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3 March 1999

Dr Alan Preston
The Secretary
Review of Business Taxation
Department of the Treasury
Parkes Place
Canberra, ACT 2600

Dear Dr Preston,

Submission to the Committee for Review of Business Taxation

I refer to the invitation for submissions in *A Platform for Consultation* published by the Committee for Review of Business Taxation in February 1999 and write to make a submission on the alignment of financial accounting rules and tax rules mentioned in paragraphs 178 to 181 of the Overview (pages 46 and 47 in Volume 1).

Enclosed please find a hard copy of my PhD thesis completed in 1997 with the title "Relationship of Tax and Financial Accounting Rules – An Empirical Study of the Alignment Issue", together with an electronic copy on two IBM compatible diskettes. I hope the work reported in my thesis would provide some useful inputs for the Committee's deliberation.

In Chapter 2 of my thesis, I review the relationship of tax and financial accounting rules from an international perspective. In particular, I point out the different institutional arrangements in Anglo-Saxon countries and in continental European countries. I trace the historical development of accounting-tax relationship in the USA, the UK and Australia. I identify the sources of divergence of the two sets of rules in Anglo-Saxon countries including Australia. The two sets of rules have been developed by different authorities for different purposes. They are designed to meet different criteria and are based on different principles. For example, the "wherewithal to pay" principle in taxation has generated timing differences between accounting income and taxable income.

In Chapter 3 of the thesis, I present the arguments for and against a complete alignment based on its potential impact on the tax system and the financial reporting regulatory system. I would like to add that Australia's commitment to harmonizing its accounting standards with International Accounting Standards presents an additional constraint: accounting rules in this country cannot be easily modified to suit the needs of revenue collection.

Three empirical studies are reported in the thesis. The effective tax rate analysis in Chapter 4 shows that companies in three industries benefited from concessional tax treatments of gold-mining income, dividends, and capital gains, and had accounting profit consistently higher than taxable income. After controlling for industry effect, the analysis also identifies a size effect: large firms had a wider book-tax income gap than small firms due to permanent differences.

The analysis of tax disclosure data in Chapter 5 shows that large firms benefited more from tax incentives, dividend rebates, and foreign tax rate differences than small firms. They also had proportionately smaller amounts of booked and unbooked timing differences, and non-deductible expenses. These results show that the book-tax income gap was mainly caused by deliberate government policies and the different objectives and standards of the tax and financial reporting systems. Thus, a complete alignment cannot be achieved unless the government is willing to yield its policy-making power in the tax system, and the objectives and standards of the two systems can be reconciled.

The survey of opinions about alignment reported in Chapter 6 shows that 57 percent of listed companies supported a complete alignment of tax rules with financial accounting rules. Listed companies also estimated total compliance cost savings in the order of 57 percent as a result of alignment. However, only 36 percent of tax practitioners (accountants) supported alignment, even though they did not estimate a substantial negative impact on their earnings as a result of alignment. Further statistical analyses show that fairness was much more influential than simplicity in forming the alignment attitudes and the opinions about compliance level of both groups of respondents. Thus, unless a complete alignment can also improve the perceived fairness and compliance level of the tax system, simplification of the tax system alone does not justify such an alignment.

The conclusion of the thesis is that given the existing institutional arrangements, a complete alignment of tax rules with financial accounting rules is neither feasible nor desirable. However, in areas where there is no conflict between the objectives and the required standards of the two systems, the two sets of rules could be aligned to reduce compliance costs.

I note that the Committee requests two hard copies plus an electronic copy in IBM compatible format for each submission, but I can only supply one hard copy of my thesis. Also, the thesis was originally word-processed with Microsoft Word 5.1 for Macintosh, so the pagination in the electronic copy is different from that of the hard copy due to the Macintosh-IBM conversion and the different softwares that drive the printer.

I would appreciate the return of the hard copy of my thesis when the Committee completes their mission. I intend to have it kept by the National Library for public access.

Sincerely,

Alfred Tran

Enclosures

RELATIONSHIP OF TAX AND FINANCIAL ACCOUNTING RULES
AN EMPIRICAL STUDY OF THE ALIGNMENT ISSUE

by

Alfred Van-Ho TRAN

February 1997

A Thesis Submitted

for

the Degree of Doctor of Philosophy

of

The Australian National University

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STATEMENT OF ORIGINAL WORK

This thesis is the original work of the author. All sources used and assistance obtained have been acknowledged.

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Alfred Van-Ho TRAN
February 1997

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INTERNATIONAL COMPARISON

I have benefited from the contributions of Professors Thomas Porcano and David Shull of Miami University, Ohio, USA, in reviewing the development of tax and financial accounting relationship in the USA and in citing the relevant US tax cases.

EFFECTIVE TAX RATE ANALYSIS

Thanks are due to Kathy Maclaren for help in accessing the STATEX Financial Statement Database of the Australian Stock Exchange through Reuter Link, and in extracting the data required for the effective tax rate analysis.

ANALYSIS OF TAX DISCLOSURE DATA

Thanks are also due to my research assistants, Steffen Pedersen, Heeki Kim and Su Huat Tan, for help in manually extracting data from the Australian Graduate School of Management Annual Report File on microfiche held by the Australian National Library, and in tabulating the data into spreadsheets for analysis.

POSTAL QUESTIONNAIRE SURVEY

I wish to thank the Australian Society of Certified Practising Accountants and the Institute of Chartered Accountants in Australia for drawing random samples of tax practitioners for the survey, and the latter for mailing out the survey instruments and the follow-up letters; Rowena Tran for the tedious preparation work before mailings and subsequent data entry; and Jaeeun Kang for data entry and data verification.

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ABSTRACT

In Anglo-Saxon countries such as Australia and the United Kingdom, two sets of rules are used to measure business profits: one for income taxation and the other for financial reporting. The divergence of these two sets of rules raises the issue of alignment. In this thesis, the relationship of tax and financial accounting rules is reviewed from an international perspective. Arguments for and against a complete alignment are presented based on its potential impact on the tax system and the financial reporting regulatory system. Three empirical studies are reported. A statistical analysis of effective tax rates (ETRs) of Australian companies exposes the gap between accounting profit and taxable income (book-tax income gap). An analysis of tax disclosure data identifies the major causes of the gap. A postal questionnaire survey reveals the opinions of listed companies and tax practitioners about the alignment issue.

The ETR analysis shows that companies in three industries benefited substantially from concessional tax treatments of gold-mining income, dividends, and capital gains, and had accounting profit consistently higher than taxable income. After controlling for industry effect, the analysis also identifies a size effect: large firms had a wider book-tax income gap than small firms. The analysis of tax disclosure data shows that large firms benefited more from tax incentives, dividend rebates, and foreign tax rate differences than small firms. They also had proportionately smaller amounts of booked and unbooked timing differences, and non-deductible expenses. These results show that the book-tax income gap was mainly caused by deliberate government policies and the different objectives and standards of the tax and financial reporting systems. Thus, a complete alignment cannot be achieved unless the government is willing to yield its policy-making power in the tax system, and the objectives and standards of the two systems can be reconciled.

The survey of opinions shows that 57 percent of listed companies supported a complete alignment of tax rules with financial accounting rules. Listed companies also estimated total compliance cost savings in the order of 57 percent as a result of alignment. However, only 36 percent of tax practitioners supported alignment, even though they did not estimate a substantial negative impact on their earnings as a result of alignment. Further statistical analyses show that 'fairness' was much more influential than 'simplicity' in forming the alignment attitudes and the opinions about compliance level of both groups of respondents. Thus, unless a complete alignment can improve the perceived fairness and compliance level of the tax system, simplification of the tax system alone does not justify such an alignment.

The conclusion is that given the existing institutional arrangements, a complete alignment of tax rules with financial accounting rules is neither feasible nor

desirable. However, in areas where there is no conflict between the objectives and the required standards of the two systems, the two sets of rules could be aligned as closely as possible to each other in order to reduce compliance costs.

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GLOSSARY OF ACRONYMS

AAS	Australian Accounting Standards
AASB	Australian Accounting Standards Board
AICPA	American Institute of Certified Public Accountants
AMT	Alternative minimum tax (USA)
AMTBIA	Alternative minimum tax book income adjustment (USA)
AMTI	Alternative minimum taxable income (USA)
AP	Accounting profit
APB	Accounting Principles Board (USA)
ASB	Accounting Standards Board (UK)
ASCPA	Australian Society of Certified Practising Accountants
ATO	Australian Taxation Office
CA	Chartered Accountant
CPA	Certified Practising Accountant (Australia), or Certified Public Accountant (USA)
CT	Current tax
DT	Deferred tax
ETR	Effective tax rate
FASB	Financial Accounting Standards Board (USA)
FIFO	First-in-first-out
FITB	Future income tax benefit
GAAP	Generally accepted accounting principles
GPFR	General purpose financial reports
ICAA	Institute of Chartered Accountants in Australia
ICTA	Income and Corporation Taxes Act 1988 (UK)

IRD	Inland Revenue Department (UK)
IRS	Internal Revenue Service (USA)
ISO	Incentive stock option (USA)
ITAA	Income Tax Assessment Act 1936 (Australia)
ITC	Investment tax credits (USA)
LIFO	Last-in-first-out
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary least squares
PD	Permanent difference
PDIT	Provision for deferred income tax
PFTE	Prima facie tax expense
RC	Rebates and credits
SAC	Statement of Accounting Concepts (Australia)
SEC	Securities and Exchange Commission (USA)
SSAP	Statement of Standard Accounting Practice (UK)
STR	Statutory tax rate
TD	Timing difference
TE	Tax expense
TI	Taxable income
TLIP	Tax Law Improvement Project (Australia)
UK	United Kingdom
USA	United States of America

CHAPTER 1

INTRODUCTION

1.1 Motivation and Significance of the Study

In Australia, two different sets of rules are used to measure profit or net income from a business, especially an incorporated business. Financial accounting rules (which comprise financial accounting concepts, principles, and standards) are used to measure business profits for financial reporting purposes (accounting profits).[1] Tax rules (which comprise income tax legislation, judicial precedents, and administrative rulings) are used to measure taxable income for taxation purposes. If the two sets of rules have been developed to measure profit or net income, why are they different? One can observe a close link between these two sets of rules in many other countries such as France and Germany. Why not in Australia and other Anglo-Saxon countries?

From time to time, suggestions are made that accounting principles and standards be adopted in assessment of income tax. In Australia, suggestions from businesses and the accounting profession are documented in official reports such as Commonwealth Committee on Taxation [1954] and Taxation Review Committee [1975]. In a speech to the Monash University Law School Foundation, the former Commissioner of Taxation [Boucher 1991, p. 282] suggested that one possible way to simplify the tax system was to improve accounting standards, then adopt accounting profit (or even consolidated profit of a group of companies) as the basis of income tax assessment. In a recent inquiry into the Australian Taxation Office, the Joint Committee of Public Accounts [1993, paragraph 5.30] of the Commonwealth Parliament recommended a redraft of the major income tax legislation – the *Income Tax Assessment Act 1936* (ITAA) – and suggested that "the possible alignment of the taxation law with accounting standards and concepts would be a fundamental change to be considered."

Apparently, instead of having two different sets of measurement rules, both being imprecise and in a state of flux, one set of rules serving two purposes would make compliance with both tax law and corporations law much easier for taxpayers, especially large corporations.

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[1] In this thesis, the terms 'accounting profits', 'accounting income', 'book income', 'accounting earnings', and 'reported earnings' are used interchangeably. They all refer to net profit (or net income) before tax based on financial accounting rules.

The primary objective of the income tax system is to raise revenue to fund government programs. The criteria used to evaluate a tax system include horizontal and vertical equity, neutrality, certainty, continuity, convenience and economy [James and Nobes 1978; Krever 1987; Lehmann and Coleman 1996; Rosen 1992; Smith 1776; Sommerfeld et al. 1992; Stiglitz 1988; Woellner et al. 1994]. A tax system is simple if the compliance costs and administration costs are minimal [Taxation Review Committee 1975]. A simple tax system is conducive to a high level of taxpayer compliance. One might wonder whether adoption of financial accounting rules to assess tax would simplify the tax system; whether alignment would have a positive or negative impact on the tax system in terms of the evaluation criteria; what would be the impact of alignment on government revenue and tax policy, on the accounting regulatory framework and reported earnings, on taxpayers' compliance costs and tax practitioners' earnings; and finally whether, in the opinions of major corporate taxpayers and tax practitioners, there should be an alignment and why. No comprehensive study has been conducted to address these questions.

The purpose of the present study is to provide answers to the above questions. In this thesis, the relationship of tax and financial accounting rules is reviewed from an international perspective. Arguments for and against a complete alignment are presented based on its potential impact on the tax system, the financial reporting regulatory system, and different governing authorities. More importantly, the thesis presents empirical evidence that clarifies the relationship of the two sets of rules, and provides an indication of the potential impact of alignment in the Australian context. It provides significant input to the debate about the alignment issue in particular, and about how the tax system can be improved in general.

1.2 Research Problem

This thesis is about the relationship of tax rules and financial accounting rules in Australia and other Anglo-Saxon countries such as the United Kingdom (UK) and the United States of America (USA), and about the issue of alignment of tax rules with financial accounting rules. Three broad research questions addressed in the thesis are:

(a) Why are tax rules and financial accounting rules different in Anglo-Saxon countries such as Australia, the UK and the USA? What are the implications of a complete alignment of tax rules with financial accounting rules in these countries?

(b) Is there a gap between accounting profit and taxable income in Australia? If so, what is the magnitude of the gap and what makes up the gap? What would be the impact of a complete alignment on government revenue as suggested by the magnitude and composition of the gap?

(c) What would be the impact of a complete alignment on the Australian income tax system in terms of the evaluation criteria, on taxpayers' compliance costs and tax practitioners' earnings? To what extent would major corporate taxpayers and tax practitioners support a complete alignment?

To provide answers to these questions, the relevant literature is reviewed, and three empirical studies are conducted to provide evidence to address the alignment issue in the Australian context.

1.3 Research Methods

The empirical work consists of two parts. Two sources of data are historical data and data generated by a postal questionnaire survey.

In the first part, the gap between accounting profit and taxable income (book-tax income gap) is studied by a statistical analysis of the average effective tax rates (ETRs) of 549 companies listed on the Australian Stock Exchange. Then the causes of the gap are identified and quantified by an analysis of tax disclosure data of a stratified sample of 46 listed companies. The objective of this part is to provide an answer to the second research question mentioned in the previous section. The findings of this part provide evidence about the magnitude and the composition of the book-tax income gap, and indicate the feasibility of a complete alignment. The findings also expose the issue of equity in the Australian corporate tax system.

The data for the ETR analysis include 'pre-tax group profit' and 'tax expense' numbers of listed companies extracted from a financial statement database. The statistical method used is ordinary least squares regression. The ETRs of firms with different industry affiliations and of different sizes are estimated, then compared with the statutory tax rate to measure the discrepancies. Tax disclosure data are then manually extracted from the 'income tax expense' notes to the financial statements of a sample of listed companies. In analysing the tax disclosure data, different categories of permanent differences and timing differences are identified and reconciled, and their relative size measured and summarised.

The second part of the empirical work is a postal questionnaire survey of the opinions of 500 major corporate taxpayers (listed companies) and 500 tax practitioners (accountants practising in tax) about the implications of a complete alignment on the income tax system. The objective of this part is to provide an answer to the third research question mentioned in the previous section. The opinions gathered by the questionnaires include:

- If accounting profit were adopted as the tax base, would the tax system be improved in terms of seven evaluation criteria?

- Would there be a higher level of compliance by taxpayers?

- Should accounting profit replace taxable income as the basis to determine income tax?

- What would be the savings in compliance costs of companies, and the impact on the earnings of tax practitioners, as a result of a complete alignment?

In addition to descriptive statistics, multiple linear regression is used to study the relationship between respondents' alignment attitude and their expected change in compliance level as dependent variables, and a number of independent variables, including the type of respondents, the perceived relative merits of the two sets of rules in terms of the evaluation criteria, and the impact of a complete alignment on the compliance costs of companies.

1.4 Major Findings

The major findings of the study are summarised as follows. The ETR analysis shows that firms in three industries benefited substantially from concessional tax treatments of particular types of income and had accounting profit consistently higher than taxable income. The apparent discrepancy was mainly due to exemption of gold-mining income, preferential treatment of capital gains, and inter-company dividend rebates. After adjusting for industry difference, the analysis also identifies a size difference: large firms tended to have a wider book-tax income gap than small firms. Large firms in six industries (other than the three mentioned earlier) had accounting profit significantly higher than their taxable income. Tax disclosure data of a sample of companies are analysed to investigate the causes of the size difference.

The results of the analysis of tax disclosure data show that large companies tended to benefit more from tax incentives, dividend rebates, and foreign tax rate differences than small companies. They also tended to have proportionately smaller amounts of booked and unbooked timing differences, and non-deductible expenses than small companies. It appears that large firms were better able to organise their activities in an optimal way to save tax and to influence the political process in their favour. The results also show that the major causes of the book-tax income gap were deliberate government policies, and different objectives of tax and financial reporting systems. Thus, a complete alignment cannot be achieved unless the government is willing to yield its policy-making power in the tax system, and the objectives of the tax and financial reporting systems can be reconciled.

The results of a postal questionnaire survey of opinions show that 57 percent of listed companies supported a complete alignment of tax rules with financial accounting rules. They also estimated substantial savings in the order of 57 percent of total compliance costs as a result of alignment. Estimated savings in compliance costs are found to positively affect the alignment attitudes of companies. However, only 36 percent of tax practitioners (accountants) supported a complete alignment, even though they did not estimate a substantial negative impact of alignment on their earnings. Despite the difference in their attitudes toward alignment, the two groups identified similar areas where tax laws could be improved by adopting financial accounting rules. Further statistical analyses of the opinions show that for both groups, 'fairness' (which underlies the criteria of horizontal and vertical equity and neutrality) had much more impact than 'simplicity' (which underlies the criteria of certainty, continuity, convenience and economy) in shaping the attitudes toward alignment, and in forming the opinions about the compliance level upon alignment. Thus, unless a complete alignment can improve the perceived fairness and compliance level of the tax system, simplification of the tax system alone does not justify an alignment. These findings have important policy implications.

The rest of the thesis is organised as follows. In chapter 2, the relationship of tax rules and financial accounting rules is examined from an international perspective. Chapter 3 reviews the earnings management (accounting choice) literature and tax compliance literature, and examines the implications of a complete alignment of tax rules with financial accounting rules. Chapter 4 reports the results of a comprehensive analysis of the ETRs of 549 Australian firms. The results of analysis of income tax disclosure data of 46 Australian firms are reported in chapter 5. Chapter 6 reports the results of a survey of the opinions of random samples of listed companies and tax practitioners about the alignment issue. In chapter 7, the findings of the whole study are summarised and conclusions drawn. Policy implications of the findings also are discussed.

CHAPTER 2

RELATIONSHIP OF TAX AND FINANCIAL ACCOUNTING RULES

AN INTERNATIONAL COMPARISON

The lack of conformity between tax and financial accounting rules is not an issue peculiar to Australia, nor is it a new issue. In this chapter, the relationship of the two sets of rules is examined from an international perspective. Section 2.1 presents an international comparison from a broad perspective. Then the focus is narrowed down to three Anglo-Saxon countries that share similar institutional arrangements: the United States of America (USA) (section 2.2), the United Kingdom (UK) (section 2.3), and Australia (section 2.4). Section 2.5 highlights the major sources of divergence between the two sets of rules in these Anglo-Saxon countries. Though not specifically examined, similar divergence of tax and financial accounting rules can also be found in Canada and New Zealand. The differences of two sets of rules in Anglo-Saxon countries are summarised in section 2.6.

2.1 Relationship of Two Sets of Rules - an International Perspective

To various degrees, income tax laws in different countries rely on accounting principles and practice to determine the quantum of taxable income derived from a business. In a study conducted by the Organisation for Economic Co-operation and Development (OECD) Working Group on Accounting Standards [1987, p. 9], three main types of relationship between accounting rules and tax rules were identified in OECD member countries. First, there were countries where accounting practices were dictated by tax rules. An example quoted was Norway where book entries contrary to tax rules were not permitted. The second type of relationship was that accounting rules and tax rules were independent of each other. Countries adopting this approach included the USA, the UK, and the Netherlands. Finally, in countries such as France, Germany, and Italy, financial statements drawn up according to accounting rules were used to determine the basis of income tax assessment.

An alternative to the classification in the OECD study is based on the connection between accounting profit and taxable income. While a close link between accounting profit and taxable income existed in continental European countries (i.e. those in the first and third types above),[2] only a loose association could be observed in Anglo-Saxon countries, such as Australia, Canada, New Zealand, the UK, and the USA.

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[2] The Netherlands should fall into this group, because accounting profit and taxable income can be easily reconciled in that country (OECD 1987, p. 10).

In international accounting literature, factors such as legal systems, major providers of finance to business enterprises, influence of taxation, and strength of accounting profession have been identified as the main causes leading to international differences in financial accounting and reporting [Nobes and Parker 1995]. In continental European countries, typically accounting principles are part of the codified commercial law. The major providers of finance are the State or banks who are the users of financial reports, so uniform financial statements are produced to serve the purposes of credit provision, taxation, and economic planning by the State. In these countries, accounting profit and taxable income are used by a rather homogeneous group of users and the two numbers are expected to be more or less identical.

By contrast, Anglo-Saxon countries generally adopt a common law system. The major providers of finance are the public who demand 'true and fair' financial statements based on generally accepted accounting principles (GAAP)[3] to assess management performance and make investment decisions. Corporations law in these countries typically only requires provision of periodic financial reports to investors and other users, leaving the detailed accounting rules to be prescribed by the accounting profession and corporate regulators. On the other hand, tax law in these countries typically imposes tax on 'income' without defining precisely and exhaustively the meaning of the word. It is up to the courts and the tax administrators to interpret what is 'income' for tax purposes. Thus, accounting profit and taxable income are two concepts developed by different authorities, used by heterogeneous groups of users serving different purposes. The different institutional arrangements in continental European countries and Anglo-Saxon countries are summarised in Table 2.1.

TABLE 2.1

Different Institutional Arrangements in Continental European and Anglo-Saxon Countries

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[3] GAAP refer to the conventions, rules and procedures that define accepted accounting practices at a particular time and provide a standard by which auditors form their professional opinions about financial statements [Cooper and Ijiri 1983], i.e. financial accounting rules. The term GAAP was first used in the USA and has gradually been adopted by other Anglo-Saxon countries. GAAP are country-specific, but the GAAP in Australia, Canada, New Zealand, the UK, and the USA, are to a large extent similar.

Continental European Countries	Anglo-Saxon Countries
• Small capital markets: main providers of finance are banks and government	• Huge capital markets: main providers of finance are the general public

• Codified law system: detailed accounting rules are part of codified commercial law; uniform financial reports are prepared for:
  • credit provision
  • taxation
  • economic planning
	• Common law system:
	  • Company law requires periodic financial reports without setting financial accounting rules
	  • Tax law imposes tax on income without precisely defining income

• Homogeneous users	• Heterogeneous users
• Taxation is an important consideration in setting accounting rules	• Financial reporting rules and tax rules are developed separately

• Small accounting profession	• Strong accounting profession involved in accounting rule-making

Lamb et al. [1995] compared the influence of taxation on accounting in four countries to determine whether there was a clear distinction between Anglo-Saxon countries and some continental European countries. The countries studied were the UK, the USA, France and Germany. Two aspects of influence of taxation on accounting examined were historical influence (i.e. taxation as a historical reason for accounting), and operational influence (i.e. the degree of contemporary connection between accounting and tax in profit measurement). They found some support for the claim that it is possible to distinguish Anglo-Saxon countries from Continental European countries according to the relative strength of tax influence on accounting. However, they also found that France could be distinguished from Germany using the same criteria, and the UK could be distinguished from the USA. Thus, the dichotomy of Anglo-Saxon model and continental European model oversimplifies the complex pattern of reciprocal influence observed between taxation and financial reporting in the countries under study.

In recent years, due to internationalisation of capital markets, large corporations in continental European countries which seek quotation of their shares on stock exchanges in New York and London are required to produce financial reports in accordance with the accounting rules of the USA and the UK. This development has helped to promote the acceptance of international accounting standards which are based mainly on the GAAP of Anglo-Saxon countries. There is a tendency for corporations in continental European countries to provide two sets of financial reports: financial reports for individual companies according to domestic accounting rules (which have a close link to tax rules) for domestic users, and consolidated financial reports based on international accounting rules for use by international investors and regulatory agencies [Nobes and Parker 1995; Whittington 1995].

In an opposite direction, there have been calls for closer connection between accounting profit and taxable income in Australia, the UK, and the USA. Alignment of the two sets of rules could reduce compliance costs, improve the perceived equity of the tax system, and enhance compliance levels. Also, by removing deliberate incentives from the tax system, the distortionary effects of the tax system on business activities could be reduced. In the USA, due to the fact that a number of large firms were able to pay little tax,[4] despite significant earnings

[4] Often this arises because of the tax incentives and accelerated write-offs offered in the tax legislation.

being reported in their financial statements, an alternative minimum tax[5] (AMT) was introduced in 1986. One component of the AMT was the book income adjustment: if the reported accounting profit in a firm's financial statements exceeded the minimum taxable income, the firm had to pay a tax on the excess.

Although in the OECD study, GAAP and tax rules are considered to be two separate sets of rules in Anglo-Saxon countries, a closer examination of the tax laws in these countries reveals some degree of connection between the two. The next three sections review the tax and financial accounting relationship in three Anglo-Saxon countries: the USA, the UK, and Australia.

2.2 The United States of America

In the USA, Federal income tax is based on the taxable income of an individual or of a corporation. Under the US *Internal Revenue Code of 1986* (the Code), computation of taxable income begins with gross income. For a corporation, taxable income equals gross income minus allowable deductions. A corporation's gross income from business is its net sales less cost of goods sold (i.e. gross profit), plus other investment income earned (e.g. dividends and interest) and gains from the sale of non-inventory property (capital gains). Gross income then is reduced by allowable ordinary and necessary expenses to arrive at taxable income. For an individual, the difference between gross income from all sources and allowable deductions is adjusted gross income, from which standard or itemised deductions (e.g. medical expenses and charitable donations) and allowances for personal and dependency exemptions are subtracted to arrive at taxable income.

US tax law has long recognised the fundamental dependence of the concept of taxable income on approved accounting practice. Under section 446 of the 1986 Code, taxable income is computed according to the accounting method regularly employed in the taxpayer's books of account, provided that the method so used clearly reflects the taxpayer's income. Thus, superficially tax rules and accounting rules in the USA are inseparable, because taxable income from business cannot be determined without referring to GAAP.

Similar provisions could be found some eighty years ago in section 212(b) of the *Revenue Act of 1918* [May 1949, p. xviii]. It appears that the US Congress did not want to develop tax accounting[6] methods. Instead it assigned this responsibility to

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5 US *Internal Revenue Code 1986*, sections 55-59.

6 Tax accounting concerns the timing of income and deductions. Depending on the context, tax accounting also may be used in a broader sense to refer to the rules and procedures used to determine taxable income.

tax administrators – the Internal Revenue Service (IRS). Also, the US Congress did not define what is a clear reflection of income. It did state, however, that income measurement would be subject to any subsequent Treasury Regulations. Thus, financial accounting rules were adopted for tax purposes subject to the regulation of the US Treasury.

Between 1920 and 1960, most court decisions supported tax and financial accounting conformity. The US Tax Court used GAAP to find against the taxpayer in *All-Steel Equipment* (1920) 54 TC 1749. The US Supreme Court appeared to have relied on GAAP when it adopted the realisation principle in *Eisner v. Macomber* (1920) 252 US 189. In *United States v. Anderson* (1926) 229 US 422, the US Supreme Court suggested that the accrual method used for financial accounting purposes was acceptable for tax purposes unless it did not clearly reflect income. Treasury Regulations and Committee Reports issued during this time period also suggested an accord between tax accounting and financial accounting, with indications that GAAP clearly reflected income for tax purposes [Seago and Horvitz 1980].

In the late 1960s the Tax Court and Seventh Circuit Court of Appeals, in finding for the taxpayer, indicated that GAAP did provide a clear reflection of income, clearer than the method the IRS wanted to impose.[7] In 1970, the Court of Claims also held that GAAP were admissible evidence in determining whether income was clearly reflected.[8] Seago and Horvitz [1980, p. 7] further noted that the court suggested that the goal should be to reconcile business and tax treatment of an item and not to drive them further apart.

However, on balance, the reliance on GAAP for tax purposes began to decrease in the 1960s. In 1961, the US Supreme Court clearly stated that a method based on GAAP did not imply that for tax purposes income was clearly reflected and therefore binding on the government.[9] In a similar case four years earlier the Court also disregarded the taxpayer's financial accounting method because it did not clearly reflect income.[10] The Court also developed an all events test to determine if certain transactions clearly reflect income, regardless of their financial accounting treatment.[11] In 1976, in *Eastman Kodak Co. v. the United States* (1976) 534 F.2d 252, the Claims Court rejected the use of GAAP because although the taxpayer's method was in conformity with GAAP it violated the all events test and as such did not clearly reflect income.

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7 *Artnell Company* (CA-7, 1968) 400 F.2d 981.

8 *Cincinnati, New Orleans & Texas Pacific Railroad* (1970) 424 F.2d 536.

9 *American Automobile Association* (1961) 376 US 687.

10 *Automobile Club of Michigan v. the United States* (1957) 353 US 180.

11 Under the all events test, a taxpayer is entitled to deduct an accrued expense when all of the events that determine the liability have occurred and the amount of the liability can be determined with reasonable accuracy. Under this rule certain provisions (e.g. for bad debts and for warranties) are not deductible.

Recognising the growing divergence of the two sets of rules in 1970, the US President's Task Force on Business Taxation [1970] noted that the divergence had resulted in unnecessary complexity and controversy. It suggested that the objective of GAAP and tax accounting was basically similar – the determination of net income of the business on an annual basis. The Task Force, which included academicians, tax policy analysts and practitioners, recommended that the US Treasury Department and Congress take steps to reduce the differences between the two sets of rules. The Treasury Department appeared to respond to this by adopting some type of conformity policy: the IRS announced that changes in accounting methods would be approved only if the taxpayer was changing to a method also used for financial accounting purposes [IRS 1971]. However, the American Institute of Certified Public Accountants (AICPA) issued a policy statement in favour of closer conformity between financial and tax accounting but opposed any mandatory financial statement eligibility test [The Tax Adviser 1971]. It was concerned that such a requirement would negatively impact the formation of accounting principles. Accounting principles might start to favour tax-saving methods.

The conformity program was short lived and apparently not very far-reaching. There was no Congressional action on the issue and by 1981 the IRS appeared to be moving away from conformity. The AICPA expressed a general presumption that conformity was desirable provided (a) it acknowledged the existence of factors which might overcome that presumption, and (b) it did not have a materially adverse effect on the improvement or application of GAAP [Raby and Richter 1975]. Its position at that time was to favour conformity of tax rules to financial accounting rules but generally to oppose conformity of financial accounting rules to tax rules [Weinman 1981]. Apparently the AICPA did not want the government to determine GAAP.

The final and most complete rejection of GAAP and financial accounting for tax purposes occurred in a 1979 US Supreme Court case, *Thor Power Tool* (1979) 439 US 522. In this case the taxpayer followed GAAP completely in accounting for its inventory. The Court agreed fully with the IRS in ruling that the method did not clearly reflect income; conforming to GAAP did not create a presumption in favour of the taxpayer. GAAP appear to have had no relevance in determining a 'clear reflection of income' for tax purposes. The Court clearly stated the different objectives of financial accounting and tax accounting and suggested that such differences precluded an accord between them. This decision, and specific articulation of the differences, is often cited and is far reaching in that it is applicable to all methods of accounting, not just the inventory procedure in question.

Initially financial accounting and tax accounting were in some accord. However, the reliance on financial accounting has eroded over time. The unstated definition of 'clear reflection of income' led the IRS and the courts to define the phrase based on tax policy objectives and concepts. This produced a divergence because such objectives do not appear to be in conformity with those of financial accounting. An additional concern of tax policymakers was the potential negative effects of conformity on tax revenues and/or capital markets. The potential negative effect of conformity on the tax policy objectives of the investment tax credit (ITC) was cited in the 1970s. Here concern was expressed that financial accounting rules might impede the fiscal (tax) policy goals underlying the implementation of the ITC [Arnold and Keller 1980].

Concern over the negative effects of earnings management on tax revenues was noted by the US Supreme Court in the *Thor Power Tool* case where it stated that if management's election among acceptable options were dispositive for tax purposes, then a firm could decide unilaterally, within limits only dictated by accountants, the tax it wished to pay. Additionally, numerous concerns about the effects of earnings management as a result of the enactment of the alternative minimum tax book income adjustment have been expressed [Gramlich 1991; Manzon 1992]. Earnings management literature will be reviewed in chapter 3.

2.3 The United Kingdom

The *Income and Corporation Taxes Act (ICTA) 1988* in the UK charges tax according to the sources from which income arises: land, business, employment, etc. For historical reasons such as privacy protection [Ross and Burgess 1991, p. 36], income is classified and chargeable to tax under five Schedules (A, C, D, E and F) depending on its source. Business profits are covered by Schedule D. Incomes under different Schedules are aggregated into total income from which reliefs (e.g. medical insurance and personal reliefs) are deducted to calculate taxable income. The taxable income of a company is computed in much the same way as that of an individual.

According to section 18(1) of *ICTA 1988*, tax under Schedule D is charged on the annual profits of a business. It is the 'profit' or 'net income', rather than 'gross income' as in the USA, that is brought into the tax base. However, tax legislation in the UK does not prescribe the rules to determine the annual profits for tax purposes. One reason why the British tax statute imposes tax on profits without referring to accounting principles or practice is that when income tax was re-introduced in the

UK in the early nineteenth century,[12] there were still no widely accepted accounting principles to rely on. By contrast, when the USA enacted its income tax legislation after the Sixteenth Amendment to the Constitution in 1913,[13] commercial accounting was already well developed. According to May [1949, p. xviii], when the *Revenue Act of 1918* was drafted by the US Treasury, technical input had been contributed by a triumvirate of a distinguished economist, an outstanding accountant and a brilliant lawyer. Presumably, the role of the accountant in the triumvirate was to operationalise the concept of income as it was applied to business by referring to accounting principles. Thus, Edwards [1976, p. 302] reckoned that if accounting procedures had been well developed at the time income tax was introduced in Britain, accounting profit should have been adopted by the early UK income tax legislation.

Nonetheless, it was decided in 1892 in *Gresham Life Assurance Co., Ltd v. Styles* 3 TC 185 that profits must be ascertained on ordinary principles of commercial trading. This principle has been amplified in later cases. In *Duple Motors Bodies Ltd v. Ostime* (1961) 39 TC 537, Viscount Simonds said (at p. 566):

> ... two consideration must be borne in mind: first, ... the ordinary principles of commercial accounting must, as far as practicable, be observed, and, secondly, ... the law relating to income tax must not be violated ... that is to say, by one means or another the full amount of profits or gains must be determined.

Thus, a presumption made in the British income tax law is that the taxpayer shall prepare a profit and loss account for each accounting period in accordance with GAAP, and the profit computed in this account will form the basis of the income tax assessment, subject to any adjustments that may be required by the statute or by precedents established by the courts.

Even though 'ordinary principles of commercial accounting' must be considered in determining the amount of taxable profit, the UK courts have recognised the subjectivity of accounting methods and have eschewed the accounting approach on many occasions [Hill 1996]. Freedman [1987, p. 70] noted that the court's original intention in referring to accounting practice was to use this as a reflection of the ordinary, natural meaning of 'profits', and not to incorporate accounting practice and all its developments into tax law. Thus, in *Heather v. P.E. Consultancy Group Ltd* [1973] 1 All E.R. 8, Lord Denning said (at p. 13):

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12 Income tax was first introduced in the UK in 1799 for nearly two decades in order to finance the Napoleonic Wars. It was re-introduced in 1842 and has since become a regular tax in the UK [Sabine 1966].

13 The adoption of Sixteenth Amendment to the US Constitution on 25 February 1913 made possible a tax on all income without apportionment among the States according to population.

> The courts have always been assisted greatly by the evidence of accountants. Their practice should be given due weight; but the courts have never regarded themselves as being bound by it. It would be wrong to do so.

Radcliffe [1993] observed that the UK courts exercised their discretion to override GAAP in three circumstances. First, if a statutory provision required adjustment of accounting profit, the provision would prevail over accounting treatment, e.g. non-deductibility of entertainment expenses. Second, any accepted accounting method was subject to review by the courts to determine if it was the 'correct principle of commercial accountancy' to be applied in the circumstances, especially when there existed more than one acceptable method. Third, accounting principles must yield to certain underlying principles of tax law established by judicial decisions. Examples of principles of tax law established by the courts are (a) the distinction between capital and revenue expenditure; (b) the principle that neither profits nor losses may be anticipated, and (c) the principle that revenue expenditure is deductible in the year in which it is incurred.

The degree to which UK courts were receptive to GAAP varied over time. Freedman [1995, p. 435] noted that *Minister of National Revenue v. Anaconda American Brass Ltd*[14] [1956] AC 85 and *Willingdale v. International Commercial Bank Ltd*[15] (1978) 52 TC 242 marked the peaks of assertion of judicial supremacy over GAAP in determination of taxable profit. However, a few recent court decisions, notably *Gallagher v. Jones*[16] [1993] STC 537 and *Johnston v. Britannia Airways*[17] [1994] STC 763 showed the tendency of the UK courts to accept Statements of Standard Accounting Practice (SSAPs) as the correct principles of

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14 In this case, despite expert witness giving evidence that LIFO method was a generally acceptable method of inventory valuation, the Privy Council decided that for tax purposes, LIFO was not appropriate in the circumstances of the taxpayer.

15 In this case, a bank purchased at a discount bills of exchange which would mature in a number of years. In its accounts for each year, the bank credited a fractional part of the profit which the bank expected to make assuming the bills were held to maturity, but returned the profit as income for tax purposes only upon maturity of the bills. The Revenue contended that the accounting treatment adopted by the bank should also be applied for tax purposes. The House of Lords decided in favour of the bank on the principle of tax law that profits cannot be taxed until it is realised, i.e. until the bills matured or sold before maturity.

16 In this case, the Inland Revenue adopted the accounting treatment in SSAP 21, the accounting standard on leasing, which was accepted by the Court. Instead of being allowed deduction of lease payments, the lessee was allowed deduction of the financing expense based on the total lease payments and an accountant's estimation of depreciation. The decision was a departure from the traditional transaction-based tax rules. See discussion in Freedman [1993] and Whittington [1995].

17 In this case, the High Court decided that an airline company could deduct the anticipated cost of major jet engine overhauls on an accruals basis over a period of three to four years before the next overhaul. The court accepted that accounts prepared according to GAAP were adequate for tax purposes. This decision is at odds with previous decisions that no expenditure and losses may be anticipated for tax purposes.

commercial accountancy to be applied to determine taxable profit in preference to principles of tax law. Freedman suggested a few reasons for this trend: increased professionalism, increased comprehensiveness of financial accounting and reporting standards, and the legislative recognition conferred to these standards. Apparently the changes in the accounting environment in the UK has assured the judges that they can rely on accounting standards which have gone through the rigorous formulation process of the standard-setter – the Accounting Standards Board (ASB).

Broke [1995], Macdonald [1995], and White [1987] argued that the courts could continue to place reliance on accounting concepts and standards. Some politicians also believed that there is a strong case for harmonisation of accounting and tax treatment of profits, because this would bring the UK into line with many other countries in the European Union, reduce compliance costs and opportunities for tax abuse.[18]

However, Whittington [1995, p. 452], who has served on the UK Accounting Standards Board and on the Meade Committee (which reviewed the UK income tax and published a report in 1978), strongly argued that the principles of taxation (e.g. equity, neutrality, and administrative effectiveness) would not allow one to adopt accounting standards as a basis for corporation tax because of the different objectives of the two systems. Administrative effectiveness requires certainty of measurement, and low cost to the taxpayer and tax collector. To that end, the tax system tends to be based on rules which are intended to be precise, and the measurement rules tend to be based on presently existing rights to receive, and obligations to pay, as a result of transactions, rather than on the accruals basis which is more subjective and contentious. Accounting standards, on the other hand, are primarily concerned with reporting past financial performance, present position, and future prospects of a business to external users. This involves trading off relevance against reliability. To provide relevant information to users of financial reports, there has been a tendency to de-emphasise the bottom line profit figure because a single number cannot meet the needs of all users, and instead to provide information which involves a high level of estimation and subjectivity, such as strategies and intentions of management. Thus, there is a need for the two sets of rules to be separately developed. This is in line with international trends.

Freedman [1987, 1993, 1995] and Green [1995] also maintained that separation of two sets of rules is desirable in furtherance of both equitable and rational taxation and good practices in financial reporting. The fact that the legal status of accounting standards has been enhanced does not mean that they are suitable for use as a basis for determining taxable income, because they are written for financial reporting purposes and not for tax purposes.

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[18] See the speech of Andrew Smith M.P., Shadow Chief Secretary to the Treasury, quoted in Freedman [1995, p. 444].

2.4 Australia

In Australia, section 17 of *Income Tax Assessment Act 1936* (ITAA) levies income tax at the rates declared by the Parliament on the taxable income derived by any person during a year. A person can be an individual or a company. In calculating taxable income, the allowable deductions incurred by a taxpayer are subtracted from the assessable income derived. The assessable income of a taxpayer includes the gross income derived directly or indirectly from all sources, but gross income is not defined in the Act. In the case of a business, gross income refers to the proceeds from business operations. Expenditures, to the extent to which they are incurred in producing the assessable income, or are necessarily incurred in carrying on a business for the purpose of producing such income, are allowed as deductions, provided they are not of a capital or private nature.

As far as income from business is concerned, the taxing scheme in Australia is at odds with the schemes in the other two Anglo-Saxon countries. First, the ITAA never refers to the accounting methods adopted by the taxpayer as in the US Code. Second, the gross proceeds of a business directly enter into the tax base, rather than its profits or gains as in the UK tax legislation. As a result, UK judicial precedents which applied the correct principles of commercial accountancy in the determination of taxable profit do not appear to have had any significant application in Australia, despite the historical connection of the judicial systems of the two countries. Thus, unlike the USA and the UK, there is a lack of a formal relationship between tax and financial accounting in Australia. This might be due to the lack of inputs from accountants in the legislative process when the ITAA and its predecessors (including the income tax acts of the various States) were enacted.[19]

In general, it is not the gain that is the direct subject of income tax. Rather, the 'flow' of gross business proceeds directly enters into the tax base, and is aggregated with the gross income from other sources to form assessable income. Business expenses and losses are then deducted therefrom in arriving at taxable income. The distinction of this flow concept of income originated from trust law and the gain concept of income adopted in the commercial world is well explained by Parsons [1986].

