

Accounting Standards Committee (ASC - UK) issued SSAP 21 in 1984.⁴

The process of promulgating an accounting standard for lease commitments started in Australia when the profession, through the Australian Accounting Research Foundation (AARF) initially released a Discussion Paper No. 1 "Accounting for Leases" in 1979 (AARF, 1979). This was followed by Exposure Draft No. 17 in December 1980 (AARF, 1980).⁵ In view of the responses and criticisms received on the exposure draft (Roberts, 1982), a revised discussion paper was released in April 1983 (AARF, 1983).⁶ AAS 17: Accounting for Leases (AARF, Accounting Standards Board [ASB], 1984) was finally issued in March 1984 and was re-issued in June 1987 following its approval by the Accounting Standards Review Board (ASRB) as approved accounting standard ASRB 1008: Accounting for Leases (ASRB, 1986) in August 1986. In all essential respects, the approved standard and AAS 17 are consistent (Whittred & Zimmer, 1992).

Features of AAS 17

As this study concerns the choice of accounting method for finance leases by lessees, there are three features of AAS 17 that are relevant for further discussion. They are:

⁴ For an overview of the comparability of the Australian leasing standard (AAS 17) with those of the international community, see Australian Accounting Standards Board (1994). On an overall basis, AAS 17 is consistent with IAS 17, SFAS 13 and SSAP 21. However, SFAS 13 is considered to be more comprehensive than AAS 17 (Ernst and Young, 1991).

⁵ A total of 49 effective responses to the exposure draft were received. On the issues regarding the accounting treatment of finance lease commitments by lessees, 21 respondents supported "capitalization only", while 12 respondents supported "disclosure only". In addition, many of the respondents who supported the optional approach of the ED specified that the capitalization alternative ought to become mandatory at the end of the proposed three-years trial period (Roberts, 1982).

⁶ The principal change from the exposure draft concerns the treatment of finance leases by lessees. The exposure draft proposed an option for lessees to either capitalize finance leases or provide expanded disclosure of finance leases. This optional approach attracted criticism from respondents to the exposure draft. The Accounting Standards Board (ASB) decided that, in view of support for capitalization expressed in responses to the exposure draft (Roberts, 1982), and the need for consistent and comparable treatment of finance leases by lessees, the option should be replaced with a capitalization requirement.

Classification of leases

AAS 17 requires lessees and lessors to classify leases as finance or operating on the basis of economic substance. Where a lease effectively transfers substantially all of the risks and benefits of ownership of the leased property from the lessor to the lessee, it should be classified as a finance lease by both the lessee and the lessor (para. 24). Where substantially all of the risks and benefits of ownership effectively remain with the lessor, the lease should be classified as an operating lease by both the lessee and the lessor (para. 25).⁷

AAS 17 provides guidelines to assist lessees and lessors in applying the basic concept of transference of risks and benefits of ownership. Classification as a finance lease by lessees and lessors normally would be expected where the following conditions are satisfied (para. 10):

- (a) the lease is non-cancellable; and
- (b) either of the following tests is met:
 - (i) the lease term is for 75 per cent or more of the useful life of the leased property; or
 - (ii) the present value, at the beginning of the lease term, of the minimum lease payment is equal to or greater than 90 per cent of the fair value of the leased property to the lessor at the inception of the lease.⁸

⁷ See footnote 1 for the revised definitions of finance and operating leases.

⁸ Para 12 provides that where a lease contains a bargain purchase option, the amount of that option, by definition, forms part of the minimum lease payment. Furthermore, Appendix 1 of AAS 17 also provides that if ownership is transferred by the end of lease term, then such lease should be classified as finance lease.

Critics commented that the guidelines are open to subjective interpretation and that this would also make its implementation and enforcement rather tenuous (Long, 1985; Reilly, 1984; Wise & Wise, 1985; Woodhams, 1985).

Accounting for finance leases by lessees

The alternative methods of accounting for finance leases by lessees are:

- (a) capitalize the lease, i.e., record the lease as the acquisition of an asset and the incurrence of a liability; or
- (b) do not capitalize the lease, i.e., account for each minimum lease payment as an expense in the period in which it is incurred.

The economic substance of a finance lease is that the lessee acquires a right to the economic benefits from the use of the leased property for the major part of its useful life. In return, the lessee enters into an obligation to pay for that right an amount which approximates the fair value of the leased property and the related finance charges. AAS 17 adopts the view that if transactions involving finance leases were not reflected in the lessee's balance sheet, the economic resources and the level of obligation of an entity would be understated. Thus, AAS 17 requires that finance leases be recorded by lessees as an asset and as an obligation to pay future rentals, i.e., the capitalization of finance leases.

Transitional provision for lessees

AAS 17 permitted lessees, from the operative date of the standard, i.e., 31 March 1985, and for accounting periods ending on or before 31 December 1987, to adopt a policy of capitalizing all finance leases or to adopt a policy of treating all minimum lease payments as period¹ expenses (para. 60). However, during the transitional (or phase-in) period, detailed disclosures were required in respect of non-capitalized finance leases so

as to provide sufficient information to permit financial statement users to appreciate the effect on the balance sheet if finance leases had been capitalized.

Two reasons were considered to have influenced the provision of the extended transitional period (Stevenson, 1984; Whittred & Zimmer, 1992) in AAS 17.⁹ First, to provide preparers and users with the opportunity to gain experience in presenting and interpreting information relating to leases. Second, the possible adverse impact in terms of violations of trust deeds brought about by capitalization of finance leases by lessees. The transitional period would allow affected firms to overcome any such problems, for example by re-negotiating the trust deeds.

These reasons argue that capitalization of finance leases by lessees could have economic consequences. The following section discusses the capitalization debate in depth supported by empirical evidence from the literature where available.

Capitalization debate and empirical evidence

There are basically three arguments advocated by the proponents supporting the capitalization of finance leases. First, capitalization would better reflect the economic substance of lessees (Harris, 1983; McGregor 1985; Woodhams, 1985). This is achieved through: (1) the recognition of a finance lease as a component of total assets employed and finance lease commitments as component of total liabilities incurred by the lessees (McGregor, 1985); and (2) the quantification of leasing exposure of lessees (Munter & Ratcliffe, 1983; Wise & Wise, 1985). As further support, evidence from the literature indicates that leases and debts are substitutes in firm's capital structure (Marston & Harris, 1988).

⁹ Other accounting standards that have an extended phase-in period are: AAS 25 Financial Reporting by Superannuation Plans; AAS 26 Financial Reporting of General Insurance Activities; AAS 27 Financial Reporting by Local Governments; AAS 29 Financial Reporting by Government Departments; and AAS 30 Accounting for Employee Entitlements.

Following from the first argument, proponents of capitalization stress that capitalization would aid users in their economic decision making because lessees have less alternative methods for accounting and reporting lease transactions (Harris, 1983). At the same time, lessees' financial statements would be more comparable between lessees and with other firms that used non-leasing debt to finance their assets (Harris, 1983; Munter & Ratcliffe, 1983).

The third and final main argument supporting capitalization is that the other alternative of footnote disclosure of finance lease transactions is inadequate from users' perspectives. This argument is corroborated by the assertions that footnote disclosure distorts financial ratios of lessees. Evidence indicates that key financial ratios measuring firms' leverage, profitability and liquidity would be over- or under-stated by keeping finance lease transactions off-balance sheet when, in fact, they should be properly reflected in the balance sheet (Abdel-khalik, Berk & Snowball, 1981b; El-Gazaar, 1993; Imhoff, Lipe & Wright, 1993; Ro, 1978; Wilkins & Zimmer, 1983a). Another claim of the inadequacy of footnote disclosure is that non-capitalization would allow manipulation of reported figures to the benefit of lessees and to the disadvantage of users of published financial statements (Wise & Wise, 1985).

At the other extreme of the debate, proponents for footnote disclosure of finance leases rather than capitalization had presented credible arguments supporting their stance. First, capitalization of finance leases would go against the legal principle of ownership of assets (Harris, 1983; Long, 1985; McGregor, 1985; Wise & Wise, 1985). They maintain that only assets that are legally owned should be recognised in firms' financial statements and finance leases are not assets legally owned by lessees.¹⁰ Furthermore, the proponents of footnote disclosure argue that this method would also render lessees'

¹⁰ However, this argument seems irrelevant as financial statements are a communication device for reporting economic reality affecting firms and in essence, finance lease is a financing method for lessees to use the leased assets over most of their useful lives (McGregor, 1985).

financial statements comparable across firms and adequately disclose lessees' finance lease exposures (Harris, 1983). Moreover, there is ample evidence in the literature to indicate that footnote disclosure is adequate for users' decision making (Abdel-khalik, Ajinkhya & McKeown, 1981a; Bowman, 1980; Finnerty, Fitzsimmons & Oliver, 1980; Houghton, 1984; Lawrence & Bear, 1986; Murray, 1982, Willdns & Zimmer, 1983a). This argument is further supported by the lack of evidence of a market reaction to the announcement of lease capitalization due to the availability of the information concerning lease commitments in the notes of the financial statements (Martin, Anderson & Keown, 1979).

Another argument against capitalization of finance leases is the possible deleterious effects of capitalization on commonly used accounting ratios and likely effect of this on debt restrictions under trust deeds (Campbell, 1991; Harris, 1983; Stevenson, 1985; Whittred & Zimmer, 1992).¹¹ The thrust for this argument is that capitalization of finance leases would be costly in terms of renegotiation and/or default costs for lessees. Moreover, it is argued that leasing is a product brought by the demand from small and medium sized firms to specifically keep leasing off-balance sheet (Wise & Wise, 1985).

The third argument against capitalizing finance leases is the direct and indirect costs, other than those highlighted in the preceding paragraph, associated with the requirements of AAS 17. First, the additional bookkeeping and auditing costs because of the differences between accounting and tax treatment of leases (Long, 1985). The second argument relates to other costs to redraft lease agreements to avoid being construed as finance leases (Abdel-khalik, 1981; Imhoff & Thomas, 1988; Whittred & Zimmer, 1992).

¹¹ Whilst this effect is true, it is also an argument supporting the move to make certain leases, i.e., finance lease, to be on-balance sheet to properly reflect the economic substance of lessees. Nevertheless, the inclusion of transitional provision in AAS 17 was to remedy this possible adverse effect on lessees (McGregor, 1985; Whittred & Zimmer, 1992).

Summary

This chapter discussed at some length the history and nature of the accounting and reporting of finance lease transactions in Australia. This was followed by a discussion on the debate whether or not finance leases should be capitalized or disclosed in the footnotes of lessees' published financial statements. This discussion is supported with empirical evidence where available. The inference that can be drawn is that capitalization of finance leases is consistent with the objective of reporting the economic reality of a firm. Furthermore, the discussion demonstrates that capitalization of finance leases has economic consequences because it affects users' economic decision making process which used the accounting numbers that are altered by capitalization. In the next chapter, a review of selected similar studies is presented, which will subsequently aid in the development of a theoretical framework and hypotheses formulation of this study.

CHAPTER 3

LITERATURE REVIEW

Introduction

This chapter examines the motivations for firms to voluntarily adopt early the provisions of specific accounting standards during the transitional (or phase-in) period as allowed in these standards. Generally, the decision to either adopt early or defer adoption of the requirements of an accounting standard can be construed as a decision to choose between income increasing or income decreasing accounting policy. This decision also has balance sheet implications; affecting firm's liquidity ratios and financial and stability ratios. This chapter is dedicated to the critical evaluation of the (1) theoretical frameworks, (2) hypotheses, and (3) methodologies employed in selected published studies similar to this study. The selected studies that are reviewed in this chapter are summarised and tabulated in Table 1. The objective of this literature review is to identify any refinements and improvements in the three preceding aspects that could be incorporated into this study.

Accounting policy choice studies

In 1975, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 8 "Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements". Due to the adverse reaction to SFAS No. 8, the FASB issued SFAS No. 52 "Foreign Currency Translation" in December 1981. Under the new rules, the translation adjustments of many foreign entities are made directly to shareholders' funds on the balance sheet instead of being included in net income. Generally, SFAS 52 requirement is an income increasing accounting policy, where firms switched from SFAS 8 to SFAS 52 (Ayres, 1986). SFAS 52

Table 1**Accounting Policy Choice Studies (Adoption During Phase-in Period)**

Authors (Year)	Accounting Std	Objective	Principal findings
Benjamin, Grossman and Wiggins (1986)	SFAS 52 Foreign currency translation	To examine the impact of the adoption of SFAS 52 during the optional three-year adoption period (1981 - 1983).	Results suggest that early adoption of SFAS 52 for many firms was motivated by a favourable impact on the financial statements (i.e., income and EPS).
Senteney and Strawser (1990)	SFAS 87 Pension Accounting	To determine whether managements' decisions to adopt SFAS 87 prior to mandatory date is influenced by its financial statement effects.	Evidence indicates that the timing of managements' adoption of SFAS may be influenced by its financial statement effects.
Wilkins and Mok (1991)	AAS 17 Accounting for Leases	To determine the economic factors motivating management choice of lease capitalization or footnote disclosure only accounting method during the first year of phase-in period (i.e., 1985).	Results indicate that management chose financial lease capitalization in 1985 with the view of maximising near term profits and minimising accounting measures of financial risk.
Sami and Welsh (1992)	SFAS 87 Pension Accounting	To investigate whether management's voluntary choice to adopt the provisions of SFAS 87 earlier than required is associated with factors influencing manager's economic incentives.	Early adopters were more frequently subject to accounting-based debt constraints; related to size, funding status, and ownership control.

also contains a provision which allowed firms to adopt its requirement early during the three-year phase-in period from 1981 to 1983.