Nonetheless, Herring [1986] noted that the ITAA has incorporated some accounting practices. For instance, trading stock is taken into account under s.28 in

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[19] Income tax was first introduced in Australia when Tasmania imposed withholding tax on dividends, annuities and rents in 1880. A general income tax was first levied by South Australia in 1884. The Commonwealth of Australia introduced personal income tax in 1915 [Smith 1993].

determining taxable income,[20] and depreciation deduction for plant is allowed under s.54 of the ITAA.[21] Also, in practice when preparing tax returns, the profit as shown on the profit and loss account of a business enterprise is used as a starting point, from which adjustments are made to take into account the different provisions of ITAA [Colditz 1987, p. 184]. This practical relationship is evidenced by the reconciliation statement that forms part of the income tax return form lodged by companies.

2.4.1 The role of accounting evidence in judicial decisions

Generally speaking, accounting principles and practices play a limited evidentiary role in the development of judicial precedents in Australia [Blaikie 1981]. There have been cases where the judge looked to GAAP in reaching a decision, but the judge emphasised that though accounting principles and practices might assist, the Court always had the final say and was never bound by them. Herring [1986] observed that in recent years, the judiciary appears to be placing more weight on accounting evidence, probably because business transactions have become more and more complex and accounting standards have received legal backing.

Justice Hill [1996] provided a comprehensive review of the role of GAAP in Australian tax cases. He observed that in the context of income tax, accounting principles were sometimes determinative, sometimes a guide, and sometimes rejected altogether. Accounting evidence is relevant in determining whether an amount received is income derived, and the timing of income derivation.[22] For tax purposes, judicial precedents suggest that only business income can be recognised on the earnings basis; other income is generally recognised on the cash receipts basis. When the tax law comes to taxing business income, GAAP are expected to play a role.[23] However, one difficulty for the court to rely on accounting evidence is that expert accountants assisting the two opposing parties may differ in their views as to what is the correct accounting treatment accorded to a particular situation.

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20 As the costs incurred to purchase trading stock are allowable deductions, if no adjustment for the change in the levels of trading stock were required by s.28, taxpayers would to able to reduce their taxable income simply by building up trading stock.

21 In general, expenditure and losses of a capital nature are not allowed for deduction from income. Depreciation deductions are an exception to this general rule.

22 Examples are *New Zealand Flax Investments v. FCT* (1938) 61 CLR 179, *Commissioner of Taxes (SA) v. The Executor Trustee and Agency Co of South Australia Ltd* (1938) 63 CLR 108 (the Carden's case), *Henderson v. FCT* (1970) 70 ATC 4016, and *Arthur Murray (NSW) Pty Ltd v. FCT* (1965) 114 CLR 314.

23 In trading stock cases such as *FCT v. Sutton Motors (Chullora) Wholesale Pty Ltd* (1984-85) 157 CLR 277 and *Phillip Morris Ltd v. FCT* (1979) 79 ATC 4352, accounting evidence has been adduced and accepted.

The income capital distinction is a principle entrenched in tax law, but it is no longer an accounting principle. Accounting evidence has rarely been accepted by the courts as elucidating the distinction between income and capital. Thus, in the *Citibank case*, the Federal Court[24] at first held that finance leases were in reality a financing arrangement for acquisition of assets. Nothing in the legislation rendered the accounting treatment prescribed in accounting standards inappropriate for tax purposes, so only the element determined on the actuarial method stated in accounting standards was income of the lessor. The Full Federal Court,[25] however, reversed this decision and held that as the ITAA required the rental receipts to be treated as assessable income, there was no room for the accounting treatment to be applicable. The accounting treatment was appropriate for financial reporting purposes under the Companies Code, but not for determination of income for tax purposes.

In deciding whether an expenditure or loss is an allowable deduction, the courts have taken a legal or jurisprudential analysis in interpreting the word 'incurred'. Accounting evidence has little part to play in deciding the time of incurring as in *New Zealand Flax Investments v. FCT* (1938) 61 CLR 179 and *FCT v. James Flood Pty Ltd* (1953) 88 CLR 492. In general, an expenditure is 'incurred' when the person who claims the deduction has paid the money or has definitely committed himself to a liability. Deduction is not allowed if an expenditure or loss is no more than impending, threatened, or expected. Thus, a general provision (e.g. for doubtful debts) is not allowed for deduction.[26]

The matching principle in financial accounting is not accepted for tax purposes. Parsons [1985, p. 359] was critical of the non-adoption of the matching principle in tax laws. However, Hill [1996, p. 33] observed that the Australian courts did at times require that expenditure be referable to the year(s) of income. This happened in *New Zealand Flax Investments v. FCT* (1938) 61 CLR 179, and more recently in *FCT v. Australian Guarantee Corp Ltd* (1984) 84 ATC 4642, *Coles Myer Finance Ltd v. FCT* (1993) 93 ATC 4214, and *FCT v. Energy Resources of Australia Ltd* (1996) 33 ATR 52. It follows from these precedents that while no expenditure is deductible unless it has been incurred, it does not mean that an expenditure is always deductible in the year of incurring. Deduction must be claimed in a later year if the expenditure is referable to that year and not to the year in which it is incurred. This principle of referability appears to be an incomplete application of the matching principle.

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24 *Citibank Ltd & Ors v. FCT* (1992) 92 ATC 4822.

25 *FCT v. Citibank Ltd & Ors* (1993) 93 ATC 4691.

26 Hill [1996, p. 22] observed that one area where commercial and accounting evidence has been very influential is insurance. Here the courts tend to accept that the task of estimation of a liability is a commercial one. Accounting evidence may have more relevance in working out the manner of estimating claims incurred but not reported as in *RACV Insurance Pty Ltd v. FCT* (1974) 74 ATC 4169, and in particular whether what is involved is a present value calculation.

The lack of a formal relationship between accounting rules and tax rules in the Australian tax laws has prompted calls for the adoption of GAAP in determining taxable income for various reasons.

2.4.2 Suggestions of adopting GAAP for tax purposes

From time to time, suggestions are made that accounting principles and standards be adopted in assessment of income tax. In the joint representations to the Commonwealth Treasurer made by the Associated Chambers of Commerce of Australia, the Associated Chambers of Manufacturers of Australia, and the Institute of Chartered Accountants in Australia in 1950, it was submitted that the adoption of accounting principles, especially the matching principle, for tax purposes would "assist commercial progress by encouraging the use of proper accounting practices and by basing the tax upon the true income rather than an artificial or distorted income" as in the ITAA. The Commonwealth Treasurer referred the submissions to the Commonwealth Committee on Taxation for examination and recommendations. The Committee [1954, paragraphs 7 and 8] noted that matching costs and income created many difficulties in practice, so it adopted the existing method of tax assessment as the starting point and considered whether changes would be needed to bring the legal concept of taxable income more in line with accounting practice. The Committee found that problems arose more frequently in determining whether or not a particular expenditure was an allowable deduction than in determining whether or not a particular receipt was assessable income, so the focus of examination was mainly on the deduction provisions [paragraph 11]. Based on the Court decisions about section 51 of the ITAA, the Committee formed the opinion that the general deduction provisions had operated satisfactorily for the tax office and for the taxpayers, hence it would be undesirable to amend the section. The Committee, therefore, recommended no major changes to the ITAA.

In 1975, the (Asprey) Taxation Review Committee [1975, ch. 8] reported that submissions had been received suggesting that net income for tax purposes should be determined by GAAP, subject to certain specific provisions in the tax legislation. The Asprey Committee [para. 8.46] rejected these proposals, because the law could not resign its function of determining the basis of income tax in favour of the professional bodies and business organisations which played a large part in formulating accounting principles. Also, in many areas, alternative procedures were available in accounting standards and a set of principles generally accepted by companies had yet to be developed. The Committee, however, conceded that company income tax might become a simple tax if the company already calculated its income on the same or very similar basis. Accordingly, the proper approach was to narrow the differences between taxable income and accounting profit. To build in some flexibility, the Committee felt it necessary for the Commissioner of Taxation to have statutory authority to adopt accounting principles if he considered adoption would be reasonable in the circumstances. However, since the publication of the Committee's report, no action has been taken by the Parliament to confer such

authority on the Commissioner, even though the Corporations Law has for over a decade conferred legislative recognition to accounting standards approved by the Australian Accounting Standards Board (formerly the Accounting Standards Review Board) in order to improve compliance by the corporate sector.

The issue of conformity of tax and financial accounting was not on the agenda for the major tax reform exercise in 1985 and 1986, but a few articles published at that time did touch on the issue. Westworth [1985] observed that accounting standards were a codification and standardisation of current practices rather than a logical extension of agreed principles. They were developed by a process of consensus rather than logical reasoning and were subjective. Accounting profit could not become the basis on which taxable income was calculated because it lacked certainty, and because tax rules were used to provide incentives under general economic policies.

On the other hand, Parsons [1986] pointed out that income tax is based on a concept of income that was designed for a different purpose. The judicial concept of income as entrenched by court decisions is based on the notion of 'flow' originated from trust law, rather than an ideal notion of 'gain' used in economic analysis. As such, the income tax system lacks coherence of principle and a claim to fairness. Accounting profit may be a step closer to the notion of gain, but a complete adoption of that notion requires that the realisation principle be abandoned.

Cooper [1986] referred to literature in Australia, Canada, the UK and the USA and found that invariably commentators and law reform authorities saw the conformity of tax to financial accounting as a major goal of tax reform. He examined the rules of tax accounting and contrasted them with those in financial accounting, and examined the difference in the roles and goals of the two systems. He concluded that to narrow the discrepancy between tax and financial accounting as suggested by the Asprey Committee, the legislature or the judiciary must import into the tax system accounting principles which are not at present consistent with tax law but which can be used more accurately to determine profit.

In addressing the simplification debate, Boucher [1991, p. 282], the former Commissioner of Taxation, suggested that one possible way to simplify the tax system was to improve accounting standards to make them robust, clear and otherwise suitable for the determination of the tax base, then to adopt them to determine taxable income. Another possibility was to treat a group of companies as a single tax entity so as to reduce complexity in areas such as rollover and loss transfer provisions. Responses from the accounting profession and the business community were mixed [Boreham 1991]. Some considered the suggestion as more whimsical than practical because there were too many differences between tax and financial accounting, and accounting standards in Australia were less solid and less

capable of being adhered to in comparison with the GAAP in the USA. Others reckoned that the suggestion was a visionary goal and would save companies millions of dollars in compliance costs.

In a report on an inquiry into the Australian Taxation Office, the Joint Committee of Public Accounts [1993, paragraph 5.30] of the Commonwealth Parliament recommended a redraft of the ITAA and suggested that "the possible alignment of the taxation law with accounting standards and concepts would be a fundamental change to be considered." As a consequence of the Parliamentary inquiry, the Commonwealth Government started a three-year project, the Tax Law Improvement Project (TLIP), funded from 1 July 1994 to restructure, renumber, and rewrite in plain English the ITAA which had grown to over 5,000 pages. The objectives of the TLIP were to reduce compliance costs, to improve compliance, and to reduce administrative costs by rewriting the present legislation in a more easily understandable way [TLIP 1994]. However, no change to tax policy or substantive tax law was intended.

The increasing complexity of tax laws has resulted in high compliance costs on the part of taxpayers, especially corporate taxpayers. Pope et al. [1994] surveyed 2,531 companies throughout Australia and estimated that for the income year 1990/91, the compliance costs of corporate income tax in Australia were 22.9 percent of the tax revenue. This ratio is ten times as high as that estimated by Sandford et al. [1989] for corporation tax in the UK. A recent survey conducted by the Australian Chamber of Commerce and Industry also showed that tax compliance costs were the first business concern. The business sector wanted the government to reduce tax complexity [Sydney Morning Herald, January 20, 1996, p. 85].

Wallschutzky [1995] surveyed the users of tax legislation (including individuals, businesses, and tax agents) in order to establish benchmarks for future evaluation of the TLIP. He found that only a minority of large businesses and tax agents thought that existing tax laws were consistent with normal business practice. When business respondents and tax agents were asked to suggest ways that had the greatest opportunity to reduce compliance costs, one of the more frequent suggestions was to base company tax on audited accounting profit.

Apparently, instead of having two different sets of measurement rules, both being imprecise and in a state of flux, one set of rules serving two systems would make compliance with both tax law and corporation law much easier for corporate taxpayers. However, alignment of tax rules with accounting rules presupposes suitability of accounting rules to achieve the objectives and criteria of the income tax system. Unfortunately this is not the case. In the next section, the major causes of divergence of the two sets of rules are examined. The divergence is due mainly to the different objectives that the two sets of rules are intended to serve.

2.5 Sources of Divergence of Two Sets of Rules

Fayle [1990] noted that when a legally-oriented objective (such as restricting dividends to be paid only out of profits of a company) is to be achieved in the accounting standard setting process, certainty of calculation is the main emphasis. When the objective is to provide information to control the performance of a business and to judge past success and future potential, judgment and guesses are important. As modern accounting rules are intended to produce information of which the protection of capital against unwarranted dividend distributions is but one of the many objectives, accounting rules provide too subjective a measurement of profit to meet the need of tax laws which demand a high level of precision. He examined the extant Australian accounting standards (the AAS series) to highlight their relevance to tax laws and identified three types of relationship between the two sets of rules. First, there are accounting standards which have some degree of symmetry with the tax laws.[27] Second, there are accounting standards which cause divergence between accounting profit and taxable income.[28] Finally, there are those accounting standards which are not relevant to tax.[29] Some standards in the last category may, however, impound useful information that may assist indirectly in the tax compliance process.[30]

The divergence of the two sets of rules does not suggest anything wrong with either set of rules. They differ because they are intended to achieve different objectives.

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27 For example, AAS7 - Accounting for the Extractive Industry, AAS11 - Accounting for Construction Contracts, and AAS13 - Accounting for Research and Development Costs.

28 Examples are AAS1 - Profit and Loss Statements, AAS2 - Valuation and Presentation of Inventories in the Context of the Historical Cost System, AAS5 - Materiality in Financial Statements, AAS8 - Events Occurring after Balance Date, AAS9 - Expenditure Carried Forward to Subsequent Accounting Periods, AAS10 - Accounting for Revaluation of Non-Current Assets, AAS18 - Depreciation of Goodwill, and AAS20 - Foreign Currency Translation.

29 For example, AAS14 - Equity Method of Accounting and AAS24 - Consolidated Financial Reports.

30 Examples are AAS6 - Accounting Policies, and AAS15 - Disclosure of Operating Revenue.

2.5.1 Different objectives of the two systems

The objectives of each system appear to be very different. The tax system is part of the overall wealth redistribution system.[31] The primary objective of a tax system is to raise revenue for government programs. Additionally, governments use the tax system to exert control over the economy, to accomplish social objectives, to encourage or discourage certain activities, and for political purposes. Balancing these objectives is a concern that the tax system meet certain criteria or standards. A tax system should be equitable, efficient (neutral), continuous, certain, convenient, and economical [James and Nobes 1978; Krever 1987; Lehmann and Coleman 1996; Rosen 1992; Smith 1776; Sommerfeld et al. 1992; Stiglitz 1988; Woellner et al. 1994]. At times these objectives and criteria may be in conflict in making tax policy decisions, but presumably to some extent the government is aware of such conflicts when it makes law.

The objective of general purpose financial reporting as set forth in Statement of Accounting Concepts SAC 2 is to provide information useful to users for making and evaluating decisions about the allocation of scarce resources. General purpose financial reports (GPFR) are those intended to meet the common information needs of users who are unable to command information tailored to their specific needs. GPFR disclose information relevant to the assessment of performance, financial position, and financing and investing, including information about compliance. According to Statement of Accounting Concepts SAC 3, the information in GPFR should possess such qualities as relevance, reliability, materiality, timeliness, comparability, and understandability. Similar financial reporting objectives and qualitative characteristics of information can be found in the US Statements of Financial Accounting Concepts, and the UK Statements of Principles. Within this context certain principles, assumptions and concepts apply, such as accounting entity, accounting period, historical cost, realisation, matching, going concern, conservatism, and consistency. In recent years, there has been a tendency to shift the focus of financial reporting from the profit and loss (or income) statement to the balance sheet, and to de-emphasise the profit figure[32] which is relevant to assessment of tax.

In the *Thor Power Tool* case, the US Supreme Court articulated these differences, noting that the primary goal of financial accounting is to provide useful information

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31 The wealth redistribution system includes the tax system which transfers wealth from the private sector to the public sector, and various government programs, such as social security, education and health, which transfer the wealth back to the private sector and result in a redistribution.

32 This trend is evident by the definitions of accounting elements in the conceptual framework for financial reporting developed in the three Anglo-Saxon countries. See, for example, Australian Statement of Accounting Concepts SAC 4 - Definition and Recognition of the Elements of Financial Statements. As a result of this shift in focus, the matching principle and the conservatism principle also are de-emphasised.

to management, shareholders, creditors, and others interested parties, and that the major responsibility of the accountant and auditor is to protect these parties from being misled. In contrast, the primary goal of the tax system is the equitable collection of revenue and the major responsibility of the administrator is to protect the public fisc. The US Court went on to state that given the diversity of objectives, any presumptive equivalence between tax and financial accounting would be unacceptable. This is also true for the UK and Australia.

As law-makers and administrators adopt concepts and principles which reflect the objectives and criteria of a tax system, tax rules differ from GAAP. The differences can be grouped into four broad categories: (a) differences in the timing of recognition of income and expenditure; (b) differences arising from government policy decisions; (c) differences in the way of determining the quantum of taxable capital gains and how they are included in taxable income, and (d) those due to the principle of substance over form or due to anti-avoidance measures. These categories are not mutually exclusive and are by no means exhaustive. They are briefly examined in the sub-sections below.

2.5.2 Timing differences

One reason why income has been selected as a tax base is that income is thought to be a good measure of a person's capacity to pay tax. To ensure the taxpayer has the wherewithal to pay tax, traditionally income is not considered to have been derived for tax purposes until the cash is received, or the taxpayer has control over the funds. This wherewithal to pay principle is explicitly recognised as a tax accounting principle in the USA, but is only implicitly applied in the tax laws of the UK and Australia. An important influence of financial accounting on income tax law is that the earnings basis of accounting based on the realisation principle has been accepted as a proper basis to recognise business income for tax purposes. Thus, only income from non-business sources (e.g. property and employment) is recognised on a receipt basis; business income is derived when goods are delivered or services are rendered. By the same token, an expenditure is considered to have been incurred for tax purposes only when the taxpayer has paid for it, or has committed to a definite liability to pay.

Due to the variety and complexity of business activities, flexibility has been built into accounting rules which allow management discretion to choose among a number of approved accounting methods, especially in the areas of cost allocation and asset valuation where the matching principle plays an important role and where subjective judgment is called for. Also, the traditional conservatism or prudence concept in financial accounting requires recognition of doubtful income items to be postponed, and recognition of doubtful expenses or losses to be brought forward. Tax laws requires certainty and precision, and allows little room for subjectivity in

the applications of the matching principle and the prudence concept. Thus, neither income (profit) nor expenditure (loss) can be anticipated. Precautionary and contingency provisions charged against income, such as general provisions for doubtful debts, warranties and long service leave, are not allowed as deductions for tax purposes until such time as the contingencies become crystallised.

Thus, due to the wherewithal to pay principle (and the consequential emphasis on cash flows) and the desirable feature of certainty and precision, the timing of derivation of income and incurrence of expenditure and losses in tax rules may be different from the timing of recognition of the same items for financial accounting purposes. These timing differences cause some items of income and deduction to appear in financial accounts for one period, but to impact tax liability of another period.

2.5.3 Non-revenue raising functions of income tax

Income tax was originally introduced to raise revenue for the government. Since 1930s, different governments have been using tax as a means to regulate economic activities. Accelerated depreciation, for instance, is widely adopted in many countries to encourage investment in plant and machinery which is essential for economic growth. Reliefs have also been granted to specific industries as a result of policy decisions or political pressures. In Australia, for example, there have been support for the film industry, preferential treatment of the gold-mining industry, and concessions given to primary producers.

Each time income tax is used as a policy instrument to achieve economic, social, or political objectives other than revenue raising, special treatment will be accorded to certain types of income or expenditure, and taxable income will be driven further away from accounting profit. Alignment of tax rules with GAAP means that the government has to use means other than the income tax system to achieve its policy objectives.

2.5.4 Treatment of capital gains and losses

A profit and loss (or income) statement prepared in accordance with GAAP includes all revenues, expenses, gains and losses arising in an accounting period, whether they are of a capital or revenue nature.[33] GAAP only require material items outside

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[33] In Australia, the relevant accounting standards are AAS1 - Profit and Loss or Other Operating Statements, and AASB 1018 - Profit and Loss Accounts.

the ordinary activities of the business (extraordinary items) to be separately disclosed. The distinction between capital and revenue items is, however, important in tax rules.

In the USA, following the decision in *Eisner v. Macomber* (1919) 252 US 189, realised capital gains are regarded as part of the taxable income, but special rates apply to long-term capital gains, because such gains have been accumulated over a number of years and it would be inequitable to tax at the marginal rate of the taxpayer in the year of realisation under a progressive rate structure.

In the UK, due to the influence of the income concept in trust law, capital gains are not considered to be income and were not subject to tax until 1965 when capital gains tax was introduced. The statutory provisions relating to capital gains tax can now be found in the *Taxation of Chargeable Gains Act 1992*. Similarly in Australia, capital gains were not generally included in taxable income until 1985. In these two countries, the dichotomy of capital and income has resulted in some permanent differences between accounting profit and taxable income, even after capital gains were included in the tax base. In Australia, for instance, the capital gain realised on the disposal of an asset held for more than one year is computed by deducting the indexed cost base[34] from the disposal proceeds, i.e. only the real gain is included in taxable income. On the other hand, relief for capital expenditure is not comprehensive. No deduction is allowed for amortisation of purchased goodwill. Capital expenditure which does not result in creation of an asset, such as the cost of feasibility study of an abortive venture, does not attract any deduction whatsoever.[35]

2.5.5 Substance over form and anti-avoidance measures

There is a tendency for financial accounting rules to recognise the importance of looking through the legal form of transactions to their economic reality. However, the principle of substance over form only has limited application in tax law.

To achieve the objective of financial reporting, transactions may need to be recharacterised to reflect their economic substance for financial accounting purposes. Since tax is a contribution enforced by law, naturally the legal form of a transaction is important in determining its impact on the tax liability of the transactors. Also, to achieve certainty the courts in the UK and Australia tend to

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34 Indexed cost base is the cost of an asset adjusted for inflation using the quarterly Consumer Price Index.

35 Cooper [1991] presents a detailed discussion of this 'blackhole' in tax laws.

adopt a legalistic approach to interpret tax legislation. Recharacterisation of a transaction may have various unintended and unforeseen consequences and may create uncertainty as to how the related parts of the tax law should apply. Thus, an asset acquired by a lessee under a finance lease is required by GAAP to be capitalised and depreciated (emphasis on economic substance), but tax law in Australia requires the lessee to deduct the rent or lease charges payable under the lease as revenue expenditure (emphasis on legal form).

However, in particular instances where tax avoidance is apparent, tax laws in different countries have adopted the approach of ignoring the form of transactions and having regard only to their substance and purpose to protect revenue, either through judicial interpretation or through legislation of anti-avoidance provisions [Millett 1988]. There has been a long-standing doctrine of substance over form adopted by the US Supreme Court to attack tax avoidance.[36] In the early 1980s, the House of Lords in the UK adopted similar doctrine by developing the principle of fiscal nullity in *WT Ramsay Ltd v IRC* (1981) 11 ATR 752, and *Furniss v Dawson* (1984) 1 All ER 530. In Australia, a general anti-avoidance measure along similar lines (Part IVA of the ITAA) became operative from 1981. In addition to the general anti-avoidance measures, there are numerous specific provisions designed to ensure administrative effectiveness, or to plug specific loopholes exploited by taxpayers to avoid tax. For instance, entertainment expenses are in general not allowed for deduction; there are also restrictions on deduction of operating losses and bad debts incurred by a company in Australia.

Thus, tax rules emphasise economic substance in areas quite different from financial accounting rules. Also, there are numerous anti-avoidance measures in tax laws which have the effect of deeming 'fictitious' income to exist and 'real' expenditure or loss to be nothing. These differences are another source of divergence between taxable income and accounting profit.

2.6 Summary

In summary, due to the institutional arrangements in Anglo-Saxon countries such as Australia, the UK, and the USA, tax and financial accounting rules have been developed by different authorities for different purposes. They are designed to meet different criteria and are based on different principles to reflect their objectives and required standards. Naturally, they are different. Table 2.2 summarises the differences of the two sets of rules in Anglo-Saxon countries.

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36 For example, *Gregory v. Helvering* (1935) 293 US 465, and *US v. Phellis* (1921) 257 US 156.

TABLE 2.2

Divergence of Tax and Financial Accounting Rules

in Anglo-Saxon Countries

Taxation	Financial Reporting
Objectives	
• Raise revenue • Manage the economy • Achieve social and political goals	Provide useful information for- • making and • evaluating economic decisions
Criteria for Evaluation	
• Equity • Neutrality or efficiency • Certainty • Continuity • Convenience • Economy or cost-effectiveness	• Relevance • Reliability • Materiality • Timeliness • Comparability • Understandability

Basic Principles

- Wherewithal to pay
  - Receipt or control of funds
  - Payment or definite liability
- Neither profit nor loss can be anticipated
- Income capital distinction
- Realisation
- Matching
- Conservatism
- Substance over form

Any attempt to force one set of rules to conform to the other, without corresponding fundamental changes in the institutional arrangements, may have negative impacts on both systems which would outweigh the advantages of conformity. In the next chapter, relevant literature which provides evidence about earnings management and tax compliance will be briefly reviewed, and the implications of a complete alignment of tax rules with financial accounting rules will be discussed.

CHAPTER 3

IMPLICATIONS OF ALIGNMENT OF TAX RULES WITH FINANCIAL ACCOUNTING RULES

Determination of income for tax purposes relies in part on the methods and procedures used to determine income for financial accounting purposes. However, there are numerous instances when the methods and procedures used for the two systems are quite different. Presumably this difference is due to different objectives of the two systems. Yet, given that both systems desire to measure income, one would expect that the amounts determined for the two systems would be somewhat similar. This is not the case and in some instances the two amounts can differ substantially. For example, the taxable income and accounting profit of General Dynamics Corporation in the USA between 1973 and 1983 differed by more than US$5.1 billion [Wheeler and Outslay 1986]. Also, over the ten-year period 1984 to 1993, the total accounting profit of the News Corporation Ltd in Australia was three times as large as its total taxable income, and the total book-tax income gap was A$3.3 billion.

Such large differences give rise to the question, should there be an alignment or conformity of tax and financial accounting rules? The apparent benefits of conformity include simplification of the tax system, greater certainty in the determination of taxable income as accounting principles continue to develop, and greater confidence in the integrity and equity of the self-assessment process [Nolan 1972]. Compliance costs might decline and compliance levels might increase. Additionally, there might be a decline in the number and degree of conflicts between tax administrators[37] and taxpayers.

The opposite might also be true. The disadvantages of conformity include complexity due to the need to reconcile two sets of objectives, reduced certainty and increased inequity due to flexibility and choices available in GAAP, and undue pressure on accounting standard-setting agencies to permit tax-saving accounting methods [Weinman 1981]. Audit fees might increase because auditors are assuming greater responsibility and therefore greater liability exposure. Also, would taxpayers try to 'manage' earnings further and what effect would this have on tax revenues and capital markets?

Additional questions arise regarding the effects of conformity on such issues as the role and influence of the government on the accounting standard-setting process, tax policy measures, taxpayer compliance, compliance costs, and the impact on

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[37] Internal Revenue Service (IRS) in the USA, Inland Revenue Department (IRD) in the UK, and the Australian Taxation Office (ATO) in Australia.

accounting profession. Answers to these questions provide the basis to assess who is affected by conformity and at what cost, and ultimately whether conformity is feasible and desirable.

In this chapter, the implications of alignment of tax rules with financial accounting rules are examined. Different dimensions of conformity or alignment are considered in section 3.1. Section 3.2 provides a literature review of documented large differences between taxable income and accounting profit, earnings management, and tax compliance. Section 3.3 addresses the implications of any complete conformity of the two sets of rules in Anglo-Saxon countries. A tentative conclusion is drawn in section 3.4.

3.1 Dimensions of Conformity

There are several dimensions of conformity: which set of rules conforms to the other, the degree of conformity, and the extent of its imposition. Tax rules could conform to financial accounting rules, financial accounting could conform to tax rules, or a new set of rules could be developed. In an ideal setting both systems would use a wealth measure for income, i.e. how much a taxpayer could consume during the year and be as well off in terms of net worth at the end of the year as he was at the beginning of the year [Haig 1921; Simons 1938]. Obviously this would require an imposed change in both systems but would produce the same income, i.e. complete conformity via the development of a new set of rules. Unfortunately this option is not practicable. This would require significant changes in both systems and the accounting standard-setting bodies have resisted such attempts for many years.[38] In addition to significant measurement problems, such a measure disregards the realisation principle and in certain instances would require taxpayers to sell assets in order to pay taxes, which is not a desirable quality of a tax system. As mentioned in the previous chapter, in Anglo-Saxon countries there have been calls for tax rules to conform to financial accounting rules for various reasons. Hence, only the issue of alignment of tax rules with financial accounting rules is examined in this thesis, not the other way around.

The degree of conformity could range from none to complete. Currently in Anglo-Saxon countries there are some degrees of tax rules conforming to financial accounting rules, although a higher degree of conformity can be observed in the USA and in the UK than in Australia. While some degree of conformity may be beneficial under the present institutional arrangements of Anglo-Saxon countries, complete conformity is a matter of concern, because the two systems have different objectives.

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[38] The current trend to shift the emphasis of financial reporting from the profit and loss (or income) statement to the balance sheet can be regarded as a step toward that direction.

Imposition deals with whether conformity is imposed, voluntary, or merely coincidental. The distinction between imposed and voluntary or coincidental conformity of tax and financial accounting is important. Raby and Richter [1975] note that coincidental conformity is not a concern in the conformity issue. They provide the following example: the deduction of an expense for both tax and financial accounting purposes may occur because the tax deduction is clearly permitted and it clearly represents an expired cost from a financial reporting standpoint. The same treatment in both cases is coincidental. However, imposed conformity, whereby tax treatment is affected by financial accounting treatment is a concern, especially when the imposed conformity is a complete one.

Whether concerns of negative impacts of conformity are justified is uncertain. The literature review presented in the next section addresses these issues.

3.2 Literature Review

This section presents a review of the literature relevant to the issue of conformity. Most of the empirical studies reviewed here were conducted in the USA. The first part addresses reported discrepancies between taxable income and accounting profits. The investment tax credits (ITC) concern is looked at next. This is followed by a review of the earnings management and accounting choice literature in general and as it relates to taxes. The last part of the literature review briefly deals with tax compliance in the context of its potential effect on the conformity issue.

3.2.1 Discrepancies between tax and financial accounting income

In the USA, the discrepancies between tax and financial accounting received much publicity in the 1980s. Large firms were paying little or no tax but were reporting very large earnings for financial reporting purposes. Concern was expressed that many firms appeared to have significant ability to pay taxes (as evidenced by their accounting earnings) but for some reason had little or no tax due [Citizens for Tax Justice 1984, 1985, 1986]. The divergence between tax and financial accounting seemed to be critical. Even though accounting income might not clearly reflect income for tax purposes, it was being used as a basis to call for reform in the tax system.

Stickney et al. [1983] analysed the difference in accounting income and Federal income tax liability of General Electric Corporation (GE) and its subsidiary, General Electric Credit Corporation (GECC), for 1981. GE filed a consolidated return with GECC for tax purposes but used the equity method of accounting for financial reporting. GE received a $103 million net refund of tax payments in 1981 even though its reported accounting income was greater than $2.5 billion. GE was able to accomplish this through the use of the safe-harbour leasing rules and the use of the consolidation method for tax purposes. The safe-harbour leasing rules enabled (loss) firms to sell to other (profitable) firms tax depreciation deductions and tax credits, effectively through a sale and leaseback provision. The provision was repealed one year after it went into effect.

In a subsequent study, Shaw [1987] further analysed the effects of the safe-harbour lease provisions on financial reporting practices. The FASB had not mandated accounting practices regarding such transactions and Shaw found reporting practice to be quite diverse. Practices resulted in both very conservative and very liberal consequences with respect to income reported by particular firms [Shaw 1987, p. 398].

A thorough analysis of General Dynamics Corporation (GDC) also revealed significant differences between tax and financial accounting [Wheeler and Outslay 1986]. The difference was so large, accounting income exceeded taxable income by more that $5.1 billion over the 1973-1983 period, that although GDC appeared financially sound and was paying dividends, the dividends were not taxable to its shareholders because under the US tax law the firm did not earn any taxable profit, i.e. they were a return of capital. The principal cause of the enormous difference between GDC's book income and taxable income was the company's use of the completed contract method for tax purposes while the percentage of completion method was used for financial reporting (the completed contract method was not permissible for financial reporting in GDC's case) [Wheeler and Outslay 1986, p. 761]. They further showed that GDC manipulated its taxable income (which was significantly increased and significantly greater than accounting income in 1984) to avoid the loss of unused carryover losses and credits. Again, it appears that conformity in this instance would have best served tax policy, and in fact, the completed contract method subsequently was repealed for large firms.

The substantial differences in income for tax and financial reporting purposes also provided some of the foundation for the implementation of the alternative minimum tax (AMT). The AMT was introduced to ensure that a taxpayer with substantial accounting income could not avoid significant tax liability. Apparently the US Government was using accounting income as an indicator of firms' abilities to pay tax even though accounting income might not clearly reflect income for tax purposes.

3.2.2 Investment tax credit issues

The investment tax credit (ITC) was enacted in the USA to stimulate investment in qualifying plant and equipment under the presumption that such investment would stimulate the economy. The effect was to reduce the cost of acquisitions because the taxpayer received a tax credit in the year of acquisition. There were two ways to account for the credit for financial accounting purposes: the flow-through method, which recognised the effect in the year of acquisition, and the deferred method, which allocated the ITC tax savings over the life of the asset. The rule-makers of the accounting profession had been attempting to require corporations to use the deferred method and tax policymakers were concerned that such action would interfere with the stimulus effect of the credit [Arnold and Keller 1980]. Thus, the concern was that a financial accounting method would have a negative effect on tax policy. This concern was so pronounced that on November 21, 1971, the US Treasury Department sent a letter to the chairman of the Senate Finance Committee that stated: "Since any change in the pre-existing well-established financial accounting practice might operate to diminish the job-creating effects of the credit, the Treasury Department strongly supports a continuation of the optional treatment" [Horngren 1972, p. 40]. Congress responded in the Revenue Act of 1971 with a provision which prohibited the accounting profession from restricting firms to use the one method of accounting for financial accounting purposes.

Arnold and Keller [1980] analysed whether the method selected for financial accounting purposes to account for the ITC was related to firms' investments in plant and equipment. They found no significant relation between accounting method and investment and these results were reasonably consistent across industries. Thus, it appears that Congressional concern that financial accounting rules would interfere with tax policy objectives might have been unwarranted in this case.

3.2.3 Earnings management concerns

Assuming information asymmetry, 'earnings management' is a purposeful intervention in the external financial reporting process with the intent of obtaining some private gain [Schipper 1989]. Managers can make use of private information they have when they choose accounting procedures and estimates from a feasible set of financial reporting rules, subject to the constraints of a set of accounting income-based contracts which determine, for example, compensation and other sharing rules among stakeholders.

There is a considerable literature on accounting choices and earnings management in the USA. Studies show that managers do appear to manage earnings through the selection of accounting methods for a wide variety of reasons: to reduce the costs of foreign trade regulation [Jones 1991]; in anticipation of a proxy contest [DeAngelo 1988]; to smooth income [McNichols and Wilson 1988]; to avoid the potential consequences of loan default [El-Gazzar et al. 1986; Dhaliwal 1980]; to affect bonus payments [Healy 1985] and compensation [Ayres 1986; Dhaliwal et al. 1982]; to reduce exposure to increased regulation and taxation [Daley and Vigeland 1983; Zmijewski and Hagerman 1981] and as a consequence of a change in management [Copeland and Moore 1972; Moore 1973]. However, some studies find no evidence of earnings management. DeAngelo [1986] found that firms did not systematically reduce earnings in periods before a management buyout of public stockholders. Similarly, Liberty and Zimmerman [1986] found no evidence that firms decreased earnings during labour contract negotiations.

Earnings management in Australia also is evident. Chambers [1973, ch. 8] cites numerous instances of the ways in which companies in Australia, the UK and the USA manipulated reported profit. Uren [1985] alleged that the 1984 reported profit of CRA Limited was suspect because of particular accounting practices it used. CRA reported a profit of $29.5 million, yet its British parent calculated it to be $79.1 million and various analysts restated the profit between $101 million and $180 million. Uren further noted that if in-house accountants had had their way, CRA would have reported a loss of $84 million. Australian corporate regulators believe that more accounting standards are required to mitigate the effects of manipulation of companies' reported financial performances [Clarke and Craig 1992].

One incentive for earnings management is income smoothing to create an impression that the earnings and cash flows of the firm have a lower variance, hence reduce financial costs [Trueman and Titman 1988]. Craig and Walsh [1989] found strong evidence indicating that large listed Australian companies were actively engaged in income smoothing. They also found a link between firm size and propensity to smooth; larger firms were more likely to use the extraordinary items adjustment to smooth income. Walsh et al. [1991] also provide evidence of earnings management by Australian firms through the extraordinary items adjustment. Finally, Houghton, et al. [1993] found a relationship between earnings management and the financial 'health' of Australian firms. Financially-distressed Australian firms used more income-increasing accounting techniques than did healthy firms and firms that were distressed and close to failure.

Thus, there is some evidence that firms (managers) manage earnings to their own benefit and that this behaviour is not restricted to a particular country. There are two well-studied areas of earnings management and accounting choice in the tax area in the USA, the inventory accounting choice of first-in-first-out (FIFO) and last-in-first-out (LIFO) and the alternative minimum tax book income adjustment

(AMTBIA). These areas are discussed below after a review of some general tax-related earnings management studies.

3.2.4 Tax studies - General

The incentive to manage earnings for tax purposes is the increase in the present value of the firms' after-tax cash flows. *Ceteris paribus*, this should be viewed favourably by the market and therefore increase the firms' value (cash flow effect). However, if this is achieved by reducing income for financial reporting purposes then the reduced income might be viewed negatively by the market and might affect other contracting considerations, e.g. compensation plans, debt covenants, etc. (earnings effect). Thus, there appears to be a tradeoff between cash flow effect and earnings effect.

Matsunaga et al. [1992] analysed firms' behaviour involving a tradeoff between tax benefits and financial accounting income. They analysed management's disqualifications of incentive stock options (ISOs). The benefit of disqualification was lower taxable income; however, accounting income also was reduced. Thus, management had to decide if the tax savings offset the costs of reduced accounting income. Matsunaga et al. primarily used variables concerned with debt covenants as a measure of financial reporting costs. As might be expected, they found that firms with the highest tax benefit tended to disqualify their ISOs; the cost of reduced accounting income was not sufficiently large to warrant the loss in tax savings. However, firms with the highest financial reporting costs (they were moving toward violation of debt covenants as accounting income decreased) tended not to disqualify their ISOs. These firms were foregoing the tax savings presumably to avoid the adverse impact of lower accounting income.

Scholes et al. [1992] analysed the income-shifting behaviour of corporations as a result of the US Tax Reform Act of 1986. The Act lowered the maximum corporate tax rate from 46 percent to 34 percent, thus providing an incentive for firms to accelerate deductions and defer income. Scholes et al. provided evidence of significant income-shifting behaviour. Additionally, larger firms shifted more than smaller ones. Firms shifted income to achieve tax savings even though their income for financial accounting purposes also was affected. Further studies to investigate whether managers were successful in deferring income from 1986 to future years and whether such tax planning activities were mitigated by financial reporting costs include Guenther [1994] and Maydew [1995]. One criticism of these studies is that they used accounting information to infer shifting of taxable income [Omer 1992].

Guenther et al. [1996] took advantage of a unique set of publicly traded firms which were forced by the US Tax Reform Act of 1986 to switch, for tax purposes, from the cash method to the accrual method. Their approach is superior to prior studies. They studied the impact of a dramatic shift in the level of book-tax conformity on firms' financial reporting activities. Before the mandated change, little tension existed between the tax planning and financial reporting goals of these firms. Acceleration of accounting income recognition imposed no tax costs so long as cash collections were not also accelerated. After the change, recognition criteria for tax and financial reporting purposes became similar. The switch created tension between tax planning and financial reporting. The results show that the required use of the accrual method for tax purposes caused firms to slow down their income recognition in financial statements in order to defer payment of tax, i.e. their tax costs were sufficiently large to affect the speed with which firms recognise accounting income. In addition, the evidence suggests that the reliance on GAAP in determining whether a firm's tax accounting clearly reflects income can have unintended and potentially adverse consequences for financial reporting.

Mills [1996] examined book-tax conformity from a different perspective. She found that firms with greater book-tax income differences faced larger adjustments in subsequent audits by the Internal Revenue Service (IRS). This finding is consistent with the anecdotal evidence that taxpayers using accrual method faced implicit pressures to align their book income and taxable income. She also found some evidence that a few firm characteristics traditionally associated with higher (lower) costs of reducing book income (e.g. leverage) were associated with lower (higher) level of book-tax conformity.

Thus, in USA where GAAP are relied on to some extent to determine taxable income, IRS audit efforts help to align reported earnings and taxable income. Depending on the relative strength of tax savings and financial reporting costs, firms may engage in income-decreasing, or income-increasing, earnings management.

3.2.5 Tax studies - Inventory accounting policy choice

The choice of inventory method is critical because the US Internal Revenue Code requires that if a firm uses LIFO for tax purposes then it also must use it for financial reporting purposes. The tradeoff is unavoidable and quite clear: tax savings can be achieved only at the expense of reduction in accounting income.

Inventory accounting choice between FIFO and LIFO may have a repercussion on the procurement and production decisions of a firm that affects shareholders' wealth. Managers remunerated under an accounting income-based contract can potentially

distort the operation to maximise their payoffs. An optimal accounting policy choice must take into account this distortion (the incentive effect) as well as the tax savings associated with LIFO. Abdel-khalik [1985] provided empirical evidence suggesting that there were incentives for corporate executives to stay on FIFO despite the apparent LIFO tax advantages possibly because their remunerations were based on accounting income. Bar-Yosef and Sen [1992] argued that by choosing an inventory accounting method to optimise the trade-off between incentive effect and tax savings, the managers' interests can be aligned as much as possible with those of the shareholders. This explains why firms continue to follow FIFO in spite of LIFO tax advantages.

Biddle [1980] and Morse and Richardson [1983] found that firms switched to LIFO only after estimated tax savings reached a rather high level. There was a point where the tax benefits were significant and a switch would not occur until that level was reached. Presumably a switch before this level was too costly. This 'plateau' theory is further supported by Dopuch and Pincus [1988]. In an analysis of firms that switched to LIFO versus those that continued with FIFO, they found that firms which continued using FIFO did not forego significant tax savings whereas those that switched would have foregone significant tax savings, providing considerable evidence that inventory accounting policy choice and tax savings were related.

Hughes and Schwartz [1988] viewed the inventory accounting choice as a signal and as a tax planning device, not an accounting policy choice per se. Firms with favourable information continued with FIFO and forwent some tax benefits because not switching signalled favourable information. Presumably at some point ('plateau') even these firms would switch but the authors did not discuss this. Firms with unfavourable information switched to LIFO because the cost of switching (unfavourable perceptions about firm quality) did not exceed the current and future benefits.

Halperin and Lanen [1987] analysed the effects of the *Thor Power Tool* decision on firms inventory decisions. The decision limited the use of estimates (formula write-downs) in determining market values for year-end inventories. Thus, for some firms using FIFO/lower-of-cost-or-market, it became advantageous (tax beneficial) to switch to LIFO. They found that such firms switched to LIFO for financial reporting purposes in order to obtain tax savings.

Cushing and LeClere [1992] found that anticipated tax savings was the primary reason firms switched to LIFO. Other firms did not use LIFO because of a number of factors which reduced the potential tax savings from LIFO. These factors include LIFO bookkeeping costs, declining production costs, contradictory tax and financial reporting rules on accounting for inventory obsolescence, debt covenants,

concern about the complexity of LIFO, and the requirements of FIFO for government contracts.

Market reaction to LIFO inventory accounting choices have produced mixed results. Sunder [1973], Biddle and Lindahl [1982] and Stevenson [1987] reported evidence which indicated the market reacted favourably to the switch (cash flow effect). However, Brown [1980] and Ricks [1982] found the opposite, a negative response from the market (earnings effect). In a subsequent analysis, Biddle and Ricks [1988] indicated that the negative returns around the dates of preliminary switch to LIFO might be due to errors (overestimates) in analysts' earnings forecasts. Such forecasts were systematically overstated and the market reaction was an adjustment for this. Jennings et al. [1992] studied the stock price response to disclosures of 1974 LIFO decisions by both adopting and non-adopting firms. They found strong evidence of a negative stock price response for non-adopting firms, and weak evidence of a positive stock price response for adopting firms.

Overall, it appears that firms did manage earnings to reduce tax via choice of inventory accounting method even though income for financial reporting purposes also were reduced. Additionally, the market response to such actions was not necessarily negative.

3.2.6 Tax studies - AMTBIA

As noted earlier, the alternative minimum tax (AMT) was adopted to ensure that firms with an ability to pay were subject to some tax liability. The AMT was a separate system used to determine tax liability. A taxpayer had an AMT liability only if his alternative minimum taxable income (AMTI) was positive and if his total AMT was greater than the tax liability computed in the 'regular' way. Alternative minimum tax book income adjustment (AMTBIA) was one adjustment made to the firm's taxable income to compute AMTI. It was equal to one-half the difference between pre-tax book income (accounting profit) over the tentative minimum taxable income (based in part on the firm's taxable income). As such, a firm's reported accounting earnings potentially could have affected the firm's tax liability. Again, by managing accounting income a firm might achieve significant tax savings but only at the expense of reduced accounting income.

Concern about earnings management was expressed by tax policy analysts and financial accounting rule-makers, e.g. the AICPA, the FASB and the Securities and Exchange Commission (SEC) [Gramlich 1991]. The concern was that firms would reduce their accounting income in order to reduce their tax liability. Such action

would, in part, defeat the purpose of the AMTBIA and would affect the integrity of financial accounting and reporting.

Researchers have studied the impact of AMTBIA on earnings management around the time when AMTBIA provisions took effect, i.e. 1987. They attempted to show that managers reduced 1987 book income either by accelerating it into 1986, or deferring it into 1988, or some combination of both methods. Although the results are mixed, most research supports the conclusion that firms did reduce their accounting income to reduce AMT liability.

Gramlich [1991] found that firms generally exhibited income-increasing behaviour in 1986, the year preceding the requirement for AMTBIA, and income-decreasing behaviour in 1987. Burilovich [1991] also reported evidence suggesting that firms decreased accounting income to minimise the AMT. Dhaliwal and Wang [1992] found that firms subject to the AMT adopted more income-decreasing strategies than firms not subject to it. One problem associated with these studies, as discussed by Gramlich [1992], is that discretionary accrual proxies may not capture book-only accruals. Many of the discretionary accruals affected both book and taxable income.

Some researchers tried to overcome this problem by focusing on book accruals that were unlikely to affect taxable income, e.g. depreciation. Manzon [1992] analysed accruals related to amortisation, depletion and depreciation and found that firms with higher marginal tax rates on accounting income were more likely to adopt income-decreasing strategies than firms with low marginal tax rates. Additionally, larger firms adopted more income-decreasing strategies than did smaller firms. Finally, the desire to achieve tax savings was more significant than other contracting concerns, e.g. leverage and bonus plans. In fact he found that firms with income-based bonus plans adopted more income-decreasing strategies.

Choi et al. [1991, 1992] reported mixed results regarding earnings management. Firms used income-decreasing deferrals in 1986 and 1987. While they did not find evidence of earnings management in firms which mentioned exposure to the AMT in their annual reports, certain industries and large firms did have significant income-decreasing accruals. Earnings management was strongest in inventories and accounts payable.

Boynton et al. [1992] also found that firms which were unable to reduce their AMT exposure through the use of net operating losses and foreign tax credits engaged in income-decreasing earnings management in 1987. However, they found an inverse relationship between firm size and earnings management.

Overall it appears that firms' response to the AMTBIA was to engage in income-decreasing earnings management. Similarly, the above literature review suggests that in many instances firms will engage in earning management to achieve tax benefits. Such behaviour provides immediate tax benefits, the present value of which apparently is greater than the cost of a reduction in reported accounting earnings.

3.2.7 Tax Compliance

Intentional non-compliance with tax rules is a concern of all governments. The extent and size vary but such behaviour significantly reduces the effectiveness of a tax system. Tax compliance has been studied extensively in the USA (e.g. see Long and Swingen 1991 for a review). One finding relevant to the tax and financial accounting conformity issue concerns the extent to which tax returns prepared by Certified Public Accountants (CPAs) are accurate. An IRS study found that paid preparers, especially CPAs, were involved with tax returns requiring large adjustments [IRS 1985]. CPAs have been associated with taxpayers who file relatively inaccurate returns [Smith and Kinsey 1986]. Also, Erard [1990] found that tax returns prepared with tax assistance, especially those prepared by CPAs and lawyers, had much higher levels of non-compliance than tax returns that were self-prepared.

CPA non-compliant behaviour is due to a variety of variables. The ambiguous nature of tax requirements leads to interpretational problems which affects non-compliance [Long and Swingen 1991]. Ayres et al. [1989] found that CPAs were significantly more aggressive (pro-taxpayer) than non-regulated professionals in resolving ambiguous tax deduction cases. Their perceptions of the fairness of deductions might have influenced their behaviour [Porcano and Price 1992]. Milliron [1988] also noted that tax preparers suggested that their perception of fairness is a potential variable affecting tax preparer aggressiveness.

These results suggest that a greater conformity between tax and financial accounting might reduce non-compliance of CPA-prepared returns because GAAP should reduce some ambiguities. Additionally, since they are the result of extensive review by accounting rules-making agencies, they might be perceived by CPAs as fairer than tax accounting methods.

The literature review above provides some evidence pertinent to the implications of alignment explored in the following section.

3.3 Implications of Complete Alignment

Complete alignment of tax and financial accounting rules can be achieved either by replacing the existing tax and financial accounting rules with a new set of common rules, or by requiring one set of rules to conform to the other. This section only explores the implications of any attempt to impose (or voluntarily adopt) a complete conformity of tax to financial accounting rules.

The conformity issue mainly concerns large corporations. Companies issuing shares and other securities to the public and their subsidiaries must follow accounting standards in preparing financial reports required by corporations law. They also must follow tax rules in preparing tax returns. Divergence of the two sets of rules means significant compliance costs to large corporations. Small and unincorporated businesses generally have simple cash flow patterns and small differences between accounting profit and taxable income. Those not classified as a reporting entity[39] may not be required to follow accounting standards to prepare financial reports. They may even adopt tax rules (e.g. tax depreciation rules) in keeping their books which are kept primarily for tax purposes rather than for financial reporting purposes. As such, small and unincorporated businesses generally should not be significantly affected by any conformity movement.

The benefits of conformity will be evaluated according to the impacts it would have on the current tax system, the accounting regulatory framework and the accounting profession. Within the current tax system, how would conformity affect equity, neutrality, certainty, continuity, simplicity, compliance and administrative costs, compliance levels, the power of tax authorities (i.e. the legislature, the courts and tax administrators), and the government's ability to use tax policy measures to accomplish its objectives? Two criteria will be used to evaluate the effect of conformity on financial accounting: how would it affect the accounting rule-making agencies and the integrity of financial accounting, and how would it impact the accounting profession? All these variables must be considered because although conformity might have a positive effect on some, it also might have a negative effect on others. Conformity would be beneficial only if it would produce a net

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39 According to the Australian Statement of Accounting Concepts SAC 1 Definition of the Reporting Entity and Australian Accounting Standard AASB 1025 Application of the Reporting Entity Concept and Other Amendments, a 'reporting entity' is an entity which is reasonably expected to have users who depend on the entity's general purpose financial reports for information to make and evaluate economic decisions. A comprehensive approach to differential reporting based on the concept of reporting entity has been adopted in New Zealand, but has not been incorporated into Australian Corporations Law. This approach is in contrast with the ad hoc approach to differential reporting adopted by the UK and the USA which permits differential disclosure on a standard by standard basis. See Brailsford and Ramsay [1993] and Ma [1996] for a comparison and discussion of the two approaches.

benefit to the society as a whole. Unfortunately, the net benefit is difficult, if not impossible, to quantify.

3.3.1 Equity

Perceived equity would be enhanced by conformity because tax payable by large companies would be based on their reported earnings. However, firms have choices in accounting methods. Also, firms are subject to different constraints on earnings management. Different options and constraints can lead to reductions in equity. Some firms (e.g. large firms or firms in a particular industry) might be better able to manage their earnings because they have more expertise, greater resources and have smaller financial costs associated with lower reported earnings. The result is more inequity, not less, especially if large firms are more actively engaged in such behaviour. Such a situation is most likely. Watts and Zimmerman [1990, p. 140], in summarising one area of positive accounting research, noted a consistent finding of the sign of the relation between firm size and accounting choice across a variety studies. The largest firms tend to use income-decreasing accounting methods.

3.3.2 Neutrality

If as a result of conformity various incentives and disincentives built into the tax system were to be removed, the neutrality of the tax system would be improved. However, given that the government regards these incentives as desirable, it is most likely that they would be provided through other mechanisms, or become 'exceptions' to accounting rules. If so, conformity is unlikely to improve neutrality.

Moreover, the accounting options available in GAAP are not tax neutral. If there were a complete conformity, taxpayers would arrange their transactions to exploit the tax-saving accounting options. Such tax avoidance behaviour would cause the neutrality or efficiency of the tax system to deteriorate.

3.3.3 Certainty and continuity

Conformity apparently would reduce uncertainty and increase continuity because the grey areas in tax laws would be eliminated and accounting rules do not change as frequently as tax rules. However, is there no uncertainty in financial accounting practices? There are numerous ways in which companies manipulate accounting numbers reported in their financial statements and the use of 'creative accounting' is

widespread [Chambers 1973; Griffiths 1986; Naser 1993; Smith 1992]. Beaver [1981, p.3] noted that the nature of the accrual process is ambiguous and is not well defined. For virtually every major event that could affect the financial statements of a firm, there exists a variety of alternative methods for matching costs and revenues. Also, there are many instances where the accounting treatment requires expert judgment (such is the nature of professional activity). Only to a limited extent, accounting standards reduce the number of accounting options and the scope of subjective judgment, whereas tax rules generally tend to be more objective. Thus, conformity may well result in increased uncertainty.

As well, financial accounting rules constantly are being reviewed, refined and extended. The accounting standard-setting bodies and corporate regulators have issued numerous pronouncements regarding the accounting treatment of certain transactions. No doubt, they will continue to do so in the future.

3.3.4 Simplicity

It appears that conformity would reduce complexity. Since there would be one set of rules serving two systems, it would be easier to prepare tax returns. The complexity associated with having to know and to articulate between two sets of numbers would be eliminated. However, this assumes that either one group of rule-makers effectively relinquishes rule-making power to the other or that the two groups work together to develop rules, and that the one set of rules serves the objectives of both systems well. The reality of these assumptions is questionable.

As the two systems have different objectives, inevitably tax authorities would seek exceptions to achieve their objectives. For example, beginning in 1987 large US banks began writing-off a large portion of their debt to Latin American countries. Such action was within financial accounting guidelines and reflected the economic reality of the situation. However, such actions were not permitted for tax purposes because of the uncertainty of the amount of bad debt and because of the impact on tax revenues. If there were conformity then something would need to be changed or an exception permitted. Exceptions made probably would make the system more complex than it is now. Instead of having two separate sets of rules we would have one set with a long list of exceptions, which over time effectively would result in two separate sets of rules. Thus, whether conformity would result in increased simplicity is questionable.

3.3.5 Compliance costs and administrative costs

A tax system should be convenient. Compliance costs incurred by taxpayers should be minimal. Additionally, it should be economical in that tax can be easily assessed, collected and administered by the administrators. There is a tradeoff between administrative costs and compliance costs, e.g. reduction in administrative costs may occur at the expense of increase in compliance costs. The self-assessment regime is a good example. By requiring taxpayers to assess their own tax liabilities, the government has effectively passed on the costs of assessment to the taxpayers. Conformity would shift further costs (audit costs) from the government to the taxpayers.

It would appear that conformity would reduce taxpayers' compliance costs. Needing only one set of books for tax and financial accounting purposes would reduce costs, or alternatively there would be no need to make complex adjustments to convert accounting earnings into taxable income. Also, the need for the controversial tax effect accounting would be eliminated.[40] However, if accounting numbers were used for tax purposes, additional resources would be consumed in re-contracting (e.g. management bonus plans, debt covenants) and in making optimal accounting policy choice. Also, the responsibilities of the auditor would increase because the audited financial statements would serve more audiences. With increased responsibilities comes increased liability exposure. The result would be higher audit fees.

Certainty and simplicity affect compliance costs. Reductions in either increase compliance costs. As noted above, conformity might lead to decreased certainty or simplicity which would increase compliance costs. It is questionable as to how much, if any, taxpayer compliance costs would be reduced because of conformity.

The effect of conformity on administrative costs also is difficult to determine. Tax returns still would need to be processed and it is unlikely that conformity would affect the efficiency with which they are processed. The need for tax audits might be reduced because tax computation would be based on financial statements already subject to audits required by the corporations law. However, the reduction of tax audit costs in the public sector would be achieved at the expense of an increase in financial statement audit costs in the private sector. Costs incurred on tax disputes would be reduced to the extent that conformity reduced disagreements between taxpayer and administrator. However, reductions in disagreements require reductions in uncertainty of correct treatment and reductions in grey areas. It also requires a change in tax practitioners' perceptions about the fairness of tax accounting methods. Conformity might produce increased perceptions of fairness (although this is not assured as noted in the equity discussion), but it is unlikely that it would produce a reduction in choices and areas of uncertainty.

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[40] For the controversy of tax effect accounting, see Barton [1970, 1971], Baylis [1971], Chambers [1968] and Gibson [1984].

It appears that both reductions and increases in compliance and administrative costs would result. Thus, one cannot conclude that conformity would lead to substantial reductions in compliance and administrative costs.

3.3.6 Compliance levels

Another apparent benefit of conformity would be increased levels of compliance. Such a result would be quite beneficial because of the current high level of non-compliance (unintentional and intentional). Unintentional non-compliance is due to errors and taxpayer's positions in grey areas (i.e. they are subject to interpretation). Conformity might reduce ambiguity and increase tax return accuracy because the same methods and numbers are being used for both tax and financial reporting purposes. It also might increase fairness perceptions about the tax system. Changes in these items would increase compliance levels.

However, as previously noted, the extent, if any, to which changes in these items would occur is unknown and questionable. Areas of uncertainty and choices would remain after alignment. Incentives to manage earnings would increase, but constraints on earnings management vary across firms. These might reduce fairness perception and lead to decrease in compliance levels. Thus, whether conformity would lead to increased taxpayer compliance is questionable.

3.3.7 Governing bodies

The rule-making bodies of the tax and financial reporting regulatory systems are independent and powerful. Conformity would reduce this independence and alter the power structure. The accounting profession prefers to govern itself without government intervention. In the USA, under the Securities Act of 1933 and the Securities Exchange Act of 1934, the SEC (a government agency) has statutory power to develop accounting principles and standards. Although the SEC issues numerous pronouncements which affect the accounting profession, there appears to be a general accord between it and the FASB.

In general, the SEC considers accounting principles, standards and practices promulgated by the FASB as having substantial authority. However, pursuant to its legal authority, the SEC can and does issue several types of authoritative pronouncements that clarify, modify, amend, or even supersede accounting

principles established by other bodies [Skousen 1991, pp. 118-119]. Horngren's [1972] broad overview of the financial accounting standards setting process equates the SEC as top management and the APB (now FASB) as lower management (in a decentralised management context). Ruder [1989], former SEC Chairman, indicated that the SEC engages in active oversight of the FASB, that such oversight is extensive and covers all aspects of the FASB's activities, and that the SEC's staff also actively monitors the structure, activities and decisions of the FASB .

As noted previously, the AICPA in the USA has indicated it opposed conformity of financial accounting to tax rules. Thus, it is unlikely that the AICPA and FASB would reduce their roles in the financial accounting process, nor would they want to alter the process to share it with the IRS. Similarly, the SEC would not reduce its role in the process. Conformity might distort the accounting rule-making process. Numerous commentators have reached near unanimity in the belief that conformity would put enormous and perhaps irresistible pressures on the FASB to permit whatever financial accounting treatment would lead to the most favourable tax result [Weinman 1981, p. 430]. Raby and Richter [1975] recommended that the AICPA adopt a policy clearly opposing conformity and labelling it as incompatible with the development of sound financial reporting.

The US Congress effectively has let the Treasury Department make tax accounting rules through the issuance of Regulations and IRS pronouncements and policies. In 1976 and 1977 subcommittees of the US Senate and the House of Representatives recommended that the setting of accounting and reporting standards should remain in the private sector and that the accounting profession should work closely with the SEC [Chasteen et al. 1992]. However, it has enacted laws directly affecting financial accounting when it believed tax policy was being threatened (e.g. the ITC issues in 3.2.2). Would the US Congress want a greater role in the conformity process?

The Treasury Department and the IRS have attacked GAAP on numerous occasions because it did not clearly reflect income. The AICPA believes that tax accounting should conform to financial accounting. Would the Treasury Department and the IRS change their concept of what is a clear reflection of income? Alternatively, would they surrender the power to challenge financial accounting methods? How would its audit policy and program be affected?

Ultimately, would the tax administrators reduce their control over the administration of the tax system? Would they be willing to shift concern over the public fisc to the accounting profession and would that produce a conflict of interests? Sometimes the corporate regulators overrule financial accounting practices promulgated by the accounting profession because they do not reflect the regulators' belief about the correct financial accounting treatment. If two powerful accounting rule-makers do

not agree on the appropriate financial accounting treatment then which treatment would be appropriate for tax purposes? Also, if the government needs an agency to protect the nation's interest in financial reporting then how could it not need a powerful agency to protect its tax policy interests. Clearly this suggests that the administrators would not reduce their powers or influence. It also suggests that perhaps the objectives of the two systems are so diverse such that neither group could, would, nor should surrender any rule-making power to the other.

Concerns over the standard-setting process of the financial accounting bodies also raise questions about the appropriateness of aligning tax and financial accounting rules. Financial accounting standard setting bodies have been criticised.[41] Almost from the beginning of its existence the Accounting Principles Board (APB), the predecessor of the FASB, was criticised for its inability to reduce areas of difference and inconsistency in financial accounting and reporting [Chasteen et al. 1992, p. 16]. The FASB also is beset with critics and has been characterised as lying in dead water. Some believe that the accounting standard-setting process in the USA is in deep trouble, possibly such deep trouble that the present structure is irretrievably lost to us [Burton and Sack 1990, p. 117].

Dissatisfaction with the governing bodies and standard setting process in Australia also is evident [Craig and Clarke 1993; Rahman 1991]. Gavens et al. [1989] found that larger companies participated in the accounting standards setting process to a greater extent than small companies. As companies participating in the process often did so as a result of disagreement with a proposed accounting standard, Gavens et al. suggested that standard-setters should be wary of this apparent bias in the process. In an interview, Ray Chambers noted that the Accounting Standards Board in Australia have produced standards that are standards in name but not in effect. They have been powerless to curb cosmetic and creative accounting [English 1989].

If the financial accounting standard setting bodies cannot satisfy their constituency then it is unlikely they would be able to meet the needs of tax authorities. Thus, it appears that the governing bodies of tax and financial accounting are very different and the two systems also are very different. Neither would be willing to give much ground to the other and such action would reduce the efficacy of a complete conformity.

3.3.8 Accounting profession

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41 See, for example, Van Riper [1994] for a review of the FASB's operations during its first 20 years and the efforts of the American corporate sector over the years to frustrate the FASB in fulfilling its mandate.

In addition to the power conflict and potential distortion to accounting policy development noted above, conformity would lead to changes in the conduct of the accounting profession. The need for tax specialists and tax services would decline. Correspondingly, the role and responsibilities of the auditor would increase. Financial statements also would be subject to review by the tax administrators. As such, the auditor would face additional liability exposure. Also, what would be the effects of a tax audit that requires a change in the financial statements in which the statutory auditor has issued an unqualified opinion? Would this imply that the statements were not in accord with GAAP and what effect would this have on auditor liability to those who relied on said statements? Conflicts such as these would have a detrimental effect on the accounting profession.

3.3.9 Revenue collection and tax policy measures

The concerns and objectives of the tax and financial reporting systems are quite different. As noted above, conformity would not necessarily result in increased simplicity, certainty or equity. Conformity would also inhibit the achievement of each system's objectives. The primary objective of raising revenue would be affected substantially for at least two reasons, earnings management and distortions in the accounting rule-making process. Previous research indicates that firms manage their earnings to achieve favourable tax positions, and that in general, larger firms do this more than smaller firms. Such behaviour would lead to reduced revenues. Also, if the accounting standard-setting bodies were to succumb to pressures to promulgate tax-favourable accounting policies then tax revenues would decline. Finally, financial accounting methods are not designed to be revenue raisers per se; accounting principles such as matching and conservatism sometimes produce the opposite results. The writeoff of Latin American debt by large US banks noted earlier is a good example of this difference.

In its quest for revenue the government is concerned with obtaining funds when firms have them. This 'wherewithal to pay' concept overrides the accrual concept. In some instances, even though a firm may have not yet 'earned' the funds, it must recognise revenue because cash has been received.[42] The government's concern is to obtain the cash while it is available. If the government waits until the firm earns it (e.g. by performing the services or delivering the goods), the firm may not have the cash to pay its tax liability any more.[43]

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[42] One striking example in Australia is *GP International Pipecoaters Pty Ltd v. FCT* (1990) 90 ATC 4413.

[43] The wherewithal to pay concept (as reflected through the claim of right doctrine) is applied in the USA but taxpayers also are permitted to carry back a net operating loss to the three years preceding the loss year. Carryback of loss is not permitted in Australia.

Thus, it appears that conformity would result in lost tax revenues unless the government intervened and/or exceptions to financial accounting rules were made to prevent revenue loss. Either action leads to divergence from conformity.

The government's ability to control the economy and to encourage or to discourage certain activities also would be reduced. For example, the US Congress has attempted to encourage the exploration and development of natural resources by allowing taxpayers to deplete such resources under the cost or statutory (percentage) methods, whichever produces a larger deduction. In many cases statutory depletion leads to significantly greater deductions than does cost depletion. Additionally, percentage depletion deductions are permitted even after the cost of the asset has been recovered through previous deductions. Only the cost method is permitted for financial accounting purposes and depletion deductions stop once the cost is recovered. Each group's permitted methods are sound and meet the group's objectives, yet the methods are very different and need to be in order to accomplish the group's objectives.

Overall it appears that a complete alignment of the two sets of rules would reduce the ability of each system to achieve its objectives and standards.

3.4 Conclusion

Ultimately the answer to the question "should tax and financial accounting be aligned?" depends on whether it is beneficial to the society as a whole. Theoretically it is possible to have complete alignment as in many continental European countries. Certainly at present there is some degree of alignment in Anglo-Saxon countries. Yet, a complete alignment of the two sets of rules does not appear to be feasible in Anglo-Saxon countries because of their institutional arrangements. There are too many differences between the two sets of rules: differences in underlying concepts, in methods and practices, and in governing agencies. These differences should exist because they have different constituencies and different objectives. Thus, probably it is in the public interest that the two sets of rules be kept separate. The distortions to both systems and therefore the impact on the audiences they serve would be too great if a complete conformity were imposed or voluntarily adopted.

To provide evidence about the potential impact of conformity in the Australian context, three empirical studies have been conducted. In the following chapter, the results of a comprehensive study of the effective tax rates of 549 Australian firms will be reported. The discrepancy between the effective tax rate and the statutory tax rate provides an indication of the gap between accounting earnings and taxable

income, and hence the potential impact of alignment on government revenue in the absence of further earnings management. Chapter 5 presents the results of an analysis of tax disclosure data of 46 firms to identify and quantify the major causes of the book-tax income gap. In chapter 6, the results of a postal questionnaire survey of opinions of major corporate taxpayers and tax practitioners on the alignment issue will be reported, together with an estimation of the impact of alignment on compliance costs and earnings of tax practitioners.

CHAPTER 4

EFFECTIVE TAX RATE AND THE BOOK-TAX INCOME GAP

Based on the anecdotal evidence of substantial book-tax income gaps cited in the previous chapter, it would appear that government revenue would increase if the existing book-tax income gaps were closed as the result of a complete alignment of tax rules with financial accounting rules. However, anecdotes adduced to demonstrate inequity of the tax system tend to be cases in which taxable income substantially falls short of accounting earnings. In some instances the reverse is true. Unless an empirical study is conducted to quantify the book-tax income gap based on a large sample, one cannot estimate whether conformity would have a positive or negative impact on government revenue.

Although accounting profit data are available on databases, taxable income data collected by the Australian Tax Office are confidential to the administrators and cannot be accessed by the public. Thus, a direct comparison of accounting profit and taxable income is not possible.[44] Nevertheless, the discrepancy between the effective tax rate (ETR) of a firm and the nominal or statutory tax rate[45] (STR) provides an indication of the book-tax income gap due to permanent differences.[46]

ETR is the ratio of tax expense (TE) to accounting profit before tax (AP) in the profit and loss statement, i.e.

$$ETR = \frac{TE}{AP} \qquad (1)$$

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44 Taxable income may be estimated by a detailed analysis of tax information disclosed in published financial reports of listed companies (see the analysis reported in chapter 5). However, tax disclosure data of some companies are incomplete. Also, due to resource constraints, building up a database of tax disclosure data for a large sample of companies is not feasible.

45 In Australia, companies are taxed at a flat statutory rate regardless of the level of taxable income.

46 The differences between accounting profit and taxable income are classified into two main types: permanent differences and timing differences. Permanent differences arise because certain revenues and expenses included in the determination of accounting profit are never included in the determination of taxable income, or vice versa. Timing differences arise because certain revenues and expenses are included in the determination of accounting profit for one period, but are included in the determination of taxable income for another period. Examples of permanent and timing differences can be found in chapter 5, section 5.2.3.

According to Australian accounting standards,[47] tax expense is based on pre-tax accounting profit (AP) adjusted for permanent differences (PD),[48] i.e.

$$TE = (AP \pm PD) \times STR \quad (2)$$

or,

$$STR = \frac{TE}{AP \pm PD} \quad (3)$$

A comparison of equations (1) and (3) shows that the discrepancy between ETR and STR is caused by permanent differences. If a firm's ETR is lower than the STR, then the firm's accounting profit is greater than its taxable income due to permanent differences, and vice versa. If ETRs are not statistically significantly different from the STR, then permanent differences also are not significantly different from zero. Thus, a comparison of ETRs and the STR provides a measure of the book-tax income gap caused by permanent differences.

This chapter reports the results of a comprehensive study of the ETRs of listed companies (and listed property trusts) in Australia. The ETRs of 549 firms over the 11-year period 1983-1993 were analysed using regression models to determine if any statistically significant discrepancy between ETRs and STR existed. To explain the variation of ETRs across firms, industry affiliations and firm sizes (using asset sizes and profit levels as two alternative proxies) were included as independent variables in the regression analyses. In addition to estimating the book-tax income gap caused by permanent differences to address the alignment issue, the analysis also provides evidence to assess the equity dimension of the Australian corporate tax system, and to test the political cost hypothesis formulated in positive accounting research literature.

This chapter is organised as follows. Prior research in the USA using corporate ETRs is briefly reviewed in section 4.1. Section 4.2 provides a detailed description of the research design. In section 4.3, the results of statistical analyses are reported. The research design is evaluated and the findings are summarised in section 4.4.

4.1 Prior Research

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47 Accounting Standards AAS 3 and AASB 1020 – Accounting for Income Tax (Tax-effect Accounting). UK and USA accounting standards also have similar requirements.

48 Timing differences not brought to account, e.g. losses, are also treated as permanent differences. See categorisation of gap components in section 5.2.3, and the reconciliation in Table 5.2.

There have been numerous ETR studies in the USA, and their findings are somewhat contradictory. Stickney and McGee [1982] computed corporate ETRs based on accounting data of US companies for 1978 and 1980. ETR was defined to be worldwide tax payable divided by pre-tax net income adjusted for the effect of timing differences. Cluster analysis was used for grouping firms with similar characteristics. Their results showed that firms with the lowest ETRs tended to be highly leveraged, heavily capital intensive, and involved in natural resource industries. Extent of foreign operations and firm size based on sales and assets did not appear to play a dominant role in explaining differences in ETRs.

Zimmerman [1983] tested the relationship between firm size and ETR for the 1970-81 period. Companies in the sample first were partitioned into four roughly equal groups (quarters) based on rankings of sales revenue. The first quarter ranges from the minimum value to the lower quartile; the fourth quarter ranges from the upper quartile to the maximum value. Zimmerman split the 50 largest companies from the fourth quarter to form a fifth group. He defined ETR as the ratio of tax currently payable to gross profit and computed the unweighed mean ETR for each category each year. The results show that the 50 firms with the largest sales revenue consistently had higher ETRs than the remaining firms. Explanations such as fixed tax shields, diversification, and foreign tax could not fully account for the results. The evidence supports the use of firm size as a proxy for the firm's political costs and is consistent with the political cost hypothesis.

The political cost hypothesis states that the larger the firm, the higher its political costs (size hypothesis), and the more likely management will choose accounting procedures to reduce reported earnings in order to reduce political costs [Watts and Zimmerman 1986; Whittred and Zimmer 1990].[49] One implication of the political cost hypothesis is that if large firms tend to employ income-reducing accounting procedures, then their ETRs based on accounting profits will be higher than those of small firms. The present ETR analysis designed to study the ETR/STR gaps also provides statistics to test the political cost hypothesis in the Australian context.

In evaluating prior research, Ball and Foster [1982, p. 183] raised the issue of construct validity in testing the political cost hypothesis. They pointed out that firm size was associated with industry because firms within an industry tended to have similar sizes. Therefore, industry membership was a confounding factor.[50] The present study addresses this problem by segregating the effects of industry affiliation and firm size on ETRs.

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49 Previous studies conducted in Australia and New Zealand to test the political cost hypothesis have produced mixed results, e.g. Zimmer [1986] and Wong [1988].

50 That is to say, if a statistical association was found between firm size and accounting policy choice, the association might be due to firm size proxying for industry membership, rather than firm size proxying for political costs.

Porcano [1986] studied the effect of firm size on ETRs to examine whether the US corporate tax structure was progressive, proportional, or regressive. Four different size criteria were used to classify firms into quarters – total assets, sales, pre-tax net income and capital expenditure. ETR was defined as the ratio of current US federal income tax to US pre-tax net income. ETRs for two years, 1982 and 1983, were computed. The ETR for each quarter was a weighted average. The weights were pre-tax income of firms. The results showed that the ETR for US companies was very low and large firms had lower ETRs than small firms, suggesting that the corporate tax rate in the USA was regressive. Further analysis indicated that the regressive tax structure was due mainly to heavier use of accelerated depreciation allowances and foreign tax credits by larger firms. The finding of a regressive tax structure is consistent with other ETR studies in the USA such as Citizens for Tax Justice [1985], but is at odds with the finding of Zimmerman [1983].[51]

Despite these inconsistent findings, corporate ETRs have played an important role in the formation of corporate tax policy and tax law reform in the USA [Birnbaum and Murray 1987]. Studies by pressure groups such as Citizen for Tax Justice [1985], which demonstrated that large US corporations were paying little tax, provided the impetus for many of the major changes enacted in the US *Tax Reform Act of 1986* [Callihan 1994].

The equity issue also has been raised in Australia from time to time. For instance, most of the 15 large companies (with over $20 million profits or over 20 percent of their profits derived in tax havens in 1988) identified by the Standing Committee on Finance and Public Administration [1989, p. 63] had low ETRs. Ryan [1994] also reported a survey by *The Sydney Morning Herald* which showed that some of the largest Australian companies managed to pay little or no tax. However, no comprehensive ETR analysis appears to have been conducted in Australia.

The ETR analysis reported in this chapter contributes to the literature by providing an insight into the book-tax income gap to address the alignment issue, and by presenting empirical evidence of the ETR structure of Australian companies to address the equity issue and to test the political cost hypothesis in the Australian context.

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[51] The apparent inconsistency between the finding of Zimmerman [1983] and that of Porcano [1986] led Wilkie and Limberg [1990] to replicate the two studies to reconcile their results by identifying and controlling for the major differences in their research procedures. The differences included ETR definitions, sample selection methods (databases used and time periods covered), firm size proxies, and data aggregation procedures (weighted versus unweighted mean). They showed that the combined effect of different empirical procedures could change the direction and magnitude of the relationship between firm size and ETR.

4.2 Research Design

The research method employed in the study was statistical analyses of corporate ETRs using multiple linear regression models. Regression models were used because they could provide estimations in addition to testing hypotheses. When industry and firm size were simultaneously included as independent variables, the models estimated industry effect after controlling for size effect, and estimated size effect after controlling for industry effect. This is an improvement over previous ETR studies which examined size differences without controlling for industry differences.

The statistical procedures first estimated the parameters of the regression models. These parameters measured the differences between ETRs of firms with different industry affiliations and of different sizes. Statistics were generated to test hypotheses about the equity issue. The parameters were then used to estimate ETRs and to construct confidence intervals to test if there was any significant difference between ETRs and the STR, and if so, in which direction.

Thus, even though the main objective of the analysis was to address the alignment issue, the statistical procedures entailed an assessment of the equity dimension of the corporate tax system to be carried out first.

4.2.1 Hypotheses

There were two sets of null hypotheses corresponding to the equity issue and the alignment issue. To address the equity issue, the null hypothesis was:

H_0: The ETRs of different firms are not significantly different from *each other* regardless of industry affiliation, asset size, and profit level.

To examine the ETR structure across industries and firm sizes, and to test the political cost hypothesis, the null hypothesis H_0 was broken down into three components:

H_{01}: Holding size constant, the ETRs of firms in different industries are not significantly different from *each other*.

H_{02}: Holding industry constant, the ETRs of firms of different asset sizes are not significantly different from *each other*.

H_{03}: Holding industry constant, the ETRs of firms of different profit levels are not significantly different from *each other*.

Theoretically, industry affiliation and firm size should not affect ETRs. However, because tax provisions are not neutral across industries and because firms of different sizes are better/less able to take advantage of said provisions and/or are better/less able to manage their earnings, the three null hypotheses were expected to be rejected.

To test whether ETRs were significantly different from the STR, and hence whether accounting profits were significantly different from taxable incomes due to permanent differences, the three null hypotheses above were modified as follows:

H'_{01}: Holding size constant, the ETRs of firms in different industries are not significantly different from *the STR*.

H'_{02}: Holding industry constant, the ETRs of firms of different asset sizes are not significantly different from *the STR*.

H'_{03}: Holding industry constant, the ETRs of firms of different profit levels are not significantly different from *the STR*.

Again, because of non-neutral tax provisions and different constraints on earnings managements, the three modified null hypotheses were expected to be rejected for certain industries or firm sizes.

4.2.2 Definition of ETR

A firm in the present study refers to a group of companies under a common control or to a property trust, i.e. an economic entity. Many listed companies are holding companies which conduct businesses through subsidiaries and receive dividends as their major source of income. Defining 'firm' as a group of companies rather than a single company substantially reduces the gap caused by dividend rebates, because intra-group dividends have been eliminated upon consolidation.

Published financial statements were the only data source for computing ETRs of firms based on accounting profits. ETRs in this study were computed from consolidated financial statement data of firms listed on the ASX. The ETR for each firm was defined as the ratio of average tax expense to average pre-tax group profit for as many years as data were available on the STATEX financial statement database of the ASX over the 11-year period from 1983 to 1993 (the study period), i.e.

$$\text{ETR} = \frac{\text{Average group tax expense}}{\text{Average group profit before tax}} \qquad (4)$$

The reason why ETR was computed by dividing average tax expense by average pre-tax profit rather than using the annual tax and profit figures is explained in

Appendix 1. Using average tax and profit over a number of years corrected to a large extent the distortions of ETRs caused by the carryforward of losses. Under the Australian income tax law, if a company incurred net operating losses, then for tax purposes the losses could be carried forward to offset against future profits. The ETR(s) for the year(s) subsequent to incurrence of losses would be distorted until the losses were fully recouped. Such distortion arose because the government took its share in corporate profits immediately but deferred its contribution to corporate losses until the company earned profits again. Asymmetrical treatment of profits and losses for tax purposes has rendered time series study of annual ETRs difficult to conduct.[52] Computing ETR based on tax and profit averaged (or aggregated) over a number of years largely avoided such distortions. They were more stable than the annual ETRs, and were more amenable to statistical analysis.

Although profits of Australian companies were taxed at a flat STR, the STRs applicable to the years in the study period varied.[53] To make inter-firm comparison meaningful, the annual tax expenses were adjusted using a common (benchmark) STR before they were averaged to form the numerator of an ETR. The STR of 39 percent was chosen as the benchmark because it applied to five of the 11 years under study and it was the latest STR for the study period. Tax expenses for different years were adjusted to what would have been the amounts had the STR for all years been 39 percent using the following adjustment ratio:

$$\text{Adjustment ratio} = \frac{\text{Benchmark STR (39 percent)}}{\text{Actual STR applicable to the accounting period}} \qquad (5)$$

Thus, the benchmark STR with which the computed ETRs are to be compared is 39 percent.

In previous studies conducted in the USA, researchers have used (a) either current tax payable only, or current tax and deferred tax,[54] and (b) either domestic tax only, or domestic and foreign taxes, to compute ETR. The choice depends on the research questions. The ETR computed in the present study used average tax expense in the consolidated profit and loss statements as the numerator, which included both current tax and deferred tax, Australian tax and foreign tax. Deferred tax data and foreign tax data were not available separately on the database used for

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52 Asymmetry of tax treatment of profits and losses may be less problematic in the USA as it is in Australia, because US tax law allows both carryback and carryforward of losses, and so incurrence of losses may result in a refund of prior year taxes.

53 The STR varied from 46 percent for the income years 1982/83 to 1985/86, to 49 percent for 1986/87 and 1987/88, and 39 percent for 1988/89 to 1992/93.

54 Omer et al. [1990] compared different ETR measures based on financial statement information used in prior research and found that systematic differences in deferred tax reporting in financial statements could cause notable shift in the estimated ETR.

the present study. Also, excluding foreign tax would understate the actual tax burden of firms unless profits from foreign sources also were excluded.

4.2.3 Data, industry and size classification

Relevant data of 1,884 firms which had been listed on the ASX for some time during the 11-year period from 1983 to 1993 were extracted from the STATEX financial statement database accessed through Reuter Link. Due to delisting or recent listing, most firms did not have data available for the whole study period. The following data for each firm-year were extracted for the purposes of the study:

- industry code (for industry classification);
- total assets (for size classification);
- balance date (for tax rate adjustment[55]);
- group profit before tax (for computation of ETR, and for size classification), and
- tax expense (for computation of ETR).

The ASX adopted its own industry classification to classify listed companies and trusts. The current industry classification was introduced in November 1987, so only firms with a post-1987 industry code available on the database were included in the sample. Valid data were available for 1,302 firms. The other 582 firms were delisted before 1988.

Firms with valid data then were deleted based on one of the following three criteria[56]: (a) the company was a foreign company; (b) average pre-tax profit was

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55 Income tax is computed by applying STR to taxable income derived in each income year. In Australia, income years end on 30 June. For companies whose accounting periods end other than on 30 June, tax administrators have the discretion to set rules to relate an accounting period to an income year, and hence to a particular STR. According to the practice of the Australian Taxation Office, 1 December is the dividing line. If the balance date of a company falls between 1 July and 30 November, the accounting period will take the place of the income year ending on the preceding 30 June. However, if the balance date falls between 1 December and 29 June, the accounting period will take the place of the income year ending on the following 30 June. For instance, if the accounting period of a company ended on 30 September 1988, then the STR applicable was 49 percent (1987/88 income year). If the balance date was 31 December 1988, then the STR applicable to the accounting period was 39 percent (1988/89 income year).

56 Similar exclusions were made in prior research, e.g. by Stickney and McGee [1982, p. 132], Zimmerman [1983, p. 123] and Porcano [1986, p. 22] in their studies. However, Porcano only excluded firms with net operating losses and included firms with negative tax expense but

non-positive, or average tax expense was negative,[57] or (c) the computed ETR was equal to or greater than 100 percent. Thirty-two foreign companies (e.g. Philip Morris) were deleted because only a minor portion of their profits was subject to Australian income tax. Six hundred eighty-nine firms with non-positive average profit or negative average tax, or both, were excluded under the second criterion because the ETR of these firms had little meaning. The last exclusion criterion eliminated extreme values that would dominate the results. Thirty-two firms with ETRs equal to or greater than 100 percent were eliminated. These three exclusion criteria reduced the final sample size to 549 firms with a total of 3,953 firm-years. An ETR was computed for each firm in the final sample.

The industry classification of these companies was based on the latest available post-1987 ASX industry code found on the database. Twenty-three industries were represented. Table 4.1 shows the distribution of firms in different industries according to ASX classification. Industry classification was based on the largest source of a firm's revenue. Firms were not distributed evenly among industries. Six industries had less than ten firms.

Size classification was based on two separate criteria: average total assets[58] (Model 1) and average pre-tax group profit[59] (Model 2) over the years in the study period for which data were available on the database. The correlation coefficient of average total assets and average pre-tax profit of firms in the final sample was 0.654 , so they were not included in the same regression model to avoid the problems of collinearity.

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reporting profits, i.e. some negative ETRs were included in the computation of mean ETR for each size category.

57 Firms with zero average pre-tax profits were excluded because ETR could not be computed if the denominator was zero. Firms with zero average tax expense were included because most likely they had benefited from preferential tax treatments and one of purposes of this study was to assess whether all companies were taxed in the same manner.

58 Total asset figures were missing for seven of the 549 firms. Thus, when total asset rankings were used for size classification, there were only 542 firms in the sample.