Against the preceding background, Benjamin, Grossman and Wiggins (1986) examined the financial impact of the adoption of SFAS 52 during the phase-in period. There are limitations in this study. Benjamin et al. offered no theoretical foundation or propositions on why firms changed from SFAS 8 to SFAS 52 or why firms adopted the rules of SFAS 52 in each year. Furthermore, no comparison was made to any "control" group of firms, i.e., firms that did not change or adopt SFAS 52 in the phase-in period. The implication of these limitations is that this study is descriptive rather than a positive accounting theory study. Economic consequences literature suggests that voluntary or early adoption of new accounting standards are influenced by not only the associated financial effects but also by agency and political variables (e.g., see Ayres (1986), Sami and Welsh (1992) and Scott (1991).

Apart from SFAS 52, the FASB had issued another accounting pronouncement which allowed firms to choose the compliance date between the standard's operative date and its mandatory date. This standard, SFAS 87 "Employers' Accounting for Pensions", was issued and became operative in December 1985. However, firms had two calendar years before it became mandatory. Although there was widespread opposition to SFAS 87, a number of firms adopted the standard earlier than required (Sami & Welsh, 1992). Early adoption could be attributed to the hypothesised favourable balance sheet and income statements effects of adoption of SFAS 87 (Ali & Kumar, 1994).

Sentenev and Strawser (1990) employed an approach which was an improvement on the approach used by Benjamin et al. (1986). In attempting to determine whether management's decision to adopt SFAS 87 prior to the mandatory date was influenced by financial statements effects, they tested the firm's leverage and size as possible explanatory factors. In addition, they employed a between group experimental design

whereby their sample was divided into a treatment group (i.e., firms adopted early) and a control group (i.e., firms that did not adopt early). This design is a better design in terms of internal validity than the single group design employed by Benjamin et al. (1986).¹²

Senteney and Strawser (1990) inferred from their evidence that the timing of management's adoption of SFAS 87 might be influenced by its financial statements effects. This was an inconclusive inference because only one of three financial statements variables tested in their study was significant. However, they offered no suggestions as to what could be the possible underlying motive for management to adopt SFAS 87 during the transitional period. This query remains further unanswered because both of the other firm specific characteristics, i.e., firm size and leverage, were not statistically significant. Moreover, the result of the size variable was contrary to the political cost hypothesis; it was positively associated with adoption of SFAS 87 - an income increasing accounting policy.

There are other limitations of the study by Senteney and Strawser (1990). They failed to test for any differences in the characteristics of firms that adopted and did not adopt SFAS 87 in the first and third year of the phase-in period. They only tested for differences between the groups sampled in 1986, i.e., the second year of the phase-in period. No explanation was offered for this approach taken. With regard to the statistical tests employed, they did not offer any reason(s) for performing both univariate and multivariate tests. In addition, prior to performing the multivariate analysis, there was no indication of testing for multicollinearity among the explanatory variables. The presence of harmful multicollinearity could cause the results of the multivariate regression to be unstable (Belsley, Kuh & Welsch, 1980; Fox, 1991).

12

Sekaran (1992) asserts that a single treatment group design, as used by Benjamin et al. (1986), has "no scientific value in determining cause-effect relationships." (p.136).

Sami and Welsh (1992) extended the earlier study by Senteney and Strawser (1990) by incorporating a number of improvements in certain areas.¹³ First, Sami and Welsh provided a strong theoretical framework in developing nine testable hypotheses, including several hypotheses that were not tested in the earlier two studies. This theoretical framework was based on the agency and political cost literature, which has been established and well tested in previous other accounting policy choice studies. A major improvement was that, rather than relying on accounting ratio proxies, they used actual provisions of debt contracts in developing their debt constraints variables.

Even though Sami and Welsh (1992) was a significant improvement over the two earlier studies, certain aspects of their study should be noted as limitations. First, their sample consisted of firms in 1985 and 1986, which were grouped as adopters and non-adopters. They left out firms that adopted or did not adopt SFAS 87 in the final year of the phase-in period of 1987. No explanation was offered for the approach taken. Second, the sample of firms were matched according to their industry classifications. Accordingly, subsequent statistical tests were, matched-pairs tests, controlling for possible industry effects. However, if industry matched-pairs testing design was considered appropriate as purported by the authors, why not match the sample for other potentially significant factors including firm age, size, and capital structure.

Notwithstanding the limitations, many of the improvements incorporated by Sami and Welsh (1992) could also be incorporated in this study. For example, certain variables employed by Sami and Welsh could also be used and tested in the Australian environment; second, a pooled cross-sectional test of the sample as performed by Sami and Welsh could be made. This method aims to validate the findings of separate cross-sectional testing over the whole phase-in period.

¹³ A major difference between these studies is their objective. While Senteney and Strawser (1990) hypothesised that the financial statement effects of SFAS 87 influenced management's decision to adopt/not adopt, Sami and Welsh (1992) hypothesised that the decision was influenced by managers' economic incentives.

The study by Wilkins and Mok (1991) is of great interest and relevance to this study. The current study is an extension and refinement, attempting to overcome the limitations identified in the preceding three studies and also the limitations in Wilkins and Mok.

A major limitation identified in Wilkins and Mok (1991) is that a majority of their hypotheses were developed based on the preliminary evidence derived from the reporting sample of their study. They found that capitalization of finance lease commitments of the sampled listed lessee firms generally resulted in an increase in income from the capitalization. This is contrary to the expectation suggested by the literature that capitalization of finance leases would generally be an income decreasing policy, at least in the year of adoption, i.e., the first year of capitalization (Abdel-khalik, 1981; Ashton, 1985; El-Gazaar, Lilien & Pastena, 1986; Whittred & Zimmer, 1992).¹⁴ The reliance on this preliminary evidence contributed to the development of hypotheses that were contradictory from the contracting theory perspective. For example, based on the general expectation that capitalization of finance lease is an accounting policy with negative effects on the balance sheet and income statement, contracting literature predicts that low-leveraged firms and firms with high interest coverage ratios would more likely capitalize their finance lease commitments; however, Wilkins and Mok hypothesised that low-leveraged firms and firms with lower interest coverage ratios would be more inclined to capitalize their finance lease commitments.

The other potential limitations in the study by Wilkins and Mok (1991) are as follows. First, they did not attempt to test political cost variables as possible explanatory variables in their study, apart from the firm size variable, which could proxy for factors other than firm's political visibility. Other potential political visibility proxies include social responsibility disclosure, press coverage, taxation burden, and market

¹⁴ However, the actual income effect of capitalization on individual lessee firm depends on factors including the age of the leased asset, its estimated useful life, and its implicit interest rate.

concentration (Watts & Zimmerman, 1990; Panchapakesan & McKinnon, 1992). In addition, they did not extend their sample to include lessee firms that capitalized/footnote disclosed their finance lease commitments in the other two years of the transitional period. It is an empirical question as to whether their findings would hold for the remaining two years of the transitional period. This is because there are plausible reasons why certain lessees might adopt capitalization in year 2 (or year 3) but chose not to in year 1 (or year 2). Firstly, these lessees were newly listed firms on the stock exchange in the relevant year. Secondly, these lessees, with certain motives, timed their adoption of AAS 17 to their advantage.

Summary

From the preceding analysis of the selected studies of a similar nature, there is a need for a stronger theoretical framework that would help in developing better testable hypotheses to explain management's decision to either capitalize or to disclose via footnote disclosure their finance lease commitments. Furthermore, there are possible improvements in the areas of research method and design that could be incorporated in this study. The following Chapter 4 develops the theoretical linkages that certain firm specific variables have to a decision to either capitalize finance lease commitments or disclose such commitments in the footnotes of the financial statements. Chapter 5 elaborates on the research method and design employed in this study.

CHAPTER 4

THEORETICAL FRAMEWORK AND HYPOTHESES FORMULATION

Introduction

This chapter proceeds with a discussion of the theoretical framework underlying this study. This followed by a short discussion on the effects of capitalization of finance leases on lessees' financial statements. Finally, this chapter deliberates on the formulation of the research hypotheses which are tested in this study.

Theoretical framework

According to Holthausen and Leftwich (1983), accounting choices (as in this case, the lessees' choice of either capitalization or footnote disclosure of finance lease commitments) have economic consequences if changes in the rules used to calculate accounting numbers alter the distribution of firms' cash flows, or the wealth of parties who use those numbers for decision making.¹⁵ Based on the extant literature, it is a logical inference that economic consequences are driven by contracting and monitoring costs (Holthausen & Leftwich, 1983), and signalling costs (Morris, 1987).¹⁶ Thus, the economic consequence of accounting policy choice is driven by contracting theory and signalling theory. The former is also associated with agency theory and political cost theory. This economic consequence theoretical framework is represented diagrammatically in Figure 1. The following two sections elaborate the components of this theoretical framework, the contracting theory and the signalling theory.

¹⁵ It has been established, in chapter 2, that the requirements of AAS 17 to capitalize finance leases do have economic consequences. The economic consequence is not in terms of affecting the firm's cash flows, but that capitalization of finance leases affect users' economic decision making processes.

¹⁶ Morris (1987) demonstrates that agency theory and signalling theory seems to be competing theories, but in essence, they are consistent.

Contracting theory

According to Holthausen (1990), there are three alternative perspectives on accounting policy choice. They are opportunistic behavior, information, and efficient contracting perspectives. Opportunistic behavior (or opportunism) assumes that managers choose income increasing accounting policies that maximize their own compensation at the expense of shareholders (Christie & Zimmerman, 1994; Holthausen, 1990).¹⁷ From the information perspective, the choice of accounting policies reveals information about the future cash flows of the firms (Holthausen, 1990). In this study, opportunism and information perspectives are not applicable because of the following reasons. First, since lease capitalization has an income decreasing effect in the year of adoption, i.e., the first year of capitalization (Abdel-khalik, 1981; El-Gazaar et al., 1986; Whittred & Zimmer, 1992), it is an unlikely opportunistic accounting policy.¹⁸ Second, lease capitalization does not affect lessee firms' cash flows because it is only a re-packaging of information (Abdel-khalik, 1981) and consequently, it is not an accounting policy that provides additional information about managers' expectation of firms future cash flows. Hence, in this study, efficient contracting is assumed to be the general premise underlying the economic consequences of lease capitalization accounting policy choice.

Accounting research based on the efficient contracting perspective examines the incentives to choose among alternative accounting methods because of the explicit and implicit contracts that rely on accounting numbers (Holthausen, 1990). Examples of the contractual agreements include lending agreements, management compensation plans, and firms' management/control structure. The efficient contracting perspective, with respect to accounting policy choice, hypothesises that accounting methods will be

¹⁷ For fuller discussion on contracting theory see, for example, Fama (1980), Holthausen and Leftwich (1983), Jensen and Meckling (1976), Watts and Zimmerman (1986 & 1990).

¹⁸ see earlier footnote no. 14.

selected to minimise agency costs and/or political costs amongst the various parties to the firm (including managers, shareholders, debtholders, unions, politicians, and bureaucrats). Christie and Zimmerman (1994) also contend that "efficiency assumes accounting procedures facilitate internal decision making and control, minimize taxes, reduce costly bond renegotiations, and minimize the costs of expected opportunism" (p. 562). Thus, the end result is maximizing the value of the firm (Christie & Zimmerman, 1994; Holthausen, 1990).

These agency costs and political costs arise because of the conflict of interest between managers and shareholders, between managers (acting on behalf of shareholders) and debtholders, and between managers (on behalf of shareholders and debtholders), and politicians, bureaucrats, consumers and unions, in which a decision made may serve the interest of one party but may not necessarily be in the best interest of the other party or parties. There are ample examples in the literature of accounting policy choice studies, in particular studies of single procedure choice, which have tested and found support to the various hypotheses derived from efficient contracting theory including Zimmer (1986), Whittred (1987), Malmquist (1990), and Mian and Smith (1990).

Signalling theory

Signalling theory addresses the problem of information asymmetry in the markets, where the seller of goods or services know their quality but the buyer does not.¹⁹ In the economic environment where there is separation between control / management and ownership, information asymmetry exists between managers and external parties to the firms including shareholders, lenders, unions, politicians, and regulators. Managers are assumed to possess superior knowledge about their firms'

¹⁹ For extensive discussion on signalling theory and its application in accounting/finance area, see, for example, Bar-Yosef and Livnat (1984), Downes and Heinkele (1982), John and Williams (1985), Miller and Rock (1985), Morris (1987) and Ross (1977).

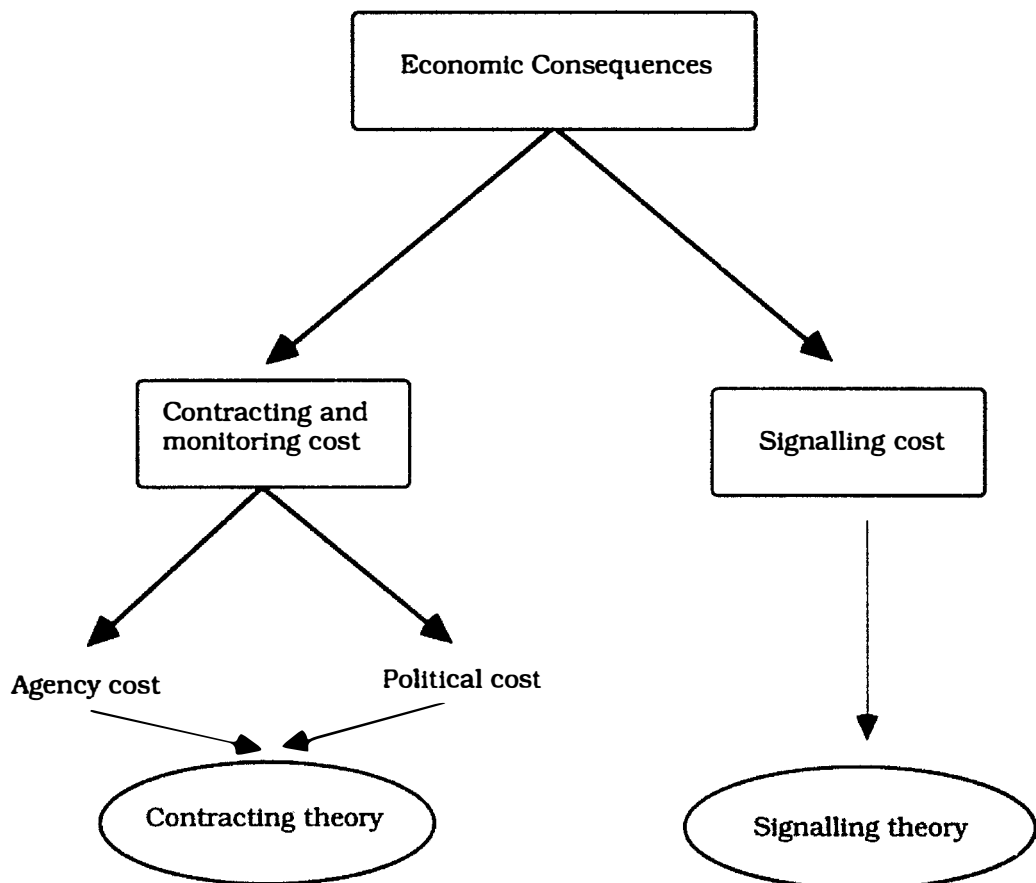
future cash flows. Thus, the incentive to signal by accounting policy selection should be highest where information asymmetry is greatest (Morris, 1987).

In the situation of information asymmetry and in the absence of an appropriate signal of quality, buyers (i.e., the external parties to the firms) will price all firms at the average price. These costs of information asymmetry are borne by the manager of an above average quality firm. The manager then has an incentive to signal his/her firm's above average quality to reduce this opportunity loss. In order to enable the buyers to differentiate between high and low quality firms, the managers will engage in appropriate quality signalling (for example, by adopting the "best" accounting and reporting policies recommended by the accounting profession). This is crucial if managers believe in the importance of users' perception towards the firms in their economic decision making (Abdel-khalik, 1981). The outcome would be that the buyers are then able to price the high and low quality firms differently based on the signals provided by these firms' managers. Thus, maximization of the value of the firms is achieved.

The preceding discussion illustrates the applicability of signalling theory in accounting policy choice, to explain and predict management's choice of alternative accounting methods. Morris (1987) reached a conclusion, based on his comparative analysis of agency theory and signalling theory, that both theories "are consistent ... a considerable overlap exists between them" (p. 53). Thus, a combined signalling and efficient contracting theory may yield further insights into choice of accounting methods, "not obtainable from either theory alone" (p. 53).

Figure 1

Economic consequences theoretical framework²⁰



²⁰ Figure 1 is adopted from Mangos (1991) with modifications.

Hypotheses formulation

The following sections discuss the formulation of each research hypothesis that will be tested in this study. These hypotheses are developed from the efficient contracting and signalling perspectives with the following general premise: The objective of the firms' decisions to capitalize finance leases is to mitigate the agency/political costs incurred by these firms, and to signal as being high quality firms to the users' of published financial statements. This accounting policy choice has the implication of maximizing the value of the firm (Holthausen, 1990).

The research hypotheses are formulated in the uni-directional form. This is made possible because of the general expected effect of finance lease capitalization on lessees' balance sheet and income statement. Since capitalization means the recognition of a finance lease as both an asset and a liability, the balance sheet would reflect much higher gearing (Ashton, 1985; El-Gazaar et al., 1986; Whittred & Zimmer, 1992). Capitalization of leases also has the potential to adversely affect lessees' reported income. There is a consensus in the literature that lease capitalization shifts or defers income to later years; it is an income-decreasing accounting policy choice in the year of adoption, i.e., the first year of capitalization (Ashton, 1985; El-Gazaar et al., 1986; Whittred & Zimmer, 1992).²¹

Corporate control structure

There is evidence in the contracting literature indicating a firm's choice of accounting method is systematically different depending upon its corporate control structure (Dhaliwal et al., 1982; Whittred, 1987). From an efficient contracting perspective, it is hypothesised that management-controlled firms (hereafter called MC firms) have greater incentives to choose capitalization of finance lease accounting policy

²¹ see earlier footnote no. 14.

than owner-controlled firms (hereafter called OC firms). The following arguments support this corporate control structure hypothesis.

The basic characteristic of MC firms is the greater separation between management / control and ownership. This gives rise to greater agency costs for MC firms due to the asymmetric information and costly monitoring of managers' performance. This situation also serves as a possibility for managers of MC firms to behave opportunistically. As a response, the outside shareholders price protect²² themselves and implement a mechanism that would entice managers to make economic decisions in the owners' best interest. One of the most common mechanism is a management compensation plan, which is normally a function of reported income (Antle & Smith, 1986; Lambert, Larcker & Baker, 1987). These responses are considered necessary in order to reduce the costs of expected opportunism by the managers.

Since rational outside shareholders are price protected, managers of MC firms have greater incentives to select accounting policies that minimize the costs of expected opportunism. This type of response suggest that managers of MC firms select particular accounting policies for efficiency purposes. As capitalization of finance leases reduces income in the year of adoption, i.e., the first year of capitalization, it consequently minimizes the costs of expected opportunism, Managers of MC firms are more likely to capitalize finance lease commitments than managers of OC firms.²³

The corporate control structure hypothesis based on signalling theory produces a similar prediction to that of efficient contracting theory. It is hypothesised that MC firms are more likely to capitalize finance lease than OC firms. There are two lines of argument

22 Price protect refers to the action where "the outside debt- and share-holders discount the price they are willing to pay for their claims for any expected managerial actions that reduce their future returns." (Christie & Zimmerman, 1994 p. 541).

23 However, since capitalization defers income to later years (Ashton 1985, El-Gazaar et al., 1986), the managers' compensation on average and over a number of periods may not be adversely affected. This may however, suggest some form of opportunism. Nevertheless, in the year of adoption the decision to capitalize finance leases is based on efficiency reason.

in support of this proposition. First, in a situation where there is greater information asymmetry between managers and interested external parties, including owners and debtholders, as in the case of MC firms, there is a greater incentive for such firms to signal by adopting appropriate recommended accounting policy to mitigate opportunity loss. This action can also be construed as a bonding mechanism by the managers of lessee firms. Second, the adoption of finance lease capitalization, a method deemed appropriate and relevant by the profession, is a signal to the market indicating that these firms are not using the alternative method (i.e., footnote disclosure) to mislead interested external parties. As determined earlier, capitalization of finance leases better reflects a firm's economic substance.

By way of contrast, OC firms will be less inclined to engage in this capitalization of finance lease signal. This is because owners in OC firms have the ability to exert a direct influence on the behaviour of managers, consequently managers in OC firms have considerably less discretionary power. Thus, based on signalling theory, it is more likely that MC firms rather than OC firms will capitalize finance leases.

There are consistent predictions between efficient contracting theory and signalling theory concerning the corporate control structure hypothesis in reference to the choice of either capitalization or footnote disclosure only for finance leases. Thus, hypothesis H1 is formulated as follows.

H1: Management-controlled firms are more likely to capitalize finance leases than owner-controlled firms.

Debt contracting

The debt/equity hypothesis, as expounded in the contracting literature, predicts that firms with large amounts of debt relative to equity in their capital structure will

tend to choose accounting methods which result in higher, or earlier reported income and oppose mandatory changes in accounting methods which would reduce, or delay the reporting of income (Watts & Zimmerman, 1986 and 1990). This implies that managers of firms with a high level of leverage are more likely to engage in opportunism. This is because asymmetric information and costly monitoring prevent outside debtholders from perfectly monitoring managers (Christie & Zimmerman, 1994).

In order to protect their interests, outside debtholders price protect themselves and implement a mechanism of restrictive covenants which are present in most debt issues, private and public. These restrictive covenants are put in place to prevent wealth transfers away from debtholders to equityholders, indicating a positive relationship between leverage and agency costs of debt (Watts & Zimmerman, 1986). Since the provisions contained in these covenants such as leverage and interest coverage are usually defined with reference to generally accepted accounting principles, a lessee could be in technical default if it capitalized its finance lease rather than disclosed them in the footnotes of their financial statements. This is because lease capitalization is likely to increase leverage ratios (Abdel-khalik, 1981; Ashton, 1985; El-Gazaar et al., 1986; Whittred & Zimmer, 1992). Furthermore, it has been found that borrowers perceive debt covenants as a more important factor than compensation contracts and political environment in their accounting policy choices (Gopalakrishnan & Parkash, 1995).

Thus, from an efficient contracting perspective, capitalization of finance lease commitments by firms with low leverage ratios is an accounting policy that promotes efficiency in monitoring and bonding. This is a plausible argument because of the following reasons. First, low leveraged lessee firms are those firms that have greater capacity to increase debt to the extent that they are further away from the need to renegotiate their debt covenants brought about by the increase in debt through capitalization of finance leases. Second, since capitalization of finance leases shows the economic substance of the firms' overall debt obligations, it consequently facilitates

internal decision making and control. Finally, as capitalization also reduces income in the year of adoption, it also minimizes the costs of expected opportunism by managers. Thus, from an efficient contracting perspective, lessee firms with low leverage ratios are more likely to capitalize their finance lease commitments than firms with high leverage ratios.

According to signalling theory, managers have an incentive to offer restrictive debt covenants to maximise the price at which debt is sold, and “indirectly to act as a signal about expected future earnings and expected levels of management compensation.” (Morris, 1987 p. 51). Hence, firms with higher contractual leverage ratios have above average expected values, and arguably are above average quality when compared to firms with lower contractual leverage ratios. However, firms with leverage ratios nearing their contractual level may also be signalling the managers' inefficiency in managing the firms' resources. In addition, since capitalization of finance lease is the method advocated by the profession because it better reflects firms' true economic substance, high quality firms with low leverage ratios have greater incentives to capitalize their finance leases in order to differentiate them from lower quality firms. Thus, it is hypothesised that low leveraged firms are more likely than high leveraged firms to capitalize finance leases.

An ideal research design to test this hypothesis is to measure the spread between each firm's maximum contractual leverage ratio and its prevailing leverage ratio. However, this information is not readily available. Nevertheless, evidence from Duke and Hunt (1990), and Press and Weintrop (1990) indicate that leverage ratios are correlated with closeness to actual debt covenant constraints, and therefore are good proxies for tightness of debt covenant constraints. Thus, consistent with efficient contracting theory and signalling theory, the debt contracting hypothesis is stated as follows:

H2: Low leveraged firms are more likely to capitalize finance leases than high leveraged firms.

Firm size

In the context of this study, the firm size construct is not used to measure a firm's political visibility. Rather, firm size is a variable to proxy for a firm's information production costs (Ball & Foster, 1982; Firth, 1979). This hypothesis predicts that if information production costs related to certain accounting policy are high, then large firms are more likely to have the resources necessary to select such accounting policy. In the case of finance lease capitalization, it is considered that the information production costs are not trivial. These costs include the following.

First, certain costs are incurred to assess the impact of capitalization on lessees financial statements. For example, there are the debt contracting costs associated with disclosures of increased debt. This includes the potential costs of renegotiation of debt agreements and / or the potential increase in costs of new debts to be raised. Second, additional bookkeeping costs associated with a new reporting system that differs from tax requirements (Whittred & Zimmer, 1992). Last but certainly not least, costs of training and education to enable preparers of financial statements to be familiar and competent with the capitalization requirement and related concepts, for example, implicit interest rates, present value of future obligations, and fair values (Harris, 1983).

Apart from the information production costs incurred, the potential benefits for large lessee firms to capitalize their finance lease commitments include the following. First, since capitalization reflects the true economic substance of the lessees' assets base and debt obligations, internal decision making and control would be facilitated. Second, as large firms tend to be firms that are complex (Abdel-khalik, 1995) and difficult to monitor, managers of these firms have greater incentives to select income decreasing /

deferral accounting policy, for example capitalization of finance leases, to minimize the costs of expected opportunism.

Hence, from an efficient contracting perspective, it is hypothesised that larger lessee firms are more likely to capitalize finance leases than smaller lessee firms. This is consistent with the prediction derived from signalling theory. It is conceivable that larger firms also tend to be high quality firms. This is supported by the argument that a firm gets larger (as measured by its revenue or assets or profits) because of its success in the market, which in turn depends on the market's perception of the firm's quality. In order to reinforce the market perception that they are high quality firms, larger lessee firms continue to engage in appropriate signalling. In the context of this study, the signal selected by larger lessee firms is the capitalization of finance leases. Recall that capitalization reduces the alternative methods for reporting a lease transaction, provides a better reflection of lessees' economic substance and hence gives the impression of attempts not to mislead the market.

Choi (1989), Firth (1979), Sami and Welsh (1992), and Singhvi and Desai (1971) have found firm size, as a proxy for firms' information production costs, to be a significant explanatory variable in their respective investigations. Thus, based on the preceding arguments and empirical evidence from the literature, H3 is formulated as follows.

H3: Larger firms are more likely to capitalize finance leases than smaller firms.