59 Because large firms were observed to receive wealth transfers in the form of government guarantees and import restrictions especially when they were in distress, Watts and Zimmerman [1986, p. 239] suggested that a better proxy for political costs or wealth transfers was a firm's accounting earnings rather than size based on sales or assets.

TABLE 4.1

INDUSTRY DISTRIBUTION OF FIRMS IN THE FINAL SAMPLE

BASED ON ASX INDUSTRY CLASSIFICATION

Code	Industry	Number of Firms
10	Gold	41
20	Other metals	30
30	Solid fuels	8
40	Oil and gas	14
50	Diversified resources	3
60	Developers and contractors	29
70	Building materials	27
80	Alcohol and tobacco	12
90	Food and household goods	27
100	Chemicals	6
110	Engineering	27
120	Paper and packaging	6
130	Retail	20
140	Transport	8
150	Media	18
160	Banks	14
170	Insurance	10
180	Entrepreneurial investors	7
190	Investment and financial services	90
200	Property trusts	19

210	Miscellaneous services	66
220	Miscellaneous industrials	52
230	Diversified industrials	15
	TOTAL	**549**

TABLE 4.2

SIZE DISTRIBUTION OF FIRMS IN THE FINAL SAMPLE

PANEL A: Size Based on Average Total Assets

Asset Size	Range of Average Total Assets	Number of Firms*
1 (Smallest)	Up to $22m	136
2	$22m^{+} to $68m	135
3	$68m^{+} to $230m	133
4	$230m^{+} to $1,200m	87
5 (Largest)	$1,200m^{+}	51
TOTAL		**542**

* Total asset figures were missing for seven of the 549 firms.

PANEL B: Size Based on Average Pre-tax Group Profit

Profit Size	Range of Average Pre-tax Profits	Number of Firms
1 (Smallest)	Up to $1m	137
2	$1m^{+} to $4m	139
3	$4m^{+} to $15m	136
4	$15m^{+} to $60m	85
5 (Largest)	$60m^{+}	52
TOTAL		**549**

In order that the results of this study could be compared with those of the previous studies in the USA, firms in the final sample were first divided into four quarters, Size 1 (minimum to lower quartile) to Size 4 (upper quartile to maximum), based on the rankings of (a) average total asset and (b) average profit. To test the firm size hypothesis, approximately 50 of the largest companies then were split off from Size 4 to form a separate group (Size 5) following Zimmerman [1983]. The cutoff points and the number of firms in each of the five size categories are shown in Panels A and B of Table 4.2 using the rankings of average total assets and average pre-tax profits, respectively.

4.2.4 Linear regression models

Ordinary least squares (OLS) regression models with ETR as the dependent variable, and industry and size as two categorical independent variables, were used to analyse the computed ETRs. A dummy variable was set up for each industry or size category. It had the value of 1 if the firm fell into that industry or size category, and 0 if otherwise. Each model was represented by the following regression equation:

$$ETR_i = \alpha + \beta_2 I_{2i} + \ldots + \beta_{23} I_{23i} + \gamma_2 S_{2i} + \ldots + \gamma_5 S_{5i} + \varepsilon_i \qquad (6)$$

where α is the constant term which estimates the ETR for Industry 1 and Size 1; I_2 to I_{23} are dummy variables for the other 22 industries in the ASX classification, and S_2 to S_5 are dummy variables for the other four size categories; i is the index for firm; the β's and γ's are parameters for the industry and size dummy variables, which measure the difference in estimated ETRs between Industry 1 and other industries and between Size 1 and other size categories; and ε represents the error term.

4.3 Results and Interpretation

4.3.1 Statistical significance of the models

Table 4.3 shows the statistical significance of the two regression models and the independent variables. Model 1 included industry and size based on average total assets as independent variables,[60] and Model 2 included industry and size based on average pre-tax profits.[61]

TABLE 4.3

STATISTICAL SIGNIFICANCE OF INDEPENDENT VARIABLES

Model and Independent Variable	F-statistic	p-value
Model 1 (Size based on Total Assets)		
Adjusted $R^2 = 0.222$		
Industry and Asset Size (without interaction terms)	6.85	<0.001
Industry, adjusted for Asset Size	7.74	<0.001
Asset Size, adjusted for Industry	2.84	0.024
Industry alone, ignoring Asset Size	7.57	<0.001

60 Seven outliers with standardised residuals greater than 3 were removed to improve the fit of the model. The final number of firms included in Model 1 was 535. These outliers were in different industries and in various size categories. They had ETRs ranging from 84 percent to 99 percent.

61 Four outliers (standardised residual > 3) were removed to improve the fit, leaving 545 firms in Model 2. These four outliers are among the seven removed from Model 1, and had ETRs ranging from 84 percent to 99 percent.

Asset Size alone, ignoring Industry	1.95	0.100

Model 2 (Size based on Pre-tax Profits)

Adjusted $R^2 = 0.224$

Industry and Profit Size (without interaction terms)	7.03	<0.001
Industry, adjusted for Profit Size	7.88	<0.001
Profit Size, adjusted for Industry	3.59	0.007
Industry alone, ignoring Profit Size	7.65	<0.001
Profit Size alone, ignoring Industry	2.30	0.058

The interaction terms of industry and size were not statistically significant, so they were not included in the final models. Without the interaction terms, the models were additive models. The estimated ETR for Industry m and Size n was simply the sum of the constant term, the coefficient of Industry m, and the coefficient of Size n. The mean ETR was 30 percent and the standard deviation was 16 percent.

The adjusted R^2 was 22.2 percent for Model 1, and 22.4 percent for Model 2. The low percentage of variance accounted for by the models suggested that other variables such as firm specific characteristics also affected firms' ETRs. However, the F-statistic was 6.85 for Model 1, and 7.03 for Model 2, which were significant at less than the 0.001 level.

The results for Model 1 indicate that industry affiliation was significantly associated with firms' ETRs, whether industry affiliation was fitted alone, or along with firm size (based on total assets) and adjusted for firm size. In each instance the F-

statistic was significant at less than the 0.001 level. Industry effect was very strong. Firm size (based on total assets) also was significant when fitted along with industry and adjusted for industry; however, it was only marginally significant by itself. These results confirm that industry membership was a confounding factor in testing the size hypothesis as noted by Ball and Foster [1982]. Similar industry effect and firm size (based on profit) effect were observed for Model 2.

4.3.2 Diagnostic tests

The results of three diagnostic tests, which are similar for both models, are discussed below. Figures 4.1 and 4.2 show the diagnostic plots for the two models.

FIGURE 4.1

DIAGNOSTIC PLOTS FOR MODEL 1

(INDUSTRY AND SIZE BY AVERAGE TOTAL ASSET RANKINGS)

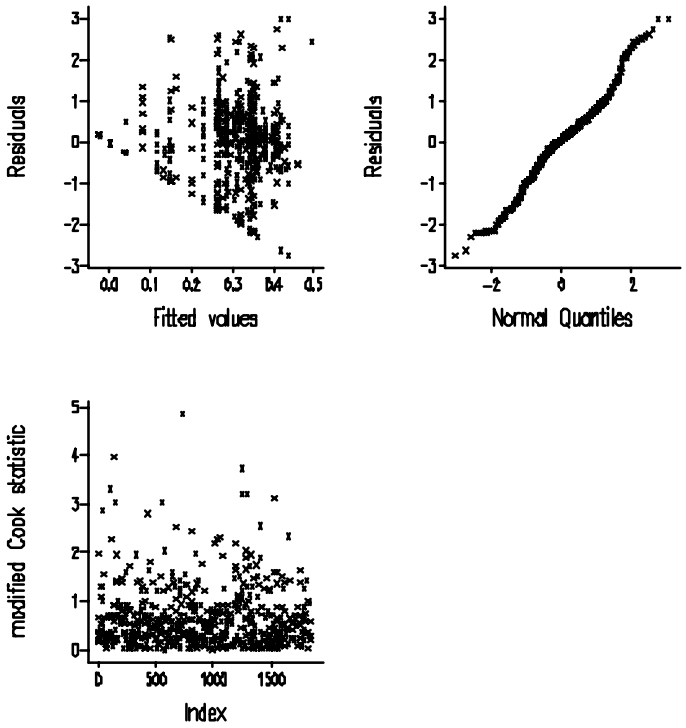
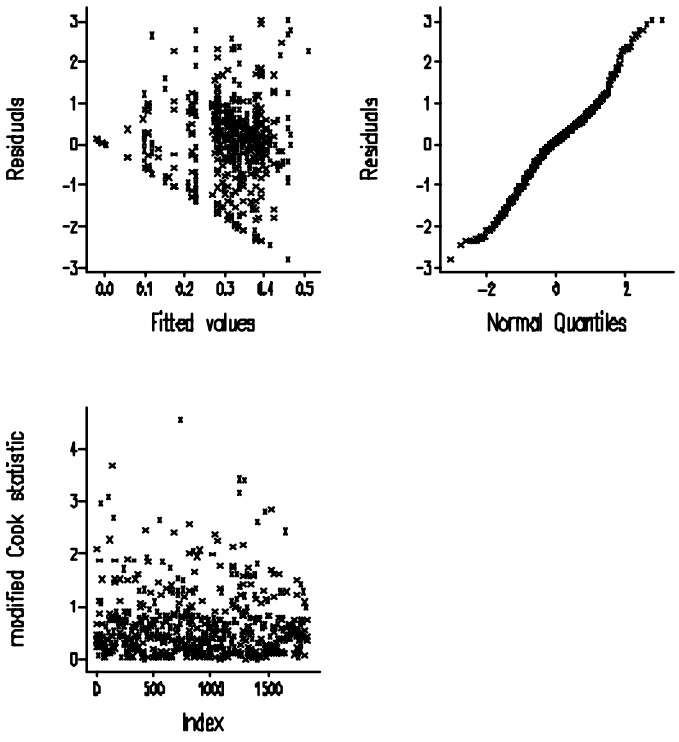


FIGURE 4.2

DIAGNOSTIC PLOTS FOR MODEL 2

(INDUSTRY AND SIZE BY AVERAGE PRE-TAX PROFIT RANKINGS)



First, plotting standardised residuals against fitted values revealed that the error variance was not constant because the minimum value of ETR was restricted to zero by excluding firms with negative tax or negative profit. Nonetheless, a reasonable spread of residuals was observed above the base line, so non-constant variance did not appear to pose any serious problem.

Second, a plot of a measure of influence (modified Cook statistic) indicated that firms in Diversified Resources, Chemicals, Paper and Packaging, and Entrepreneurial Investors had high leverage. Each of these industries consisted of only seven or fewer firms distributed among five size categories, so the ETR of each firm in these industries was highly influential in estimating the ETR for an industry-size mix. Since firms did not evenly spread among 115 industry-size combinations, the estimated ETR for industries having a small number of firms and for industries with skewed size distribution should be interpreted with caution.

Third, plotting standardised residuals against normal quartiles shows that the residuals are approximately normally distributed. Thus, the reported p-value of F-statistic or t-statistic can be used for hypothesis testing.

4.3.3 Industry differences

Tables 4.4 and 4.5 summarise the regression results respectively for Models 1 and 2. The estimate for the constant term (15 percent in Table 4.4; 17 percent in Table 4.5) is the estimated ETR for Industry 1 (Gold) and Size 1. The estimated coefficients for the dummy variables in Tables 4.4 and 4.5 measure the differences in ETRs between the gold-mining industry and other industries holding size constant, and between Size 1 and other size categories holding industry constant. The estimated industry coefficients for the two models are very similar in magnitude and sign.

Estimated ETR and standard error for each industry-size combination from the two models are shown in Tables 4.6 and 4.7. A review of Table 4.6 indicates that in Model 1, for the smallest firms (firm size 1) ETRs ranged from 3.9 percent for Property Trusts to nearly 50 percent for Chemicals. For the 50 largest firms (firm size 5), ETRs ranged from -2.4 percent (Property Trusts) to 43 percent (Chemicals).

Results are somewhat similar when firm size is based on pre-tax profits (Model 2, Table 4.7). The range of estimated ETRs for firm size 1 was 5.8 percent (Property Trusts) to 51 percent (Chemicals); for firm size 5 they ranged from -2.2 percent (Property Trusts) to 43 percent (Chemicals).

Thus, in both models, ETRs varied substantially between industries ($p < 0.001$ in Table 4.3). There was a strong industry effect. Overall, the results provide evidence to reject the null hypothesis H_{01}.

To test the null hypothesis H'_{01}, 95 percent confidence intervals were constructed using the standard errors in Tables 4.6 and 4.7. Figures 4.3 and 4.4 show the estimated ETRs and their confidence intervals for different industries for Model 1 (Asset Size 1) and Model 2 (Profit Size 1) respectively. Each vertical line represents the confidence interval for an industry, and the mid-point is the estimated ETR for that industry. The horizontal line shows the benchmark STR of 39 percent.

TABLE 4.4

ESTIMATES OF REGRESSION COEFFICIENTS OF MODEL 1*

(INDUSTRY AND FIRM SIZE BY AVERAGE TOTAL ASSET RANKINGS**)

	Estimate	Standard Error	t-statistic	p-value
Constant (Gold, Firm Size 1)	0.1500	0.0284	5.28	<.001
Industry Dummy Variable				
Other metals	0.1913	0.0401	4.77	<.001
Solid fuels	0.2767	0.0637	4.34	<.001
Oil and gas	0.2112	0.0509	4.14	<.001
Diversified resources	0.1993	0.0993	2.01	0.045
Developers and contractors	0.2051	0.0401	5.11	<.001
Building materials	0.2528	0.0410	6.17	<.001
Alcohol and tobacco	0.2462	0.0538	4.57	<.001
Food and household goods	0.2029	0.0407	4.98	<.001
Chemicals	0.3453	0.0716	4.82	<.001
Engineering	0.2669	0.0411	6.49	<.001
Paper and packaging	0.1971	0.0722	2.73	0.007
Retail	0.2894	0.0456	6.34	<.001
Transport	0.2584	0.0639	4.04	<.001
Media	0.2609	0.0466	5.59	<.001
Banks	0.2942	0.0574	5.13	<.001
Insurance	0.2223	0.0591	3.76	<.001
Entrepreneurial investors	0.0491	0.0676	0.73	0.468

Investment and financial services	0.1170	0.0315	3.71	<.001
Property trusts	-0.1107	0.0456	-2.43	0.015
Miscellaneous services	0.1960	0.0330	5.93	<.001
Miscellaneous industrials	0.2032	0.0345	5.88	<.001
Diversified industrials	0.2057	0.0505	4.08	<.001
Firm Size Dummy Variable				
Firm Size 2	-0.0033	0.0201	-0.16	0.869
Firm Size 3	-0.0358	0.0209	-1.71	0.088
Firm Size 4	-0.0678	0.0240	-2.82	0.005
Firm Size 5	-0.0628	0.0317	-1.98	0.048

---

* Adjusted $R^2 = 0.222$

** Size 1 = Minimum value to lower quartile

Size 2 = Lower quartile to median

Size 3 = Median to upper quartile

Size 4 = Upper quartile to maximum value, excluding top 50

Size 5 = Top 50

TABLE 4.5

ESTIMATES OF REGRESSION COEFFICIENTS OF MODEL 2*

(INDUSTRY AND FIRM SIZE BY AVERAGE PRE-TAX PROFIT RANKINGS**)

	Estimate	Standard Error	t-statistic	p-value
Constant (Gold, Firm Size 1)	0.1731	0.0294	5.89	<.001
Industry Dummy Variable				
Other metals	0.1737	0.0408	4.26	<.001
Solid fuels	0.2646	0.0653	4.05	<.001
Oil and gas	0.2111	0.0523	4.04	<.001
Diversified resources	0.1860	0.1020	1.82	0.069
Developers and contractors	0.1988	0.0410	4.85	<.001
Building materials	0.2471	0.0419	5.89	<.001
Alcohol and tobacco	0.2520	0.0555	4.54	<.001
Food and household goods	0.2067	0.0419	4.94	<.001
Chemicals	0.3364	0.0737	4.57	<.001
Engineering	0.2847	0.0418	6.81	<.001
Paper and packaging	0.1946	0.0742	2.62	0.009
Retail	0.2921	0.0470	6.22	<.001
Transport	0.2607	0.0658	3.96	<.001
Media	0.2698	0.0480	5.62	<.001
Banks	0.2621	0.0531	4.94	<.001
Insurance	0.2156	0.0599	3.60	<.001
Entrepreneurial investors	0.0404	0.0695	0.58	0.561

Investment and financial services	0.1077	0.0322	3.34	<.001
Property trusts	-0.1153	0.0468	-2.46	0.014
Miscellaneous services	0.2153	0.0337	6.39	<.001
Miscellaneous industrials	0.2042	0.0357	5.72	<.001
Diversified industrials	0.1953	0.0523	3.73	<.001
Firm Size Dummy Variable				
Firm Size 2	-0.0542	0.0205	-2.64	0.009
Firm Size 3	-0.0640	0.0213	-3.01	0.003
Firm Size 4	-0.0736	0.0243	-3.02	0.003
Firm Size 5	-0.0795	0.0305	-2.61	0.009

---

* Adjusted $R^2 = 0.224$

** Size 1 = Minimum value to lower quartile

Size 2 = Lower quartile to median

Size 3 = Median to upper quartile

Size 4 = Upper quartile to maximum value, excluding top 50

Size 5 = Top 50

TABLE 4.6

ESTIMATED ETR FROM REGRESSION MODEL 1

(INDUSTRY AND SIZE BY AVERAGE TOTAL ASSET RANKINGS*)

Estimated value followed by standard error (s.e.).

Asset Size	1		2		3		4		5	
Industry		s.e.		s.e.		s.e.		s.e.		s.e.
Gold	0.150	0.028	0.147	0.029	0.114	0.029	0.082	0.031	0.087	0.039
Other metals	0.341	0.033	0.338	0.033	0.306	0.033	0.274	0.035	0.279	0.038
Solid fuels	0.427	0.061	0.423	0.060	0.391	0.060	0.359	0.058	0.364	0.064
Oil and gas	0.361	0.046	0.358	0.046	0.325	0.045	0.293	0.046	0.298	0.050
Diversified resources	0.349	0.097	0.346	0.097	0.314	0.097	0.282	0.096	0.287	0.094
Developers and contractors	0.355	0.034	0.352	0.033	0.319	0.032	0.287	0.034	0.292	0.041
Building materials	0.403	0.034	0.400	0.034	0.367	0.033	0.335	0.036	0.340	0.040
Alcohol and tobacco	0.396	0.049	0.393	0.049	0.360	0.048	0.328	0.050	0.333	0.054
Food and household goods	0.353	0.033	0.350	0.034	0.317	0.034	0.285	0.036	0.290	0.040
Chemicals	0.495	0.068	0.492	0.069	0.460	0.067	0.428	0.068	0.433	0.070
Engineering	0.417	0.034	0.414	0.035	0.381	0.034	0.349	0.036	0.354	0.043
Paper and packaging	0.347	0.069	0.344	0.069	0.311	0.067	0.279	0.069	0.284	0.069
Retail	0.439	0.040	0.436	0.039	0.404	0.039	0.372	0.041	0.377	0.046
Transport	0.408	0.060	0.405	0.059	0.373	0.060	0.341	0.061	0.346	0.060
Media	0.411	0.041	0.408	0.040	0.375	0.041	0.343	0.042	0.348	0.045
Banks	0.444	0.053	0.441	0.053	0.408	0.052	0.377	0.053	0.381	0.045
Insurance	0.372	0.055	0.369	0.055	0.337	0.053	0.305	0.055	0.310	0.054

Entrepreneurial investors	0.199	0.064	0.196	0.064	0.163	0.063	0.131	0.063	0.136	0.065
Investment and financial services	0.267	0.020	0.264	0.021	0.231	0.023	0.199	0.026	0.204	0.034
Property trusts	0.039	0.040	0.036	0.040	0.003	0.039	-0.029	0.040	-0.024	0.046
Miscellaneous services	0.346	0.023	0.343	0.024	0.310	0.024	0.278	0.027	0.283	0.034
Miscellaneous industrials	0.353	0.025	0.350	0.026	0.317	0.026	0.285	0.029	0.290	0.037
Diversified industrials	0.356	0.046	0.352	0.046	0.320	0.045	0.288	0.043	0.293	0.049

* Size 1 = Minimum value to lower quartile

Size 2 = Lower quartile to median

Size 3 = Median to upper quartile

Size 4 = Upper quartile to maximum value, excluding top 50

Size 5 = Top 50

TABLE 4.7

ESTIMATED ETR FROM REGRESSION MODEL 2

(INDUSTRY AND SIZE BY AVERAGE PRE-TAX PROFIT RANKINGS*)

Estimated value followed by standard error (s.e.).

Profit Size	1		2		3		4		5	
Industry		s.e.		s.e.		s.e.		s.e.		s.e.
Gold	0.173	0.029	0.119	0.030	0.109	0.030	0.100	0.031	0.094	0.037
Other metals	0.347	0.033	0.293	0.035	0.283	0.034	0.273	0.034	0.267	0.038
Solid fuels	0.438	0.061	0.384	0.061	0.374	0.061	0.364	0.062	0.358	0.063
Oil and gas	0.384	0.048	0.330	0.047	0.320	0.047	0.311	0.047	0.305	0.050
Diversified resources	0.359	0.100	0.305	0.100	0.295	0.099	0.286	0.100	0.280	0.097
Developers and contractors	0.372	0.034	0.318	0.035	0.308	0.033	0.298	0.035	0.292	0.041
Building materials	0.420	0.035	0.366	0.035	0.356	0.036	0.347	0.036	0.341	0.040
Alcohol and tobacco	0.425	0.051	0.371	0.051	0.361	0.050	0.352	0.052	0.346	0.053
Food and household goods	0.380	0.035	0.326	0.035	0.316	0.035	0.306	0.037	0.300	0.040
Chemicals	0.509	0.070	0.455	0.071	0.445	0.070	0.436	0.070	0.430	0.072
Engineering	0.458	0.034	0.404	0.035	0.394	0.035	0.384	0.037	0.378	0.042
Paper and packaging	0.368	0.071	0.314	0.071	0.304	0.069	0.294	0.071	0.288	0.071
Retail	0.465	0.041	0.411	0.040	0.401	0.040	0.392	0.043	0.386	0.046
Transport	0.434	0.061	0.380	0.061	0.370	0.062	0.360	0.063	0.354	0.062
Media	0.443	0.043	0.389	0.042	0.379	0.041	0.369	0.044	0.363	0.045
Banks	0.435	0.049	0.381	0.049	0.371	0.047	0.362	0.048	0.356	0.048
Insurance	0.389	0.057	0.334	0.056	0.325	0.056	0.315	0.054	0.309	0.059

Entrepreneurial investors	0.214	0.066	0.159	0.066	0.150	0.064	0.140	0.067	0.134	0.067
Investment and financial services	0.281	0.021	0.227	0.021	0.217	0.023	0.207	0.027	0.201	0.033
Property trusts	0.058	0.041	0.004	0.041	-0.006	0.040	-0.016	0.042	-0.022	0.045
Miscellaneous services	0.388	0.024	0.334	0.024	0.324	0.025	0.315	0.027	0.309	0.034
Miscellaneous industrials	0.377	0.027	0.323	0.026	0.313	0.027	0.304	0.031	0.298	0.036
Diversified industrials	0.368	0.048	0.314	0.048	0.304	0.046	0.295	0.047	0.289	0.046

* Size 1 = Minimum value to lower quartile

Size 2 = Lower quartile to median

Size 3 = Median to upper quartile

Size 4 = Upper quartile to maximum value, excluding top 50

Size 5 = Top 50

FIGURE 4.3

MODEL 1 - ASSET SIZE 1

ESTIMATED ETR BY INDUSTRY WITH 95% CONFIDENCE INTERVAL

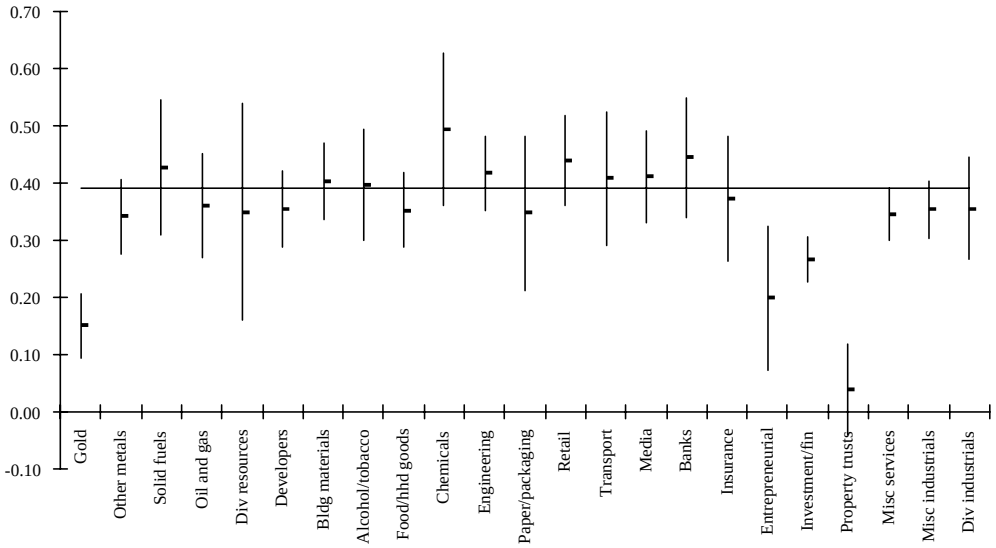
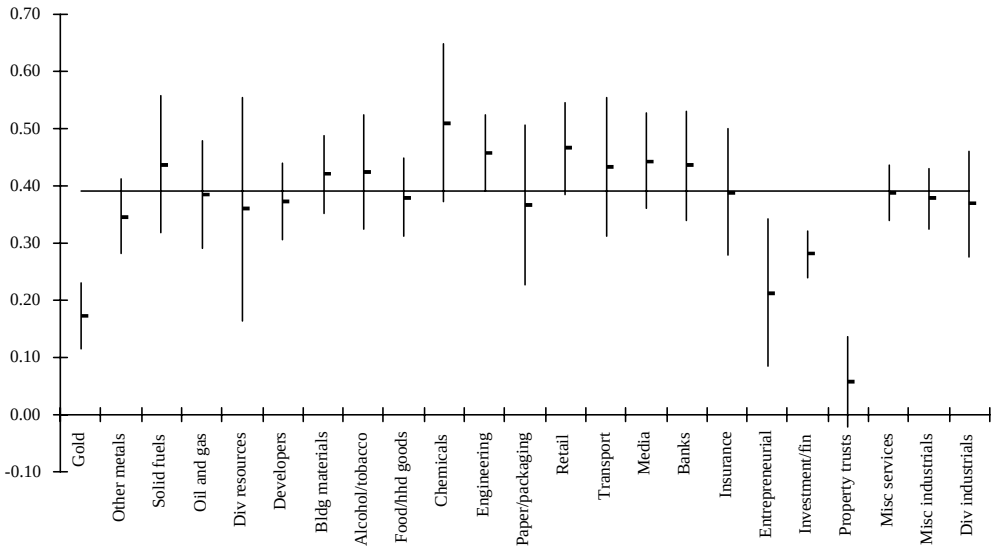


FIGURE 4.4

MODEL 2 - PROFIT SIZE 1

ESTIMATED ETR BY INDUSTRY WITH 95% CONFIDENCE INTERVAL


0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
-0.10
Gold
Other metals
Solid fuels
Oil and gas
Div resources
Developers
Bldg materials
Alcohol/tobacco
Food/hhd goods
Chemicals
Engineering
Paper/packaging
Retail
Transport
Media
Banks
Insurance
Entrepreneurial
Investment/fin
Property trusts
Misc services
Misc industrials
Div industrials

Four industries (Gold, Entrepreneurial Investors, Investment and Financial Services, and Property Trusts) consistently had ETRs significantly lower than the benchmark STR of 39 percent, regardless of firm size.[62] Also, the ETRs of Property Trusts were not significantly different from zero, regardless of size. Six additional industries[63] had estimated ETRs significantly lower than 39 percent when firm size was large, but not so when firm size was small. Thus, for these 10 industries the hypothesis H'_{01} was rejected at the 0.05 significance level. The remaining 13 industries had ETRs not significantly different from the benchmark, regardless of size, i.e. the hypothesis H'_{01} could not be rejected for these 13 industries.

The following observations about the possible causes of industry differences can be made.[64]

- Property trusts had an estimated ETR which was not significantly different from zero. This was so because under the tax law, if a trust distributed all its income, then it was the beneficiaries who were liable to pay tax on the income to which they were entitled.

- The gold-mining industry received concessional tax treatment prior to 1991. Up to 31 December 1990, income from working a qualifying gold mining site in Australia was exempt from income tax. The gold mining incentive explains why the industry had ETR significantly below the benchmark STR.

- The main activities of Entrepreneurial Investors were investing in other companies (e.g. through takeovers), so the major sources of profits were dividend income and capital gains on disposal of investments. Dividend income effectively was tax free due to dividend rebates. Capital gains were largely untaxed before September 1985. Even after the introduction of comprehensive taxation, capital gains still receive preferential tax treatment. The concessional treatment of these two types of income explains why the ETR of Entrepreneurial Investors was significantly below the benchmark STR.

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62 If the STR falls outside the 95 percent confidence interval of an estimated ETR, then the ETR is significantly different from the STR at the 0.05 significance level.

63 They were Other Metals, Developers and Contractors, Food and Household Goods, Miscellaneous Services, Miscellaneous Industrials, and Diversified Industrials.

64 These observations were confirmed by the results of the analysis of tax disclosure data reported in chapter 5.

- Dividend rebates and concessional treatment of capital gains also accounted for the low estimated ETR for firms in the Investment and Financial Services industry.

4.3.4 Size differences

In general, the estimated regression coefficients for asset size and profit size dummy variables in Tables 4.4 and 4.5 indicate that there was a monotonic negative relationship between ETR and firm size, after controlling for industry differences.[65] Stronger negative size effect was found in Model 2 than in Model 1. This was confirmed by the F-statistics for asset size and profit size in Table 4.3, adjusted for industry. The p-values were 0.024 and 0.007 respectively for Models 1 and 2. Also, the number of industries with ETRs significantly less than 39 percent increased with firm size. These results indicate a significant negative relationship between firm size and ETR regardless of whether firm size is based on total assets or pre-tax profit, and provide evidence to reject the null hypotheses H_{02} and H_{03}.

Table 4.4 shows that, holding industry affiliation constant, the estimated ETR of firms of Asset Size 1 was not significantly different from Asset Size 2. Firms of Asset Size 3 had an ETR that was about 3.6 percentage points below Asset Size 1, but the difference was only marginally significant (i.e. the p-value was between 0.05 and 0.1). The ETRs of Asset Sizes 4 and 5 (which made up the fourth quarter) were more than 6 percentage points below that of Asset Sizes 1 and the differences were statistically significant. The ETR of Asset Size 4 was also significantly lower than that of Asset Size 2 by more than 6 percentage points.

Table 4.5 shows that firms of Profit Sizes 2 to 5 had significantly lower ETRs than firms of Profit Size 1. The differences ranged from over 5 percentage points for Profit Size 2 to nearly 8 percentage points for Profit Size 5. Although the ETR declined as profit size increased, the differences between Profit Sizes 2 to 5 did not appear to be statistically significant.

The monotonic negative relationship between firm size and estimate ETR indicates that large firms were taxed at a lower effective rate than small firms, no matter whether firm size was based on total assets or profits. Thus, corporate income tax in Australia was effectively regressive. This finding is consistent with those of Porcano [1986] and Citizens for Tax Justice [1985] in the US context.

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65 The only exception was that in Model 1 the estimated ETR for Asset Size 5 was 0.5 percentage point lower than that for Asset Size 4, but the difference was not statistically significant.

To test the null hypotheses H'_{02} and H'_{03}, 95 percent confidence intervals were constructed for different firm sizes using the standard errors in Tables 4.6 and 4.7. Figures 4.5 and 4.6 show the estimated ETRs and their confidence intervals for Miscellaneous Industrials for Models 1 and 2 respectively. Miscellaneous Industrials is one of the six industries that had estimated ETRs significantly lower than the benchmark when firm size was large, but not so when firm size was small. Each vertical line represents the confidence interval for a firm size, and the mid-point is the estimated ETR for that size. The horizontal line shows the benchmark STR of 39 percent.

FIGURE 4.5

MODEL 1 - FIRM SIZE BY AVERAGE TOTAL ASSET RANKINGS

ESTIMATED ETR BY FIRM SIZE WITH 95% CONFIDENCE INTERVAL

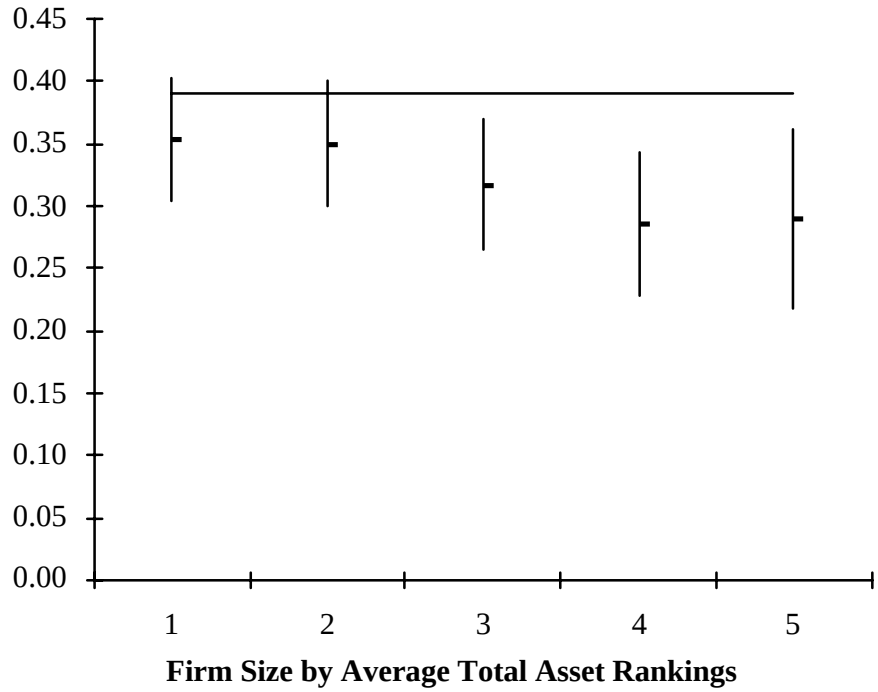
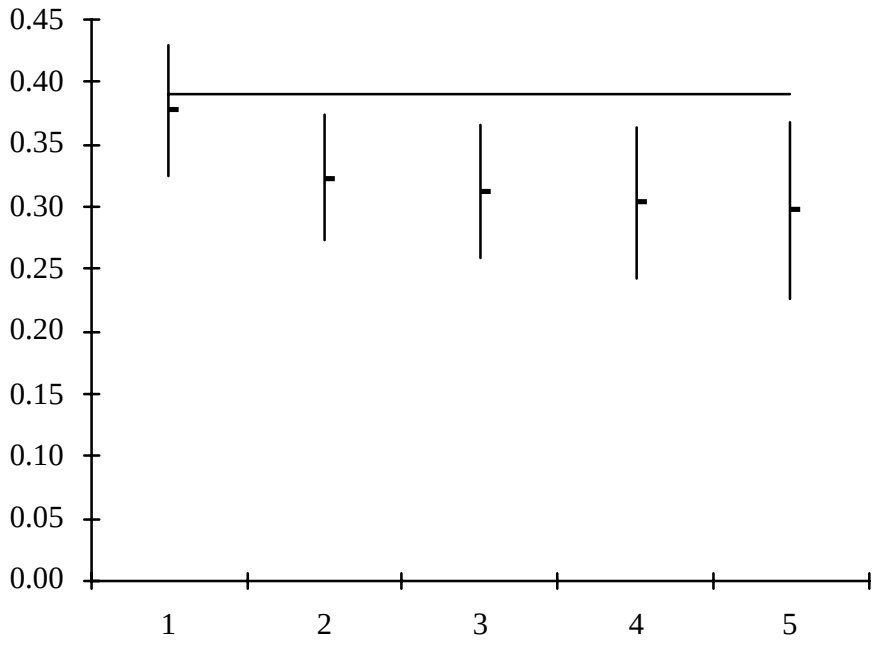


FIGURE 4.6

MODEL 2 - FIRM SIZE BY AVERAGE PRE-TAX PROFIT RANKINGS

ESTIMATED ETR BY FIRM SIZE WITH 95% CONFIDENCE INTERVAL



Firm Size by Average Pre-Tax Profit Rankings

Figure 4.5 shows that in Model 1, Miscellaneous Industrials had ETRs significantly lower than the benchmark STR when firm size exceeded the median ranking of average total asset (Asset Sizes 3 to 5), and not so when firm size was below the median ranking (Asset Sizes 1 and 2). For Model 2, Figure 4.6 shows that Miscellaneous Industrials had ETRs significantly lower than the benchmark STR when firm size exceeded the lower quartile ranking of average profit (Profit Sizes 2 to 5), and not so when firm size was below the lower quartile ranking (Profit Size 1). Thus, the negative size effect cut in at a smaller size for Model 2 than for Model 1.

Five additional industries, i.e. Other Metals, Developers and Contractors, Food and Household Goods, Miscellaneous Services, and Diversified Industrials, also had estimated ETRs significantly lower than the benchmark when firm size was large.[66] As reported under industry differences, the ETRs of four other industries were consistently below the benchmark regardless of firm size. Thus, for these 10 industry groupings the evidence suggests that the two hypotheses H'_{02} and H'_{03} were rejected at the 0.05 significance level. The hypotheses could not be rejected for the remaining 13 industries.

Size differences could be due to the fact that large firms had more sophisticated tax departments and had more resources committed to tax planning activities. Therefore, they were better able to organise their activities in optimal tax saving ways, and to influence the political process in their favour. The causes of size differences are further investigated in chapter 5.

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66 More industries might have shown similar pattern of size effect had the sample sizes of these industries been larger, so that the standard errors of estimation could be reduced (e.g. Diversified Resources, Paper and Packaging).

4.3.5 Political cost hypothesis

The relationship between firm size and ETR also provides evidence regarding the political cost hypothesis.

FIGURE 4.7

MEAN ETR BY SIZE FOR ALL INDUSTRIES

(NOT ADJUSTED FOR INDUSTRY DIFFERENCES)

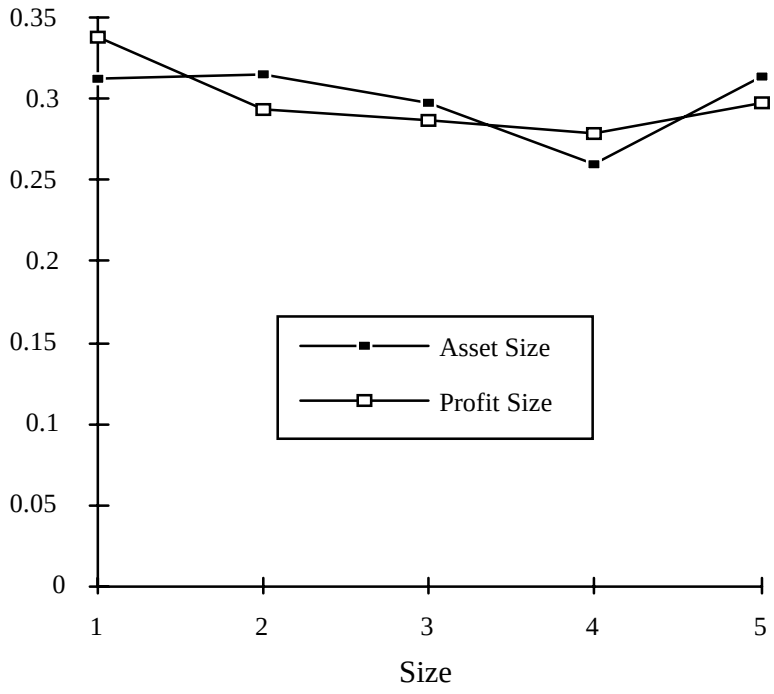


Figure 4.7 shows the relationship between firm size and mean ETR of firms without controlling for industry differences. When firm size was measured by assets, the mean ETR dropped from 31 percent for Asset Sizes 1 and 2 to 30 percent for Asset Size 3, and to 26 percent for Asset Size 4, then rose sharply to over 31 percent for the 50 largest firms. When firm size was measured by profits, the mean ETR dropped from 34 percent (Profit Size 1) to 29 percent (Profit Sizes 2 and 3), and further to 28 percent (Profit Size 4), then rose back to 30 percent (Profit Size 5). The observed relationship in Figure 4.7 provided support for the political cost hypothesis: although the mean ETR (for all industries) decreased as firm size

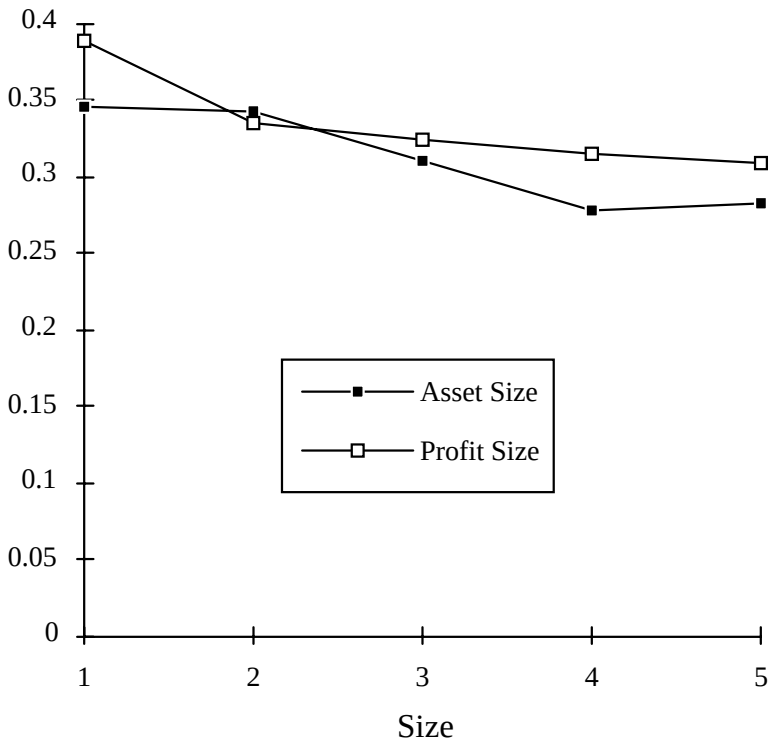
increased up to Size 4, it increased for the 50 largest firms. This is consistent with the finding of Zimmerman [1983].

However, after adjusting for industry differences the relationship between firm size and ETR was different. Figure 4.8 shows the relationship between firm size and estimated ETRs of a typical industry (Miscellaneous Services) after adjusting for industry differences.[67] The estimated ETR for Asset Size 5 was only 0.5 of one percentage point higher than that of Asset Size 4, but was lower than the other three asset size categories (see Table 4.6). Also, the estimated ETR for Profit Size 5 was lower than those of the other four profit size categories (see Table 4.7).