Political visibility

Political visibility (also referred to as politically sensitive or vulnerable) refers to the situation whereby a firm attracts a disproportionate share of scrutiny by the government and its regulatory agencies or other interest groups (including the general

public and trade unions), making it a potential target for the imposition of political costs. Political costs are the wealth redistributions away from the firm to the government and other sectors of its industry or the economy. The redistribution of wealth is normally effected through among others, the imposition of taxes, removal of subsidies and licences, granting of wage increases, and restrictions on firm's activities. Financial statements are a source of information used by interested parties in singling out firms for wealth transfers. However, the extent to which these devices rely on accounting based data varies widely. There is a consensus in the literature that firms' political visibility is positively related with their reported income (Watts, 1977; Watts & Zimmerman, 1986; Whittred & Zimmer, 1992; Wong, 1988a and 1988b). The political costs hypothesis predicts that politically visible firms are more likely to select accounting methods which result in lower, or delay reported income (Watts & Zimmerman, 1986 and 1990). Thus, from an efficient contracting perspective, it is hypothesised that since capitalization of finance leases results in lower reported income (which consequently minimizes the expected wealth transfers affected by the regulators and thereby protects the outside claimholders' interests), lessee firms with higher political visibility are more likely to capitalize finance leases than lessee firms with lower political visibility during the phase-in period.²⁴

The preceding political cost hypothesis is consistent with the prediction derived from signalling theory. A firm's level of political visibility is an incentive for such firm to engage in appropriate signalling to indicate their expected level of quality. As political visibility is a function of reported income, it is a fair assumption that politically visible firms, due to the high level of reported income, are also high quality firms. Prior to introduction of AAS 17, lessees had alternative methods for disclosing their lease transactions. With the availability of such flexibility, firms have the tendency to choose the alternative that reports the firms' performance in the most favourable way. This

²⁴ The literature on single procedure accounting choice reveals empirical evidence which supports the political costs hypothesis (Bowen et al., 1981; Daley & Vigeland, 1983; Dhaliwal et al., 1982).

arguably could mean that such firms are engaging in creative accounting to mislead interested external parties. However, this action would result in adverse selection because there is no way for users' of financial statements to differentiate between high and low quality firms (Morris, 1987).

The early adoption of capitalization of finance leases during the phase-in period is a positive signal indicating a firm is relinquishing the flexibility to disclose lease transactions. At the same time, the signal is indicating to external parties that the firm is adopting an accounting practice advocated by the profession which will better reflect its economic substance. Thus, in an attempt to differentiate high and low quality firms, politically visible firms have greater incentive to capitalize finance leases during the phase-in period.

H4: Firms with higher political visibility are more likely to capitalize finance leases than firms with lower political visibility.

The level of press coverage is used to measure firms' political visibility is . This is considered to be an appropriate construct because of "an expectation that firms that are constantly in the media spotlight are more susceptible to political [wealth] transfers than firms that rarely receive media attention" (Deegan & Carroll, 1993 p. 223). Thus, the level of press coverage (a component of the media) encapsulates "the media's perception of the aggregate political visibility of a firm arising from one or a combination of specific sources" (Panchapakesan & McKinnon, 1992 p. 75).²⁵ Empirical evidence supports the contention of a strong link between the level of press coverage and political visibility (Panchapakesan & McKinnon, 1992), and between press coverage and firm size (Laswad, 1991).

²⁵ Panchapakesan and McKinnon (1992) argue that "if a firm comes under governmental or interest group scrutiny because of specific circumstances such as, for example, the industry it operates, the working and pay conditions of its employees, or the market position it occupies, the press and media will devote proportionately more space to the firm ... that attract public attention." (p.75).

Financial performance

The bonus plan hypothesis has been extensively tested in numerous accounting policy choice studies in the USA (Abdel-khalik, 1985; Ayres, 1986; Bowen et al., 1981; El-Gazaar et al., 1986; Scott, 1991). This hypothesis predicts that managers of firms with management compensation plans tied to reported income are more likely to choose accounting methods that report higher or earlier income.²⁶ This hypothesis has been thoroughly tested in the USA because the information relating to the plans parameters are publicly available. This is not the case for Australia (Wilkins & Mok, 1991; Whittred & Chan, 1992; Zimmer, 1986), and as result a direct test of the bonus plans hypothesis has not been employed in Australian accounting policy choice studies. However, a review of the literature has revealed that most Australian commercial organisations have instituted bonus schemes tied to reported income or other performance indicators including return on equity (ROE) and return on assets (ROA), into management/executive compensation plans (Deegan, 1994; Klinedinst, 1991; Lawriwsky, 1982; Smith & Watts, 1982; Watt, 1988).

Nevertheless, even in the absence of explicit income-based bonus plans, management may have an incentive to mitigate decreases in the level of reported income (Christie & Zimmerman, 1994; Sami & Welsh, 1992; Trombley, 1989). The primary reason for this is that poor performance relative to the preceding year may lead to termination, whereas improved performance can justify requests for increased compensation. Since capitalization of finance leases results in decreased reported income, *ceteris paribus*, the incentive to adopt the capitalization method is not uniform across lessee firms. Thus, from an efficient contracting perspective, it is hypothesised that firms with greater improved financial performance relative to the preceding year have greater incentive to capitalize finance leases than firms with smaller improved financial performance relative

²⁶ However, this general hypothesis does not necessarily hold in situation where the bonus has a ceiling and it is near or at maximum level. In this situation, managers are more likely to defer income to the next reporting period (Healy, 1985).

to the preceding year. This hypothesis is supported by the argument that since capitalization reduces income in the year of adoption, it consequently minimizes the costs of expected opportunism by managers. Furthermore, capitalization of finance leases accounting policy also facilitates efficiency in monitoring and bonding managers' behavior because it better reflects a firm's economic substance.

Signalling theory yields consistent predictions in this aspect. Firms with bigger growth in income are generally considered as high quality firms due to the fact that bigger growth results in maximizing the value of the firms. Thus, in order to reinforce their high quality status, firms with bigger percentage growth in income have greater incentive to capitalize their finance leases than firms with smaller percentage growth in income. This is a positive signal because capitalization removes the possibility of firms to elect off-balance sheet (footnote) disclosure which gives the impression of attempts to mislead shareholders and debtholders. By way of contrast, firms with smaller growth in income (which also means low quality firms) do not have the same incentive to capitalize their finance leases. This is because capitalization results in lower reported income which in turn reinforces the perception of users of financial statements as being low quality firms. Thus, hypothesis H5 is stated as follows.

H5: Firms with bigger percentage growth in pre-adoption income are more likely to capitalize finance leases than firms with smaller percentage growth in pre-adoption income.

Overseas association

A lessee is considered to have an overseas association if it is either (1) a subsidiary of a foreign parent in Canada or the UK or the USA, or (2) where its shares are simultaneously listed in Canada or the UK or the USA. It is hypothesised that firms

with either one or both of these characteristics are more likely to capitalize finance leases during the phase-in period. An in-depth discussion of this hypothesis follows.

First, Australian subsidiaries of foreign parents in Canada, the UK or the USA, where finance lease capitalization policy is already fully in force, are likely to adopt the same practices of their parents (Bazley et al., 1985; Gay, Farley & Peirson, 1993). Assuming these foreign parents are capitalizing their finance leases, it is hypothesised that their subsidiaries in Australia are more likely to capitalize their finance leases.²⁷ This uniform practice of accounting for finance leases would facilitate the consolidation of financial statements by the parents, and at the same time allow comparability of performance between subsidiaries in Australia and in the home country.

Second, Australian lessee firms that are also listed in countries (Canada, the UK and the USA) where capitalization of finance leases is mandatory have greater incentive to follow suit and capitalize their finance leases. This is because the additional costs to account for and to report capitalized finance leases have already been incurred in complying with the overseas listing requirements (Leftwich, Watts and Zimmerman, 1981). In addition, these lessee firms have the necessary experience, which makes them more likely to capitalize finance leases early.

The benefit accruing to firms with an overseas association that adopt the capitalization of finance leases is in terms of the favourable perception by external parties, including Australian investors, analysts, and regulators. This would result in lower agency costs and lower political costs. Thus, for lessee firms with an overseas association, capitalization of finance leases promotes efficiency in monitoring managers' performance. In addition, since these lessee firms are complying with the "best" practice advocated by the accounting profession, this action can be construed as signalling to

²⁷ It is assumed here that since the finance lease capitalization requirement has become mandatory in these countries, there is no reason to believe that lessees in these countries are not complying with this requirement.

the market that they are not endeavouring to mislead external parties. Consequently, it is an indication that they are high quality firms.

Recent empirical studies have reported findings in support of the components of this hypothesis. Cooke (1991), Malone, Fries and Jones, (1993), Meek and Gray (1989), and Saudagaran and Biddle (1992) have found evidence suggesting a positive relationship between voluntary disclosure levels and a firm's listing on foreign stock exchanges. In addition, studies by Bazley et al. (1985) and Gay et al. (1993) reveal findings which suggest that a subsidiary relationship is a significant predictor in managements' decision concerning voluntary lease disclosures and presentation of value-added statements respectively. Thus hypothesis H6 is formulated as follows.

H6: Firms with an overseas association are more likely to capitalize finance leases than firms with no overseas association.

Summary

This chapter presented a discussion on the proposed theoretical framework underlying this study. Subsequently, a set of hypotheses was developed based on the economic consequences theory (efficient contracting and signalling). It is hypothesised that lessee firms bearing the characteristics of being (1) manager-controlled firm, (2) low leveraged, (3) larger in size, (4) politically visible, (5) positive change in profitability, and (6) with overseas association, are more likely to capitalize their finance leases during the phase-in period of AAS 17 so as to reduce their agency and political costs, and also to signal their status as high quality firms. In the next chapter, matters concerning the research methodology of this study are expounded. These matters include the discussions on sample selection, definition of variables, and research design.

CHAPTER 5

RESEARCH METHOD

Introduction

This chapter discusses the methodological aspects of this study. The discussions are on the following areas: First, the selection of the final reporting sample. Second, the definition of relevant dependent and independent variables. Third, the data sources that will be utilised in the data collection and data analysis stages. Last, the statistical techniques to be employed.

Sample selection

This study is a cross-sectional study of financial reporting practices of listed lessee firms' finance lease commitments during the transitional period between 1985 and 1987. Lessees' reported in the Australian Graduate School of Management (AGSM) Annual Reports Microfiche Files (1985, 1986 and 1987) was used as the sample of this study.²⁸ The sample was subjected to a further sampling phase through which a final reporting sample was selected after satisfying the sampling criteria.

The sampling design of this study is as follows. Upon inspection of the AGSM File, Australian lessee firms who adopted AAS 17 (either capitalising or disclosing in the footnotes their finance leases transactions) in 1985, 1986 and 1987 were identified. The

²⁸ The AGSM File consists of the top 500 listed companies in Australia by market capitalisation. The AGSM File that was used in this study is housed at the Edith Cowan University, Churchlands' campus library.

This study acknowledges the limitations of the AGSM File. Deegan and Carroll (1993) note that due to the fact that the AGSM File only consists of the top 500 Australian listed companies, the results based on this sample may be more specific to larger firms. Further, Bazley, Brown and Izan (1985) assert that the AGSM File does not include large private companies, and allowance has not been made for the different accounting methods, e.g., depreciation / amortisation policies, used by companies in arriving at balance sheet and profit and loss figures.

sample selection is subjected to the constraint that a lessee firm once identified as a capitalizer (footnote discloser) in one year could not be selected again as footnote discloser (capitalizer) in the subsequent year(s). Subsequently, these lessee firms were classified as capitalizer and non-capitalizer (i.e., footnote discloser) across time.²⁹ Thus, the test or treatment group consists of the capitalizers, and the control group is made up of the non-capitalizers. This sample selection and classification process gives rise to potential self-selection bias problems which are normally encountered in most accounting studies in which firms are not randomly assigned to treatment and control groups (Foster, 1980; Abdel-khalik, 1990; Rayburn, 1990).³⁰

Definition of variables

In this section, the definition and the measurement of the relevant dependent and independent variables are discussed. Table 2 presents the summary of the descriptions of these variables.

Dependent variable

The dependent variable of the study is the accounting policy choice by the lessees concerning their finance leases. This choice is captured as a dichotomous dummy variable. Lessees that capitalized finance leases were given a value of 1, and lessees that adopted note disclosure of their finance lease transactions were given a value of 0.

²⁹ This sample selection process is consistent with the approach taken by Whittred and Chan (1992), but differs slightly whether the process is with or without replacement of subjects. This is because, the sample selection process in this study is non-random.

³⁰ One method for correcting self-selection bias is the employment of "Two-stage switching regression" (Abdel-Khalik, 1990; Maddala, 1991; Shehata, 1991). However, due to the unavailability of appropriate factors to be incorporated into the regression analyses, this study is unable to assess or correct for any such bias.

Table 2**Descriptions of Variables**

Variables	Descriptions
<u>Dependent variable</u>	
ADOPT	(0,1) finance lease accounting choice; footnote disclosure (0); capitalization (1).
<u>Independent variables</u>	
OCCMC(1)	(0,1) owner-controlled (OC) if one party has more than 10% of voting shares, and exercise active control, or if one party has more than 20% of voting shares (0); otherwise manager-controlled (MC) (1).
DEBT	Total liabilities divided by total tangible assets
SIZE(1)	Total assets
PRESS	Level of press coverage as cited in the ABI
PERF(1)	Adoption year net income less prior year net income divided by prior year net income
OSEAS	(0,1) no overseas association in terms of foreign parent relationship, or overseas listing status (0); otherwise (1).

Financial variables, DEBT, SIZE and PERF, are adjusted to remove the effect of capitalization of finance leases (see Appendix C).

Alternative proxy	Description
OCCMC(2)	Percentage of ordinary shares held by other than the top 20 shareholders; widely held = MC firm; narrowly held = OC firm.
SIZE(2)	Total revenue
SIZE(3)	Net income after tax before extraordinary items
PERF(2)	(0,1) firms with negative change (i.e., decrease in profit or increase in loss) in net income tax before extraordinary items (0); firms with positive change (i.e., increase in profit or decrease in loss) (1).

Independent variables

Consistent with the number of research hypotheses, there are six independent variables tested. Subsequent discussion relates primarily to the main definition and measurement construct of each variable.³¹

(1) Corporate structure (OCMC)

This variable is measured by a dichotomous dummy variable (0,1) with OC firms were given the value of 0, whilst MC firms were given the value of 1. Consistent with the criteria used by Dhaliwal et al., (1982), firms were classified as OC if one party holds more than 10% of the voting shares and exercise active control, or if one party hold more than 20% of the voting shares. Active control is taken to mean representation on the Board of Directors or in firm's management (e.g., Managing Director or Chief Executive Officer). When a firm could not be identified as OC firm, the firm is classified as MC firm (Whittred, 1987).³²

(2) Debt contracting (DEBT)

Whittred and Zimmer (1986) and Stokes and Tay (1988) have found that the most frequently used measurement of leverage in Australian public debt issues is the ratio of total liabilities (excluding contingent liabilities) divided by total tangible assets.

³¹ However, this study will also attempt to employ and test alternative measurements as no single construct can adequately capture or proxy the true dimensions of the independent variables contained in the disclosure model (Watts & Zimmerman, 1990). This approach was also taken in order to avoid criticism of arbitrary selection of the proxies for the various independent variables. These alternative measurement constructs are provided in the footnote following the definitions of each variable and also in Table 2.

³² An alternative proxy is the percentage of ordinary shares held by other than the top 20 shareholders. A widely held shareholding can be considered as an indication of the firm concerned to be MC firm; narrowly held shareholding is therefore an indication of OC firm. This is consistent with arguments offered by Craswell and Taylor (1992) and Whittred (1987).

Thus, consistent with this finding, the same ratio is used to proxy for leverage in this study.³³

(3) Firm size (SIZE)

There are several measures for firm size as cited in the literature. However, there is no reason to choose one measure of size over another as no proxy for size should outperform another (Hagerman & Zmijewski, 1979). Nevertheless, in the context of this study, the firm size variable is measured by the natural logarithm of firm's total assets. This proxy is considered appropriate as it reflects the overall resources available to the firms.³⁴

(4) Political visibility (PRESS)

Panchapakesan and McKinnon (1992) reported that the level of press coverage in a calendar year was a good proxy for a firm's political visibility as perceived by the media. The level of press coverage was measured as the number of times during the year an article about the firm appeared in the 27 leading newspapers and business magazines reviewed in 1985 (29 publications in 1986, and 32 publications in 1987) by the Australian Business Index (ABI). This measure is consistent with the one used by Deegan and Carroll (1993) and Panchapakesan and McKinnon (1992).

³³ Other measures of leverage that have been either commonly found in debt covenants or tested in previous studies are the ratios: (1) total liabilities divided by shareholders funds (Whittred & Zimmer, 1986; Stokes & Tay, 1988), and (2) total liabilities divided by total assets. The latter ratio has been used quite extensively in previous studies especially those in the USA environment. However, since it is very likely that these constructs of leverage to be highly correlated with one another due to common denominator or common numerator, this study will only test the ratio total liabilities divided by total tangible assets.

³⁴ The natural logarithm of a firm's total revenue has also been used in previous studies as proxy for firm's information production costs (for example, Choi (1989) and Sami and Welsh (1993) among others). Deegan and Hallam (1991) and Wong (1988a & b) suggest that net income after tax before extraordinary items is a better proxy for firm size because it is a proxy which takes into account the relative magnitude of positive and negative wealth transfers. Accordingly, these constructs would also be tested.

(5) Financial performance (PERF)

Consistent with Sami and Welsh (1992), a ratio was used to measure the change of preadoption income as proxy for this variable. This ratio was calculated as: Adoption year net income less prior year net income divided by prior year net income.³⁵

(6) Overseas association (OSEAS)

OSEAS is a dummy variable to represent whether a firm is (1) a subsidiary of a foreign listed firm in Canada or the UK or the USA; and/or (2) concurrently listed in Canada or the UK or the JSA. Firms that possessed either of these characteristics were given the value of 1, otherwise the value 0 were allocated to them.

Data sources

The primary source of data is the AGSM Annual Reports Microfiche File. Apart from this, other source of data utilised include the publications by Stock Exchange Research Pty Ltd, the Australian Business Index and Jobson's Public Company Yearbook. From these sources, the information that were gathered for all lessees in the final reporting sample are tabulated in Appendix A. The industry membership of the reporting sample as classified by the Australian Associated Stock Exchanges (AASE) is reported in Appendix B.

³⁵ Scott (1991) used a dichotomous dummy variable to proxy for change in firm's preadoption income. As an alternative, this proxy was also used. Firms with positive change in their preadoption net income were given the value of 1, whilst firms with negative in their preadoption net income were given the value of 0.

Research design

The research design of this study is a pooled cross-sectional analysis for the period 1985 to 1987.³⁶ A between groups quasi-experimental design is used to test the research hypotheses. A multivariate analysis is considered to be the appropriate technique in view of the arguments forwarded by Bazley et al., (1985), Scott (1991), and Tabachnik and Fidell (1989). Bazley et al., (1985) and Tabachnik and Fidell (1989) suggest that if it is suspected that there may have been some inter-dependence amongst the independent variables, then a multivariate analysis is necessary. Scott (1991) further argues that since political costs and agency costs (possibly also signalling costs) are likely to be present in varying degrees and with opposite influence on management across firms, "a multivariate analysis that assesses the marginal impact of each while controlling for the other is appropriate" (p. 66). The specific multivariate technique chosen is the Logistic regression. It is chosen over other regression techniques, namely the OLS regression and the Probit regression, based on the findings of studies by Stone and Rasp (1991), and Maddala (1991) which examined numerous accounting choice studies' statistical methodologies.³⁷

36 Whittred and Chan (1992) found difficulty in deciding between a time series or a pooled cross-sectional analysis methodology for their study. However, in this study a pooled cross-sectional analysis is considered appropriate because: First, it is conceivable that lessee firms that adopted capitalisation differ from those that adopted note disclosure policy. Second, it is not difficult to define what constitutes an appropriate control group, i.e., lessee firms that had finance lease commitments and chose to disclose such commitments in the notes, rather than capitalizing them.

37 Logistic regression calculates Maximum Likelihood Estimates (MLE) for the parameters with each independent variables. Logistic regression was employed in this study based on the findings by Stone and Rasp [1991] that:

whenever the functional form of the relationship is non-linear [as is usually the case in dichotomous accounting policy choice studies], using OLS rather than logit can result in higher misclassification rates, a number of meaningless probability estimates, and less powerful tests of parameter estimates. Given these problems ... logit rather than OLS ... be the preferable method ... even when sample sizes technically are not "large enough". (p. 184)

Maddala [1991] concluded that for accounting studies, even in small samples, the available evidence indicates that it is preferable to use probit or logit models rather than regression when the dependent variable is dichotomous.

Furthermore, Afifi and Clark (1984) assert that logistic regression is appropriate when both categorical and continuous variables are used, as in this study.

Prior to performing the logistic regression, univariate diagnostics are undertaken to screen the data for the evaluation of the assumption of univariate normality. This is despite logistic regression requires far fewer assumptions than multiple regression analysis; and even when the assumptions for multiple regression analysis are satisfied, logistic regression still performs well (Hosmer & Lemeshow, 1989; Hair, Anderson, Tatham & Black, 1995; Maddala, 1991; Stone & Rasp, 1991). Tabachnik and Fidell (1989) suggest that the starting point is to analyse the descriptive statistics of each independent variable. A normally distributed variable should have a skewness and kurtosis value of zero; indicating that the mean is equal to median. Additional univariate diagnostics are performed including graphical examinations (histogram, box-whisker plots, and normal probability plots) and statistical tests (Shapiro-Wilks test and Kolmogorov-Smirnov test). If the variables' distributions are not normally distributed, then these variables should be transformed to remedy for outliers, non-normality and heteroscedacity (Erickson & Nosanchuk; 1992; Hair et al., 1995; Tabachnik & Fidell, 1989).

Multivariate diagnostics are also performed before and after the logistic regression analysis. The objectives of these diagnostics are (1) to assess multicollinearity among the independent variables, and (2) to identify influential observations that would impact the logistic estimations (Belsley et al., 1980; Fox, 1991; Hair et al., 1995). In assessing multicollinearity, the relevant statistics are the bivariate correlations, the variance inflation factor (VIF), and the tolerance levels. Influential observations can be detected by analysing the studentized residuals (SRESID), the leverage points (LEVER), Cook's distance (COOK), and the change in the logistic coefficients when a case is deleted from the model (DFBETA).³⁸

³⁸ All these statistical tests and diagnostics are performed using the statistical software "SPSS for Macintosh" (SPSS, 1990) and "SYSTAT" (SYSTAT, 1990).

The logistic regression model has six independent variables. However, since alternative proxy variables have been developed for OCMC, SIZE, and PERF, this study employs a sensitivity analysis by testing a total of 12 logistic regression models, of which one will be selected based on its goodness-of-fit with all independent variables (hereafter referred to as the explanatory power), significance level, and classification accuracy rate.³⁹ In order to support this selection, the selected model is subjected to a validation process whereby the sample is split into two groups and the logistic regression analyses are performed accordingly. The objective of this process is to find evidence that would lend support and validity of the original selected model (Hair, et al., 1995 p. 147).⁴⁰

The basic logistic regression model is expressed as follows:

$$y(0,1) = \alpha_1 + \beta_1 \text{ OCMC} + \beta_2 \text{ DEBT} + \beta_3 \text{ SIZE} + \beta_4 \text{ PRESS} + \beta_5 \text{ PERF} + \beta_6 \text{ OSEAS} + \varepsilon$$

where

³⁹ In logistic regression the following relevant statistics are noted. First, to determine goodness-of-fit, the model chi-square is comparable to the overall *F* test for OLS regression (SPSS Inc., 1990). Second, in testing hypotheses about the coefficients, the Wald statistic is comparable to the *t*-statistic in OLS multiple regression (Hair et al., 1995; SPSS Inc., 1990). Third, classification accuracy rate refers to the ability of the model, on an overall basis, to correctly classify the sample into the corresponding groups, which in this study relate to the capitalizer and non-capitalizer groups. Aldrich and Nelson (1984) and Hosmer and Lemeshow (1989) suggest different versions of pseudo-*R*² statistics, which is also comparable to the *R*² of OLS regression, as a measure of explanatory power of the logistic models. However, because "it is not universally accepted, let alone used" (Aldrich & Nelson, 1984, p. 57), and the "difficulty with ... interpretation" (Demaris, 1992), this study will not be reporting this statistic.

⁴⁰ Hair et al., (1995) state that the objective of the validation process "is to ensure that the results are generalizable to the population and not specific to the sample used in estimation" (p. 147). They suggest that the most direct approach to validation is to obtain another sample from the population and compare the results of the two samples. This approach is however not practical in this study due to the nature of the sampling frame and the sample selection process discussed earlier. In view of such a limitation, the split-sample approach taken in this study, as recommended by Hair et al., (1995). Demaris (1992, pp. 55-56), suggests a statistic - cross-validation probability of chance error (*PRE_{cv}*) - that measures the predictive efficacy in logistic regression. This *PRE_{cv}* indicates the level of reduction in prediction errors when the full model is used to predict the phenomenon.

- α is the constant value;
- $y(0,1)$ is the dependent variable taking the value (1) if the lessee firm capitalized finance leases, and (0) otherwise, i.e., by footnote disclosure;
- β_n represents the coefficient of the explanatory variables.
- ε is the residual or prediction error

Summary

This chapter elaborated the sample selection process, the definitions of the dependent and independent variables, the data sources used, and the various aspects of the research design of this study. In the following chapter, the results of the data analysis are reported.

CHAPTER 6
EMPIRICAL RESULTS
POOLED CROSS-SECTIONAL ANALYSIS

Introduction

This chapter presents the results of the various statistical analyses performed to test the research hypotheses developed in Chapter 4. The results are presented in four major sections. First, characteristics of the sample selected are reported. This is followed by a discussion on the descriptive statistics and the diagnostics performed prior to the multivariate analysis. Third, an analysis of the results of the logistic regression including the validation process is presented, which is followed by a summary.

Sample characteristics

Table 3 reports the composition and industry membership of the 1985-1987 sample; a total of 314 lessee firms classified into the capitalizer group with 67 lessee firms and the non-capitalizer group with 247 lessee firms. A preliminary analysis of Table 3 shows that the number of resource firms in the capitalizer group is relatively more than those in the non-capitalizer group. This is also the case for the other industries. This suggests that there is a relationship between industry membership and the decision to capitalize finance lease commitments. The statistical evidence supports this proposition. The chi-square analysis reveals that there is a significant relationship between firms' industry membership and their finance lease accounting policy choice ($\chi^2 = 12.850$; $d.f. = 3$; $p = 0.005$).

Table 3**Sample Companies Grouped Under Major Industry Classification: 1985 - 1987**

Industry	Capitalizer		Non-Capitalizer		Total	
	n	%	n	%	n	%
Industrial & Commercial	35	52	183	74	218	69
Resources	21	31	47	19	68	22
Financial Institutions	2	3	4	2	6	2
Diversified companies	9	14	13	5	22	7
Total	67	100	247	100	314	100

$$\chi^2 = 12.850; d.f. = 3; p = 0.005$$

Descriptive statistics and diagnostics

The descriptive statistics of the independent variables appear in Table 4 - Panels A and B. An examination of the descriptive statistics of the interval-scaled variables in Panel A shows that six of these variables suffer substantial skewness indicating non-normality. The results of supplementary graphical analysis and statistical tests for normality including normal probability plot, Shapiro-Wilks test, and Kolmogorov-Smirnov test support the earlier findings of examination of the descriptive statistics. These variables are: PRESS, DEBT, SIZE(1), SIZE(2), SIZE(3), and PERF(1).

Results of the preceding evaluation of assumptions lead to transformation of the relevant variables to reduce their skewness, reduce the number of outliers, and improve the normality, linearity and homoscedacity of residuals. Natural logarithmic transformation was used on PRESS, SIZE(1), SIZE(2) and DEBT. Square-root transformation was used on SIZE(3) and PERF(1). The results of these transformations appear in Panel B of Table 4.