FIGURE 4.8

ESTIMATED ETR BY SIZE FOR MISCELLANEOUS SERVICES

(ADJUSTED FOR INDUSTRY DIFFERENCES)



67 As the models are additive models, size differences are the same for all industries. It does not matter which industry is chosen for illustration.

Thus, when size effect was adjusted for industry effect, the estimated ETRs decreased as firm size increased, and the 50 largest firms had the smallest ETRs when firm size was based on profits. This result is contrary to the political cost hypothesis. The evidence suggests that firm size measured in terms of total assets or accounting profits was not a proper proxy for political costs.

4.4 Limitations, Summary and Conclusions

Two limitations of this study affect the generalisability of the results. First, as noted by Spooner [1986], any study of ETRs based on financial statement data is necessarily limited to listed companies whose financial statements are available to the public. The great majority of companies which are closely held and are not required to publish financial information have to be excluded. Hence the sample of companies used in this study is necessarily biased. The final sample also may suffer from survivorship bias because firms with non-positive average profits have been excluded. This limitation is relevant mainly to the assessment of the equity dimension of the corporate income tax system.

Second, ETRs computed from average tax expense and profits are not completely free from the distortions of carryforward of losses. In some cases, recent losses have reduced the denominators of ETRs, but the impacts of these losses have not been fully reflected in the numerators. To the extent that some losses remain unrecouped for tax purposes, ETRs are exaggerated. An examination of the annual profits and tax figures of 93 firms with computed ETRs in excess of 50 percent shows that seven of them may have unrecouped losses which increase their ETRs.[68] Thus, asymmetrical treatment of profits and losses for tax (and accounting[69]) purposes may have caused an upward bias to the estimated ETRs and their standard errors.

Subject to the above limitations, the key findings of the ETR analysis are summarised as follows. First, firms in gold-mining and investment industries substantially benefited from concessional tax treatments of particular types of income and had ETRs significantly lower than the ETRs of other industries and the STR. Concessional tax treatments include exemption of gold-mining income, preferential treatment of capital gains, and dividend rebates. Such industry differences and the apparent inequity in the income tax system were mainly due to

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68 Of the seven firms, two are of Asset Size 2, three of Asset Size 3, and two of Asset Size 5.

69 According to Australian accounting standards, if a company incurs losses, a future income tax benefit is recognised as an asset only when "realisation of the benefit is virtually certain". Because of the asymmetrical criteria for recognition of deferred tax liability and future income tax benefit, most timing differences arising from losses are not accounted for in the profit and loss account.

deliberate government policies. Effective from 1991, gold-mining income concession was removed. Capital gain concession is expected to reduce over time as more and more assets change hands and become assets acquired after 19 September 1985, and therefore subject to income tax on disposal.

Second, after controlling for the industry differences, a size effect also was identified. In addition to firms in the gold-mining and investment industries, large firms in six other industries had ETRs significantly below the benchmark STR, i.e. the accounting earnings of these firms were significantly greater than their taxable incomes due to permanent differences. The analysis of tax disclosure data reported in chapter 5 provides an insight into the causes of these size differences.

Third, corporate income tax in Australia was found to be regressive. Large firms were found to have accrued tax expense at a lower rate than small firms. This raises the issue of equity. Furthermore, the largest firms were not observed to have higher ETRs than other firms due to adoption of income-reducing accounting procedures. Thus, the evidence does not support the size hypothesis or political cost hypothesis in positive accounting research literature.

The presence of ETR/STR gaps suggests that firms in some industries and size categories had taxable incomes significantly smaller than accounting profits due to permanent differences. However, the presence of such book-tax income gaps does not mean that an alignment of tax with financial accounting rules would necessarily result in an increase in the revenue collection of government. If the government regards the tax incentives and concessions as desirable, they will be provided through other mechanisms, or become exceptions to accounting rules. Moreover, potential earnings management and distortions in the accounting rule-making process as a result of a complete alignment might well produce the opposite results. Prior research indicates that firms manage their earnings to achieve favourable tax positions, and that in general, larger firms manage earnings more than smaller firms. Such behaviour would lead to reduced government revenue. If the accounting rule-making bodies yield to pressures to promulgate tax-saving accounting methods, government revenue would further decline.

The causes of the book-tax income gap and the observed industry and size differences have been further investigated in an analysis of tax disclosure data of 46 firms reported in chapter 5. Additional conclusions will be drawn and policy implications will be discussed at the end of the following chapter.

CHAPTER 5

CAUSES OF THE BOOK-TAX INCOME GAP

The statistical analyses of the effective tax rates (ETRs) of 549 listed companies reported in the previous chapter identified a significant industry effect. Firms in three industries consistently had ETRs significantly lower than the statutory tax rate (STR), regardless of size. Judging from the description of business activities of these three industries, the industry difference appears to be due to preferential treatment of gold-mining income, capital gains, and dividend income. However, the said causes need to be confirmed by further evidence. The statistical analyses also identified a significant size effect: large firms tended to have lower ETRs than small firms. This size difference calls for explanations.

Furthermore, even though the 95 percent confidence intervals of the estimated ETRs for 13 industries included the STR regardless of size, i.e. ETRs for these industries were not significantly different from the STR, the confidence intervals of some industries appeared to be very wide because of large variability of ETRs around the mean. The dispersion of ETRs also calls for explanations.

A systematic analysis of income tax disclosures in financial statements can provide the necessary explanations and confirmation. This chapter reports a detailed analysis of the book-tax income gaps of Australian companies using tax disclosure data. The income tax notes in the financial statements of 46 firms listed on the Australian Stock Exchange over a period of ten years were analysed. The items comprising the book-tax income gap were identified, grouped into categories, reconciled and summarised. The study identifies and quantifies the causes of the gap between the two income numbers and provides further insight to address the alignment issue and the equity issue.

This chapter is organised as follows. In section 5.1, previous studies are briefly reviewed. Section 5.2 describes the research design. The results are presented and discussed in section 5.3. In the final section, the findings are summarised and policy implications discussed.

5.1 Prior Research

To answer the question "Is big business paying its fair share of the tax burden?", Blair [1985] studied the financial statements of the 30 largest listed companies in

New Zealand. The study period was only one year. Although not specifically identified, it appears that it was 1983/84. Four companies were subsequently excluded because their financial statements did not disclose sufficient details. The remaining 26 accounted for 58 percent of the total market capitalisation of listed companies in New Zealand at 30 November 1984. They were divided into two groups: a group of five companies whose aggregate tax expense was only 10.5 percent of reported profit, and a group of 21 whose tax expense was 32.6 percent of reported profit. The STR for that year was 45 percent. The group of five was separated from the other companies because the uniqueness[70] of these five companies (which accounted for the 34.5 percentage point gap between ETR and STR) would result in distortion of the tax burden of the average big company. He found that the 12.4 percentage point gap between the ETR and STR of the group of 21 was accounted for by the following factors:

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70 Examples are cross-shareholdings, substantial extent of overseas involvements, abnormal impact of incentives, unusual accounting policies.

	Percentage point
Export incentives and investment allowances	4.6
Capital gains	2.7
Dividends received	1.0
Deduction available for specified preference shares	0.6
Losses carried forward	1.2
Other permanent differences	2.3
TOTAL	12.4

Blair also examined the deferred tax liability of the group of 21 and found that there was no major deferral of tax in the big business sector. He concluded that the available evidence supported the argument that big business (as represented by the 21 major companies) was paying its fair share of income tax. The main reasons, according to Blair, why income tax collected from the company sector had declined over time relative to individuals were (a) that corporate profits had declined relative to personal income over time; (b) that fiscal drag[71] was penalising individuals relative to companies, and (c) that government had provided incentives to companies to promote economic growth and the same incentives were not available to individuals.

Sawyer [1992] studied the 40 largest listed companies in New Zealand for the year 1990/91. The STR was 33 percent for that year. He computed weighted average ETR and unweighted average ETR for these 40 companies, including companies which incurred losses. The weights were market capitalisations. Both weighted and unweighted average ETRs were found to be very low: 7.2 percent and 14.9 percent respectively. The scheme used by Sawyer to classify the gap components was more detailed than that used by Blair. A comparison of the findings of these two New Zealand studies revealed that the major item which caused the widened gap between ETR and STR in Sawyer's study was utilisation of tax losses. Tax losses accounted for only 1.2 percentage points of the gap in Blair's study, but accounted for 10.9 and 7.6 percentage points respectively for weighted and unweighted average ETRs in Sawyer's study.

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71 Fiscal drag refers to the restraining effect on aggregate demand and output as a result of increase in effective tax rates under inflation. This happens when tax rates are progressive and tax brackets are not properly indexed, so that increasing wages in an inflationary period push people into higher tax brackets, even though their real income may not be rising.

Thus, when the study period is short, e.g. one year in Blair [1985] and Sawyer [1992], the results can be significantly affected by the prevailing economic conditions. The year chosen by Sawyer happened to be in the recovery phase of the business cycle, so recoupment of tax losses could create a picture somewhat different from that presented by Blair.

No similar research appears to have been done in Australia. The present study contributes to the literature by providing empirical evidence of the causes leading to the book-tax income gaps of Australian companies.

5.2 Research Design

5.2.1 Research questions and research methods

Given the results of the statistical analyses reported in chapter 4, the research questions posed in this study were:

- What were the causes of the discrepancy between accounting profit and taxable income of Australian companies?

- Alternatively, what were the causes of the gaps between their prima facie tax expense[72] (PFTE), tax expense, and current tax payable?

- What was the magnitude of the gap, and to what extent did different causes contribute to the gap?

- Did timing differences in aggregate reverse over time?

- What were the causes of different gap magnitudes observed between firms with different industry affiliations, and between firms of different sizes?

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[72] 'Prima facie tax expense' is computed by applying the STR to accounting profit, usually including extraordinary items. This is the theoretical or expected tax expense in the absence of permanent and timing differences. Most reconciliations in income tax notes start with this amount.

- Why did the observed ETRs of firms vary considerably around the mean?

To provide answers to these questions, the research method used was an analysis of tax disclosure data. The unit of analysis was an economic entity, i.e. a group of companies (or a property trust), referred to as a firm. The data in the income tax notes to the annual financial statements of a stratified sample of 46 firms in the study period were extracted manually from the Australian Graduate School of Management Annual Report File on microfiche held by the Australian National Library. The items making up the book-tax income gap (gap components) were categorised and reconciled. Companies of different sizes were treated equally by expressing the gap components as percentages of the PFTE. Arithmetic mean of the firms in the sample was used as a measure of central tendency to summarise the data for interpretation.

5.2.2 Study period and sample selection

One of the main causes of timing differences is accelerated depreciation of plant for tax purposes. The useful life of plant can vary considerably. Thus, the longer the study period, the more timing difference reversals could be covered by the study. The study period chosen was the ten-year period from 1984 to 1993. A number of considerations impacted this research decision. First, the study required every company in the sample to have data available throughout the study period. The longer the study period, the smaller the number of companies would be in the sampling frame. This could increase survivorship bias which impaired the representativeness of the sample. Thus, a trade-off existed between the length of the study period and the representativeness of the sample. Second, resource constraint prohibited adoption of an extensive study period. A study of 46 companies (explained later) over a ten-year period required an examination of 460 annual reports to extract the relevant income tax data. The actual number of annual reports on microfiche accessed was much greater than 460, because in the data collection phase, a selected company might have to be discarded due to incomplete or missing data, and be replaced by another company chosen at random. Third, data extracted from the Australian Stock Exchange STATEX financial statement database (accessed through Reuter Link) were used to identify companies in the sampling frame. The STATEX data available to the researcher were for the period 1983 to 1993 only. Taking into account variation of accounting dates, the STATEX data could only help to identify companies with a history of ten income years from 1983/84 to 1992/93. Finally, the chosen study period is similar to the study period of the ETR study reported in chapter 4.

Only 196 companies had a pre-tax group profit or loss figure for each of the 11 years 1983-1993 on the STATEX financial statement database. These 196 companies formed the sampling frame from which a stratified sample of 46 companies was drawn for the study. The decision of sampling strategy was based on the findings of the ETR study reported in chapter 4. Since there was a significant effect of industry affiliation on ETR, two companies were drawn at random from each industry grouping for inclusion in the sample. As the number of companies in an industry grouping varied from one industry to another (both in the population of all listed companies and in the sampling frame), the probabilities of selection were not constant across strata.

Only companies with an aggregate pre-tax group profit for the study period were to be included in the sample, because companies with aggregate loss would produce relative gap magnitudes with contrary signs. Unfortunately, none of the companies in the industry grouping "Entrepreneurial Investor" had an aggregate profit for the period in the sampling frame. Therefore, the final sample included 44 companies with aggregate profit, and two companies with aggregate loss.

Also, the ETR study shows that there was a statistically significant effect of firm size on ETR. Thus, where possible one 'small' company and one 'large' company from each industry were included in the sample. The two size categories, small and large, in the present study were based on the average total asset rankings of 542 companies in the ETR study. The ETR study shows that size effect cut in at the median ranking of average total asset. Thus, small companies were those in the lower half of the average total asset rankings; large companies were those in the upper half. Only 14 industry groupings had small companies in the sampling frame, however. No small companies were found in the other nine industry groupings either because by its nature the industry mainly consisted of large firms (Diversified Resources, Chemicals, Paper and Packaging, Banks, Insurance, Entrepreneurial Investor), or because small firms were unable to survive a period of ten years (Gold mining, Alcohol and Tobacco, Developers and Contractors). As a result, there were 14 small companies and 32 large companies in the final sample. A list of the 46 companies in the sample, together with their industry affiliation and asset size category, can be found in Appendix 2.

5.2.3 Categorisation of the gap components

For accounting purposes, the differences between pre-tax accounting profit (or book income) and taxable income are classified into two main types: permanent differences and timing differences.

Permanent differences arise because certain revenues and expenses included in the determination of accounting profit are never included in the determination of taxable income, or vice versa. Permanent differences which reduce taxable income and/or tax expense include:

- rebates on dividend income;[73]
- investment allowances: available between 1979 and 1987, reintroduced in 1993;
- tax deduction for research and development expenditure in excess of the actual expenditure: for every dollar spent on eligible research and development, deduction of $1.50 could be allowed for tax purposes;
- non-taxable capital gains: before comprehensive taxation of capital gains was introduced, capital gains were largely untaxed; after 19 September 1985, capital gains on disposal of assets acquired after that date are taxable, but as the cost base of an asset held for more than 12 months is indexed in computing capital gain, only real gains are taxable;
- exempt income, e.g. Australian films, gold mining prior to 1991;
- concessions given to primary producers and to the mining and quarrying industry;
- tax rate differentials: a difference arose if a company had overseas subsidiaries of which the profits were taxed at foreign tax rates lower than the Australian tax rate, and the profits were not intended to be remitted to Australia.[74]

Permanent differences which increase taxable income and/or tax expense include:

- non-deductible capital losses: before the capital gains provisions were introduced, capital losses were not allowable deductions; after Part IIIA was

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73 Due to the dividend rebates, dividend income of a listed company is effectively exempt income.

74 With effect from 1991, accruals tax legislation was introduced to attribute certain income derived by foreign controlled entities to the Australian controller.

introduced, capital losses on disposal of assets acquired after 19 September 1985 can be recouped, but only offset against capital gains;

- amortisation or depreciation of certain capital assets, such as goodwill, for which deductions are not allowed for tax purposes;

- writing-off of preliminary expenses and costs of feasibility study of a new business;

- entertainment expenses;

- non-deductible fringe benefits tax;[75]

- interest expense subject to thin capitalisation rules;

- tax rate differentials: overseas branches and subsidiaries were taxed at foreign tax rates higher than the Australian tax rate.

Timing differences arise because certain revenues and expenses are included in the determination of accounting profit for one period, but are included in the determination of taxable income for another period. A timing difference initiated in one period is expected to reverse (or turn around) in one or more future periods. Timing differences which increase taxable income and tax payable include:

- present assessability of revenue items for tax purposes: some revenues received in advance (e.g. rents) are taxable in the period of receipt but are not recognised as revenues in financial accounting until a later period;

- present non-deductibility of expenses for tax purposes: provisions for doubtful debts, for employee leave entitlements, for product warranties, etc. are not recognised for tax purposes until they are legally "incurred" in a later period;

- excess of accounting depreciation charges over tax depreciation deductions;

- unrealised foreign exchange losses included in determining accounting profit, which are not recognised for tax purposes.

Timing differences which reduce taxable income and tax payable include:

- present non-assessability of revenue items for tax purposes: revenues receivable are accrued in the accounting period (e.g. interest) but are not taxable until received;

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75 Sub-section 51(4A) of ITAA, repealed with effect from 1 April 1994.

- present deductibility of expenses for tax purposes: expenditure is deducted for tax purposes as it is "incurred" (e.g. research and development expenses) but is capitalised and amortised for accounting purposes;

- excess of tax depreciation deductions over accounting depreciation charges;

- unrealised foreign exchange gains included in determining accounting profit.

Both Australian Accounting Standards AAS 3[76] and AASB 1020[77] Accounting for Income Tax (Tax Effect Accounting) adopt the liability method of tax effect accounting. These two accounting standards hereafter are referred to as the accounting standards. AASB 1020 became effective from December 1989 and has the legal backing of Corporation Laws. Not all companies adopted tax effect accounting before AASB 1020 took effect despite requirements by the professional standard AAS 3. Where tax effect accounting was not adopted in earlier years, deferred tax information may be found in auditors' qualified reports.

Tax effect accounting requires that the amount of tax expense attributable to the transactions included in the profit and loss account for a period be accounted for in the same profit and loss account, whether the income tax is currently payable, has already been paid, or will become payable in the future. Tax expense is based on the pre-tax accounting profit adjusted for permanent differences. Accounting standards require disclosure of the nature and significance of permanent differences if they are material. Usually, companies attach a note to their profit and loss statement showing a reconciliation of PFTE and tax expense charged in the profit and loss statement.

Timing differences result in a discrepancy between the amount of tax expense charged in the profit and loss account and the amount of tax payable for the same period based on a tax assessment. If tax expense exceeds tax payable, the excess is recognised as a non-current liability and credited to a "provision for deferred income tax" (PDIT) account. If the amount of income tax expense falls short of the amount of income tax payable, the shortfall is recognised as a non-current asset and debited to a "future income tax benefit" (FITB) account. The nature of timing differences usually is not disclosed in any footnote, as disclosure is not required by the accounting standards.

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76 Accounting standard AAS 3 was issued jointly by the Institute of Chartered Accountants in Australia and the Australian Society of Accountants in 1979. After AASB 1020 came into effect from 1989, AAS 3 mainly applies to unincorporated entities. Compliance is enforced by professional discipline.

77 Accounting standard AASB 1020 was issued by the Accounting Standards Review Board (now Australian Accounting Standards Board) in 1989. This standard applies to companies. Compliance is enforced by Corporations Law.

According to the accounting standards, a FITB is carried forward as an asset only when "the realisation of the benefit can be regarded as being assured beyond any reasonable doubt." If a company incurs losses, a FITB in respect of the losses is recognised as an asset only when "realisation of the benefit is virtually certain." Because of these recognition criteria for FITBs, not all timing differences are booked or brought to account.[78] Unbooked timing differences (mainly due to tax losses) impact the tax expense (or benefit) for both the year of initiation and the year of reversal, and are treated in the same way as permanent differences.[79]

Under the liability method, when there is a change in the STR, both the balance of PDIT and the balance of FITB are required to be adjusted for the effect of rate change. The adjustments are included in the profit and loss account for the year in which the tax rate changes, and are required to be separately disclosed if material.

Companies may make adjustment for over- and under-provision for income tax payable in respect of prior years. Over- and under-provisions arise because of estimation errors or as a consequence of tax audits. Prior year adjustments impact current year tax expense and tax payable, and are reconciled in the same way as permanent differences.

Permanent and timing differences also arise on consolidation of financial statements. Examples of permanent difference arising on consolidation are amortisation of goodwill on consolidation and foreign currency translation differences. Examples of timing difference are profits on intra-group sales of goods which are considered unrealised from the group's perspective and are eliminated on consolidation, but are regarded as realised for tax purposes.

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78 According to the accounting standards, any future income tax benefit attributable to tax losses brought to account as an asset is required to be separately disclosed in a note. When a provision for deferred income tax exists and a company incurs a tax loss, the future income tax benefit attributable to the tax loss should be brought to account as a reduction of the provision for deferred income tax, to the extent that the deferred tax liability will become payable within the financial periods that the tax loss is available for recoupment. Also, to the extent that a future income tax benefit attributable to tax losses has not been recognised as an asset or as a reduction in deferred tax liability, and there is a possibility that the tax losses will be recouped, the future income tax benefit expected to arise should be disclosed by way of a note. In general, to the extent that a deferred income tax liability is likely to become payable in the same financial period(s) as a future income tax benefit is expected to realise, the provision for deferred income tax must be offset against the future income tax benefit brought to account. However, the future income tax benefit carried forward by one company in a group of companies is not allowed to be offset against a provision for deferred income tax of another company on consolidation.

79 For example, if a company incurs a net operating loss of $100 which is the same as tax loss, the prima facie tax benefit will be -$39 (negative PFTE), assuming a statutory tax rate of 39 percent. If the future income tax benefit (a non-current asset) is not brought to account, there will be a 'permanent' difference with a tax effect of +$39, and the tax expense for the year of loss will be zero (instead of negative). If the company makes profit in a future year and recoup the tax loss, there will be another 'permanent' difference with a tax effect of -$39 that reduces the tax expense for the year of recoupment.

For the purposes of the present study, the items that make up the gap between PFTE and tax payable are classified into 11 categories as shown in Table 5.1.

Classification of gap items in income tax notes was not always straight-forward. For instance, if a company wrote down the book value of its long-term investments after the stock market crash in 1987, the book loss could be classified as a non-deductible item (category 4 in Table 5.1). If, however, the company had the intent to divest, arguably the book loss should be classified as an unbooked timing difference which would turn around upon divestment (category 5), or as a non-tax capital loss (category 3) if the loss subsequently realised was not tax deductible (e.g. the investments were acquired before 20 September 1985). In the absence of further information, a writedown of investments was classified as a non-deductible item in this study.

5.2.4 Reconciliation and method of analysis

A reconciliation of PFTE and tax expense could usually be found in notes to financial statements under the heading "income tax" or "income tax expense", but a breakdown of tax expense into current tax payable, deferred tax and FITB was not always available in annual reports. Where such a breakdown was not disclosed, it could be computed from the movements of PDIT account (a non-current liability) and FITB account (a non-current asset) between two balance dates.

TABLE 5.1

CATEGORIES OF GAP COMPONENTS

Permanent Differences and Timing Differences

Cat. No.	Category	Gap Components
1	Incentives	• Research and development incentives • Investment allowance; development allowance • Primary production incentives • Mining and quarrying industry concessions • Australian film incentives
2	Dividends	Rebateable dividend income
3	Capital gains and losses	• Non-assessable capital gains (including those due to indexation of cost base) • Non-deductible capital losses
4	Non-deductibles	• Entertainment expenses • Fringe benefits tax • Capital expenditure not allowed for deduction, e.g. plant dismantling expenses, amortisation of goodwill (other than consolidation goodwill), preliminary expenses, costs of share issues, legal expenses

5	Unbooked timing differences (i.e. tax losses and other timing differences not brought to account)	• Incurrence of tax losses not brought to account as a future income tax benefit or as a reduction in deferred income tax liability • Recoupment of prior year tax losses not previously brought to account • Origination and reversal of other timing differences not brought to account
6	Consolidation items	• Amortisation of goodwill on consolidation • Foreign currency translation differences
7	Foreign tax rate differences	Profits of subsidiaries subject only to foreign tax at a rate different from Australian tax rate
8	Australian tax rate changes	Adjustments to provision for deferred income tax and future income tax benefits due to changes in Australian tax rate
9	Prior year adjustments	• Under and over provision in prior years • Consequences of tax audit
10	Other permanent differences	Permanent differences not described in income tax notes
11	Timing differences brought to account	• Movement of provision for deferred income tax • Movement of future income tax benefits

TABLE 5.2

ANNUAL TAX AND INCOME RECONCILIATIONS

PANEL A - Annual Tax Reconciliation

Prima facie tax expense

= Pre-tax accounting profit x Statutory tax rate

Add / deduct:

Tax effect of permanent differences

Tax effect of timing differences *not* brought to account

Adjustments for tax rate changes and differences*

= *Income tax expense* charged in profit and loss account

Add / deduct:

Tax effect of timing differences brought to account

= Taxable income x Statutory tax rate

i.e. *Income tax payable*

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* These items only impact tax reconciliation and do not appear in income reconciliation.

PANEL B - Annual Income Reconciliation

Pre-tax accounting profit

Add / deduct:

Permanent differences

Timing differences *not* brought to account

= Accounting profit adjusted for permanent differences

Add / deduct:

Timing differences brought to account

= *Taxable income*

Annual reconciliation of PFTE, tax expense, and current tax payable is illustrated in Panel A of Table 5.2. An annual reconciliation of tax amounts is very similar to the corresponding reconciliation of income amounts (Panel B of Table 5.2), except that adjustments for tax rate changes and differences do not appear in the latter reconciliation. Tax rate items (i.e. "foreign tax rate differences" and "Australian tax rate changes" in Table 5.1) only impact the tax gap, not the income gap. For other items, a tax gap amount is simply the underlying income gap amount multiplied by the STR for the year. Thus, an annual reconciliation of tax amounts expressed in relative terms (percentages) also can be read as a reconciliation of the underlying income amounts in relative terms, provided that one adjusts for tax rate items.

In the study, the data in the income tax notes of a company were first tabulated onto a spreadsheet with ten columns for the ten years under study. Next, the classification scheme in Table 5.1 was applied to categorise the gap items. A second segment of the spreadsheet was used to tabulate the annual tax reconciliations in a standard format as illustrated in Panel A of Table 5.2. The total column in the second segment showed the aggregate tax reconciliation for the study period as a whole. Before aggregation, all yearly tax gap amounts were converted to what would have been the amounts if the STR for all years had been 39 percent using the following adjustment ratio:

$$\text{Adjustment ratio} = \frac{\text{Benchmark STR (39 percent)}}{\text{Actual STR applicable to the accounting period}} \qquad (1)$$

The STR varied from 46 percent for the income years 1983/84 through 1985/86, to 49 percent for 1986/87 and 1987/88, and to 39 percent for 1988/89 through 1992/93. Thus, the above adjustment is required to preserve a simple relationship between the tax gap amounts and the underlying income gap amounts in the total column so that an aggregate tax reconciliation also can be read as an aggregate income reconciliation. The adjustment also ensures that different tax gap components in the total column are comparable across companies, because they are all computed at a common STR, rather than at a weighted average STR specific to a particular component and specific to a particular company. Technical notes which explain why the adjustment is necessary are presented in Appendix 3. A tax rate of 39 percent was chosen as the benchmark because it applied to five out of the ten years under study and it was the most recent corporate STR in the study period.

The size of a large company could be hundreds of times larger than that of a small company. To treat companies of different sizes equally and to ensure meaningful measurement of central tendency[80], a third segment of the spreadsheet was created

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80 Without expressing the absolute amounts in relative terms, measurement of central tendency such as mean will be meaningless because the result will be dominated by large companies.

to express all tax amounts in the second segment as a percentage of the corresponding PFTE. For easy reference, a reconciliation of PFTE, tax expense, and tax payable expressed in percentage terms was called a percentage reconciliation. The format of the third segment of the spreadsheet for each company is similar to Table 5.3 in section 5.3.1, except that Table 5.3 shows the mean percentage reconciliations for 44 companies in the sample, rather than the percentage reconciliations for a single company.

The final sample was a stratified sample with differential probabilities of selection. On average, each industry-size mix consisted of one company only. Therefore, it was inappropriate to analyse the data using statistical methods. An alternative method was used, however, to segregate industry and size effects in a crude manner. Companies in the four industry groupings that were identified in the ETR study to have a ETR consistently lower than STR were first excluded to isolate the industry effect. The remaining companies were then split into two groups, small and large, to study the size effect.

5.3 Results and Interpretation

The results of the study are presented and discussed in the following way. First, the annual mean percentage reconciliations of 44 companies in the sample (excluding two property trusts which had a zero ETR) are presented and discussed. Next, the three industry groupings (other than Property Trusts) which were found in the ETR study to have a ETR consistently lower than STR are singled out for close examination. Then the three industry groupings are excluded from the sample to isolate the industry effect and the mean percentage reconciliations for the reduced sample of 38 companies are presented and discussed. Finally, the reduced sample is split into two groups, small and large companies, and a comparison is made.

5.3.1 Annual reconciliations of the whole sample

Although two trusts[81] were drawn from the industry grouping "Property Trusts" for the purposes of the study, they were not included in any further analysis because (a) as expected, they were not liable for income tax throughout the study period, and (b)

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[81] Two property trusts sampled for the present study were P.A. Property Trust and Westfield Property Trust. Both were unit trusts. They held a portfolio of investment properties (e.g. shopping centres) and distributed the income from properties to their unitholders. Throughout the study period, the income tax notes of the two trusts stated that under income tax law, they were not liable for income tax, provided their taxable income was fully distributed to unitholders. Thus, their ETRs were zero. In general, a trust is not by itself a taxpayer. Thus, the two property trusts in the sample were not included in the computation of mean in Table 5.3.

they were not companies. Thus, the number of companies to be analysed was only 44.

Table 5.3 shows the mean percentage of the gap components and the reconciliations of annual PFTE and annual tax payable for the whole sample. All amounts were expressed in percentage terms before the mean was computed to avoid domination by large companies. The total column in Table 5.3 shows the mean percentage of aggregate amounts for the whole study period after standardisation of STR to 39 percent as explained in section 5.2.4 and Appendix 3.

The reconciliation in each column starts with PFTE expressed as 100 percent, followed by the tax effects of permanent differences, unbooked timing differences, and adjustments for tax rate changes and differences. All are expressed as a percentage of the PFTE. A negative sign in front of an item indicates that the item reduces tax expense (e.g. incentives, rebateable dividends, and non-taxable capital gains). Absence of a negative sign indicates that the item increases tax expense (e.g. non-deductibles). PFTE is first reconciled with tax expense. Then the tax effect of timing differences is taken into account to work out current tax payable. A negative sign in front of the tax effect of timing differences indicates that there is a net deferred tax, hence tax payable is smaller than tax expense. Absence of a negative sign means that there is a net FITB, hence tax payable is greater than tax expense.

Reconciliations in Table 5.3 also can be read as reconciliations of annual accounting profit and taxable income. Two tax gap items, "foreign tax rage differences" and "Australian tax rate changes", should be ignored (and adjusted for) when a tax reconciliation is viewed as an income reconciliation.

TABLE 5.3

RECONCILIATION OF ANNUAL PFTE AND ANNUAL TAX PAYABLE*

SAMPLE OF 44 COMPANIES

1984-1993

	Mean of Percentage**										
	1984	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**Total**
	%	%	%	%	%	%	%	%	%	%	%
Prima facie tax expense (Accounting profit)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tax effect of-											
Incentives	-13.1	48.2	-8.5	-11.2	-9.2	-7.0	-7.9	-1.9	-3.5	-0.8	-9.5
Dividends	-8.5	-12.2	-11.6	-8.9	-7.9	-8.9	-10.6	-0.8	-4.5	-3.2	-11.0
Capital gains and losses	-3.0	-4.8	-8.9	-6.3	-12.8	22.4	-6.0	-9.7	-8.4	-17.0	-10.8
Non-deductibles	6.6	-0.8	7.2	5.2	9.9	-13.9	8.3	17.9	2.3	-67.7	12.0
Unbooked timing differences	-11.5	-60.6	-7.1	-3.8	-3.2	-42.8	-16.8	-24.4	-21.8	65.7	5.8
Consolidation items	-0.1	-0.2	-0.2	0.0	0.8	-0.5	0.0	-0.1	0.2	-0.2	0.0

Foreign tax rate differences	-1.3	-2.3	-2.3	0.6	-3.0	-2.8	-1.3	-1.3	-1.1	-2.9	-2.4
Australian tax rate changes	0.0	0.0	-0.4	-0.7	-1.0	-0.2	-0.1	1.7	0.0	0.6	-1.1
Prior year adjustments	-0.4	0.4	-0.2	-0.4	0.6	-4.3	0.1	-3.5	-8.5	-20.8	-0.5
Other permanent differences	-1.0	-2.0	0.2	-1.8	-1.1	3.1	-0.4	0.3	-4.9	-0.3	0.2
Tax expense	**67.7**	**65.8**	**68.1**	**72.8**	**73.0**	**45.0**	**65.3**	**78.2**	**50.0**	**53.3**	**82.7**
Tax effect of timing differences brought to account	-8.7	-4.0	-7.1	-14.2	-14.3	-48.6	-1.0	-22.5	-11.5	-13.5	-11.3
Tax payable (Taxable income)	**59.1**	**61.8**	**61.1**	**58.6**	**58.7**	**-3.6**	**64.3**	**55.8**	**38.6**	**39.8**	**71.5**

* This table also shows mean percentage reconciliations of annual accounting profit and annual taxable income for the period 1984-1993. "Foreign tax rate differences" and "Australian tax rate changes" should be ignored and adjusted for when a tax reconciliation is read as an income reconciliation.

** Items with a negative sign are items which reduce tax payable and/or taxable income. Those without a negative sign increase tax payable and/or taxable income.

Unexpected or contrary signs and abnormal magnitudes can be found in the yearly columns of Table 5.3. For instance, the item "incentives" for 1985 is on average 48.2 percent of the PFTE for that year. The sign of this item is unexpected (as incentives should reduce taxable income and tax payable), and its magnitude is abnormally large. A company-by-company examination revealed that one company (Magellan Petroleum) incurred a loss of $32,000 for 1985 and had a prima facie tax benefit (negative PFTE) of $15,000. However, the company was entitled to investment allowances with a total of $404,000. When the amount of these incentives was expressed as a percentage of the small prima facie tax benefit, it became an extreme value of 2,693 percent (with an unexpected sign), and the mean of the 44 companies was grossly distorted by this extreme value. Had that company been excluded in computing the mean, the incentives for 1985 would have been about -10 percent. The same company also distorted the sign and/or magnitude of "non-deductibles" and "unbooked timing differences" for 1985. Thus, in Table 5.3 (as well as Table 5.7 presented in section 5.3.3), unexpected signs occurred when there were loss companies and their PFTEs were negative;[82] abnormal magnitude occurred when the PFTE (or benefit) of at least one of the companies happened to be exceptionally small.[83] Unexpected sign and/or abnormal magnitude also occurred in the years 1989 (caused by Ariadne and Sime Darby), 1991 (caused by Gunns and Foster's Brewing), and 1993 (caused by Central Norseman Gold and Leighton Holdings).

As the amounts in the yearly columns fluctuate widely due to extreme values, the yearly reconciliations convey a distorted picture of the movement of different gap items over time. The amounts in the total column are, however, not so much affected by extreme values. Two companies in the sample have aggregate losses for the study period which are substantial. The aggregate losses only result in unexpected signs for the two companies, but not extreme values.[84] Thus, the total column of Table 5.3 presents a reasonably undistorted overall picture of the 44 companies in the sample. On average, tax expense was only about 83 percent of PFTE for the whole study period. Of this, 11 percentage points were deferred tax, so current tax only amounted to about 72 percent of PFTE. The major gap components were incentives (-9.5 percent), dividends (-11 percent), capital gains (-10.8 percent), non-deductibles (12 percent) and timing differences brought to account (-11.3 percent). The minor gap components were unbooked timing differences (5.8 percent, mainly due to losses), foreign tax rate differences (-2.4 percent) and Australian tax rate changes (-1.1 percent). The last two items did not impact income reconciliation. Hence taxable income amounted to about 75 percent

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82 Unbooked timing differences had an unexpected sign in most of the yearly reconciliations, because most likely this item arose when a company incurred a loss and was not certain that the loss would be recouped in the future. See the example in footnote 10.

83 The problem of extreme values can be dealt with either by deletion of the data points, or by taking aggregate or average over a number of years to reduce (but not eliminate) the chance of having extreme values. Deletion of data points is a feasible strategy only when the sample is large. This strategy was not adopted in the present study.

84 See Table 5.5 for details of these two companies, and compare with Table 5.7 (especially the total column) where these two companies and four others are excluded.

of accounting profit.[85] Consolidation items, prior year adjustments, and other permanent differences were negligible.

5.3.2 Case studies of three industries

Three industry groupings[86] identified by the ETR analysis to have ETRs significantly lower than STR were singled out for close examination. In general, the results of the case studies confirm the causes of the industry effect suggested in chapter 4.

Gold mining

Up to 31 December 1990, a gold mining company was exempt from tax on income from working a qualifying gold mining site in Australia. The two gold mining companies in the sample were Central Norseman Gold Ltd (CNG) and Sons of Gwalia Ltd (SGW). Both were classified as 'large' companies (asset size 3). Table 5.4 shows the reconciliations of total PFTE and tax payable of these two companies.

Up to 1988, CNG reported profits which were exempt from tax. From 1989, it reported losses. The losses incurred up to 31 December 1990 did not give rise to tax benefits because of the exemption status. As the company also reported losses after removal of the exemption status, the aggregate exempt income (incentives) exceeded the aggregate profit for the study period. Hence the tax effect of the incentives was -113 percent of the PFTE. The other main items in the gap were non-deductibles (8.7 percent for amortisation, fringe benefits tax, legal expenses, etc.) and tax benefits arising from losses not brought to account (4.5 percent). Overall, the company had no tax expense, no tax payable, and no taxable income for the study period.

SGW reported profits for all years except 1984 when the company reported a small loss. As income after 31 December 1990 was no longer exempt, the tax effect of the incentives was -77 percent of the PFTE. Other significant items in the gap were non-deductibles (4.5 percent for capital expenditure, writedowns of investment, etc.), unbooked timing differences (-4.6 percent for utilisation of prior year tax losses) and timing differences brought to account (5 percent). The company also

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85 After adjustment for foreign tax rate differences (-2.4 percent) and Australian tax rate changes (-1.1 percent).

86 As explained earlier, "Property Trusts", which was found in the ETR study to have an estimated ETR significantly lower than the benchmark STR, are not subject to further analysis.

had some rebateable dividends (-1.5 percent) and non-taxable capital gains (-1.2 percent). As a result, tax expense and tax payable were respectively only about 20 percent and 15 percent of PFTE. Taxable income was about 16 percent of accounting profit for the study period (after adding back 0.9 percent for Australian tax rate changes).

TABLE 5.4

RECONCILIATION OF TOTAL PFTE AND TOTAL TAX PAYABLE*

GOLD MINING

1984-1993

	Central Norseman Gold Ltd		Sons of Gwalia Ltd		MEAN
	Amount ($000)	Percentage of PFTE	Amount ($000)	Percentage of PFTE	Percentage of PFTE
Prima facie tax expense (Accounting profit)	23,246	100.0%	73,970	100.0%	100.0%
Tax effect of-					
Incentives	-26,325	-113.2%	-56,678	-76.6%	-94.9%
Dividends	0	0.0%	-1,144	-1.5%	-0.8%
Capital gains and losses	0	0.0%	-865	-1.2%	-0.6%
Non-deductibles	2,026	8.7%	3,329	4.5%	6.6%
Unbooked timing differences	1,041	4.5%	-3,408	-4.6%	0.0%
Consolidation items	0	0.0%	0	0.0%	0.0%

Foreign tax rate differences	0	0.0%	0	0.0%	0.0%
Australian tax rate changes	0	0.0%	-687	-0.9%	-0.5%
Prior year adjustments	-797	-3.4%	-390	-0.5%	-2.0%
Other permanent differences	12	0.1%	455	0.6%	0.3%
Tax expense	**-797**	**-3.4%**	**14,582**	**19.7%**	**8.1%**
Tax effect of timing differences brought to account	-3	0.0%	-3,717	-5.0%	-2.5%
Tax payable (Taxable income)	**-800**	**-3.4%**	**10,865**	**14.7%**	**5.6%**

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* This table also shows reconciliations of the total accounting profit and total taxable income for the period 1984-1993. "Foreign tax rate differences" and "Australian tax rate changes" should be ignored and adjusted for when a tax reconciliation is read as an income reconciliation.

The last column of Table 5.4 shows the mean percentage reconciliation of the two companies. Due to exemption of gold mining income before 1991, on average 95 percent of the profits of the companies was exempt from tax. Apart from the incentives, the difference in accounting rules and tax rules mainly gave rise to permanent differences of 6.6 percent due to non-deductibles, and timing differences of -2.5 percent. Overall, taxable income was only 6 percent of accounting profit due to the incentives.

Entrepreneurial investor

The main activities of firms in this industry are investing in other companies (e.g. through takeovers) so the major sources of profit are dividend income and capital gains on disposal of investments. The two entrepreneurial investors in the sample were Ariadne Australia Ltd (ARA) and Australian Consolidated Investment Ltd (AUC, formerly Bell Resources Ltd). Both were large companies and both had aggregate losses over the study period. Table 5.5 shows the reconciliations of these two companies.

Up to 1987, ARA reported profits. A very large loss was reported for 1988 following the October 1987 stock market crash, and losses were reported in each subsequent year. As the company had an aggregate prima facie tax benefit (negative PFTE), all gap components, when expressed as a percentage of PFTE, had an unexpected sign. Thus, the percentage column may confuse some readers. Dividends ($19 million) and non-taxable capital gains ($174 million) were reported in earlier years. Non-deductibles were mainly writedowns of investments in later years. The unbooked timing differences were FITBs not brought to account in respect of realised losses. As the company reported profits in earlier years and a significant proportion of the losses reported in later years were unrealised losses (writedowns of investments), the company had an aggregate tax liability of $48 million for the period.

AUC reported profits for 1984, 1985, 1986, 1988 and 1993, but reported losses in the other years. Compared with ARA, AUC had a larger amount of dividend income ($81 million) and a smaller amount of non-taxable capital gains ($29 million). The major item of non-deductibles ($261 million) was writeoffs of investments in 1987. The large amount of unbooked timing differences ($425 million) was mainly due to realised losses. AUC also had substantial foreign operations in low tax regimes, so the tax benefits from foreign tax rate differences were significant ($60 million). Tax ($153 million) was payable for the earlier years to 1987 only.

As both companies reported profits for some years, losses for other years, and had an aggregate loss (hence an aggregate prima facie tax benefit), the signs and magnitudes in three percentage columns of Table 5.5 have little meaning. The contrary signs of these two companies cause downward bias to the mean percentage reconciliation in the total column of Table 5.3.

TABLE 5.5

RECONCILIATION OF TOTAL PFTE AND TOTAL TAX PAYABLE*

ENTREPRENEURIAL INVESTORS

1984-1993

	Ariadne Australia Ltd		Aust. Consolidated Investments Ltd		MEAN
	Amount ($000)	Percentage of PFTE	Amount ($000)	Percentage of PFTE	Percentage of PFTE
Prima facie tax expense (Accounting profit)	-239,449	100.0%	-335,296	100.0%	100.0%
Tax effect of-					
Incentives	0	0.0%	0	0.0%	0.0%
Dividends	-18,783	7.8%	-80,810	24.1%	15.9%
Capital gains and losses	-173,682	72.5%	-29,031	8.7%	40.6%
Non-deductibles	252,958	-105.6%	260,657	-77.7%	-91.7%
Unbooked timing differences	211,705	-88.4%	424,902	-126.7%	-107.6%
Consolidation items	0	0.0%	-11,700	3.5%	1.8%

Foreign tax rate differences	-38	0.0%	-59,875	17.9%	9.0%
Australian tax rate changes	3,534	-1.5%	0	0.0%	-0.8%
Prior year adjustments	1,504	-0.6%	22,678	-6.8%	-3.7%
Other permanent differences	67	0.0%	-11,320	3.4%	1.7%
Tax expense	**37,816**	**-15.8%**	**180,206**	**-53.7%**	**-34.8%**
Tax effect of timing differences brought to account	10,154	-4.2%	-27,371	8.2%	2.0%
Tax payable (Taxable income)	**47,970**	**-20.0%**	**152,835**	**-45.6%**	**-32.8%**

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* This table also shows reconciliations of the total accounting profit and total taxable income for the period 1984-1993. "Foreign tax rate differences" and "Australian tax rate changes" should be ignored and adjusted for when a tax reconciliation is read as an income reconciliation.

Investment and financial services

The two companies in the sample were Choiseul Plantation (Holdings) Ltd (CHO) and Australian Foundation Investment Company Ltd (AFI). The former was a small company, and the latter a large company. Both companies held a large investment portfolio of listed Australian securities. They reported profits throughout the study period. Table 5.6 shows the reconciliations of the two companies.

Both companies received dividends as their major source of income. Dividend rebates reduced PFTE by more than 60 percent. Non-taxable capital gains are also a significant gap component (-13 percent for CHO; -22 percent for AFI). CHO also had an aggregate deferred tax of 15 percent. Other gap items were negligible. Taken together, the tax payable (taxable income) of the two companies was only 12 percent of their PFTE (accounting profit).

5.3.3 Annual reconciliations of the reduced sample

When the three industries examined in section 5.3.2 are excluded from the sample, the remaining industries are those having ETR not significantly different from the STR, at least when firm size was small. Table 5.7 shows the mean percentage reconciliations of the reduced sample of 38 companies.

Again as explained in section 5.3.1, due to extreme values, the yearly mean percentages fluctuate widely and do not show any meaningful trend. The total column in Table 5.7 is, however, not distorted by extreme values and contrary signs (because two entrepreneurial investors with aggregate loss have been excluded). It summarises the mean percentage reconciliation of 38 companies over the 10-year period.

TABLE 5.6

RECONCILIATION OF TOTAL PFTE AND TOTAL TAX PAYABLE*

INVESTMENT AND FINANCIAL SERVICES

1984-1993

	Choiseul Plantation (Holdings) Ltd		Australian Foundation Investment Ltd		MEAN
	Amount ($000)	Percentage of PFTE	Amount ($000)	Percentage of PFTE	Percentage of PFTE
Prima facie tax expense (Accounting profit)	13,647	100.0%	100,879	100.0%	100.0%
Tax effect of-					
Incentives	0	0.0%	0	0.0%	0.0%
Dividends	-8,404	-61.6%	-65,753	-65.2%	-63.4%
Capital gains and losses	-1,736	-12.7%	-21,944	-21.8%	-17.3%
Non-deductibles	11	0.1%	0	0.0%	0.1%
Unbooked timing differences	0	0.0%	0	0.0%	0.0%
Consolidation items	0	0.0%	0	0.0%	0.0%

Foreign tax rate differences	86	0.6%	0	0.0%	0.3%
Australian tax rate changes	8	0.1%	56	0.1%	0.1%
Prior year adjustments	-76	-0.6%	-145	-0.1%	-0.3%
Other permanent differences	-95	-0.7%	111	0.1%	-0.3%
Tax expense	**3,440**	**25.2%**	**13,204**	**13.1%**	**19.2%**
Tax effect of timing differences brought to account	-2,016	-14.8%	221	0.2%	-7.3%
Tax payable	**1,425**	**10.4%**	**13,424**	**13.3%**	**11.9%**
(Taxable income)					

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* This table also shows reconciliations of the total accounting profit and total taxable income for the period 1984-1993. "Foreign tax rate differences" and "Australian tax rate changes" should be ignored and adjusted for when a tax reconciliation is read as an income reconciliation.

TABLE 5.7

RECONCILIATION OF ANNUAL PFTE AND ANNUAL TAX PAYABLE*

REDUCED SAMPLE OF 38 COMPANIES**

1984-1993

	Mean of Percentage										
	1984	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**Total**
	%	%	%	%	%	%	%	%	%	%	%
Prima facie tax expense (Accounting profit)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Tax effect of-											
Incentives	-9.9	61.1	-4.5	-7.9	-5.5	-3.0	-4.0	-1.2	-0.3	-2.2	-6.0
Dividends	-5.3	-8.8	-8.7	-8.2	-6.0	-8.3	-8.8	1.7	-2.1	0.4	-10.2
Capital gains and losses	-0.9	-3.3	-5.3	-3.0	-13.7	-4.8	-6.1	-10.5	-8.6	-20.7	-13.7
Non-deductibles	6.5	-1.6	7.3	8.9	12.9	-8.4	10.8	23.0	2.9	1.5	18.4
Unbooked timing differences	-11.0	-69.4	-8.6	-5.1	-1.3	-6.0	-14.6	-19.4	-23.6	7.5	12.4
Consolidation items	-0.1	-0.2	0.0	0.0	0.9	-0.6	0.0	-0.1	0.3	-0.3	-0.1

Foreign tax rate differences	-0.8	-1.9	-2.5	-0.6	-2.2	-2.1	-1.2	-1.5	-1.3	-3.4	-3.3
Australian tax rate changes	0.0	0.0	-0.5	-0.8	-1.1	-0.2	-0.1	2.0	0.0	0.9	-1.2
Prior year adjustments	-0.5	0.5	0.0	-0.7	0.7	-4.9	0.1	-1.0	-10.0	-3.2	-0.2
Other permanent differences	-1.1	-2.3	0.2	-2.3	-0.9	3.3	-0.5	0.1	-3.9	-1.5	0.1
Tax expense	**77.0**	**74.0**	**77.3**	**80.4**	**83.8**	**65.2**	**75.5**	**93.3**	**53.6**	**79.0**	**96.2**
Tax effect of timing differences brought to account	-9.8	-4.3	-10.1	-14.5	-15.8	-55.8	-1.1	-26.5	-8.8	-15.4	-12.7
Tax payable	**67.2**	**69.7**	**67.2**	**65.9**	**68.0**	**9.4**	**74.4**	**66.8**	**44.8**	**63.7**	**83.5**
(Taxable income)											

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* This table also shows reconciliations of the total accounting profit and total taxable income for the period 1984-1993. "Foreign tax rate differences" and "Australian tax rate changes" should be ignored and adjusted for when a tax reconciliation is read as a income reconciliation.

** Six companies in three industry groupings with effective tax rate significantly lower than the statutory tax rate (Gold, Entrepreneurial Investor and Investment and Financial Services) and two property trusts are excluded.

The following discussion focuses on the total column of Table 5.7. First, the magnitudes of gap components are examined. As expected, incentives decline to -6 percent of PFTE in Table 5.7, after the two gold-mining companies are excluded from the sample. Rebateable dividends (-10.2 percent) are only slightly lower than those in Table 5.3. Non-taxable capital gains (-13.7 percent) are even higher than those in Table 5.3, despite the fact that two industries (Entrepreneurial Investors and Investment and Financial Services) have been excluded, because in Table 5.3 these two items have been pulled down by the contrary signs of two entrepreneurial investors.

The other major gap components in Table 5.7 in order of importance are non-deductibles (18.4 percent), unbooked timing differences (12.4 percent), and timing differences brought to account (-12.7 percent). The booked and unbooked timing differences are roughly equal in magnitude and opposite in sign, but the two items should not offset each other because the latter are mainly due to losses. Two minor gap components are foreign tax rate differences (-3.3 percent) and Australian tax rate changes (-1.2%). Three gap components (consolidation items, prior year adjustments, and other permanent differences) are negligible.

When Table 5.7 is read as income reconciliations, taxable income is on average 88 percent of accounting profit (after adjusting for two tax rate items). The 12 percentage point gap is the combined effect of incentives, rebateable dividends, non-taxable capital gains, non-deductibles, as well as booked and unbooked timing differences.

TABLE 5.8

RECONCILIATION OF TOTAL PFTE AND TOTAL TAX PAYABLE*

COMPARISON OF SMALL AND LARGE COMPANIES

IN THE REDUCED SAMPLE OF 38 COMPANIES**

1984-1993

	Small Companies (n = 12)		**Large Companies (n = 26)**		**All Companies (n = 38)**	
	Mean	*Standard Error*	Mean	*Standard Error*	Mean	*Standard Error*
	%	*%*	%	*%*	%	*%*
Prima facie tax expense (Accounting profit)	100.0	*0.0*	100.0	*0.0*	100.0	*0.0*
Tax effect of-						
Incentives	-3.4	*1.3*	-7.2	*3.4*	-6.0	*2.3*
Dividends	-4.1	*2.2*	-13.0	*4.7*	-10.2	*3.3*
Capital gains and losses	-16.9	*10.3*	-12.2	*4.8*	-13.7	*4.5*
Non-deductibles	20.5	*4.1*	17.3	*5.6*	18.4	*4.0*
Unbooked timing differences	17.0	*11.1*	10.3	*8.2*	12.4	*6.5*

Consolidation items	0.0	*0.0*	-0.1	*0.1*	-0.1	*0.1*
Foreign tax rate differences	-1.9	*1.8*	-3.9	*2.0*	-3.3	*1.5*
Australian tax rate changes	-2.2	*1.7*	-0.8	*0.7*	-1.2	*0.7*
Prior year adjustments	0.9	*2.7*	-0.7	*1.4*	-0.2	*1.3*
Other permanent differences	3.1	*3.8*	-1.3	*0.9*	0.1	*1.3*
Tax expense	**113.0**	***15.6***	**88.5**	***5.4***	**96.2**	***6.3***
Tax effect of timing differences brought to account	-25.5	*12.5*	-6.7	*4.0*	-12.7	*4.9*
Tax payable	**87.4**	***18.6***	**81.7**	***7.2***	**83.5**	***7.5***
(Taxable income)						

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* This table also shows reconciliations of the total accounting profit and total taxable income for the period 1984-1993. "Foreign tax rate differences" and "Australian tax rate changes" should be ignored and adjusted for when a tax reconciliation is read as a income reconciliation.

** Six companies in three industry groupings with effective tax rate significantly lower than the statutory tax rate (Gold, Entrepreneurial Investor and Investment and Financial Services) and two property trusts are excluded.

5.3.4 Comparison of small and large companies in the reduced sample

To study the size effect, the reduced sample was split into two groups: 12 small companies and 26 large companies. Table 5.8 shows the mean percentage reconciliations of the two groups, together with their standard errors.

The following observations are made by comparing the means of the two groups:

- Large firms tended to benefit more from incentives (-7.2 percent) relative to small firms (-3.4 percent). Incentives available included research and development incentives and investment allowances.

- Large firms tended to receive more dividend rebates (-13 percent) compared with small firms (-4.1 percent). Note that dividends which attracted rebate were dividends received from companies outside the group. Intra-group dividends had been eliminated upon consolidation.

- Small firms appeared to have a higher proportion of non-taxable capital gains in their profit (-17 percent) compared with large firms (-12 percent). However, unlike large firms, the non-taxable capital gains of small firms were not significantly different from zero due to the large standard error (10 percent).

- Small firms also tended to have a greater amount of non-deductibles (21 percent) than large firms (17 percent).

- Small firms tended to have more unbooked timing differences (17 percent) than large firms (10 percent), presumably because they were more likely to incur losses.

- Large firms tended to benefit more from foreign tax rate differences (-3.9 percent) than small firms (-1.9 percent), presumably because they were in a better position to take advantage of tax havens.

- When expressed as a percentage of PFTE, the tax expense of small firms (113 percent) was higher than that of large firms (89 percent). This is consistent with the results of the regression analysis which show that ETRs of small firms were higher than those of the large firms.

- Small firms tended to have a higher proportion of deferred tax (-26 percent of PFTE) than large firms (-6.7 percent of PFTE). Consequently, when STR was reduced, small firms tended to benefit more from tax rate changes (-2.2 percent) than large firms (-0.8 percent).

- The current tax liability of small firms (87 percent of PFTE) was relatively higher than that of large firms (82 percent of PFTE).

- Overall, the book-tax income gap was wider for large firms (13.6 percent) compared to small firms (8.5 percent).[87]

5.3.5 Summary reconciliation of 38 companies in the reduced sample

The last two columns of Table 5.8 show that only six gap components are significantly different from zero at the 0.05 significance level.[88] They are incentives, dividends, capital gains and losses, non-deductibles, foreign tax rate differences, and timing differences.

The amounts being reconciled are now examined. Based on a stratified sample of 38 companies, on average tax expense was about 96 percent of PFTE. With a standard error of 6.3 percent, tax expense was not significantly different from PFTE at the 0.05 significance level. In other words, ETR was not significantly different from the STR. This finding is consistent with the finding of the ETR study in chapter 4. However, due to the presence of deferred tax (-12.7 percent), current tax payable was only about 84 percent of PFTE, and was significantly lower than PFTE at the 0.05 significance level.

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87 For small companies, taxable income is 91.5 percent (87.4 + 1.9 + 2.2) of accounting profit. For large companies, taxable income is 86.4 percent (81.7 + 3.9 + 0.8) of accounting profit.

88 When the absolute magnitude of the mean exceeds 1.96 times the magnitude of the standard error, the mean is significantly different from zero at the 0.05 significance level.

If timing differences in aggregate do reverse in full over time, one would expect that aggregate deferred tax would converge to zero over a certain period of time. The fact that the aggregate deferred tax over the study period is significantly different from zero (at the 0.05 significance level) suggests that either timing differences in aggregate fail to reverse fully over time, or the study period is not long enough to cover all reversal patterns.

5.4 Summary and Conclusions

The findings of the present study can be summarised as follows. First, the major causes leading to the book-tax income gap over the study period were non-deductibles, non-taxable capital gains, booked and unbooked timing differences, dividend income, incentives, and foreign tax rate differences (in order of importance based on the total column of Table 5.7).[89] Unbooked timing differences were mainly unrecognised FITB in relation to losses, and this item is not statistically significant at 0.05 level.

Second, the average magnitude of the book-tax income gap was 12 percent of accounting profit. The magnitude of the gap between PFTE (hence STR) and tax expense (hence ETR) was 3.8 percent of the former. When deferred tax (12.7 percent) was taken into account, the gap between PFTE and tax payable was 16.5 percent of the former. The extent to which different gap components contributed to the gap can be found in the last column of Table 5.7. In general, the magnitude of each of non-deductibles, non-taxable capital gains, booked and unbooked timing differences, and dividend income, exceeded 10 percent of accounting profit. Incentives were about 6 percent of accounting profit. These gap components impacted taxable income in different directions, and to a large extent they offset each other.

Third, over a period of ten years, the aggregate of timing differences brought to account was significantly different from zero. The evidence supports the conclusion that timing differences in aggregate do not fully reverse over time, although it is also possible that the study period is not long enough to cover all reversals of timing differences.

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89 Even though Table 5.3 covers more industries, the results are somehow biased by inclusion of the gold mining industry which received an abnormal level of incentives in earlier years, and two investment industries whose profits are mainly dividends and capital gains subject to preferential tax treatment. Two entrepreneurial investors reporting aggregate loss over the study period also distort the results.

Fourth, a close examination of three industries confirms that industry differences were mainly due to exemption of gold-mining income, and preferential treatment of dividend income and capital gains.

Fifth, the book-tax income gap of large companies tended to be wider than that of small companies. Large companies tended to benefit more from incentives, dividend rebate, and foreign tax rate differences, than did small companies. They tended to have proportionately smaller amounts of booked and unbooked timing differences, and non-deductibles than did small companies. The relative importance of non-taxable capital gains is unclear, for while the mean of this item for small companies appears to be higher than that for large companies, the former is not significantly different from zero.

Finally, an important reason why the effective tax rate was observed to fluctuate in a wide range was the presence of extreme values. A common situation giving rise to extreme values was when accounting profit (or loss) was very small. If accounting profit was close to zero, then even a modest difference between book and taxable income could result in an extreme effective tax rate.

Due to asymmetrical treatment of profit and loss for tax purposes (which distorted the annual ETRs) and the presence of extreme values (which distorted the annual tax and income reconciliations), the results of both the ETR analysis and the analysis of tax disclosure data were based on aggregate or average values over a number of years. Nevertheless, the findings of these two studies have significant policy implications for both the alignment issue and the equity issue.

The major causes of the book-tax income gap are attributable to deliberate government policies and different objectives of the tax and the financial reporting systems. Tax incentives, dividend rebates, concessional treatment of capital gains, and non-deductibles are all the results of government policy decisions. There are good economic, political, and administrative reasons for these policies. Tax incentives are provided because of the need to encourage specific economic actitivies, to achieve a higher level of employment and to foster economic growth. Provision of tax incentives may also be the result of interest group activities. Inter-company dividends are rebateable because of the policy that the ultimate taxpaper is the individual; corporation is merely a form of business organisation. Concessional treatment of capital gains is the result of both economic[90] and political[91]

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90 Because capital gains are taxed only upon realisation, a person who owns an asset that has increased in value may be reluctant to sell it. If he continues to hold the asset, he can postpone the tax indefinitely. Thus, taxation of capital gains gives rise to an important distortion in resource allocation. This distortion is referred to as the lock-in effect.

considerations. Some business expenses (e.g. entertainment expenses) are not deductible for tax purposes in order to avoid frequent disputes between taxpayer and administrator and to protect government revenue.

Timing differences are mainly due to accelerated tax depreciation and the different timings of income and expense recognition in the two sets of rules. Accelerated depreciation should have been categorised as tax incentives in the present analysis but for the lack of information about the composition of timing differences in financial statements. Different timings of recognition arise because of the application of the wherewithal to pay principle in taxation, and the matching principle in financial accounting. These different principles are attributable to different standards of the two systems, i.e. certainty and convenience versus relevance, and to different objectives of the two systems, i.e. revenue collection versus performance evaluation.

Unbooked timing differences are due mainly to asymmetrical treatment of profit and loss in taxation. Unless the government is willing to treat profit and loss in a symmetrical way for tax purposes (e.g. by allowing losses to be carried back and to give rise to refund of prior year taxes as in the USA), unbooked timing differences will remain even if tax rules are aligned with financial accounting rules.

Thus, a complete alignment cannot be achieved unless (a) the government is willing to yield its policy making power in the tax system and the same policy outcomes can be achieved by other policy measures, e.g. by handing out cash incentives instead of providing tax incentives, and (b) the objectives of the tax and financial reporting systems can be reconciled.

The evidence of a wider book-tax income gap (and a wider ETR/STR gap) for large firms relative to small firms raises the issue of equity. The facts that large firms tend to benefit more from tax incentives and foreign tax rate differences suggest that they probably are better able to organise their activities in optimal tax saving ways and to influence the political process in their favour. While it appears desirable for the government to take appropriate policy actions to redress the equity issue, imposing a complete alignment of tax rules with financial accounting rules is unlikely to improve equity because previous studies show that large firms are in a better position to manage their accounting earnings than small firms.

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91 In Australia, capital gains tax was foreshadowed in 1974 by the then Labor Government but was not proceeded with because of a change of government. Taxation of capital gains was not introduced until 1985 after the Labor Party returned to power.

To gather the opinions of major corporate taxpayers and tax practitioners about the alignment issue and to assess the potential impacts of alignment on compliance costs and earnings of tax practitioners, a postal questionnaire survey has been conducted. The findings of the survey study will be reported in the following chapter.

CHAPTER 6

A SURVEY OF OPINIONS ABOUT ALIGNMENT

The primary objective of the income tax system is to raise revenue for government programs. In addition, the tax system is used by the government to achieve other economic and social objectives. The criteria used to evaluate a tax system include horizontal and vertical equity, neutrality, certainty, continuity, convenience and economy. A tax system is simple if the compliance costs and administration costs are minimal and the tax rules have a high degree of certainty and continuity. A simple tax system is conducive to a high level of taxpayer compliance. Alignment of tax rules with financial accounting rules might simplify the income tax system and reduce compliance costs.

However, as discussed in chapter 3, alignment might also have negative impacts on the tax system in terms of these evaluation criteria. One might wonder whether, in the opinions of corporate taxpayers and tax advisers, existing financial accounting rules are preferred to existing tax rules in terms of these criteria; what would be the impact of alignment on taxpayers' compliance costs and tax practitioners' earnings; and to what extent they support a complete alignment of tax rules with accounting rules.

This chapter reports the results of a survey of the opinions of random samples of major corporate taxpayers (companies listed on the Australian Stock Exchange) and accountants practising in tax about the alignment of tax rules with accounting rules. The method adopted was a postal questionnaire survey. The objective was to address the above questions. The study provides empirical evidence which contributes to the debate about how the Australian tax system can be improved in general, and about the alignment issue in particular.

The remainder of this chapter is organised as follows. The research design is described in section 6.1. Section 6.2 reports the response rates and the results of the tests for nonresponse biases. Demographic profiles of respondents are described in Section 6.3. Section 6.4 summarises the opinions about alignment. The impacts of alignment on companies' compliance costs and on practitioners' earnings are respectively reported in sections 6.5 and 6.6. Section 6.7 report the results of the regression analyses. In Section 6.8, the findings are summarised and the policy implications discussed.

6.1 Research Design

Oppenheim [1992] notes that there are two broad types of survey design: descriptive and analytic. Descriptive surveys tell us how many and what proportion of members of a population have a certain opinion or characteristic, or how often certain events occur together. Analytic surveys, on the other hand, are designed to provide explanations, or to show causal relationships between one variable and another. For many surveys, such a distinction appears to be artificial. The survey reported here is both a descriptive one and an analytic one. In addition to provision of descriptive data such as the proportion of respondents agreeable to alignment and the likely financial implications of alignment, statistical analyses were carried out to test hypotheses and to explore associations between variables.

Subsection 6.1.1 below describes the two instruments used in the survey. The target populations and the sampling strategy are described in subsection 6.1.2. The hypotheses under test, the relationships between variables to be explored, and the statistical methods used are described in subsection 6.1.3.

6.1.1 Survey instruments

Two instruments were used in the survey, one for listed companies and one for accountants practising in tax (practitioners). Copies of the survey instruments with the frequency distribution of the responses to most questions can be found in Appendices 4 and 5. The instruments were divided into three parts. Part 1 was the same for both instruments. The objective of Part 1 was to ascertain the respondent's opinions about the relative merits of existing tax rules and existing accounting rules as the yardstick to measure income for tax purposes in terms of the seven evaluation criteria, and their opinions about alignment.

It is widely agreed that the desirable characteristics (hence the evaluation criteria) of any tax system include horizontal and vertical equity, neutrality, certainty, continuity, convenience and economy [James and Nobes 1978; Krever 1987; Lehmann and Coleman 1996; Rosen 1992; Smith 1776; Sommerfeld et al. 1992; Stiglitz 1988; Woellner et al. 1994]. However, the criteria may have different meanings to different people; or different people may use different terms to describe the criteria. To ensure a common understanding of the criteria, seven definitions were provided in the instruments.[92]

Respondents were asked if they agreed with statements that ranked one set of rules over another in terms of these criteria. A seven-point Likert scale was used, ranging from 'strongly agree' to 'strongly disagree'. The mid-point was 'neither agree nor disagree'.[93] Having more points on the scale would force respondents to consider the fine points of their attitudes [Mangione 1995], and would enable the use of more sophisticated statistical techniques to analyse the data.

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92 'Equality' (or horizontal equity) requires that taxpayers in similar positions be subject to similar tax liability. 'Ability to pay' (or vertical equity) requires that the total tax burden be distributed among taxpayers according to their capacity to bear it. 'Neutrality' (or efficiency) requires that the efficient working of the economy be subject to minimum interference by the tax system to avoid misallocation of economic resources. 'Certainty' requires that tax rules be comprehensible, unambiguous and certain, both to the taxpayer and to the tax administrator. 'Continuity' requires that tax rules be changed infrequently and changes be made only in the context of a systematic tax reform. 'Cost effectiveness' (or economy) requires that the costs incurred by government in assessing and collecting tax, and in auditing taxpayer, be kept to minimum. 'Convenience' requires that assessment and collection of tax cause taxpayer as little inconvenience and compliance costs as possible.

93 To avoid possible acquiescence bias caused by the tendency to be agreeable [Mangione 1995], in some questions respondents were asked if they agreed that accounting rules be preferred to tax rules, and the order of preference was reversed in other questions. This would cause respondents who wanted to be consistent with their viewpoint to have to agree in some questions, and to disagree in others.

Furthermore, respondents were asked to express their agreement or disagreement as to whether the compliance level would be enhanced if income tax was based on accounting profit instead of taxable income; whether overall accounting profit should replace taxable income as the tax base; and whether taxable income should replace accounting profit as a measure of performance in financial reports. They also were asked to indicate whether they preferred to have one common set of rules for both tax and financial reporting purposes, or to have two separate sets of rules.

One of the questions in Part 1 contained an (optional) open-ended part. Respondents were asked to give the reasons for their agreement or disagreement with the statement "Overall, accounting profit should replace taxable income as the basis to compute income tax liability." This was the only open-ended question in the two survey instruments.

The main focus of the survey was on a complete alignment of tax rules with accounting rules. However, the possibility of a closer (yet incomplete) alignment also was explored. The last question in Part 1 provided a list of accounting concepts, principles, and standards, and respondents were asked to select items which they would like to recommend to the income tax authorities for adoption. This question was intended to help identify the potential areas where tax laws could be improved by adopting financial accounting rules.

Part 2 contained questions to collect information about the demographic characteristics of the respondents. In the case of companies, information such as industry affiliation, firm size[94] and foreign involvement of the group, position and professional affiliations of the person who completed the questionnaire was gathered. In the case of practitioners, information about size of the practice,[95] types of clientele, position, professional affiliations, academic qualifications and work experience of the respondents was collected.

The objective of Part 3 of the survey instruments was to ascertain-

(a) in the case of companies: the estimated changes in compliance costs[96] incurred by the companies for the income year 1993/94[97] assuming that accounting

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94 Firm size was measured in terms of total assets, pre-tax net profit, and income tax expense.

95 Size of a practice was measured in terms of size of staff, including partners.

96 Following Sandford et al. [1989] and Pope et al. [1994], compliance costs were defined to be the costs incurred by companies in meeting the requirements of the income tax system, including both computational costs (unavoidable) and planning costs (discretionary). Compliance costs were divided into external and internal costs. External costs were fees paid to external advisers for income tax related services. Internal costs were the costs of the time spent by internal staff (including directors) of the company on work exclusively for income tax purposes.

profit figures were used to assess their income tax liability in place of taxable income; and

(b) in the case of practitioners: the estimated impact on the revenues and profits of the firms for the income year 1994/95 assuming that accounting profit figures were used to assess the income tax liability of their clients in place of taxable income.

One of the questions in Part 3 of the two instruments also asked respondents to choose the reason(s) for taxpayers using external income tax services provided by practitioners.

Both survey instruments were pretested with random samples drawn from the target populations. The results of the pretest and the ways in which it impacted the final research design can be found in Appendix 6.

6.1.2 Target populations and survey samples

The target populations of the survey were originally intended to include corporate taxpayers, tax practitioners (including accountants, lawyers and other tax agents[98] who provide tax services to the public), and officers of the Australian Taxation Office (ATO). The target populations were subsequently narrowed down to include only (a) companies listed on the Australian Stock Exchange (ASX), and (b) Certified Practising Accountants (CPAs) and Chartered Accountants (CAs) practising in the taxation area. It was a fundamental requirement that the respondents had a reasonable knowledge of both tax rules and financial accounting rules to make a comparison. Tax lawyers, tax agents, and officers of the ATO who were not accountants might not have the required knowledge of financial accounting rules to form an opinion. Also, only listed companies were included because they were thought to benefit the most from alignment at least in terms of savings in compliance costs, and the chance of having someone in the company who met the knowledge requirement was much higher than non-listed companies.[99]

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97 In the case of companies, income for the income year 1993/94 formed the basis of assessment for the tax year 1994/95.

98 In Australia, a tax agent is a practitioner who acts as an agent for taxpayers in respect of their tax affairs, i.e. a tax adviser. A tax agent must register with a Tax Agents Board, but need not be a member of a professional accounting body. A lawyer can practise tax without being a tax agent.

99 The scales of operations of many non-listed companies did not justify having in-house accounting and tax advisers. They simply obtained services from external advisers.

A random sample of 500 listed Australian companies were drawn from the 1995 ASX Yearbook for the purposes of the survey.[100] Foreign companies and property trusts were excluded from the sample.[101] Both the Australian Society of Certified Practising Accountants (ASCPA) and the Institute of Chartered Accountants in Australia (ICAA) provided a random sample of 250 members who were in public practice and whose primary job function was 'taxation' for the survey, i.e. a total of 500 accountants practising tax around Australia.[102]

6.1.3 Hypotheses testing and regression modelling of responses

Companies and practitioners were expected to be two groups of respondents with different opinions of, and different interests in, alignment of tax rules and accounting rules. The divergence of the two sets of rules was expected to have caused more inconvenience to large businesses, especially listed companies, than small businesses. Listed companies must follow accounting standards in preparing financial reports. They must also follow tax rules in preparing tax returns. Divergence of the two sets of rules means significant compliance costs. Small businesses tend to have simple cash flow patterns and small timing and permanent differences between accounting profit and taxable income. If they are not a reporting entity, they need not follow accounting standards to report to external users of financial information. They may even adopt tax rules (e.g. tax depreciation rules) in keeping their books. Practitioners advise both large and small clients, incorporated or otherwise. Practitioners advising small businesses outnumber those advising large corporations. Because of their expertise and diversified experience in advising different types of clients, practitioners were expected to perceive the divergence of the two sets of rules not so inconvenient as were listed companies.

Furthermore, it was expected that alignment would reduce the compliance costs of companies, but might reduce the earnings of practitioners. Also, due to the flexibility of financial accounting rules, companies might prefer accounting profit as the tax base because of its relative manipulability. Thus, the two groups might have different perceptions of, and conflicting interests in, the alignment issue. It was expected that companies would be more inclined to have a supportive attitude toward alignment than would practitioners. The null hypotheses under test were that the opinions of companies and those of the practitioners about the relative

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100 As at 28 February 1995, about 1,180 companies and trusts were listed on the ASX, including 55 foreign companies and 41 property trusts [ASX 1995].

101 Foreign companies were excluded because only a part of their profits were subject to Australian tax and they were unlikely to respond to the survey. Property trusts were excluded because in general a trust *per se* was not a taxable entity and was not liable to income tax.

102 According to the annual reports of ASCPA [1995] and ICAA [1995], the numbers of members engaged in public practice in Australia and overseas, either as principals or as employees, were respectively 17,099 (as at 31 December 1995) and 13,347 (as at 30 June 1995). However, the numbers of members in public practice whose primary job function was 'taxation' were not available.

convenience of the two sets of rules and about the desirability of alignment were not significantly different.

The opinions of respondents were scored from 1 (strongly agree) to 7 (strongly disagree).[103] A low score on the seven-point scale means a favourable attitude toward the use of accounting rules for taxation purposes. The statistical method used to test hypotheses was t-test (a parametric test). An important assumption made was that the seven-point scale was an interval scale.[104]

To shed light on the relationships between variables, ordinary least squares (OLS) regression models were used to analyse how the evaluation criteria, demographic characteristics of respondents, and financial implications of alignment impact the perceived compliance level (Question 1.8) and the alignment attitudes (Question 1.9). OLS regression models took into account the strength of opinions as measured by the seven-point scale in the survey instruments, but again they assumed that the scale was an interval one.[105]

FIGURE 6.1

STRUCTURE OF THE SURVEY INSTRUMENTS

AND RELATIONSHIP OF VARIABLES

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[103] Questions with reverse order of preference to avoid acquiescence bias were scored in the reverse order.

[104] Mann-Whitney U test, a non-parametric test, was also used to compare the opinions of the two groups of respondents. The Mann-Whitney U test only requires the scale be an ordinal one. Because the results of Mann-Whitney U tests were similar to those of the t-tests, only the latter are reported here.

[105] Logistic regression models also were used to model the probabilities of disagreeing to the two statements in questions 1.8 and 1.9 of the survey instruments. In logistic regression analyses, the dependent variables were dichotomised into 'tend to agree' (1 to 3 on the scale) and 'tend to disagree' (5 to 7 on the scale); the mid-point on the scale (4 'neither agree nor disagree') was excluded. The assumption that the dependent variables were on an interval scale was no longer required. However, dichotomising the dependent variables resulted in loss of information (e.g. the strength of agreement and disagreement). Because the results of logistic regression analyses were similar to those of the OLS regression analyses, only the latter are reported here.

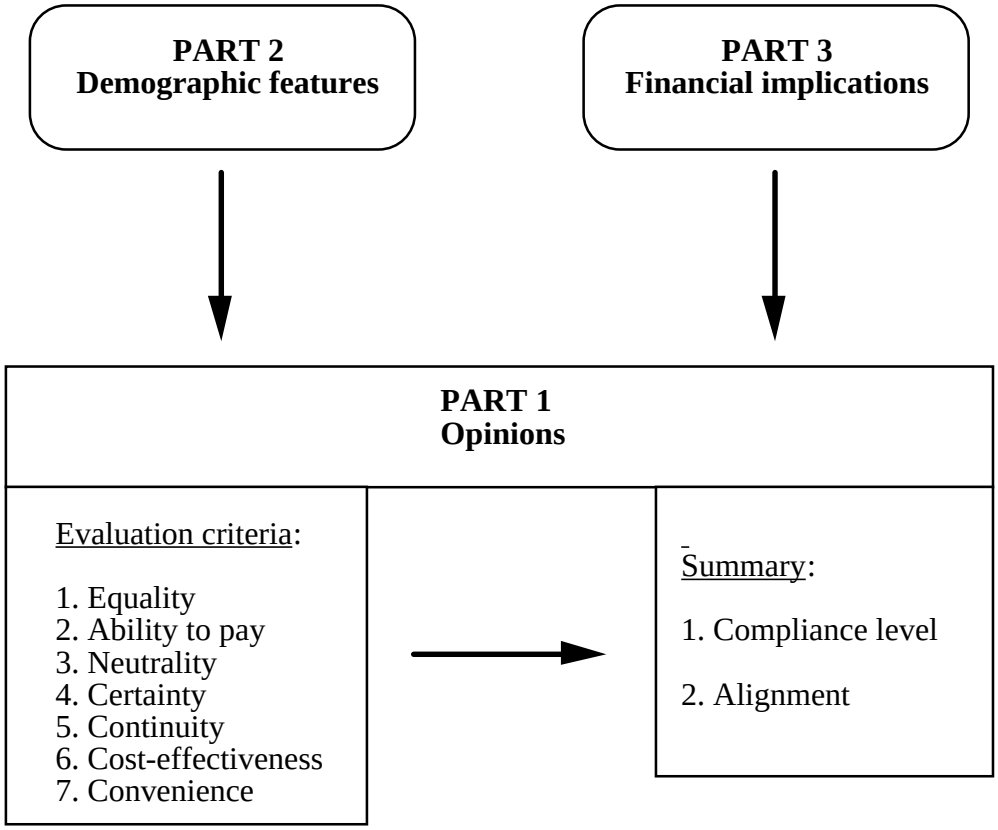

Figure 6.1 summarises the relationships between different variables. Two summary opinions were compliance level (Question 1.8) and alignment (Question 1.9); they were the dependent variables in the regression models. The perceived relative merits of financial accounting rules over tax rules in terms of the seven evaluation criteria were expected to play an important role in determining the summary opinions. Thus, in the models the evaluation criteria were independent variables. Other variables such as the demographic characteristics of respondents and the financial implications of alignment also were expected to have an impact on the summary opinions, so they were also included as independent variables in the modelling process.

Factor analysis[106] was used to reduce the seven evaluation criteria to a smaller number of factors which have an important bearing on perceived compliance level and alignment opinions of the respondents. The method used to extract factors was principal component analysis. The rotation algorithm used was varimax method which minimised the number of variables that had high loadings on a factor. As a

[106] Factor analysis can be used to identify common factors underlying the variables [Kerlinger 1986; Oppenheim 1992]. A factor is a construct that underlies a number of closely related variables. If two or more variables are substantially correlated, they are measuring something in common; they share common factor variance.

result of the factor analysis, new variables were constructed in place of the seven evaluation criteria to reduce the number of independent variables and to avoid the problems of collinearity.

Regression modelling was carried out at two levels. At the first level, the responses of both companies and practitioners were included in the analysis (the combined models). At the second level, companies and practitioners were segregated (company models and practitioner models), and additional independent variables pertinent to each group were included in the modelling process.

6.2 Response Rates and Tests for Nonresponse Biases

6.2.1 Response rates

The survey instruments were administered in February 1996.[107] The numbers of valid responses received from companies and practitioners were 118 and 221 respectively. After adjusting for ineffective mailings, the response rate for companies was 24 percent.[108] One reason for the low response rate for companies was survey overload.[109] Another reason was the lack of a suitable person in the company perceived to have the required knowledge to complete the questionnaire.[110] The response rate of 24 percent is on a par with those of Wallschutzky [1995] in his survey of users of tax legislation to establish benchmarks for future evaluation of the TLIP.[111]

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107 An advance letter was dispatched on 30 January 1996. The survey instruments were put in the mail on 6 February. A follow-up letter was sent two weeks later. The survey was closed off on 11 April 1996.

108 Twelve questionnaires sent to companies were returned unopened because the addressees had moved.

109 Twelve companies forwarded a letter or a note to the researcher by mail or by facsimile transmission, or returned a blank questionnaire attached with a note, advising that they would not respond to the survey. Six of them said that it was a company policy not to respond to any survey unless responding was mandatory or the company had a direct financial interest in the survey. Some also expressed concerns about the tendency to receive an increasing number of surveys that they would like to do without.

110 This was evidenced by a few companies advising nonresponse because the tax matters of the company were handled by accounting firms, or because the personnel in the head office were only administrative staff and the management was stationed close to the mining site. This observation was also supported by the fact that over 90 percent of those who completed and returned the company questionnaire were members of either of the professional accounting bodies (see Question 2.7 of the company instrument in Appendix 4).

111 The response rate in the TLIP benchmarking study for large and small businesses was 25 percent and 19 percent, respectively.

The response rate of practitioners was 44 percent (48 percent for CAs, and 41 percent for CPAs).[112] Two reasons can be offered for the higher response rate of practitioners compared with that of companies. First, the problem of lack of knowledge of the two sets of rules did not apply to practitioners. Second, the letters of support from the directors of the two accounting bodies enclosed with the survey instrument probably had helped to enhance the response rate. The practitioner response rate is better than that of tax agents (37 percent) reported by Wallschutzky [1995].

Given the knowledge required of a respondent and the length of the instruments (eight pages), the response rates appear to be reasonable.

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[112] Only one practitioner questionnaire was returned unopened. Also, one of the CPA respondents returned a blank questionnaire and advised that he had already responded as a CA respondent.

6.2.2 Tests for nonresponse biases

One way to test for nonresponse biases is to compare the demographic characteristics of the respondents with those of the survey population to check if any sector of the survey population has been over- or under-represented, bearing in mind that some disproportionate representation may be caused by the random nature of the sample.

Table 6.1 summarises the industry affiliation of 118 company respondents. The distribution of the survey population across industry groupings is shown alongside for comparison. In general, there is a reasonable spread of respondents among the industry groupings and the distribution is quite similar to that of the survey population in relative terms.[113]

Table 6.2 shows the size distribution of company respondents based on group total asset as at 30 June 1994. The distribution is similar to that of the listed companies found on the STATEX Financial Statement Database of the ASX accessed through Reuter Link. The slight bias toward the larger size of the distribution of respondents may be due to the one-year difference between the two sets of figures; the STATEX data for 1994 are not available to the researcher.

TABLE 6.1

INDUSTRY AFFILIATION OF COMPANY RESPONDENTS

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[113] An anomaly was found in "diversified resources". According to ASX Yearbook 1995, there were only five companies in this industry grouping as at 28 February 1995, but seven respondents classified themselves into this grouping. One possibility is that some of these companies were in fact classified by ASX as 'gold' or 'other metals'. Two industry groupings not represented in the responses were 'insurance' and 'tourism and leisure'. Tourism and Leisure was a new industry grouping split off from Miscellaneous Services in 1995. 'Developers and contractors' and 'media' were over-represented, whereas 'investment and financial services' and 'miscellaneous services' were under-represented. Some respondents might have classified themselves in an incorrect industry grouping. The ASX Industry Classification is designed for investors and is based on the largest source of revenues in consolidated accounts. Many groups of companies operate across industry boundaries, so for diversified groups the classification is only a crude indicator of industry affiliation. Company employees might not pay much attention to the label attached by the ASX for the benefits of the investors. The ASX scheme itself also might cause confusion because of the existence of overlapping and mixed categories such as 'diversified resources', 'diversified industrials', 'miscellaneous industrials', and 'miscellaneous services'. Thus, it is not surprising to find that two respondents did not know into which ASX industry grouping their companies should fall (see the "don't know" category at the bottom of Table 6.1).

WITH COMPARATIVE DISTRIBUTION OF SURVEY POPULATION

	Respondents		Listed Companies 1995*	
ASX industry classification	Number	Percentage	Number**	Percentage
Gold	22	18.6	261	22.9
Other metals	9	7.6	104	9.1
Solid fuels	1	0.8	10	0.9
Oil and gas	7	5.9	47	4.1
Diversified resources	7	5.9	5	0.4
Developers and contractors	9	7.6	43	3.8
Building materials	2	1.7	27	2.4
Alcohol and tobacco	1	0.8	17	1.5
Food and household goods	3	2.5	33	2.9
Chemicals	2	1.7	10	0.9
Engineering	3	2.5	41	3.6
Paper and packaging	1	0.8	9	0.8
Retail	5	4.2	38	3.3
Transport	2	1.7	13	1.1
Media	6	5.1	30	2.6
Banks	1	0.8	18	1.6
Insurance	0	0.0	9	0.8
Entrepreneurial investors	3	2.5	8	0.7
Investment and financial services	6	5.1	156	13.7
Miscellaneous services	6	5.1	109	9.6
Miscellaneous industrials	15	12.7	109	9.6
Diversified industrials	5	4.2	16	1.4
Tourism and leisure	0	0.0	26	2.3

Don't know	2	1.7		
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TOTAL	118	100.0	1,139	100.0
	===	=====	=====	=====

*SOURCE: The Australian Stock Exchange Yearbook 1995.

**Fifty five foreign companies listed on the Australian Stock Exchange are included, but 41 property trusts are excluded.