Table 4

Panel A - Descriptive Statistics 1985-1987 (Before Data Transformation)

Expected relation	Interval-variable	(1) Capitalizers (N = 67)			(2) Non-capitalizers (N = 247)		
		Mean	Median	SD	Mean	Median	SD
(1) > (2)	OCMC(2)	24.122	21.010	13.443	27.565	26.700	14.698
(1) < (2)	DEBT	0.540	0.513	0.255	0.634	0.518	1.883
(1) > (2)	SIZE(1)	430039.750	68192.000	1542575.478	371456.721	86419.000	795373.824
	SIZE(2)	289744.597	58202.000	935121.075	415221.146	73663.000	1076056.433
	SIZE(3)	19159.133	3012.500	97230.496	15994.642	3193.000	45022.360
(1) > (2)	PRESS	65.075	21.000	133.398	47.356	21.000 †	76.542
(1) > (2)	PERF(1)	-564.013	7.163	4299.489	157.369	19.261	2648.982
	Ordinal-variable	(0)	(1)		(0)	(1)	
	OCMC(1)	51	16		186	61	
	PERF(2) **	22	34		60	184	
	OSEAS	62	5		222	25	

** Due to missing values, some companies are excluded.

Table 4

Panel B - Descriptive Statistics 1985-1987 (After Data Transformation)

Expected relation	Interval-variable	(1) Capitalizers (N= 67)			(2) Non-capitalizers (N = 247)		
		Mean	Median	SD	Mean	Median	SD
(1) > (2)	OCMC(2)	24.122	21.010	13.443	27.565	26.700	14.698
(1) < (2)	LnDEBT	0.411	0.406	0.167	0.407	0.409	0.251
(1) > (2)	LnSIZE(1)	11.380	11.129	1.644	11.540	11.367	1.624
	LnSIZE(2)	10.751	10.972	2.166	11.110	11.207	2.244
	SqSIZE(3)	333.916	318.866	80.183	334.444	319.149	53.066
(1) > (2)	LnPRESS	3.238	3.091	1.292	3.112	3.091	1.268
(1) > (2)	SqPERF(1)	174.918	178.126	23.914	178.444	178.160	6.102
	Ordinal-variable	(0)	(1)		(0)	(1)	
	OCMC(1)	51	16		186	61	
	PERF(2) **	22	34		60	184	
	OSEAS	62	5		222	25	

** Due to missing values, some companies are excluded.

A check on the direction of the mean differences of the interval-scaled variables between the capitalizer and non-capitalizer groups discloses that only LnPRESS has its mean differences in the hypothesised direction. The others, i.e., OCMC(2), LnDEBT, LnSIZE(1), LnSIZE(2), SqSIZE(3), and SqPERF(1), have the direction contrary to expectation. However, the findings may not hold in subsequent multivariate analysis.

Table 5 reports the correlation analysis among the independent variables. Consistent with the results in the separate cross-sectional analysis, the present sample also exhibits a number of significant bivariate correlations. For example, between LnSIZE(1) and OCMC(2), between PERF(2) and LnPRESS, and between LnDEBT and LnSIZE(2). This finding indicates some inter-dependence amongst the independent variables, and thus, lends support to the appropriateness of multivariate regression analysis, specifically the logistic regression (Bazley et al., 1985; Tabachnik & Fidell, 1989). Except for the bivariate correlations among the alternative constructs for firm size (to be used separately in sensitivity analysis), none of the other bivariate correlations reach 0.8. Thus, it is inferred that harmful multicollinearity among the independent variables is not present. (Farrar & Gaulber, 1967; Lewis-Beck, 1987). An examination of the tolerance levels and VIFs also corroborates this inference (Belsley et al., 1980; Fox, 1991).

Logistic regression results

Results of the sensitivity analysis of the logistic regression appear in Table 6 - Panels A to D.⁴¹ Only models 7, 8, 10, 11 and 12, are statistically significant. On an overall basis, the "best" model is Model 10 because it has the highest explanatory power (model $\chi^2 = 12.672$; *d.f.* = 6), most significant ($p = 0.0485$), and a comparatively high classification accuracy rate of 81.53%.

⁴¹ Sensitivity analysis was performed because for certain variables, there are more than one construct to proxy for the variables. Consequently, 12 logistic regression models were developed and tested.

Table 5

Spearman Rank Correlation Matrix (with Probabilities in Parentheses): 1985-1987

Variable	OCMC(1)	OCMC(2)	LnDEBT	LnSIZE(1)	LnSIZE(2)	SqSIZE(3)	LnPRESS	SqPERF(1)	PERF(2)	OSEAS
OCMC(1)	1.000									
OCMC(2)	0.510 (0.000)	1.000								
LnDEBT	-0.069 (0.110)	-0.085 (0.069)	1.000							
LnSIZE(1)	0.075 (0.091)	0.131 (0.011)	0.0323 (0.000)	1.000						
LnSIZE(2)	0.106 (0.029)	0.190 (0.000)	0.297 (0.000)	0.850 (0.000)	1.000					
SqSIZE(3)	0.114 (0.023)	0.190 (0.001)	0.107 (0.031)	0.696 (0.000)	0.706 (0.000)	1.000				
LnPRESS	0.077 (0.086)	0.190 (0.000)	0.213 (0.000)	0.670 (0.000)	0.515 (0.000)	0.459 (0.000)	1.000			
SqPERF(1)	0.019 (0.372)	-0.026 (0.328)	0.093 (0.054)	0.070 (0.114)	0.042 (0.233)	0.263 (0.000)	0.079 (0.087)	1.000		
PERF(2)	0.003 (0.473)	0.059 (0.156)	0.039 (0.251)	0.200 (0.000)	0.219 (0.000)	0.476 (0.000)	0.088 (0.064)	0.269 (0.000)	1.000	
OSEAS	-0.084 (0.068)	-0.149 (0.005)	-0.040 (0.241)	0.122 (0.015)	0.169 (0.001)	0.172 (0.001)	-0.064 (0.126)	0.003 (0.478)	0.079 (0.084)	1.000

Further examination of the result of Model 10 shows that the coefficient LnDEBT, LnPRESS, and OSEAS are in the hypothesised direction, but only LnPRESS is highly significant at $p < 0.05$. Thus there is strong support for the efficiency perspective hypothesis H4, that capitalization is positively related to the level of press coverage as proxy for a firm's political visibility. There is no evidence to accept the other five research hypotheses.

In Model 10, the coefficients OCMC(2), LnSIZE(2), and SqPERF(1) are not in the expected direction. However, only OCMC(2) and SqPERF(1) are significant at $p < 0.05$. The implication of this finding is that capitalization decision is more likely for lessee firms that had narrowly-held shareholdings; and lessee firms with negative change in net income from prior year.

Additional multivariate diagnostics were considered necessary to determine the presence of any influential observation that could have impacted and biased the model's estimations. The studentized residuals, leverage points, DFBETA and Cook's statistics were examined and compared with the numerical cutoffs proposed by Hair et al., (1995) and Fox (1991). The finding indicates absence of influential observations.

The next stage is to assess the validity and efficacy of Model 10. This is achieved by performing the split-sample validation process and the estimation of cross-validation probability chance of error (PRE_{cv}). In the split-sample validation process, the original sample was randomly divided into two sub-samples (hereafter referred to as sub-1 and sub-2). Logistic regressions were performed for sub-1 and sub-2 using the same independent variables in Model 10. Results of this process appear in Table 7. On an overall comparison, it appears that Model 10 is valid and generalisable model beyond the sample. This is inferred from the result that Model 10 has highest explanatory power and at a lowest significance level than sub-1 and sub-2. And its classification accuracy rate is in between that of sub-1 and sub-2.

Table 6**Panel A - Results of Logistic Regression: 1985-1987 (N = 314)**

Independent variable	Expected relation	Model 1	Model 2	Model 3
		Coefficient Wald stat.	Coefficient Wald stat.	Coefficient Wald stat.
Constant	?	5.3577	4.0403	2.9088
		0.6846	0.4167	0.2697
OCMC(1)	+	0.1448	0.1863	0.1227
		0.1640	0.2681	0.1182
LnDEBT	-	1.4185	1.3770	0.9327
		1.8949 ^b	1.8570 ^b	0.8541
LnSIZE(1)	+	-0.2714		
		3.2303 ^a		
LnSIZE(2)	+		-0.1468	
			2.4555 ^b	
SqSIZE(3)	+			-0.0008
				0.0739
LnPRESS	+	0.3713	0.2580	0.1365
		3.6872 ^a	2.7399 ^a	0.9920
SqPERF(1)	+	-0.0314	-0.0303	-0.0283
		0.7861	0.7572	0.8211
OSEAS	+	0.2607	0.2106	0.0232
		0.2280	0.1508	0.0019
Model χ^2		9.353	8.445	6.093
		($p = 0.1547$)	($p = 0.2073$)	($p = 0.4128$)
% correctly classified		82.31%	82.31%	82.31%

^a Significant at $p \leq 0.05$

^b Significant at $p \leq 0.10$

Table 6**Panel B - Results of Logistic Regression: 1985-1987 (N = 314)**

Independent variable	Expected relation	Model 4	Model 5	Model 6
		Coefficient Wald stat.	Coefficient Wald stat.	Coefficient Wald stat.
Constant	?	-0.2076	-1.0311	-1.6146
		0.0290	1.8601 ^b	3.6445 ^a
OCMC(1)	+	0.0723	0.1002	0.0620
		0.0416	0.0792	0.0304
LnDEBT	-	0.0546	0.1092	0.0181
		0.0092	0.0363	0.0009
LnSIZE(1)	+	-0.1835		
		1.6829 ^b		
LnSIZE(2)	+		-0.0967	
			1.1974	
SqSIZE(3)	+			-0.0002
				0.0045
LnPRESS	+	0.3755	0.2928	0.1958
		3.8693 ^a	3.5727 ^a	2.1852 ^b
PERF(2)	+	-0.6732	-0.6460	-0.7226
		4.2827 ^a	3.8105 ^a	4.9001 ^a
OSEAS	+	0.2129	0.1703	0.0563
		0.1536	0.0997	0.0109
Model χ^2		8.688	8.166	6.988
		(p = 0.1919)	(p = 0.2262)	(p = 0.3220)
% correctly classified		81.88%	81.88%	81.88%

^a Significant at $p \leq 0.05$ ^b Significant at $p \leq 0.10$

Table 6**Panel C - Results of Logistic Regression: 1985-1987 (N = 314)**

Independent variable	Expected relation	Model 7	Model 8	Model 9
		Coefficient Wald stat.	Coefficient Wald stat.	Coefficient Wald stat.
Constant	?	7.4598	5.9309	3.9205
		0.4565	0.3177	0.2577
OCMC(2)	+	-0.0196	-0.0192	-0.0206
		2.7422 ^a	2.6388 ^a	3.0453 ^a
LnDEBT	-	1.0304	0.9175	0.6109
		0.9904	0.8132	0.3615
LnSIZE(1)	+	-0.2572 2.8229 ^a		
LnSIZE(2)	+		-0.1203 1.5193	
SqSIZE(3)	+			-3.4E-05 0.0002
LnPRESS	+	0.4423	0.3155	0.2071
		4.8839 ^a	3.7191 ^a	2.1180 ^b
SqPERF(1)	+	-0.0413	-0.0393	-0.0325
		0.4568	0.4491	0.5647
OSEAS	+	0.1333	0.0585	-0.1249
		0.0576	0.0112	0.0531
Model χ^2		12.518 (<i>p</i> = 0.0514)	11.113 (<i>p</i> = 0.0850)	9.612 (<i>p</i> = 0.1420)
% correctly classified		81.98%	81.98%	81.98%

^a Significant at *p* ≤ 0.05^b Significant at *p* ≤ 0.10

Table 6**Panel D - Results of Logistic Regression: 1985-1987 (N = 314)**

Independent variable	Expected relation	Model 10	Model 11	Model 12
		Coefficient Wald stat.	Coefficient Wald stat.	Coefficient Wald stat.
Constant	?	0.1550 0.0151	-0.7107 0.7360	-1.3623 2.5352 ^b
OCMC(2)	+	-0.0194 2.7514 ^a	-0.0192 2.6978 ^a	-0.0201 2.9262 ^a
LnDEBT	-	-0.1316 0.0498	-0.0991 0.0270	-0.1667 0.0683
LnSIZE(1)	+	-0.1759 1.5114 ^b		
LnSIZE(2)	+		-0.0798 0.7617	
SqSIZE(3)	+			0.0005 0.0362
LnPRESS	+	0.4388 4.9971 ^a	0.3455 4.5860 ^a	0.2565 3.4677 ^a
PERF(2)	+	-0.7117 4.6399 ^a	-0.7010 4.3904 ^a	-0.7687 5.3449 ^a
OSEAS	+	0.0973 0.0311	0.0422 0.0059	-0.0788 0.0208
Model χ^2		12.672 ($p = 0.0485$)	11.900 ($p = 0.0642$)	11.184 ($p = 0.0829$)
% correctly classified		81.53%	81.53%	81.53%

^a Significant at $p \leq 0.05$ ^b Significant at $p \leq 0.10$

Closer analysis of the results of sub-1 and sub-2 provides additional evidence supporting the above mentioned inference. All coefficients in sub-1 yield directions consistent with Model 10. However, where OCMC(2) is significant in Model 10, it is not significant in sub-1. With regard to the result of sub-2, the direction of all coefficients except that LnDEBT, are consistent with those of Model 8. But, where OCMC(2) and SqPERF(1) are significant in Model 10, they are not significant in sub-2. Thus, analysis of individual coefficient and its significance level reveals that the split-sample validation process support the validity of Model 10.

In terms of the predictive efficacy, estimation of PRE_{cv} yields evidence suggesting that Model 10 is an efficacious model. When compared with the result of sub-1 and sub-2, the estimated PRE_{cv} is 41.72%% and 44.60% respectively. Thus, it is inferred that the prediction error is reduced by about one half when using Model 10 to predict whether a lessee firm will capitalize its finance lease commitments. In conclusion, based on the evidence derived from the split-sample validation process and the estimation of PRE_{cv} , Model 10 is a valid, generalisable and efficacious model.

Summary

It is apparent that the result of the pooled cross-sectional analysis provides strong evidence to accept only one of the six research hypotheses. Whilst the lack of explanatory power could be attributed to the theoretical framework, or the research methodology adopted or both, there are perhaps other factors that could have confounded the result. These factors include significant accounting events; that is, the issuance and introduction of new accounting standards that have the potential to affect lessee firms' accounting policy choices and also their profitability and financial structure.

Table 7**Split Sample Validation of Logistic Regression Estimation: 1985-1987**

Independent variable	Expected relation	Model 10	Sub-1	Sub-2
		(N = 314)	(n = 155)	(n = 159)
		Coefficient	Coefficient	Coefficient
		Wald stat.	Wald stat.	Wald stat.
Constant	?	0.1550	1.1529	-0.5545
		0.0151	0.3431	0.1062
OCMC(2)	+	-0.0194	-0.0193	-0.0105
		2.7514 ^a	1.2750	0.3939
LnDEBT	-	-0.1316	-0.8542	1.5972
		0.0499	0.6669	1.3998
LnSIZE(2)	+	-0.1759	-0.2378	-0.1884
		1.5114 ^b	1.1036	0.9448
LnPRESS	+	0.4388	0.5267	0.3510
		4.9971 ^a	3.1075 ^a	1.8405 ^b
SqPERF(1)	+	-0.7117	-1.1899	-0.3937
		4.6389 ^a	5.5020 ^a	0.7405
OSEAS	+	0.0973	0.5350	0.0499
		0.0311	0.3415	0.0049
Model χ^2		12.672	11.521	5.171
		(p = 0.0485)	(p = 0.0735)	(p = 0.5221)
% correctly classified		81.53%	82.27%	80.82%

^a Significant at $p \leq 0.05$

^b Significant at $p \leq 0.10$

In 1985, the accounting standard AAS 18 Accounting for Goodwill (AARF, ASB, 1985) was issued. Furthermore, in 1986, AAS 19 Accounting for Joint Ventures (AARF, ASB, 1986a), and AAS 20 Accounting for Foreign Currency Translation (AARF, ASB, 1986b) promulgated. Finally, in 1987, the ASRB approved the adoption of ASRB 1011 Accounting for Research and Development (R&D) Costs (ASRB, 1987). These accounting standards limit the options for firms to account for goodwill, joint venture transactions, foreign subsidiaries financial statements, and R&D costs respectively. As a result, these events influenced firms' accounting policy choices and also their profitability and financial structures.⁴²

Another factor that could have confounded the result relates to the significance of finance lease arrangement for lessee firms that chose to capitalize them. Appendix D reveals that on average, throughout 1985-1987 capitalized leased assets and capitalized lease liabilities only represented less than three percent of capitalizers' total assets and total liabilities respectively. This is further supported by a finding that in 1988 (the first year the requirements of AAS 17 became mandatory), on average the capitalized leased assets and capitalized lease liabilities represented about three per cent of capitalizers' total assets and five per cent of capitalizers' total liabilities respectively.⁴³ This preliminary evidence suggests that finance lease accounting policy was not a major agenda in terms of policy choices and its effect on the lessee firms' profitability and financial structure. This finding also leads to the inference that for the non-capitalizers, their finance lease commitments may even be less significant than those of the capitalizers, and consequently adopted the footnote disclosure accounting policy based on the arguments that it is an adequate form of reporting (Abdel-khalik et al., 1981a; Bowman, 1980; Finnerty et al., 1980; Houghton, 1984; Lawrence & Bear, 1986; Murray, 1982; Narayanaswamy, 1994; Wilkins & Zimmer, 1983a).

⁴² This explanation suggests and re-affirms that a firm has a portfolio of accounting policies at its disposal (Zmijewski & Hagerman, 1981).

⁴³ A random sample of 37 lessee firms in 1988 were selected of which about 60% of them had finance lease commitments. They complied with the capitalization requirement of AAS 17.

Notwithstanding the preceding limitations and plausible confounding factors, the logistic regression model 10 has been found to be a valid, generalisable beyond the sample, and efficacious model.

CHAPTER 7

SUMMARY AND CONCLUSION

Summary

The objective of this study is to answer the research question of: Why a group of lessee firms chose to capitalize whilst others chose to report via footnote disclosure their respective finance lease commitments during the transitional or phase-in period (1985 - 1987) as permitted by AAS 17. Chapter 2 of this thesis discusses the history and the features of AAS 17, with particular attention on the transitional provision and the finance lease accounting choice. This is followed by an in-depth discussion of the capitalization debate supported by empirical evidence.

Chapter 3 deals with the review of the selected similar published studies of accounting policy choice. The purpose of this review is to identify areas of improvement that could be incorporated into this study. These improvements are elaborated in subsequent chapters of this thesis.

As a subsequent chapter, Chapter 4 relates to the discussion on the theory development and hypotheses formulation. A combined theory of contracting theory (efficient contracting perspective) and signalling theory has been employed as the underlying theoretical framework. From this framework a general hypothesis was formulated, that is, lessee firms choose to capitalize finance lease rather than adopt footnote disclosure in order to reduce or mitigate the agency costs and/or political costs and also to signal to the market that they are high quality firms, which consequently would lead to maximizing the value of the firm. To test this general hypothesis, six research hypotheses were formulated and proxied by six constructs as explanatory variables. These variables are: Corporate structure, debt contracting, firm size, political

visibility, financial performance, and overseas association. The dependent variable is the finance lease accounting choice: Capitalization or footnote disclosure.

In Chapter 5, the sample selection process was discussed and followed by the definitions of the dependent and independent variables. This chapter also describes the data that were collected for each year of 1985, 1986 and 1987 from various sources which include the AGSM Annual Reports Microfiche File, the publications by the Stock Exchange Research Pty Ltd (Stock Exchange Research Pty Ltd, 1986, 1987 & 1988), Jobson's Public Company (and Mining) Year Book (Dunn & Bradstreet, 1986, 1987 & 1988), and the Australian Business Index (Australian Business Intelligence, 1986, 1987 & 1988). Finally the research design aspects of this study was discussed in this chapter. It was considered appropriate to employ a multivariate analysis, in particular the logistic regression, to test the data for pooled cross-sectional analysis.

Chapters 6 presents the results of the statistical analyses undertaken in this study. The results discussed in these chapters include the descriptive statistics, regression diagnostics, logistic regression with sensitivity analysis, and regression model validation process.

Conclusion

The objective of this study is to examine the economic factors motivating Australian listed lessee companies to adopt capitalization or footnote disclosure of their finance lease commitments throughout 1985 to 1987, as permitted by the transitional provision of the accounting standard AAS 17: Accounting for Leases. It is hypothesised that the decision to capitalize, rather than to disclose finance lease commitments in the footnotes of the financial statements, is positively related to a firm's (1) corporate structure, (2) debt contract financial constraints, (3) size, (4) political visibility, (5) financial performance, and (6) overseas association.

Pooled cross-sectional analysis

The result reveals that only hypothesis H4 is supported. Thus, on average for the transitional period, the capitalization decision was positively related to lessee firm's political visibility as measured by the level of press coverage. It can also be inferred that capitalization may be used by lessee firms as a means of reducing wealth transfers related to the political process and also as a signal to the market that they are high quality firms. The result also indicates findings that are contrary to expectation. It is found that capitalization decision was negatively related to firm's ownership structure, size, and financial performance; of which only size is not significant. This perplex finding could be explained by alternative plausible hypotheses.

Alternative plausible hypotheses

Notwithstanding the findings of this study, there are perhaps other plausible explanations motivating a firm to capitalize rather than disclosing its finance lease commitments in the footnotes of the financial statement during the transitional period. Two plausible hypotheses are offered.

First, firms that capitalized their finance lease commitments prior to the mandatory compliance date of AAS 17 had a different set of motives other than those suggested in this study. There is evidence in the literature suggesting that early adopters of accounting standards, as in the case of the capitalizers in this study, time their adoption with the view to "earnings management" (Ali & Kumar, 1993; Gujarathi & Hoskin, 1992; Pincus & Wasley, 1994).

Second, the research question may perhaps be better explained by adopting a socio-economic paradigm rather than an economic paradigm of economic consequences theory used in this study (Mangos & Lewis, 1995; Neu, 1992). This socio-economic

paradigm suggests the inclusion of social factors in the analysis because managers, being "economic actors are influenced by their environment and also have the ability to influence that environment" (Mangos & Lewis, 1995 p. 56).

Limitations of the study

Whilst every effort has been taken to ensure that this is a thorough and rigorous study, there are inherent limitations in it. As this study is an example of positive accounting research, it suffers from the limitations that have been well documented and expounded by Holthausen (1990), Holthausen and Leftwich (1983), and Watts and Zimmerman (1990). Among others, these limitations include specification errors in either the left-hand side (dependent) variable, or the right-hand side (independent) variables or both (Holthausen & Leftwich, 1983; Watts & Zimmerman, 1990). With respect to the specification error of the left-hand side variable, it was inherently assumed in this study that firms use single capitalization of finance lease commitments policy to reduce or mitigate agency costs and political costs and to signal to the market. However, there is evidence to indicate that firms use a portfolio of accounting procedures and policies rather than single accounting policy (Zmijewski & Hagerman, 1981). This study also acknowledges the possible specification error of the right-hand side variables relating to the imprecise measurement constructs of the proxy variables used as independent variables in this study (Holthausen & Leftwich, 1983; Watts & Zimmerman, 1990).

Another potential limitation of this study is that the practices relating to accounting treatment of finance lease commitments in the year of issuance of AAS 17 and during the period of exposure draft ED 17 were not examined. During this period, some lessee firms may have already capitalized finance leases in anticipation of AAS 17 (Godfrey & Warren, forthcoming). This is possible because about half of the respondents to ED 17 supported the capitalization policy (Roberts, 1982). Thus, the practices of lessee firms during this period may confound the analysis of this study.

Apart from the preceding limitations, further shortcomings of this study are the very modest explanatory power and the lack of explanations for findings that are contrary to expectations. As noted by Bazley et al., (1985) that "the results here [as in the case of this study] have confirmed the difficulty we have in explaining discretionary accounting policy choice. This 'relatively modest' explanatory power ... is not unique to this study" (p. 61). Other accounting policy studies which exhibit modest explanatory power include the studies by Brown, Izzan, and Loh (1992), Whittred and Chan (1992), and Wilkins and Mok (1991).

Implications of this study

The findings of this study provide the following implications, even though only one of the research hypotheses was supported by the result. First, the variable level of press coverage has been found to be an important predictor and proxy for firm's political visibility. This is a significant finding because it is an evidence that firms will act efficiently in responding to the media's perception of their level of political visibility, and at the same time signalling that they are not endeavouring to mislead the market by adopting an accounting policy that is both income reducing / deferral in principle and purporting to show the economic substance of finance lease commitments.

Second, whilst the standard setters may believe that a lengthy transitional period is useful to the lessee firms and users of financial statements, the evidence of this study suggests otherwise. This is because at the end of 1987 only about 21% of the total sampled lessee firms (67 out of 314 firms) that had finance lease commitments opted to capitalize early. Furthermore, in Appendix D, there is *prima facie* evidence that among the capitalizers the level of average capitalized leased assets had reduced from 1985 to 1987. This suggests that lessee firms had during the period not only re-negotiated the existing finance lease agreements but possibly re-negotiated with the lessors to make the

existing finance lease commitments appear as an operating lease and thus not brought into account (Abdel-khalik, 1981; Godfrey & Warren, forthcoming; Whittred & Zimmer, 1992). This form of reaction by the lessee is contrary to the spirit of the standard, which did not intend to encourage lessees to circumvent the provisions of AAS 17 but to allow lessees the opportunity "to gain experience in presenting ... information relating to leases" (para. 34). Therefore, it is plausible to hypothesise that multi-year adoption period is a political rather than an economic arrangement (Langer & Lev, 1993) which gave firms the opportunity to manipulate income (Pincus & Wasley, 1994; Soo, 1991).

The implication of the findings of this study to the users of financial statements is not to support any proposal to have a lengthy phase-in period in future accounting standards. This is because during this period, as in this case, the transitional period of AAS 17, the financial statements of lessee firms were incomparable due to different finance lease accounting policies adopted by the lessees, that is capitalized or expensed. There are costs, private and social, resulting from a reduction in cross-company (lessee) comparability (Langer & Lev, 1993). Since different lessee firms used different finance lease accounting policy, it complicates "the cross-sectional adjustment of financial statements to a uniform basis" (Langer & Lev, 1993 p. 516).

Suggested areas for future research

One area for future research is to test the hypothesis of income smoothing by the capitalizers. It is an empirical question whether or not the capitalizers took the opportunity of voluntary early adoption for income smoothing purposes. The findings of this study would help, among others, the standard setters to either continue or cease the policy of providing a lengthy phase-in period for new accounting policy requirements. At present, these phase-in provisions are provided so as to give the financial statements preparers ample time and opportunity to grasp and understand the requirements of the accounting standards. However, if by this proposed study it is found that firms took this

advantage for income smoothing or bath effect purposes, then arguably the reasons for having such lengthy phase-in periods as offered by the standard setters are indeed unjustified. (Langer & Lev, 1993; Pincus & Wasley, 1994).

Another area for future research is to extend the application of the joint contracting/signalling framework in examining the economic factors motivating lessee firms' choice to either adopt early or defer the adoption of the requirement to capitalize their finance lease within the phase-in period. Findings of similar studies in the literature indicate that besides certain economic factors like firm size and leverage, the financial statements effect of adoption is a significant factor influencing a firm's accounting policy adoption timing choice. These studies include the studies by Ayres (1986), Trombley (1989), Scott (1991), Ali and Kumar (1994), and Tung and Weygandt (1994). As no similar studies have been done in the Australian environment, this area of future research represents an opportunity to understand the motivations and behaviours of Australian firms. Furthermore, it also represents an opportunity to extend the generalisability of the methodologies and the findings of studies done in the USA environment.