TABLE 6.2

SIZE OF COMPANY RESPONDENTS

BASED ON GROUP TOTAL ASSETS AS AT 30 JUNE 1994

WITH COMPARATIVE SIZE DISTRIBUTION

OF LISTED COMPANIES FOR 1993

	Respondents		Listed Companies 1993*	
Group total assets as at 30 June 1994	Number	Percentage	Number	Percentage
Less than $30 million	61	51.7	544	59.9
$30 million to under $100 million	20	16.9	139	15.3
$100 million to under $300 million	18	15.3	97	10.7
$300 million to under $1,500 million	9	7.6	64	7.0
$1,500 million or more	10	8.5	64	7.0
TOTAL	118	100.0	908	100.0

*SOURCE: The Australian Stock Exchange's STATEX Financial Statement Database accessed through Reuter Link. STATEX data for 1994 are not available to the researcher. Property trusts have been excluded.

TABLE 6.3

GEOGRAPHICAL LOCATION OF PRACTITIONER RESPONDENTS

WITH COMPARATIVE DISTRIBUTION

OF ACCOUNTANTS IN PUBLIC PRACTICE

	Respondents		CAs & CPAs in Public Practice*	
State or Territory	Number	Percentage	Number	Percentage
New South Wales (including A.C.T.)	68	30.9	8,557	35.9
Northern Territory	3	1.4	142	0.6
Queensland	44	20.0	3,625	15.2
South Australia	18	8.2	1,701	7.1
Tasmania	6	2.7	380	1.6
Victoria	60	27.3	7,080	29.7
Western Australia	21	9.5	2,381	10.0
TOTAL	220	100.0	23,866	100.0

*SOURCE: Data of Chartered accountants (as at 30 June 1995) were extracted from the 1995 Annual Report of the Institute of Chartered Accountants in Australia. Data of Certified Practising Accountants (as at 31 December 1994) were supplied by the Australian Society of Certified Practising Accountants.

As regards practitioners, only limited information about the survey population was available for comparison with the respondents. Table 6.3 shows the geographical location of practitioner respondents in comparison with the distribution of CPAs and CAs in public practice across States and Territories. The two distributions are quite similar in relative terms.[114]

Thus, in terms of industry and size distributions of companies and geographical distribution of practitioners, it appears that the survey populations were reasonably well represented by the respondents.

Another way to check for nonresponse biases is to compare the opinions of those who respond immediately with those who respond after follow-up steps are taken [Fowler 1993; Oppenheim 1992]. The underlying assumption is that late

[114] New South Wales (including Australian Capital Territory) was under-represented, and Queensland over-represented.

respondents have similar opinions to those of non-respondents.[115] Student t-tests were used to test if the opinions of the late respondents were significantly different from those of the early respondents.[116] No statistically significant differences were found between early and late responses to the closed questions in Part 1 of the survey instruments.

Thus, there were no signs which indicated that significant nonresponse biases existed. Nevertheless, the usual caveats about potential nonresponse biases apply to the results reported below.

6.3 Demographic Profiles of Respondents

The demographic profiles of the two groups of respondents based on the data gathered in Part 2 of the two survey instruments are briefly described in the two subsections below.

6.3.1 Demographic profile of company respondents

Tables 6.1 and 6.2 show the distributions of industry affiliation of company respondents and of their size based on group total assets as at 30 June 1994 (or substituted balance date). Nearly 40 percent of the respondents were resources companies; 60 percent were industrials. About one-half of the company respondents reported group total assets under $30 million; the other half had total assets of $30 million or more. Details of other demographic features of company respondents can be found in Appendix 4. More than one-third of the company respondents reported zero profit or net operating loss for 1993/94 and paid no tax (questions 2.4 and 2.5). Nearly one-third of company respondents reported group net profit before tax under $5 million, and group income tax expense under $1.5 million. The remaining 31 percent reported pre-tax profit of $5 million or more, with tax expense of $1.5 million or more. Finally, about 47 percent of the company respondents had members in the group deriving foreign income (question 2.2). Thus, companies of different asset sizes and profit levels, with different industry affiliations and different degrees of overseas operations, were well represented by the respondents.

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[115] Forty company responses, 21 CA responses and 38 CPA responses were received after the follow-up letters took effect.

[116] Since the type of respondents (company, CA or CPA) might be a confounding factor, t-test was applied to each group separately. As reported later in this chapter, significant differences were found between the responses of companies and those of practitioners, and within the practitioner group, between CAs and CPAs as well.

About two-thirds of the company officers and employees who completed the questionnaire were in a senior management position (question 2.6). Forty-eight percent of those who completed the questionnaire were CPAs, and 46 percent were CAs (question 2.7). About 20 percent of them were registered with a Tax Agents Board. As expected, the survey instrument was passed on to a professional accountant in the company or the group who had the required knowledge for completion, even though it was addressed to the managing director. Nonetheless, the instructions in Part 1 of the company survey instrument explicitly asked the respondent to answer the questions from the viewpoint of the company as a taxpayer.

6.3.2 Demographic profile of practitioner respondents

Table 6.3 sets out the distribution of practitioners across State and Territories. Other demographic data of the respondents can be found in Appendix 5. Over 98 percent of the practitioner respondents were a principal (64 percent) or an employee (35 percent) of a public accounting firm or a tax agent's practice (questions 2.1 and 2.3). Eighty-eight percent of them had 'taxation' as their primary job function, and 9 percent 'financial accounting and reporting' (question 2.4). All respondents had work experience in the income tax area (question 2.6), and almost all of them also had work experience in financial accounting and reporting (question 2.7). These demographic data of the respondents reflect the reasonable accuracy of the membership databases of the two accounting bodies. About one-third of the respondents had up to 10 years' tax and accounting experience, one-third had 11 to 20 years, and one-third had over 20 years. Thus, the respondents clearly had the knowledge and experience required to make a comparison of financial accounting and tax rules.

In terms of professional affiliation, 62 percent of the respondents were CAs and 55 percent CPAs (question 2.5). The total exceeds 100 percent because of overlapping professional membership. Forty-three percent of them were registered with a Tax Agents Board. Two of the respondents were also lawyers. As regards academic qualifications, nearly three-quarters of the respondents had a bachelor degree, and 8 percent had a higher degree in accounting, business, commerce or economics (question 2.10). Nearly eight percent had a degree in laws or taxation.

In terms of firm size, 54 percent of the respondents worked in a small practice of 10 persons or less, including the proprietor of partners (question 2.2). One-third worked in a medium-sized practice with 11 to 50 persons on the staff; 13 percent worked in large firms with a staff size over 50 persons. As regards the type of clientele, over 80 percent of the respondents were advising small businesses

(question 2.9). Six percent were advising companies and trusts listed on the ASX. The respondents had been involved in various areas of industry specialisation (question 2.8). Thus, tax practitioners working in practices of different sizes and advising different types of clientele were well represented by the respondents.

6.4 Opinions about Alignment

Tables 6.4 and 6.5 respectively summarise the opinions of companies and practitioners about the alignment issue. For easy comprehension, 'strongly agree', 'agree', and 'slightly agree' on the original scale are grouped under one single heading 'tend to agree'. Likewise, the three levels of disagreement are grouped under 'tend to disagree'.[117] Distributions of responses based on the original scale are available in Part 1 of Appendices 4 and 5.

6.4.1 Opinions of companies

The first seven questions asked the respondents if they agreed to the preference of one set of rules over another in terms of the criteria used to evaluate a tax system. As shown in Table 6.4, a majority of the company respondents tended to agree that accounting rules were preferred to tax rules in terms of these criteria. The preference was stronger in terms of convenience (86 percent), continuity (79 percent), certainty (70 percent), and neutrality (70 per cent) compared with the other criteria (less than 60 percent).

About 58 percent of the respondents tended to agree that tax compliance level would be enhanced if income tax was based on accounting profit. Nearly 57 percent of the company respondents tended to agree that overall accounting profits should replace taxable income as the tax base. Fifty-six respondents (48 percent) provided reasons for their agreement or disagreement to adopting accounting profit as the tax base. These reasons are listed in Appendix 7.

About 81 percent of the respondents tended to disagree that taxable income should replace accounting profit for corporate financial reporting. An even higher proportion (88 percent) tended to disagree that a firm's taxable income and accounting profit were usually similar in dollar amount. About three-quarters of the

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[117] The mixed order of preference of accounting rules (or accounting profit) and tax rules (or taxable income) in the survey instruments has been standardised in the two tables.

respondents preferred a common set of rules for both taxation and financial reporting purposes. Only 25 per cent preferred to have two separate sets of rules.[118]

The last question in Part 1 provided a list of accounting principles and standards and respondents were asked to select items to recommend to the income tax authorities for adoption. Three accounting standards recommended by 50 percent or more of the respondents were depreciation of non-current assets, employee entitlements, and inventory valuation. The matching principle also was recommended by 54 percent of the respondents. Forty percent or more (yet less than one-half) of the respondents recommended adoption of accounting for leases, accounting for purchased goodwill, and the materiality principle.[119]

TABLE 6.4

OPINIONS OF COMPANY RESPONDENTS

ABOUT ALIGNMENT OF TAX RULES WITH ACCOUNTING RULES

	Tend to agree	Neither agree nor disagree	Tend to disagree	Number of Respondents
For tax purposes, accounting rules are preferred to tax rules* in terms of-	**%**	**%**	**%**	**Count**
Equality	51.7	9.3	39.0	118

[118] The chi-square test was applied to examine if the opinions of companies were contingent upon firm size. The results show that company responses to the 13 closed questions in Part 1 are independent of all three size variables. No statistical test was applied to detect industry differences because of the large number of industry groupings and the uneven distribution of companies across industries.

[119] The fact that only a minority of the respondents recommended adoption of an accounting standard does not necessarily mean that the majority did not recommend its adoption, because the standard might not be relevant to the circumstances of all respondents. Also, no Australian accounting standard for financial instruments existed at the time the survey was conducted; only two exposure drafts had been released for comments.

(Horizontal equity)				
Ability to pay (Vertical equity)	52.5	10.2	37.3	118
Neutrality (Efficiency)	70.1	8.5	21.4	117
Certainty	70.1	1.7	28.2	117
Continuity	78.6	11.1	10.3	117
Cost effectiveness (Economy)	58.1	12.8	29.1	117
Convenience	85.5	3.4	11.1	117
General opinion:				
Compliance level will be enhanced if tax is based on AP	58.1	20.5	21.4	117
AP should replace TI for tax purposes	56.8	6.8	36.4	118
TI should replace AP				

for financial reporting	14.4	4.2	81.4	118
AP and TI are usually similar in dollar amount	7.6	4.2	88.1	118
Prefer one set of rules for both purposes	75.4	5.1	19.5	118
Prefer two separate sets of rules	24.6	4.2	71.2	118

AP = Accounting Profit TI = Taxable Income

*The mixed order of preference of accounting rules (or accounting profit) and tax rules (or taxable income) in the survey instrument has been standardised in this table.

TABLE 6.5

OPINIONS OF PRACTITIONER RESPONDENTS

ABOUT ALIGNMENT OF TAX RULES WITH ACCOUNTING RULES

	Tend to agree	Neither agree nor disagree	Tend to disagree	Number of Respondents
For tax purposes, accounting rules are preferred to tax rules* in terms of-	**%**	**%**	**%**	**Count**
Equality (Horizontal equity)	41.2	11.3	47.5	221
Ability to pay (Vertical equity)	53.8	11.8	34.4	221
Neutrality (Efficiency)	55.9	19.5	24.5	220
Certainty	59.3	10.9	29.9	221
Continuity	76.9	10.4	12.7	221
Cost effectiveness (Economy)	45.7	23.1	31.2	221

Convenience	68.3	14.9	16.7	221
General opinion:				
Compliance level will be enhanced if tax is based on AP38.0	24.9	37.1	221	
AP should replace TI for tax purposes	35.6	14.6	49.8	219
TI should replace AP for financial reporting	13.3	9.2	77.5	218
AP and TI are usually similar in dollar amount	29.9	8.1	62.0	221
Prefer one set of rules for both purposes	67.0	8.1	24.9	221
Prefer two separate sets of rules	31.7	10.0	58.4	221

AP = Accounting Profit TI = Taxable Income

*The mixed order of preference of accounting rules (or accounting profit) and tax rules (or taxable income) in the survey instrument has been standardised in this table.

6.4.2 Opinions of practitioners

As shown in Table 6.5, a majority of the practitioner respondents tended to agree that accounting rules were preferred to tax rules in terms of continuity (77 percent), convenience (68 percent), certainty (59 percent), neutrality (56 per cent), and ability to pay (54 percent). Only a minority tended to agree that accounting rules were superior in terms of cost-effectiveness (46 percent) and equality (41 percent).

Only 38 percent of practitioners tended to agree that compliance level would be enhanced if tax was based on accounting profit. Nearly 36 percent of practitioners supported the statement that overall accounting profit should replace taxable income as the tax base; the proportion of respondents who tended to disagree was close to 50 percent. Ninety five respondents (43 percent) provided reasons for their agreement or disagreement to adopting accounting profit as the tax base. The reasons are listed in Appendix 8.

About 78 percent of practitioner respondents tended to disagree that taxable income should replace accounting profit for financial reporting purposes. Only 62 percent of practitioners (compared with 88 percent of companies) disagreed that accounting profit and taxable income are usually similar in dollar amount. This was expected as explained in subsection 6.1.3. About two-thirds of the practitioners preferred one set of rules for both tax and financial reporting purposes. Only one-third preferred two separate sets of rules.[120]

In line with the recommendations of company respondents, the accounting principles and standards which were recommended for adoption for tax purposes by 40 percent or more of the practitioner respondents are inventory valuation (52 percent), matching principle (47 percent), purchased goodwill (45 percent), depreciation of non-current assets (45 percent), materiality principle (45 percent), financial and operating leases (42 percent), and employee entitlements (41 percent).

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[120] The chi-square test was applied to test if practitioners' opinions were contingent upon the staff size of the practice (question 2.2), whether the practitioner advising listed companies (question 2.9(a)), and tax experience of practitioner (question 2.6). In general, opinions were independent of the size of the practice. The only dependency found to be significant ($p = 0.052$) is similarity of accounting profit and taxable income in dollar amount. An inspection of the contingency table shows that large practices (staff size greater than 50) were more inclined to disagree that accounting profit and taxable income are usually similar in dollar amount. Again, this was expected. As regards clientele effect, practitioners who advised listed companies were significantly more inclined to agree that accounting rules are more cost-effective to administer than tax rules ($p = 0.038$), and to disagree that accounting profit and taxable income are usually similar in dollar amount ($p = 0.015$). Finally, opinions were independent of tax experience.

6.4.3 Comparison of opinions of companies and practitioners

In terms of the evaluation criteria, generally speaking, practitioner responses were less favourable toward accounting rules than company responses. The two groups of respondents had similar response patterns in two criteria, 'ability to pay' and 'continuity'. As regards the other five criteria, the proportion of practitioners who tended to agree that accounting rules were preferred to tax rules was at least 10 percentage points lower than that of companies.[121] Unlike companies, only a minority of practitioners tended to agree that accounting rules were preferred to tax rules in terms of 'equality' and 'cost effectiveness'.

Student t-tests were applied to the data on the seven-point scale to test whether the opinions of companies and practitioners are significantly different. Table 6.6 summarises the results of the tests. The first two columns of Table 6.6 show the mean response of the opinions of companies and practitioners respectively. The last column shows the p-values, i.e. observed significance levels.

TABLE 6.6

COMPARISON OF OPINIONS OF COMPANIES AND PRACTITIONERS

RESULTS OF T-TEST

	Companies	**Practitioners**	**Two-tailed**
	Mean Response	**Mean Response**	**p-value**
For tax purposes,			
accounting rules are			
preferred to tax rules*			
in terms of-			

[121] The proportion of practitioners who neither agreed nor disagreed with the preference of accounting rules over tax rules was higher than companies by about 10 percentage points in terms of 'neutrality', 'certainty', 'cost effectiveness', and 'convenience'. For the 'equality' criterion, the proportion of practitioners who tended to disagree that accounting rules were superior was 9 percentage points higher than that of companies.

Equality (Horizontal equity)	3.8	4.2	0.122
Ability to pay (Vertical equity)	3.6	3.6	0.798
Neutrality (Efficiency)	3.1	3.5	0.044
Certainty	3.1	3.3	0.284
Continuity	2.7	2.7	0.867
Cost effectiveness (Economy)	3.4	3.6	0.165
Convenience	2.4	2.9	0.003
General opinion:			
Compliance level will be enhanced if tax is based on AP	3.3	4.1	0.000
AP should replace TI for tax purposes	3.7	4.4	0.002

TI should replace AP for financial reporting	5.7	5.5	0.303
AP and TI are usually similar in dollar amount	5.7	4.7	0.000
Prefer one set of rules for both purposes	2.7	3.1	0.060
Prefer two separate sets of rules	5.1	4.6	0.042

AP = Accounting Profit TI = Taxable Income

*The mixed order of preference of accounting rules (or accounting profit) and tax rules (or taxable income) in the survey instrument has been standardised in this table:

1 = 'Strongly agree' 4 = 'Neither agree nor disagree' 7 = 'Strongly disagree'

The opinions of the two groups of respondents were significantly different in terms of two evaluation criteria: neutrality ($p = 0.044$) and convenience ($p = 0.003$). Significantly more companies than practitioners tended to rate accounting rules preferred to tax rules based on these two criteria. Also, significantly more companies were inclined to agree that compliance level would be enhanced if income tax was based on accounting profit, and that overall accounting profit should replace taxable income as the tax base. On the other hand, significantly more companies were inclined to disagree that accounting profit and taxable income were usually similar in dollar amount, and to disagree that two separate sets of rules were the preferred position. Thus, the evidence supports the alternative hypotheses that practitioners do not consider the divergence of the two sets of rules to have caused as much inconvenience to taxpayers as do companies, and that companies are more inclined to agree with alignment of tax rules with accounting rules than are practitioners.

6.5 Estimated Savings in Compliance Costs of Companies

The objective of Part 3 of the company instrument was to estimate the potential savings in compliance costs incurred by companies if accounting profit were adopted as the tax base. Respondents first were asked to provide details of their actual compliance costs for the 1993/94 income year. Then they were asked to estimate what their compliance costs would have been if accounting profit figures were used to assess income tax in place of taxable income for that year. Savings in compliance costs upon alignment were estimated by comparing the two figures.

Only 90 percent of the respondents (106) provided information about their actual compliance costs. Table 6.7 shows the average compliance costs of the respondents by asset size. On average, the total compliance costs of a respondent were nearly $110,000 for the 1993/94 income year. In general, compliance costs did not increase proportionately as firm size increased, i.e. there were economies of scale. In other words, compliance costs as a hidden tax was regressive. This finding is in line with the findings of other studies such as Pope et al. [1994].

TABLE 6.7

AVERAGE TOTAL COMPLIANCE COSTS FOR 1993/94 INCOME YEAR

BY ASSET SIZE OF COMPANIES

BASED ON GROUP TOTAL ASSETS AS AT 30 JUNE 1994

	Total Compliance Costs	
Group total assets as at 30 June 1994	Number	Average ($)
Less than $30 million	57	19,034
$30 million to under $100 million	18	52,860
$100 million to under $300 million	16	86,002
$300 million to under $1,500 million	7	229,779
$1,500 million or more	8	804,566
	------	----------

TOTAL / AVERAGE	106	108,089
	===	=======

The majority (62 percent) of the respondents had their income tax work done by internal staff assisted by outside advisers. Nearly one-quarter of the respondents had their income tax work mainly or entirely done by outside advisers. Only about 14 percent of the companies relied entirely on internal staff (Appendix 4, question 3.1).

Most companies (86 percent) sought external tax advice from accountants and tax agents. Only 12 percent of the respondents sought advice from lawyers on income tax matters (question 3.2). The most popular reason for seeking external tax advice was 'technical knowledge is not readily available within the group' (33 percent), followed by 'tax laws are complex' (23 percent) (question 3.3). Other reasons selected by more than 10 percent of the respondents were 'to get calculation of taxable income right' (14 percent), 'group policy requires independent review of internally generated opinions' (14 percent), and 'to minimise exposure to penalties' (12 percent). Respondents were asked to choose the most important reason only, but some of them did not follow the instruction and chose more than one reason. Hence the total count exceeds the number of respondents.

About 82 percent of the respondents used external advisers in preparing or reviewing their income tax return (question 3.4). Thirty-eight percent sought external advice on tax planning. Only 14 percent sought external advice on tax audits and in contesting assessments.

TABLE 6.8

ESTIMATED SAVINGS IN EXTERNAL COMPLIANCE COSTS

OF COMPANIES FOR 1993/94 INCOME YEAR

IF THERE HAD BEEN AN ALIGNMENT

	Respondents Who Estimated

Percentage of savings	Number	Proportion %
No savings	9	9.8
Saved up to 25%	5	5.4
Saved from 26% to 50%	30	32.6
Saved from 51% to 75%	14	15.2
Saved from 76% to 100%	34	37.0
	---	---
TOTAL	92	100.0
		=====

Average percentage of savings = 59.9%

Respondents who did not use external services	16
Respondents who did not estimate	10

Total number of respondents	118
	===

Table 6.8 shows the distribution of estimated savings in external compliance costs if the tax liability of the respondents were based on accounting profits for the 1993/94 income year. Ten respondents provided information about actual compliance costs but did not estimate the hypothetical compliance costs if there had been an alignment. Of those who made estimation, about 10 percent estimated no savings. Thirty-eight percent estimated savings up to 50 percent. Over one-half of companies estimated savings of more than 50 percent. Over one-third estimated savings of more than 75 percent. On average, including those respondents who estimated no savings, external compliance costs would have been reduced by 60 percent if there had been an alignment.

Over 90 percent of the respondents indicated that their internal staff spent some time on work exclusively for income tax return preparation and review (question 3.9), even though in an earlier question (question 3.1), nearly 24 percent of them indicated that their income tax work was undertaken mainly or entirely by external advisers. Fifty-six percent had internal staff involved in income tax planning work, and 16 percent had internal staff involved in tax audits or in contesting assessments.

TABLE 6.9

ESTIMATED SAVINGS IN INTERNAL COMPLIANCE COSTS OF COMPANIES FOR 1993/94 INCOME YEAR IF THERE HAD BEEN AN ALIGNMENT

	Respondents Who Estimated	
Percentage of savings	Number	Proportion %
No savings	12	12.1
Saved up to 25%	7	7.1
Saved from 26% to 50%	26	26.3
Saved from 51% to 75%	20	20.2
Saved from 76% to 100%	34	34.3
	---	---
TOTAL	99	100.0
		=====
Average percentage of savings = 56.2%		
Respondents who used external services only	4	
Respondents who did not estimate	15	

Total number of respondents	118
	===

Table 6.9 summarises the estimated savings in internal compliance costs. Fifteen respondents provided details of actual internal compliance costs, but did not estimate their internal compliance costs in the hypothetical situation. Of the 99 respondents who provided estimation, 12 percent estimated no savings. About one-third estimated savings up to 50 percent. Over one-half estimated savings of more than 50 percent, and over one-third estimated savings of more than 75 percent. The average percentage of savings (including those who estimated no savings) would have been 56 percent had there been an alignment.

TABLE 6.10

ESTIMATED SAVINGS IN TOTAL COMPLIANCE COSTS

OF COMPANIES FOR 1993/94 INCOME YEAR

IF THERE HAD BEEN AN ALIGNMENT

	Respondents Who Estimated	
Percentage of savings	Number	Proportion %
No savings	8	7.9
Saved up to 25%	10	9.9
Saved from 26% to 50%	28	27.7
Saved from 51% to 75%	21	20.8
Saved from 76% to 100%	34	33.7
	------	---------
TOTAL	101	100.0

	=====
Average percentage of savings = 56.6%	
Respondents who did not estimate	17

Total number of respondents	118
	===

Table 6.10 summarises the savings in total compliance costs. Of those who estimated, only 8 percent estimated no savings. Nearly 38 percent estimated savings up to 50 percent. Over one-half estimated savings of more than 50 percent; over one-third estimated savings of more than 75 percent. If accounting profit figures were used to assess tax for 1993/94, the total compliance costs would have been reduced by nearly 57 percent on average, i.e. an average saving of $61,000. Apply this average saving to all companies listed on the ASX (about 1,180), the savings in compliance costs would have been $72 million in aggregate.

Table 6.11 shows the savings by types of income tax work. On average, more savings were estimated to occur in the income tax return preparation and review work than in other work, and more so in external costs (68 percent) than in internal costs (60 percent).

TABLE 6.11

BREAKDOWN OF AVERAGE PERCENTAGE OF SAVINGS

IN EXTERNAL AND INTERNAL COMPLIANCE COSTS

OF COMPANIES FOR 1993/94 INCOME YEAR

IF THERE HAD BEEN AN ALIGNMENT

(BY TYPE OF INCOME TAX WORK)

	Savings in Compliance Costs			
	External		Internal	
	Number	Average	Number	Average
Type of income tax work		%		%
Return preparation or review	88	67.9	99	60.0
Income tax planning	54	47.6	69	45.5
Others	20	51.6	15	32.4
TOTAL	92	59.9	99	56.2

6.6 Estimated Impact of Alignment on Practitioners' Earnings

Most practitioner respondents were employed by firms which derived income from tax services (99 percent), bookkeeping and accounting (83 percent), auditing (67 percent), and company secretarial services (67 percent) (Appendix 5, question 3.1). Almost all practitioners offered income tax return preparation and review services and tax planning services during the 1994/95 income year (question 3.2). Less than two-thirds of them offered advice on tax audits and contesting assessments.

When practitioners were asked why their clients used their income tax services, two most popular reasons were 'tax laws are complex' (89 percent), and 'technical knowledge is not readily available within the client's organisation' (84 per cent) (question 3.3). Two other reasons selected by more than 50 percent of the respondents were 'to get calculation of taxable income right' (70 percent) and 'to minimise exposure to penalties' (58 percent). Unlike companies, practitioners were asked to select as many reasons as appropriate, because different clients might have different reasons for using their tax services.

Pretest of the practitioner instrument revealed that unless the respondents were partners or proprietors, they might not have access to the financial information of

the practice. Thus, practitioners were not asked to estimate the impact of alignment on their earnings in dollar amount. They were only asked to estimate a percentage range[122] by which their revenues, costs and profits would have increased or decreased if accounting profit figures were used to assess the income tax liabilities of their clients in place of taxable income.

Table 6.12 summarises the estimated impact of alignment on the revenues, costs, and profits of the practitioners for the 1994/95 income year. About 20 percent of the respondents did not make any estimation. Of those who estimated, 18 percent estimated that their net profits from tax services would have increased, 48 percent unchanged, and 35 percent decreased. The proportions who estimated an increase, no change, and a decrease in gross revenues and total costs of providing tax services were very similar. In general, the proportion of respondents who estimated a decline in demand for tax services was twice as much as the proportion that estimated an increase in demand for tax services.

TABLE 6.12

ESTIMATED FINANCIAL IMPACTS ON PRACTITIONERS

FOR 1994/95 INCOME YEAR

IF THERE HAD BEEN AN ALIGNMENT

	No. of Respondents who estimated	Proportion estimating an increase %	Proportion estimating no change %	Proportion estimating a decrease %
Gross revenues from tax services	181	17.7	47.5	34.8
Total costs to provide tax services	183	16.9	52.5	30.6

[122] For example, 'less than 10%', '10-19%', i.e. steps with an increment of 10 percent.

Net profits from tax services	181	17.7	47.5	34.8
Gross revenues from accounting and auditing services	182	22.5	62.6	14.8
Net profits from all services	179	20.1	50.8	29.1

About 23 percent estimated their gross revenues from financial accounting and auditing services would have increased, 63 percent unchanged, and 15 percent decreased. Thus, more respondents estimated an increase in revenues from accounting and auditing than those who estimated an decrease. This suggests that alignment would result in a shift of demand for practitioners' services from tax to financial accounting and auditing.

Overall, 51 percent of respondents estimated no change to their profits from all services. More respondents estimated a decrease in the practice's profitability (29 percent) than those who estimated an increase (20 percent), if accounting profit had been adopted as the tax base of their clients. However, most of the estimated increases and decreases were below 20 percent of the actual net profit, i.e. the potential impact of alignment on tax practitioners' net earnings was not estimated to be substantial.

6.7 Results of Regression Modelling

OLS linear regression models were used to explore the association between (a) two summary opinions (compliance level and alignment) as dependent variables, and (b) the evaluation criteria, demographic characteristics of respondents, and financial impacts of alignment as independent variables. The correlation matrix of the seven evaluation criteria indicated some patterns of moderate to high correlation. Hence, factor analysis was first used to identified the common factors underlying the evaluation criteria. The underlying factors then replaced the evaluation criteria as independent variables, so as to avoid the problems of collinearity and to simplify the regression models.

Subsection 6.7.1 reports the results of factor analysis. The results of the regression analyses which include all respondents (combined models) are reported in Subsection 6.7.2. Subsections 6.7.3 and 6.7.4 respectively report the results of the company models and the practitioner models.

6.7.1 Results of factor analysis of evaluation criteria

Table 6.13 shows the results of factor analysis of the responses of both companies and practitioners to the first seven questions in Part 1 of the survey instruments. The factor extraction algorithm was principal component analysis. The rotation method used was the varimax method.

Two factors were identified. Four criteria (convenience, certainty, cost effectiveness, and continuity) share common factor variance. The common factor underlying these four criteria is Factor 1. Similarly, the common factor underlying the other three criteria (neutrality, equality, and ability to pay) is Factor 2.

TABLE 6.13

FACTOR ANALYSIS OF OPINIONS OF ALL RESPONDENTS

PANEL A

Variable	Factor 1 (Simplicity)	Factor 2 (Fairness)
Convenience	0.822	0.005
Certainty	0.735	0.103
Cost-effectiveness	0.720	0.190
Continuity	0.353	0.293
Neutrality	0.022	0.852
Equality	0.076	0.817
Ability to pay	0.245	0.472

PANEL B

Variable	Communality
Equality	0.674
Ability to pay	0.283
Neutrality	0.726

PANEL C

Factor	Eigenvalue	Percentage of Variance	Cumulative Percentage
1	2.360	33.7	33.7
2	1.313	18.8	52.5

Certainty	0.551
Continuity	0.211
Cost effectiveness	0.554
Convenience	0.675

Kaiser-Meyer-Olkin measure of sampling adequacy = 0.680

Bartlett test of sphericity = 362.48, Significance = 0.0000

Factor extraction method: Principal components analysis

Rotation algorithm: Varimax method

Panel A of Table 6.13 is a factor matrix. It shows the correlations between the variables and the factors (factor loadings).[123] Panel B shows the proportion of the variance of each variable that is explained by the factors (communality).[124] Panel C shows the explanatory power of the factors.[125]

Since Factor 1 is a construct that underlies the criteria of convenience, cost effectiveness, certainty, and continuity, it is the notion of 'simplicity'. Factor 2 is a construct that correlates with the criteria of neutrality, equality, and ability to pay (i.e. horizontal and vertical equity), so it is the notion 'fairness'. For easy interpretation, two new variables labelled as 'simplicity' and 'fairness' were constructed by taking the average score of the related criteria, i.e.

$$\text{Simplicity} = (\text{Convenience} + \text{Cost effectiveness} + \text{Certainty} + \text{Continuity}) \div 4 \quad (1)$$

$$\text{Fairness} = (\text{Neutrality} + \text{Equality} + \text{Ability to pay}) \div 3 \quad (2)$$

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123 For instance, the correlations of neutrality, equality, and ability to pay with Factor 2 are respectively 0.852, 0.817, and 0.472.

124 For example, about 67 percent of the variance of 'equality' is explained by the two factors identified in the analysis.

125 With seven variables, the total variance is 7. The variance explained by each factor is listed in the column labelled Eigenvalue. The next column shows the percentage of the total variance attributable to each factor. Factor 1 explains a variance of 2.36, which is nearly 34 percent of the total variance. Factor 2 explains a variance of 1.31, which is nearly 19 percent of the total variance. Together, the two factors explain nearly 53 percent of the total variance of the seven variables.

These two constructed variables replaced the seven criteria in the regression models, so that the independent variables were not significantly correlated with one another. The reduced number of independent variables also enhanced the interpretability of the models.

6.7.2 Results of two combined models

The combined models included both company and practitioner respondents. The two combined models were represented by the following regression equations:

$$\text{Compliance} = \alpha + \beta_1(\text{Simplicity}) + \beta_2(\text{Fairness}) + \beta_3(\text{Type}) + \varepsilon \quad (3)$$

$$\text{Alignment} = \alpha + \beta_1(\text{Simplicity}) + \beta_2(\text{Fairness}) + \beta_3(\text{Type}) + \varepsilon \quad (4)$$

The dependent variables of the two models, 'compliance level' and 'alignment', were respectively the score of the response to Question 1.8 and Question 1.9 of the survey instruments. The three independent variables in each model were the scores of the two constructed variables 'simplicity' and 'fairness', and a categorical variable, 'type of respondents', which had the value of 1 if the respondent was a company, and 0 for a practitioner. The constant term was α. The regression coefficients β_1 and β_2 respectively measured the impact of the perceived 'simplicity' and 'fairness' of accounting rules relative to tax rules on the dependent variable; β_3 measured the difference of opinions of companies compared with practitioners. The last term, ε, was the error term. The interaction terms between the three independent variables were not found to be statistically significant at the 0.05 significance level,[126] so they were not included in the models. Thus, the two models were additive models.[127] Panel A of Table 6.14 summarises the results of the two combined models.

All regression coefficients and the constant term of the Combined Compliance model were statistically significant. Perceived relative fairness of accounting rules over tax rules (β_2 = 0.50) had a stronger impact on the perceived relative compliance level than perceived relative simplicity (β_1 = 0.38). Also, companies

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[126] The 0.05 significance level applies to tests of statistical significance of independent variables in all regression models and will not be explicitly stated in subsequent discussion.

[127] The R^2 of the combined Compliance and Alignment models were respectively 0.33 and 0.54. Diagnostic checking revealed that the assumptions of constant variances, linearity, and normality were reasonable. As the residuals were approximately normally distributed, the reported p-value of F-statistic could be used for hypothesis testing.

were more inclined to perceive a higher compliance level upon alignment than practitioners (β_3 = -0.54).[128]

Figure 6.2 depicts the marginal effect[129] of each of the independent variables on the dependent variable. The dotted lines in Panels A and B show the confidence intervals, so do the vertical lines crossing the top of the bars in Panel C.

TABLE 6.14

RESULTS OF LINEAR REGRESSIONS

Respondents	Dependent variable	Independent variable	Estimated coefficient	Standard error	P-value
		PANEL A			
Combined	Compliance	Simplicity	0.376	0.072	0.000
	(R^2 = 0.327)	Fairness	0.502	0.059	0.000
		Type: company	-0.537	0.162	0.001
		Constant	1.024	0.280	0.000
	Alignment	Simplicity	0.280	0.067	0.000
	(R^2 = 0.538)	Fairness	0.914	0.055	0.000
		Type: company	-0.354	0.153	0.021
		Constant	0.089	0.263	0.736

[128] This is consistent with the result of t-test reported in Table 6.6. Note that the 0.75 difference in the mean response of companies (3.3) and practitioners (4.1) in Table 6.6 is greater than the difference of 0.54 in the model because the difference in Table 6.6 has not been adjusted for the variation of simplicity and fairness perception of the two groups of respondents.

[129] The marginal effect of an independent variable on the dependent variable is the effect when the other independent variables are held constant. For instance, Panel A of Figure 6.2 depicts the marginal relationship between Compliance and Simplicity when Fairness is held constant at 3 (i.e. slightly agree), and Type held constant at 0 (i.e. practitioner). As an additive model, the slope of the linear relationship is not affected by the levels at which the other independent variables are fixed.

PANEL B

Companies	Compliance	Simplicity	0.324	0.122	0.009
	(R^2 = 0.277)	Fairness	0.504	0.099	0.000
		Constant	0.628	0.440	0.157
	Alignment	Simplicity	0.359	0.131	0.007
	(R^2 = 0.504)	Fairness	0.847	0.111	0.000
		Total savings	-1.036	0.466	0.028
		Constant	-0.266	0.584	0.650

PANEL C

Practitioners	Compliance	Simplicity	0.402	0.089	0.000
	(R^2 = 0.306)	Fairness	0.500	0.073	0.000
		Constant	0.948	0.339	0.006
	Alignment	Simplicity	0.200	0.079	0.012
	(R^2 = 0.542)	Fairness	0.896	0.065	0.000
		Type: CA	0.403	0.172	0.020
		Constant	0.190	0.309	0.540

FIGURE 6.2

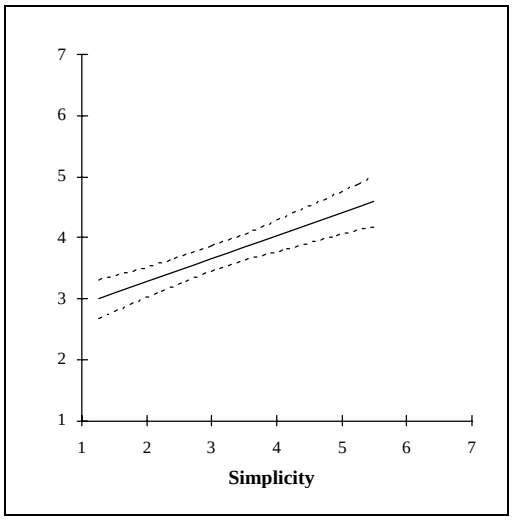
EFFECT OF FAIRNESS, SIMPLICITY, AND TYPE OF RESPONDENTS

ON PERCEIVED COMPLIANCE LEVEL

PANEL A

Fairness = 3

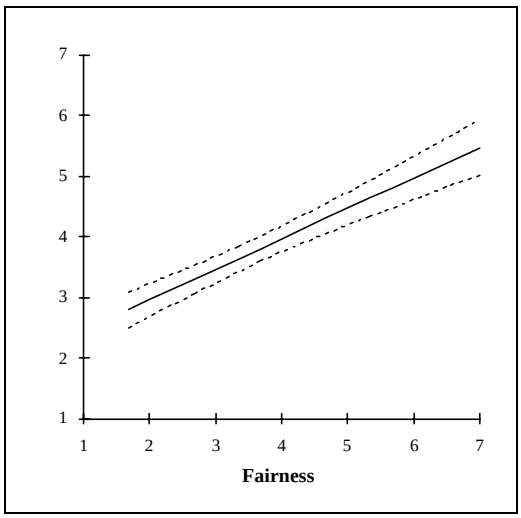
Type = 0 (Practitioner)



PANEL B

Simplicity = 2.5

Type = 0 (Practitioner)



PANEL C

Fairness = 2

Simplicity = 2

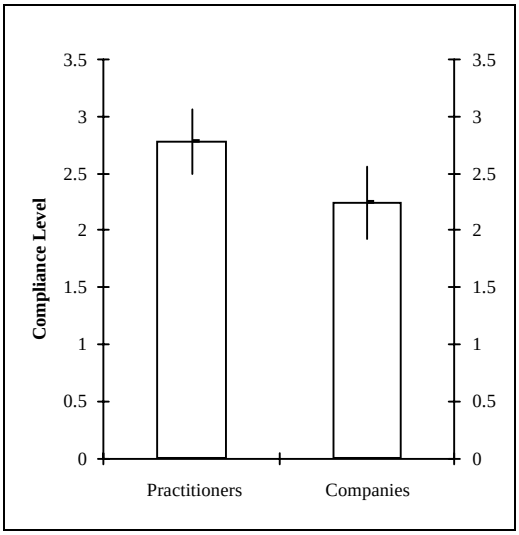

Compliance Level
3.5
3
2.5
2
1.5
1
0.5
0
Practitioners
Companies

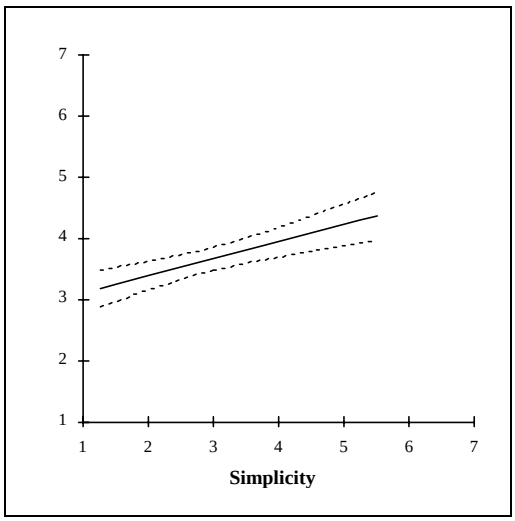
FIGURE 6.3

EFFECT OF FAIRNESS, SIMPLICITY, AND TYPE OF RESPONDENTS ON ALIGNMENT OPINION

PANEL A

Fairness = 3

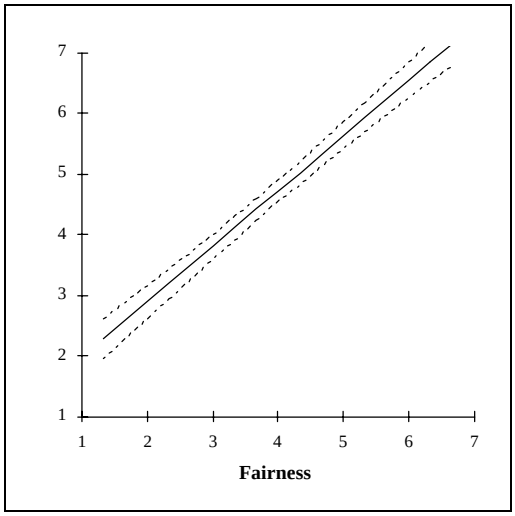
Type = 0 (Practitioner)



PANEL B

Simplicity = 3.5

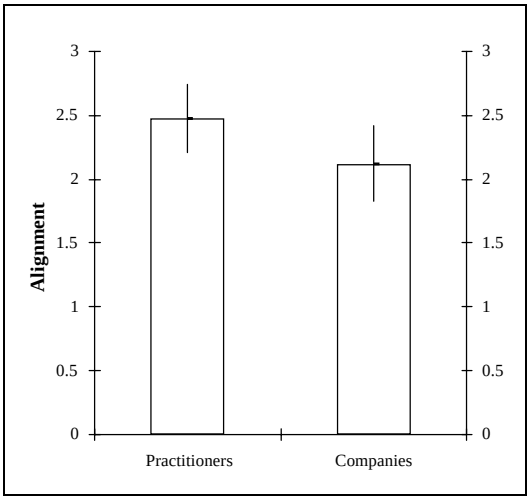
Type = 0 (Practitioner)



PANEL C

Fairness = 2

Simplicity = 2


Alignment
3
2.5
2
1.5
1
0.5
0
Practitioners
Companies

The different slopes for Simplicity and Fairness suggest that to enhance the compliance level, fairness is more important than simplicity. Perhaps fairness would induce willingness to comply; simplicity could only facilitate compliance. Hence the former is more important than the latter in determining the level of compliance.

All regression coefficients of the Combined Alignment model were statistically significant, but the constant term was not. Fairness ($\beta_2 = 0.91$) had much more impact on the perceived desirability to align tax rules with accounting rules than Simplicity ($\beta_1 = 0.28$). Also, companies were more inclined to have a favourable attitude toward alignment than practitioners ($\beta_3 = -0.35$).[130]

Figure 6.3 depicts the marginal effect of each of the independent variables on the dependent variable. The marked difference between the slopes of Simplicity and Fairness in the Combined Alignment model suggests that the attitude toward alignment of tax rules with accounting rules hinges on the perceived fairness of accounting rules relative to tax rules, rather than the relative simplicity of accounting rules.