Finally this study could be replicated in other countries especially in countries that developed their accounting standards based on the one formulated by the International Accounting Standards Committee (IASC). This is because, the equivalent IASC standard on lease accounting, IAS 17: Accounting for Leases (IASC, 1982), also has a lengthy transitional or phase-in period. The findings of such studies would enhance understanding on cross-cultural behaviours of managers in accounting policy choices (Hofstede, 1983 & 1984).

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Appendix A

Data Collected From AGSM File and Other Sources

- (1) Lessee's name
- (2) Industry category
- (3) Net profit: (a) current year; (b) prior year
- (4) Tax expense: (a) current year; (b) prior year
- (5) Interest expense: (a) current year; (b) prior year
- (6) Extraordinary items: (a) current year; (b) prior year
- (7) Finance lease charges
- (8) Total revenues
- (9) Total tangible assets
- (10) Total assets: (a) current year; (b) prior year
- (11) Total liabilities: (a) current year; (b) prior year
- (12) Shareholders' funds: (a) current year; (b) prior year
- (13) Current lease commitments
- (14) Financial/capital leased assets
- (15) Total lease liabilities
- (16) Amortisation of leased assets
- (19) Percentage of ordinary shares held by top 20 shareholders
- (20) Foreign parent company
- (21) Overseas exchange listing status
- (22) Press coverage

Appendix B

Australian Associated Stock Exchange (AASE) Industry Classification **(1985 - 1987)**

Automotive

Banks

Builders and Suppliers

Chemicals

Developers and Contractors

Diversified Resources

Electrical and Durables

Entrepreneurial Investors

Finance

Food Sectors

Heavy Engineering

Insurance

Investment and Trustees

Light Engineering

Media

Metals

Merchants and Agents

Miscellaneous and Diversified Industrials

Miscellaneous Services

Oil and Gas

Paper and Packaging

Property Trusts

Retail

Solid Fuels

Textiles

Transport

Appendix C

The financial characteristics of the capitalizers and the non-capitalizers have to be comparable before any between groups statistical testings can be performed. This can be achieved in either one of the following way: (1) to adjust the non- capitalizers' financial variables as if they had capitalized their finance lease commitments (or constructive capitalization); (2) to adjust the capitalizers' financial variables as if they had periodically expensed, rather than capitalized, their finance lease commitments. However, since the former is not feasible due to unavailability of information to reliably estimate the implicit interest rates, finance lease charges, present value of obligations, fair values, and amortisation expense, the latter method of adjustment was opted. This is because AAS 17 (para. 57) requires the capitalizers to disclose additional information that enable the necessary adjustments to be made.

Table C1

Adjustments to Remove the Effect of Capitalization of the Capitalizer Group's Financial Variables

Financial variables	Adjustments
Total liabilities	Total liabilities (less) total capitalized lease liabilities
Total tangible assets	Total tangible assets (less) total capitalized leased assets
Total assets	Total assets (less) total capitalized leased assets
Adoption year net income	Adoption year net income before extraordinary items (add) adoption year finance lease charges (add) adoption year amortisation of finance leases (less) estimated lease commitment due not later than one year

Appendix D

Table D1

Panel A: Proportion of Mean Capitalized Leased Assets to Mean Total Asset*

(\$'000): Capitalizer group.

Year	Leased assets	Total assets	Proportion (%)
1985	11395.892	532817.243	2.138
1986	14329.800	226493.100	6.326
1987	3851.412	328670.941	1.171
1985-1987	9850.313	430039.750	2.290

Panel B: Proportion of Mean Capitalized Lease Liabilities to Mean Total Liabilities*

(\$'000) : Capitalizer group.

Year	Lease liabilities	Total liabilities	Proportion (%)
1985	8429.158	258235.474	3.264
1986	14040.000	140973.300	9.959
1987	3139.263	167504.105	1.874
1985-1987	7766.478	215003.866	3.612

Panel C: Proportion of Mean Capitalized Leased Assets (& Mean Capitalized Lease Liabilities) to Mean Total Assets (Mean Total Liabilities)* (\$'000): 1988

Year	Leased assets	Total assets	Proportion (%)
1988	22116.318	755440.682	2.927

Year	Lease Liabilities	Total liabilities	Proportion (%)
1988	20969.864	414620.727	5.057

* Adjusted for capitalization of finance leases (see Appendix C)

Appendix E

List of Companies in the Sample

Non-capitalizers (footnote disclosures)

- 1985

ACI International Ltd

Acrow Australia Ltd

Adelaide & Wallaroo Fertilizers Ltd

AFL Holdings Ltd

AFM Developments Ltd

Amalgamated Holdings Ltd

Amalgamated Wireless Ltd

Amatil Ltd

Ampol Ltd

Angus & Coote Holdings Ltd

APM Ltd

Arnotts Ltd

Atkin Carlyle Ltd

ATS Resources Ltd

Austen & Butta Ltd

Austral Group Ltd

Asiatic Pacific Resources Ltd

Austmark International Ltd

Australian Chemical Holdings Ltd

Australian Consolidated Mineral Ltd

Australian Merchant Holdings Ltd

Australian National Industries Ltd

Bank of Queensland Ltd

Barrack Mines Ltd

Bennet & Fisher Ltd

Blue Circle Ltd

Boral Ltd

Brash Holdings Ltd

Bridgestone Australia Ltd

Broadlands Finance Ltd

Bruck Australia Ltd

BTR Nylex Ltd

Bunnings Ltd

Caltex Australia Ltd

Cameronic Technology Corporation Ltd

Canada Northeast Australia Oil NL

Carpenters Investment Trading Ltd

Carr Boyd Mineral Ltd

Carrier Air Conditioning Holdings Ltd

Cascade Brewery Company Ltd

C & C Bottlers Ltd

Chalmers Ltd

Chamberlain Holdings Ltd

Cheetham Ltd

Clyde Industries Ltd

Commonwealth Industrial Gases Ltd

Communications & Entertainment Ltd

Comsteel Vickers Ltd

Consolidated Rutile Ltd

Costain Ltd

G E Crane Holdings Ltd

Cudgen RZ Ltd

Cultus Pacific Ltd

Davies Brothers Ltd

Defiance Mills Ltd

Dominion Mining & Oil NL

Dunlop Olympic Ltd	Hills Industries Ltd
Eagle Corporation	Holland (John) Holdings Ltd
East African Coffee Plantations Ltd	Home Energy Group
Edward Dunlop & Co. Ltd	Humes Ltd
Elders KL Ltd	Hunter Resources Ltd
Elders Resources Ltd	ICI Australia Ltd
Enacon Ltd	Industrial Equity Ltd
Energy Resources Ltd	Industrial & Pastoral Holdings Ltd
ENT Ltd	International Combustion Australia Ltd
Entrad Corporation Ltd	Ivanhoe
Evans Deakin Industries Ltd	Jasco Holdings Ltd
Fairfax (John) Ltd	Jingellic Minerals Ltd
Faulding (FH) & Co. Ltd	Johns Perry Ltd
Fielder Gillespie Davies Ltd	Jones (David) Ltd
Gene Link Limited	Jonray
General Investment Australia Ltd	Kemtron Ltd
Gibson Chemical Industries Ltd	Keywest Investments Ltd
Goliath Cement Holdings Ltd	Kia Ora Gold Corporation NL
Gordon & Gootch Limited	Kilndried Timber Industries Ltd
Greenbushes Tin Ltd	Kurts (Peter) Properties Ltd
Griffiths Brothers Ltd	Lanes Motor Holdings Ltd
Group Property Services Ltd	Ludowici & Sons Ltd
Hanimex Corporation Ltd	MacBesser Ltd
Hardie (James) Ltd	McIlwraith McEacharn Ltd
Hawker De Havilland Ltd	Mayne Nickless Ltd
Henderson's Industries Ltd	Metals Exploration Co.
Henry & Walker Ltd	Metro Industries Ltd
Herald & Weekly Times Ltd	Mildara Wines Ltd
Hill Minerals	MIM Holdings Ltd

Mitsubishi Motors Australia Ltd
Monier Ltd
Moonie Oil Co. Ltd
Moore Business Systems Aust. Ltd
Mortlock Brothers Ltd
Muswellbrook Energy & Minerals Ltd
Myer Emporium Ltd
Nally Ltd
National Consolidated Ltd
National Trustee Exec. & Agency Co.
News Corp. Ltd
Nicholas Kiwi Australasia Ltd
Nilsen Australia Ltd
North Broken Hills Ltd
Oakbridge Ltd
Oceanic Equity Ltd
Offshore Oil NL
P & O Australia Ltd
Pancontinental Petroleum Ltd
Paynter Dixon Holdings Ltd
Peko-Wallsend Ltd
Perpetual Trustees Australia Ltd
Peters (WA) Ltd
Petersville Sleigh Ltd
Philips Industries Ltd
Pioneer Concrete Services Ltd
Plumrose Australia Ltd
Poseidon Ltd
Qintex Ltd

QUF Industries Ltd
Renison Goldfields Consolidated Ltd
Repcor Corporation
Richardson (D) & Sons Ltd
Rovers Holdings Ltd
SA Brewing Holdings Ltd
Sabco Ltd
Santos Ltd
Siddons Industries Ltd
Simpson Holdings Ltd
Smith (Howard) Ltd
Softwood Holdings Ltd
Shannons Ltd
Southern Farmers Group Ltd
Speedo Holdings Ltd
Spotless Group Ltd
Sunshine Australia Ltd
Syme (David) & Co. Ltd
Taubmans Industries Ltd
Thomas & Coffey Ltd
Thorn EMI Australia Ltd
Tooth & Co. Ltd
Tubemakers of Australia Ltd
TWT Ltd
Union Carbide Aust. & New Zealand Ltd
Unity Corporation Ltd
Universal Telecasters Ltd
Vam Ltd
Vox Adeon Holdings Ltd

Walton Bonds Ltd
Watt (James) Group Ltd
Waugh & Josephson Holdings Ltd
Webster Ltd
Westfield Holdings Ltd
Westinghouse Brake & Signal Co.
(Australia) Ltd
Westralian Forest Industries Ltd
Whittakers Ltd
Winterbottom Ltd
Woodside Petroleum
Wormald International Ltd
Wright (Walter) Industries Ltd
York Motor Holdings Ltd

Comalco Ltd
CRA Ltd
Davis (Charles) Ltd
Golconda Minerals
Golden Grove
Goodman Ltd
Gunns Kilnd Ltd
Hancock & Gore Ltd
Horwood Bagshaw Ltd
McConnel Dowell Ltd
Mt. Carrington Mines
National Venture Ltd
Netmap Corporation Ltd
PAL Ltd

Non-capitalizers (footnote disclosers)

- 1986

Amcor Ltd
Ariadne Australia Ltd
Bell Ltd
Bisley Investment Corporation Ltd
Brambles Industries Ltd
Brick & Pipe Industries Ltd
BT Insurance Ltd
Bundaberg Sugar Co. Ltd
Burns Philips & Co. Ltd
BWD Industries Ltd
Carricks Ltd
Cereus Australia Ltd

Petro Energy
Pine Vale
Pioneer Sugar Ltd
Provincial Newspapers Ltd
Rothwells Ltd
Smith (Henry) Ltd
Stokes Australasia Ltd
Strategic Minerals
Viscount Holdings Ltd
Wattyl Ltd
WCP Ltd
Weston (George) Foods Ltd
Woolworths Ltd

Non-capitalizers (footnote disclosures)

- 1987

Advertiser Newspapers Ltd

Associated Broadcasting Services Ltd

Clayton Roband Ltd

Coles Myer Ltd

Computer Power Ltd

Comrealty Ltd

Danomic Investment Ltd

Euro-national Ltd

First Investors Security Ltd

Gazal Corporation Ltd

Ghivan Ltd

Golden Shamrock

Gordon Pacific

ICAL Ltd

McDonnell & East Ltd

National Properties Ltd

Normandy Resources

Pan Australian Mining

Reid (Malcolm) Ltd

Rothmans Holdings Ltd

TNT Ltd

White (Joe)

Capitalizers - 1985

Allied Queensland Coalfields Ltd

Ashton

Austram Ltd

Base Resources Ltd

Bond Corporation Ltd

Bristle Ltd

BHP Ltd

Cherry Lane Fashion Group Ltd

City & Suburban Properties Ltd

Coal & Allied Industries Ltd

Coventry Motor Replacements Ltd

Crusader Oil NL

CSR Ltd

Eglo Engineering Services Ltd

Endeavour Resources Ltd

Energy Research Group Ltd

EWI Ltd

Hartogen

Hiteks Ltd

IDAPS Australia Ltd

Leighton Holdings Ltd

Linter Groups Ltd

Malco Industries Ltd

McKay (Ralph)

Minerals, Mining & Metallurgy Ltd

Osborne Metals Ltd

Pacific Cooper Ltd

Pancontinental Mining Ltd

Parry Corporation Ltd

Pelsart Resources NL

Pennant Holdings Ltd

Reckitt & Coleman Australia Ltd

Reid (Walter) & Co. Ltd

Shearer (John) Ltd

Timber Holdings Ltd

Tinsley Corporation Ltd

Wesfarmers Ltd

White Industries Ltd

Capitalizers - 1986

APA Holdings Ltd

Australia Gas Light Co. Ltd

Australian Mining Investment

Eastern Resources Ltd

GKN Kwikform Ltd

Hastings Deering Ltd

Mangrovite Industries Ltd

Newtech Development Corporation Ltd

Queensland Cement & Lime Co. Ltd

Queensland Press Ltd

Capitalizers - 1987

Alcan Ltd

Australian Resort

Bond Media Ltd

Bridge Oil Ltd

Cadbury Schweppes Ltd

Coal & Carbon

Colly Farms Cotton Ltd

Giant Resources

Incorne Group Ltd

Kern Corporation Ltd

Macmahon Holdings Ltd

Meridian Oil NL

Metals Manufacturing Ltd

Natcorp Investments

Palmer Tube Ltd

Petroz

Segenhoe Ltd

SA Gas Ltd

Total Assets Ltd