These findings have two important policy implications. First, the relative importance of fairness and simplicity suggests that to improve compliance levels, efforts to enhance the perceived fairness (in terms of equality, ability to pay, and neutrality) of the tax system are more important than efforts to simplify the tax system (in terms of certainty, continuity, economy, and convenience). Thus, simplification efforts such as the Tax Law Improvement Project may not be very successful in enhancing the compliance levels. To improve compliance, a fundamental review of tax policies and tax laws with a view to enhancing the perceived fairness of the tax system is more effective. Second, simplification of the tax system does not justify an alignment of tax rules with accounting rules unless the alignment can also improve the perceived fairness and the compliance levels of the tax system. As discussed in chapter 3, it is doubtful whether a complete alignment can improve the perceived equity and neutrality and hence the compliance levels of the tax system.

6.7.3 Results of two company models

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130 Again, this is consistent with the result of t-test reported in Table 6.6.

When company responses were modelled separately, in addition to Simplicity and Fairness, Total Savings (i.e. the percentage savings in total compliance costs if accounting profits were used as the tax base) was also included as an independent variable in the Company Alignment model.[131] The interaction terms between the independent variables were found not statistically significant in both models. The two company models were represented by the following equations:

$$\text{Compliance} = \alpha + \beta_1(\text{Simplicity}) + \beta_2(\text{Fairness}) + \varepsilon \quad (5)$$

$$\text{Alignment} = \alpha + \beta_1(\text{Simplicity}) + \beta_2(\text{Fairness}) + \beta_3(\text{Total Savings}) + \varepsilon \quad (6)$$

Panel B of Table 6.14 summarises the results of two company models.[132] The constant term in both models were not statistically significant. The estimated coefficients of Simplicity and Fairness in the company models were similar to those of the combined models in sign and magnitude. The estimated coefficient of Total Savings in the Company Alignment model ($\beta_3 = -1.036$) suggests that the higher the estimated savings in total compliance costs, the more favourable would be the attitude of companies toward alignment of tax rules with accounting rules.

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131 Total Savings was not statistically significant in the Company Compliance model ($p = 0.085$).

132 The R^2 of the Company Compliance and Alignment models are respectively 0.28 and 0.50. Diagnostic checking revealed that the assumptions underlying OLS regression were reasonable.

6.7.4 Results of two practitioner models

When practitioner responses were modelled separately, a categorical variable Type was used to measure the difference between the opinions of CPAs (Type = 0) and CAs (Type = 1) in the Practitioner Alignment model.[133] Size of practice (Question 2.2), tax experience (Question 2.6), whether or not the practitioner advised companies and trusts listed on the ASX (Question 2.9(a)), and the impact of alignment on practitioners' earnings (Question 3.8) have been tested for inclusion as independent variables but were found not statistically significant, so were the interaction terms between Simplicity, Fairness and Type in both models. Thus, the two practitioner models were represented by the following regression equations:

$$\text{Compliance} = \alpha + \beta_1(\text{Simplicity}) + \beta_2(\text{Fairness}) + \varepsilon \quad (7)$$

$$\text{Alignment} = \alpha + \beta_1(\text{Simplicity}) + \beta_2(\text{Fairness}) + \beta_3(\text{Type}) + \varepsilon \quad (8)$$

Panel C of Table 6.14 summarises the results of two practitioner models.[134] The constant term in the Practitioner Alignment model was not statistically significant. The estimated coefficients of Simplicity and Fairness in the practitioner models also are similar to those of the combined models in sign and magnitude. Compared with companies, practitioners placed more emphasis on Simplicity in forming their opinions about the compliance level, and placed less emphasis on Simplicity in forming their alignment attitudes. The estimated coefficient of Type in the Practitioner Alignment model ($\beta_3 = 0.403$) suggests that on average CA respondents had a less favourable attitude toward alignment of tax rules with accounting rules than CPA respondents. This might be due to the fact that CAs were more likely to associate with larger professional practices and tended to be more specialised than CPAs,[135] so they were more inclined to keep the two sets of rules separate.

6.8 Summary and Conclusions

The findings of the survey are summarised and their policy implications are discussed as follows.

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133 Type was not statistically significant in the Practitioner Compliance model ($p = 0.245$).

134 The R^2 of the Practitioner Compliance and Alignment models are respectively 0.31 and 0.54. Diagnostic checking revealed that the assumptions underlying OLS regression were reasonable.

135 In large practices, accountants tend to be specialised, e.g. in tax only, or even in a special area of tax; whereas accountants in small practices tend to be generalists.

The majority of listed companies regarded financial accounting rules as superior to tax rules in terms of the seven criteria used to evaluate the tax system. About 58 percent of company respondents tended to agree that compliance level would be enhanced if income tax were based on accounting profit. Nearly 57 percent of them tended to agree that existing financial accounting rules should replace existing tax rules as the yardstick to measure income for tax purposes. Companies also estimated total compliance cost savings in the order of 57 percent, i.e. $72 million for all listed companies, had there been a complete alignment for the 1993/94 income year. Estimated savings in total compliance costs were found to affect the alignment attitudes of companies: the higher the estimated compliance cost savings, the more favourable would be the attitude of companies toward alignment.

The majority of tax practitioners (accountants) ranked financial accounting rules ahead of tax rules in terms of five criteria other than equality (horizontal equity) and cost-effectiveness (economy of administration). However, only 38 percent of practitioners tended to agree that compliance level would be enhanced upon alignment, and only 36 percent tended to agree that a complete alignment should proceed, even though practitioners did not estimate substantial negative impact of alignment on their earnings. Also, CPAs were found to be more pro-alignment than Chartered Accountants.

The differences in the opinions of companies and practitioners might be due to different perceptions of, and different interests in, the two sets of rules. Thus, while a complete alignment of tax rules with financial accounting rules would be supported by major corporate taxpayers, it would be opposed by tax practitioners in the accounting profession.

Despite the difference in their attitudes toward alignment, the two groups of respondents identified similar areas where tax laws could be improved by adopting financial accounting rules. The potential areas where accounting rules could be adopted for taxation purposes were: inventory valuation, depreciation of non-current assets, matching principle, employee entitlements, financial and operating leases, purchased goodwill, and materiality principle. Thus, even though a complete alignment is not feasible because of the different objectives of the tax and financial reporting systems, the two sets of rules can be more closely aligned in these areas in order to reduce compliance costs.

Two factors, 'fairness' and 'simplicity', were found to underlie the seven evaluation criteria of a tax system and to explain the opinions about the perceived compliance levels and the alignment attitudes. Fairness was found to have more impact than simplicity on the opinions of both groups of respondents, and more so in shaping the alignment attitudes than in forming the opinions about the compliance level upon alignment. Thus, unless a complete alignment can also improve the perceived

fairness and the compliance levels of the tax system, simplification of the tax system alone does not justify such an alignment.

If the relative importance of fairness and simplicity can be generalised beyond the alignment issue, then the implication is that simplification efforts such as the Tax Law Improvement Project may not be very successful in enhancing the compliance levels. To improve compliance, a fundamental review of tax policies and tax laws with a view to enhancing the perceived fairness of the tax system is more effective.

This study contributes to the literature by providing evidence of the opinions of major corporate taxpayers and tax practitioners about the alignment issue. It also provides an estimate of the potential savings in compliance costs as a result of a complete alignment, and evidence of the relative importance of perceived relative fairness and simplicity of measurement rules in shaping the opinions about compliance levels and the alignment attitudes.

CHAPTER 7

SUMMARY AND CONCLUSIONS

7.1 Summary and Conclusions of the Thesis

The lack of conformity between tax and financial accounting rules is an issue common to Anglo-Saxon countries which have similar institutional arrangements. Alignment is an old issue that has generated heated debates in these countries from time to time. The controversy was reviewed in chapter 2. Anglo-Saxon countries generally adopt a common law system. The major providers of finance to corporations are the public who demand financial statements to assess management performance and make investment decisions. Corporations law in these countries typically only requires provision of periodic financial reports to investors and other users, leaving the detailed accounting rules to be prescribed by the accounting profession and corporate regulators. On the other hand, tax law in these countries typically imposes tax on income without precisely and exhaustively defining income. It is up to the judiciary and the administrators to interpret the meaning of income for tax purposes. Thus, in these countries financial accounting rules and tax rules are two sets of rules developed by different authorities serving different purposes. They are designed to meet different standards and are based on different principles to reflect their objectives and required standards, even though to some extent they overlap each other. Any attempt to force one set of rules to conform to the other without any corresponding changes in the institutional arrangements would have negative impacts on both systems which might outweigh the benefits of conformity.

The earnings management (accounting choice) and tax compliance literature reviewed in chapter 3 provides some indication of the potential impacts of a complete alignment. In that chapter, the costs and benefits of alignment were evaluated according to the impacts it would have on the current tax system, the accounting regulatory framework, and the accounting profession. It was argued that a complete alignment might have both positive and negative impacts on the standards required for a tax system (i.e. horizontal and vertical equity, neutrality, certainty, continuity, convenience and economy), and on the level of compliance. Furthermore, judging from the experience in the USA, tax authorities, corporate regulators and the accounting profession would not be willing to yield or compromise their rule-making powers. Nor would the government be willing to give up its power to use tax policy measures to achieve its economic, social, and political goals. Thus, it is doubtful whether a complete alignment of tax rules with financial accounting rules would result in a net benefit to the society, or would ever be feasible given the existing institutional arrangements.

Three empirical studies were conducted to shed light on the potential impacts of a complete alignment, and to examine the feasibility and desirability of alignment in the Australian context.

The discrepancy between effective tax rate (ETR) and statutory tax rate (STR) was used to proxy the book-tax income gap due to permanent differences. The book-tax income gap provides an indication of the potential impact of a complete alignment on tax collection in the absence of further earnings management. The results of the ETR analysis reported in chapter 4 show that firms in three industries benefited substantially from concessional tax treatments of particular types of income and had ETRs consistently lower than other industries and the STR. The book-tax income gaps observed in these industries were due to exemption of gold-mining income, preferential treatment of capital gains, and dividend rebates. The results also show a size effect after controlling for the industry effect: large firms had ETRs lower than smaller firms. Large firms in six industries (other than the three mentioned earlier) had ETRs significantly below the STR, i.e. the accounting profits of these firms were significantly higher than their taxable incomes. An analysis of tax disclosure data was conducted to ascertain the causes of the size difference.

Chapter 5 reports the findings of the analysis of tax disclosure data. The results show that large companies tended to benefit more from economic incentives, dividend rebates, and foreign tax rate differences than small companies. They also tended to have proportionately smaller amounts of booked and unbooked timing differences, and non-deductible expenses than small companies. It appears that large firms were better able to organise their activities in optimal tax saving ways and to influence the political process in their favour. While it appears desirable for the government to take appropriate policy actions to redress the equity issue, imposing a complete alignment of tax rules with financial accounting rules would not improve equity and increase revenue collections of government, because earnings management and the likely distortions in the accounting rule-making process might well produce the opposite results.

The results of the analysis of tax disclosure data also show that the book-tax income gap could be attributed to deliberate government policies and the different objectives and standards of the tax system and the financial reporting system. Thus, a complete alignment cannot be achieved unless (a) the government is willing to yield its policy-making power in the tax system and the same policy outcomes can be achieved by other policy measures, e.g. by handing out cash incentives instead of providing tax incentives, and (b) the objectives of the tax and financial reporting systems can be reconciled.

Chapter 6 reports the results of a postal questionnaire survey of opinions about alignment. Nearly 57 percent of listed companies supported a complete alignment

of tax rules with financial accounting rules. They also estimated substantial savings in the order of 57 percent of total compliance costs upon alignment. Estimated compliance cost savings were found to positively affect the alignment attitudes of companies. However, only 36 percent of tax practitioners (accountants) supported a complete alignment, even though they did not estimate a substantial negative impact of alignment on their earnings. Despite the difference in their attitudes toward alignment, the two groups of respondents identified similar areas where tax laws could be improved by adopting financial accounting rules. Further statistical analyses of the opinions shows that 'fairness' had much more impact than 'simplicity' in shaping the attitudes toward alignment of both groups, and in forming the opinions about the compliance level upon alignment. Thus, unless a complete alignment can improve the perceived fairness and compliance level of the tax system, simplification of the tax system alone does not justify an alignment.

The overall conclusion of the study is that a complete alignment of the tax rules with financial accounting rules is neither feasible nor desirable. The empirical evidence reported in chapters 4 and 5 indicates that the differences between the two sets of rules, and hence the discrepancy between accounting profit and taxable income, can be attributed to deliberate government policies and the different objectives and standards of tax and financial reporting systems. Government is unlikely to yield its power to use the tax system as a policy instrument to achieve its various goals. Also, given the existing institutional arrangements, the objectives and required standards of the tax and financial reporting systems can hardly be reconciled. Thus, a complete alignment is not feasible.

The empirical evidence reported in chapter 6 suggests that 'fairness' of the tax system is much more influential than 'simplicity' in forming the alignment attitudes and the opinions about compliance level. A complete alignment is unlikely to improve the 'fairness', and hence the compliance level, of the tax system because different taxpayers are facing different constraints on earnings management. Simplification alone does not justify such an alignment. From the government's point of view, adopting accounting rules to assess tax is more likely to result in a decrease than an increase in government revenue because of the incentives to manipulate accounting profits. Thus, a complete alignment is undesirable.

Although a complete alignment is not recommended, it does not mean that there is no scope for bringing the two sets of rules closer to each other. To reduce compliance costs, the rules could be aligned as closely as possible in areas where there is no conflict between the objectives and the required standards of the two systems.

7.2 Significance of the Study and the Findings

This is a comprehensive study of the relationship of tax and financial accounting rules and the issue of alignment of these rules. Overall, the study provides empirical evidence which contributes to the debate about the alignment issue not only in Australia, but also in other Anglo-Saxon countries.

The ETR analysis reported in chapter 4 contributes to tax and accounting literature by presenting empirical evidence (a) of the gap between ETRs and STR, and hence the discrepancy between accounting earnings and taxable income due to permanent differences; (b) to assess the equity dimension of the Australian corporate tax system, and (c) to test the political cost hypothesis formulated in positive accounting research. In terms of research method, the ETR analysis demonstrates the use of an alternative method to compute corporate ETRs from historical data which can largely avoid the distortion of the carryforward of losses. It also illustrates the use of regression models to analyse ETRs and to segregate size effect from industry effect. This modelling approach to data analysis is more sophisticated than simple t-tests and analysis of variance used in previous studies.

The analysis of tax disclosure data reported in chapter 5 adds to the literature by providing evidence of the causes of the book-tax income gap , and the extent to which these causes contribute to the gap. It helps to determine whether tax policy changes are needed to address the alignment issue and the equity issue. In terms of research method, the analysis demonstrates the use of (a) a systematic way to categorise the items which cause the book-tax income gap and, more importantly, (b) an adjustment method to ensure that a reconciliation of prima facie tax expense and current tax payable aggregated over a number of year can also be read as a reconciliation of accounting profit and taxable income for the same period (see the technical notes in Appendix 3).

The opinion survey reported in chapter 6 contributes to the literature by providing evidence of the opinions of major corporate taxpayers and tax practitioners in the accounting profession about the alignment issue. It also provides an estimate of the potential savings in compliance costs as a result of a complete alignment, and evidence of the relative importance of perceived fairness and simplicity of measurement rules in shaping opinions about alignment and compliance level. In terms of research method, the study illustrates the use of the principal component analysis to reduce the number of variables, and the use of linear regression to model the relationship of different variables in an opinion survey.

7.3 Limitations and Further Research

Both the ETR analysis and the analysis of tax disclosure data included only firms with an aggregate profit over the study period. Thus, the representativeness of both samples suffered from the problem of survivorship bias. However, this is unavoidable given the nature of the study and the asymmetrical treatment of profit and loss in tax laws. Inclusion of loss firms would not produce any meaningful results.

Due to the noise produced by the carryforward of losses and the presence of extreme values, the findings of the ETR analysis and the analysis of tax disclosure data were mainly based on aggregate or average tax and profit figures over a number of years. However, no adjustment was made for the time value of money using discounting technique. Discounting did not apply because the aggregation and averaging procedures were used to generate data amenable to statistical analyses to illuminate the relationship of accounting profit and taxable income, and not to study the financial implications of timing of tax payments. Discounting also was considered inappropriate because the data being analysed were accounting numbers rather than cash flow data.

Due to resource constraints, the analysis of tax disclosure data in chapter 5 was based on a small sample of 46 firms, which was further reduced to 38 firms when the size difference was investigated. Future research may include an extensive study using as large a sample as resources permit, so as to improve the generalisability of the results and to enable statistical analyses to be carried out.

Even though the analysis of tax disclosure data provides some explanations for the regressiveness of corporate income tax found in the ETR analysis, further investigation is needed to show how large firms managed to have low ETRs. In-depth case studies of a single company along the lines of Stickney et al. [1983], Wheeler and Outslay [1986], Weber and Wheeler [1992], and Salzarulo [1994, 1995] can be carried out to explore significant economic events which have policy implications, and to expose important measurement and disclosure issues.

Finally, the response rates in the survey suggest that the usual caveats about potential non-response biases apply to the reported results. However, given the knowledge required of a respondent and the length of the questionnaire, the response rates appear to be reasonable. Comparison of the composition of the respondents and the survey populations and comparison of early and late responses also did not detect serious non-response biases.

7.4 Policy Implications

The convergence of financial accounting rules and tax rules may or may not result in cost saving simplification of our income tax system. Taxpayers, especially listed companies and their subsidiaries, would reduce their compliance costs when the process of converting accounting profit to taxable income by making complex adjustments is dispensed with. However, only a small (albeit important) group of taxpayers is required to prepare financial reports and income tax returns based on two different sets of rules. Savings in compliance costs mainly apply to this group of taxpayers. Adoption of accounting profit in tax assessment also may reduce the costs incurred by the administrators in verifying the information supplied in tax returns, because public companies must have their financial statements audited by auditors who bear legal liability of negligence in their audit work. However, audit fees would increase, i.e. administrative costs would only be reduced at the expense of increase in audit costs of the taxpayer. Furthermore, the revenue collection of the government would be threatened by taxpayers manipulating their reported profits to reduce tax liability (earnings management), so that alignment may end up with increased legislation and regulations, and hence increased complexity in the tax system.

Even though a complete alignment of the two sets of rules is not feasible and is undesirable given the existing institutional arrangements, it does not mean that there is no scope for bringing the two sets of rules closer to each other. Tax authorities (i.e. the legislature, the courts, and the administrators) can selectively adopt some of the accounting principles and standards to provide a tax base which is clear and certain. In fact, the courts have recently shown their willingness to adopt, for instance, the matching principle to spread the discount expense on bills of exchange over the life of the bills (*Coles Myer Finance* case), and similar accruals basis is likely to be adopted in the emerging regime of taxation of financial arrangements [Australian Taxation Office 1993]. The realisation basis (which can be traced to the wherewithal to pay principle) is likely to be abandoned in the new taxation regime for financial arrangements because the timing of realisation of a financial instrument can be easily manipulated. Thus, it is not that financial accounting rules should not be adopted for taxation purposes; it is only an indiscriminate adoption of all financial accounting rules for taxation purposes that will serve neither the needs of a good tax system nor those of a good financial reporting system.

In addition to the alignment issue, the evidence generated by the study also exposes the issue of equity and sheds additional light on the way to improve the tax system. The ETR analysis in chapter 4 shows that corporate income tax in Australia was regressive. This apparent inequity of the corporate income tax system may need to be redressed by the government. Also, the relative importance of 'fairness' over 'simplicity' found in the opinion survey suggests that to improve compliance, a fundamental review of tax policies and tax laws with a view to enhancing the perceived fairness of the tax system is more important than mere simplification of the tax laws.

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APPENDIX 1
REASONS FOR USING AVERAGE PROFIT AND TAX EXPENSE TO COMPUTE EFFECTIVE TAX RATE

This Appendix explains why ETR in the study reported in chapter 4 is computed from average profit and average tax expense over a number of years, instead of annual profit and annual tax expense figures.

Table A1.1 summarises the results of statistical analysis of annual ETRs for the six years 1988 to 1993 using regression Model 1 (industry and firm size by average total asset rankings). The six-year period appears to be the trough of a business cycle after the stock market crash in late 1987. As shown in the second column of Table A1.1, the number of firms reporting positive annual pre-tax income and non-negative tax expense declined from 444 for 1988, to 322 for 1991, then rose back to 445 for 1993.

TABLE A1.1
STATISTICAL SIGNIFICANCE OF ANNUAL REGRESSION MODELS (INDUSTRY AND SIZE BY AVERAGE TOTAL ASSET RANKINGS)

		F-statistic		
Year	**No. of firms**	**Industry+Size**	**Industry adjusted for Size**	**Size adjusted for Industry**
1988	444	8.12	9.20	3.64
1989	420	7.34	8.46	0.86
1990	349	5.67	6.62	0.75
1991	322	5.38	5.00	3.94
1992	391	3.80	2.66	5.10
1993	445	5.03	4.28	3.98

Table A1.2 summarises the size effect, i.e. the relationship between firm size (measured in terms of total asset rankings) and annual ETR. In 1988, when the economy was at a peak, the size effect was negative, i.e. larger firms tend to have lower annual ETRs. As the recession crept in, the size effect gradually changed from significantly negative (1988), to insignificantly negative (1989), then insignificantly positive (1990), and finally became significantly positive (1991, 92 and 93). This is so because large firms tend to be more diversified and are less likely to incur losses in an economic downturn than small firms.

TABLE A1.2
SUMMARY OF ASSET SIZE EFFECT

Year	Relationship between Size and Annual ETR	Statistically Significant at 0.05 Level
1988	Negative	Yes
1989	Negative	No
1990	Positive	No
1991	Positive	Yes
1992	Positive	Yes
1993	Positive	Yes

Note:
A "negative" relationship means that larger firms tend to have lower ETRs.
A "positive" relationship means that larger firms tend to have higher ETRs.

The following hypothetical example helps to explain this phenomenon. In the example, tax rate is assumed to be a constant rate of 39 percent. Suppose that the typical large firm in the example has never incurred a loss and has a stable ETR of 34 percent which is lower than the STR. The typical small firm in the example has a normal ETR of 39 percent. Suppose the small firm incurred a loss of $80 in Year 2 and had zero tax expense for that year[136]. The loss was then carried forward to offset against future profits until it was fully recouped. Thus, in Year 3 even a profit was reported, no tax expense was charged due to recoupment of prior year loss and the ETR was zero percent. In Year 4, another profit was reported but the ETR was only 26 percent, again because of recoupment of loss. It is only when the loss was fully recouped would the ETR return to its normal level of 39 percent (in Year 5).

HYPOTHETICAL EXAMPLE

Year	1	2	3	4	5	Total
Typical small firm						
Profit (loss)	70	(80)	50	90	100	230
Tax expense	27.3	0	0	23.4	39	89.7
ETR	39%	--	0%	26%	39%	39%
Typical large firm (No loss incurred)						
ETR	34%	34%	34%	34%	34%	34%
Size effect	Negative	?	Positive	Positive	Negative	Negative

[136] A loss is unlikely to be accounted for as a timing difference because paragraph .12 of accounting standard AASB 1020: Accounting for Income Tax (Tax Effect Accounting) requires that a "future income tax benefit shall not be brought to account as an asset unless realisation of the benefit is virtually certain."

Thus, if small firms are more likely to incur losses than large firms in an economic downturn, one would expect to observe the size effect (which is negative in the long run) to change from negative to positive in an economic downturn, then back to negative when losses are fully recouped in a recovery of the economy.

Another evidence supporting this interpretation is that the statistical significance of industry effect for the three years 1991 to 1993 (especially 1992, see Table A1) declines substantially because the ETRs of many firms in different industries were low due to recoupment of losses.

Using aggregate or average profit and tax over the five-year period in the above example (see the last column) to compute ETR can largely avoid the distortion of carryforward of losses. The ETR so computed is the "true" or "long run" ETR. It is more stable and more amenable to statistical analysis.

APPENDIX 2

COMPANIES IN THE SAMPLE FOR ANALYSIS OF TAX DISCLOSURE DATA

Industry	Company Name	Size*
1. Gold	Central Norseman Gold Corporation Ltd	3
	Sons of Gwalia Ltd	3
2. Other metals	Minerals Mining & Metallurgy Ltd	1
	Cudgen RZ Ltd	3
3. Solid fuels	Allied Queensland Coalfields Ltd	2
	Energy Resources of Australia Ltd	4
4. Oil and gas	Magellan Petroleum Australia Ltd	2
	Bridge Oil Ltd	4
5. Diversified resources	Pancontinental Mining Ltd	4
	The Broken Hill Proprietary Company Ltd	5
6. Developers and contractors	Peter Kurts Properties Ltd	3
	Leighton Holdings Ltd	4
7. Building materials	Gunns Ltd	2
	Bunnings Ltd	4
8. Alcohol and tobacco	Mildara Blass Ltd	3
	Foster's Brewing Group Ltd	5
9. Food and household goods	Gibson's Ltd	1
	Defiance Mills Ltd	3
10. Chemicals	Gibson Chemical Industries	3
	ICI Australia Ltd	5
11. Engineering	J.C. Ludowici & Son Ltd	2
	National Consolidated Ltd	4
12. Paper and packaging	National Can Industries Ltd	3
	Amcor Ltd	5
13. Retail	Angus & Coote (Holdings) Ltd	2
	Coles Myer Ltd	5
14. Transport	Chalmers Ltd	1
	Brambles Industries Ltd	5
15. Media	Telecasters North Queensland Ltd	2
	ENT Ltd	3
16. Banks	National Australia Bank Ltd	5
	Westpac Banking Corporation	5

17. Insurance	FAI Insurances Ltd	5
	QBE Insurance Group Ltd	5

Industry	Company Name	Size*
18. Entrepreneurial investors	Ariadne Australia Ltd	4
	Australian Consolidated Investments Ltd	5
19. Investment and financial services	Choiseul Plantation (Holdings) Ltd	2
	Australian Foundation Investment Company Ltd	4
20. Property trusts	P.A. Property Trust	1
	Westfield Trust	4
21. Miscellaneous services	Webster Ltd	2
	Spotless Group Ltd	3
22. Miscellaneous industrials	Sime Darby Australia Ltd	1
	Australian Agricultural Company Ltd	3
23. Diversified industrials	Hancock & Gore Ltd	1
	Coventry Group Ltd	3

* Firm size is based on average total asset rankings of 542 listed companies in Model 1 (see chapter 4), and is dichotomised into 'small' and 'large' as follows:

Small: Size 1 = Minimum value to lower quartile (first quarter)
Size 2 = Lower quartile to median (second quarter)

Large: Size 3 = Median to upper quartile (third quarter)
Size 4 = Upper quartile to maximum value, excluding top 50
Size 5 = Top 50 (sizes 4 and 5 make up the fourth quarter).

APPENDIX 3
TECHNICAL NOTES

Adjustment Required to Maintain a Simple Relationship between Tax Amounts and Income Amounts Using a Benchmark Tax Rate

Assume for simplicity that there are only two categories of permanent differences. The following relationship:

Accounting Profit + Permanent Differences + Timing Differences = Taxable Income (1)

pertinent to a company can be denoted in mathematical symbols as-

$$y_{1j} + y_{2j} + y_{3j} + y_{4j} = y_{5j} \quad (2)$$

where y_{1j} = Accounting profit for year j;
y_{2j} and y_{3j} = Amounts of the two permanent differences for year j;
y_{4j} = Amount of timing differences for year j, and
y_{5j} = Taxable income for year j.

The variable y denotes an income amount. For simplicity of expression, the subscript k as running index for companies is suppressed.

Suppose the statutory tax rate (STR) for year j is denoted by r_j. Then the relationship:

Prima Facie Tax Expense + Tax Effect of Permanent & Timing Differences = Tax Payable (3)

can be denoted in mathematical symbols as-

$$y_{1j}r_j + y_{2j}r_j + y_{3j}r_j + y_{4j}r_j = y_{5j}r_j \quad (4)$$

or

$$t_{1j} + t_{2j} + t_{3j} + t_{4j} = t_{5j} \quad (5)$$

where $t_{ij} = y_{ij}r_j$ is the tax amount computed by applying the STR for year j to the underlying income amount y_{ij}, for i = 1, 2,..., 5.

Suppose we are studying a time series of 3 years (j = 1, 2, 3) and the STR varies from year to year, i.e.

$$r_1 \bullet r_2 \bullet r_3 \quad (6)$$

Let y_i and t_i respectively denotes the total amount of y_{ij} and t_{ij} aggregated over the study period, i.e.

$$y_i = \sum_{j=1}^{3} y_{ij}, \quad \text{for i = 1, 2,..., 5} \quad (7)$$

$$t_i = \sum_{j=1}^{3} t_{ij}, \quad \text{for i = 1, 2,..., 5} \quad (8)$$

The relationship of the yearly income amounts (the time series) and the total income amounts can be denoted in matrix notations as follows:

$$\mathbf{Y\,1} = \mathbf{y} \quad (9)$$

where $\mathbf{Y} = [y_{ij}]$ is a 5 x 3 matrix of the yearly income amounts;
$\mathbf{1} = [1]$ is a 3 x 1 column vector with all elements equal 1, and
$\mathbf{y} = [y_i]$ is a 5 x 1 column vector of the total income amounts.

The relationship of the yearly income amounts and the total tax amounts can be denoted in matrix notations as follows:

$$\mathbf{Y}\,\mathbf{r} = \mathbf{t} \qquad (10)$$

where $\mathbf{Y} = [y_{ij}]$ is a 5 x 3 matrix of the yearly income amounts;
$\mathbf{r} = [r_j]$ is a 3 x 1 column vector of the statutory tax rates, and
$\mathbf{t} = [t_i]$ is a 5 x 1 column vector of the total tax amounts.

The weighted average tax rate computed from a total income amount y_i and its corresponding total tax amount t_i (i = 1, 2,..., 5) varies across items i (and across companies k), because the yearly income amount y_{ij} and the yearly STR r_j are different from year to year. In other words, there is no constant relationship between the elements of vector **y** and the elements of vector **t**.

If we adjust all yearly tax amounts to what would have been the amounts if the STRs had been the same for all years by selecting one particular STR as the benchmark rate (r*), then for all items i (and for all companies k), the following equation holds-

$$y_i \times r^* = t_i \qquad (11)$$

Thus, by adjusting all yearly tax amounts using a benchmark rate, a reconciliation of aggregate tax amounts also can be read as a reconciliation of the underlying aggregate income amounts, because one vector is simply the other vector multiplied by a scalar r^* (the benchmark tax rate).

APPENDIX 4
COMPANY SURVEY INSTRUMENT
THE AUSTRALIAN NATIONAL UNIVERSITY

Survey of Opinions of Companies about Alignment of Taxable Income and Accounting Profit

February 1996

All responses will be kept strictly confidential.

PART 1

The objective of Part 1 is to ascertain your opinions about the relative merits of existing tax laws on the one hand, and existing accounting principles and standards on the other, to serve as the rules to measure the income tax base.

Definitions

'Accounting profit' means the amount of net profit (or net income) before tax computed in the profit and loss statement (or income statement) in accordance with accepted accounting principles and existing Australian accounting standards (hereafter referred to as "existing accounting principles and standards").

'Taxable income' means the difference between assessable income and allowable deductions computed according to existing Australian tax laws.

Instructions

Please indicate the degree of your agreement or disagreement with the thirteen statements in quotation marks below using the seven-point scale provided. Answer the questions from the viewpoint of the company as a taxpayer.

A definition is provided before the statement in 1.1 to 1.7 to ensure a common understanding of the evaluation criteria of a tax system.

Please tick the appropriate box.

1.1 Definition: The criterion of *equality* (or horizontal equity) requires that taxpayers in similar positions be subject to similar tax liability.

"The *equality* criterion is better observed if tax liability is based on accounting profit instead of taxable income."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	10	38	13	11	6	28	12	118
%	8.5	32.2	11.0	9.3	5.1	23.7	10.2	100.0

1.2 Definition: The criterion of *ability to pay* (or vertical equity) requires that the total tax burden be distributed among taxpayers according to their capacity to bear it.

"Taxable income is a better indicator of *ability to pay* than accounting profit."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	4	28	12	12	5	44	13	118
%	3.4	23.7	10.2	10.2	4.2	37.3	11.0	100.0

1.3 Definition: The criterion of *neutrality* (or efficiency) requires that the efficient working of the economy be subject to minimum interference by the tax system to avoid misallocation of economic resources.

"The income tax system is more *neutral* if tax liability is based on accounting profit, rather than taxable income."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	9	52	21	10	6	16	3	117
%	7.7	44.4	17.9	8.5	5.1	13.7	2.6	100.0

1.4 Definition: The criterion of *certainty* requires that tax rules be comprehensible, unambiguous and certain, both to the taxpayer and to the tax administrator.

"Existing tax laws are more *comprehensible, unambiguous and certain* than existing accounting principles and standards to serve as the rules to determine income tax liability."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	7	15	11	2	15	44	23	117
%	6.0	12.8	9.4	1.7	12.8	37.6	19.7	100.0

1.5 Definition: The criterion of *continuity* requires that tax rules be changed infrequently and changes be made only in the context of a systematic tax reform.

"Existing accounting principles and standards have a higher level of *continuity* than existing tax laws."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	8	64	20	13	4	7	1	117
%	6.8	54.7	17.1	11.1	3.4	6.0	0.9	100.0

1.6 Definition: The criterion of *cost effectiveness* requires that the costs incurred by government in assessing and collecting tax, and in auditing taxpayer, be kept to minimum.

"Income tax based on taxable income is more *cost-effective* to assess, collect and audit than income tax based on accounting profit."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	5	18	11	15	14	40	14	117
%	4.3	15.4	9.4	12.8	12.0	34.2	12.0	100.0

1.7 Definition: The criterion of *convenience* requires that assessment and collection of tax cause taxpayer as little inconvenience and compliance costs as possible.

"Existing tax laws are *easier and less costly* to comply with than existing accounting principles and standards."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	3	4	6	4	18	54	28	117
%	2.6	3.4	5.1	3.4	15.4	46.2	23.9	100.0

1.8 "*Compliance level* will be enhanced if income tax is based on accounting profit instead of taxable income."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	8	43	17	24	6	15	4	117
%	6.8	36.8	14.5	20.5	5.1	12.8	3.4	100.0

1.9 "Overall, accounting profit should replace taxable income as the basis to compute income tax liability."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	10	40	17	8	8	19	16	118
%	8.5	33.9	14.4	6.8	6.8	16.1	13.6	100.0

The reasons for your agreement or disagreement with the above statement are: *(optional)*

_____
_____
_____

1.10 "Overall, taxable income should replace accounting profit as a measure of operating results in company financial reports."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	2	9	6	5	5	53	38	118
%	1.7	7.6	5.1	4.2	4.2	44.9	32.2	100.0

1.11 "Usually, a firm's annual taxable income and accounting profit are similar in dollar amount."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	1	2	6	5	10	73	21	118
%	0.8	1.7	5.1	4.2	8.5	61.9	17.8	100.0

1.12 "I would prefer to have one set of rules for both financial accounting and income tax purposes."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	42	34	13	6	4	12	7	118
%	35.6	28.8	11.0	5.1	3.4	10.2	5.9	100.0

1.13 "I would prefer to keep the current status of having two separate sets of rules, one for income tax purposes and one for financial accounting and reporting."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	8	14	7	5	13	39	32	118
%	6.8	11.9	5.9	4.2	11.0	33.1	27.1	100.0

1.14 Which of the following areas of financial accounting principles and standards would you like to recommend adoption by the income tax authorities? *(Please tick as many boxes as appropriate.)*

		%			%
(a)	Financial and operating leases	47.5	(j)	Events occurring after balance date	16.9
(b)	Foreign currency transactions	37.3	(k)	Consolidated accounts	34.7
(c)	Financial derivatives	24.6	(l)	Employee entitlements	53.4
(d)	Inventory valuation	50.0	(m)	Materiality principle	39.8
(e)	Long-term construction contracts	28.0	(n)	Conservatism (or prudence)	17.8
(f)	Purchased goodwill	42.4	(o)	Matching principle	54.2
(g)	Depreciation: non-current assets	56.8	(p)	SAC4 Definitions & recognition rules	10.2
(h)	Revaluation: non-current assets	33.1	(q)	Current cost accounting	7.6
(i)	Accounting policy changes	22.0	(r)	Other (Please state) _____	1.7

PART 2

The objective of Part 2 is to collect some data about the demographic features of our respondents.

2.1 According to the industry classification of the Australian Stock Exchange, into which of the following industry groups is your company classified? *(Please tick one box.)*

	Count	%		Count	%
Gold	22	18.6	Transport	2	1.7
Other metals	9	7.6	Media	6	5.1
Solid fuels	1	0.8	Banks	1	0.8
Oil and gas	7	5.9	Insurance	0	0.0
Diversified resources	7	5.9	Entrepreneurial investors	3	2.5
Developers and contractors	9	7.6	Investment and financial services	6	5.1
Building materials	2	1.7	Property trusts	0	0.0
Alcohol and tobacco	1	0.8	Miscellaneous services	6	5.1
Food and household goods	3	2.5	Miscellaneous industrials	15	12.7
Chemicals	2	1.7	Diversified industrials	5	4.2
Engineering	3	2.5	Tourism and leisure	0	0.0
Paper and packaging	1	0.8			
Retail	5	4.2	Don't know	2	1.7
			TOTAL = 118		100.0

2.2 Is there any company in your group which: *(Please tick the appropriate boxes.)*

	Yes	No	
(a) Derives foreign income = 114	46.5%	53.5%	n
(b) Resides outside Australia = 116	47.4%	52.6%	n

2.3 About how much was the amount of your *group's total assets* on the consolidated balance sheet at 30 June 1994 (or the substituted balance date)? *(Please tick one box.)*

	Count	%
Less than $30 million	61	51.7
$30 million to under $100 million	20	16.9
$100 million to under $300 million	18	15.3
$300 million to under $1,500 million	9	7.6
$1,500 million or more	10	8.5
TOTAL	118	100.0

2.4 About how much was the amount of *group net profits before tax* in the consolidated profit and loss statement for the year ended 30 June 1994 (or the substituted accounting period)? *(Please tick one box.)*

	Count	%
Nil or net operating loss	44	37.3
$1 to under $1 million	12	10.2
$1 million to under $5 million	25	21.2

$5 million to under $20 million	14	11.9
$20 million to under $100 million	12	10.2
$100 million or more	11	9.3
TOTAL	118	100.0

2.5 About how much was the amount of *group income tax expense* in the consolidated profit and loss statement for the year ended 30 June 1994 (or the substituted accounting period)? *(Please tick one box.)*

	Count	%
Nil or refund of tax	45	38.1
$1 to under $300,000	16	13.6
$300,000 to under $1,500,000	20	16.9
$1,500,000 to under $6 million	16	13.6
$6 million to under $30 million	10	8.5
$30 million or more	11	9.3
TOTAL	118	100.0

2.6 Which of the following most closely describes your position (level of job responsibility) within the company or the group? *(Please tick one box.)*

	Count	%		Count	%
Chief executive officer	9	7.6	Specialist staff	12	10.2
Senior management level	69	58.5	Staff	0	0.0
Management level	23	19.5	Other _____ (Please state)	5	4.2
			TOTAL = 118		100.0

2.7 Please indicate if you are a member (or registered person) of any of the following bodies: *(Please tick one or more boxes.)*

	%
(a) The Australian Society of Certified Practising Accountants	48.3
(b) The Institute of Chartered Accountants in Australia	45.8
(c) Law Institute or Society of any State or Territory in Australia	0.8
(d) Tax Agents Board of any State or Territory in Australia	20.3
(e) None of the above	7.6

n = 118

PART 3

The objective of Part 3 is to ascertain the likely changes in compliance costs incurred by your group of companies for the income year 1993/94 if accounting profit figures were used to assess the income tax liability of companies in your group in place of taxable income figures.

3.1 Who undertook the group's income tax work for the 1993/94 income year? *(Please tick the appropriate box, then follow the instruction after that box.)*

	Count	%	
Entirely by internal staff	17	14.4	*Please go to question 3.9.*
By internal staff with outside advice	73	61.9	*Please continue.*
Mainly or entirely by outside adviser(s)	28	23.7	*Please continue.*
TOTAL	118	100.0	

External Costs of Compliance

3.2 The sources of external income tax related services received for the 1993/94 income year were:

(Please tick one or more boxes.)

	Count	%
(a) Accountants or tax agents	101	85.6
(b) Lawyers	14	11.9
(c) Others _____ (Please state)	0	0.0

n = 118

3.3 What is the *most* important reason for using external income tax related services? *(Please tick one box.)*

	Count	%
Technical knowledge is not readily available within the group.	39	33.1
It is more cost effective to use outside advisers.	10	8.5
The group's policy requires independent review of internally generated opinions.	16	13.6
Tax laws are complex.	27	22.9
To get calculation of taxable income right.	17	14.4
To minimise exposure to penalties.	14	11.9
Other (please state) _____	4	3.4
TOTAL	127	107.6

3.4 The income tax related work calling for external services was: *(Please tick one or more boxes.)*

	Count	%
(a) Income tax return preparation or review	97	82.2
(b) Income tax planning	45	38.1
(c) Tax audit, contesting assessment(s)	17	14.4
(d) Other (please state) _____	2	1.7

3.5 Please itemise or estimate the fees for external income tax related services for the 1993/94 income year:

(a) Accountants or tax agents $ ☐ (Amount)

(b) Lawyers $ ☐ (Amount)

(c) Others $ ☐ (Amount)

3.6 Approximately, what is the breakdown of the external service fees in question 3.5 between tax return preparation or review, tax planning, and other work (tax audit, contesting assessment, etc.)?
(Please estimate.)

	Return preparation	Tax planning	Others	
(a) Accountants, tax agents	$ ☐	$ ☐	$ ☐	(Amount)
(b) Lawyers	$ ☐	$ ☐	$ ☐	(Amount)
(c) Others	$ ☐	$ ☐	$ ☐	(Amount)

3.7 If accounting profit figures were used to assess income tax in place of taxable income figures, *what would have been* the fees for external income tax related services for the 1993/94 income year?
(Please estimate.)

(a) Accountants or tax agents $ ☐ (Amount)

(b) Lawyers $ _____ (Amount)

(c) Others $ _____ (Amount)

3.8 Approximately, *what would have been* the breakdown of the external service fees in question 3.7 between tax return preparation or review, tax planning, and other work (tax audit, contesting assessment, etc.)? *(Please estimate.)*

	Return preparation	Tax planning	Others	
(a) Accountants, tax agents	$ _____	$ _____	$ _____	(Amount)
(b) Lawyers	$ _____	$ _____	$ _____	(Amount)
(c) Others	$ _____	$ _____	$ _____	(Amount)

Internal Costs of Compliance

3.9 The income tax work calling for time spent by internal staff was: *(Please tick one or more boxes.)*

	Count	%
(a) Income tax return preparation or review	110	93.2
(b) Income tax planning	66	55.9
(c) Tax audit, contesting assessment(s)	19	16.1
(d) Other (please state) _____	3	2.5

3.10 How much time *within* the group was spent entirely on *work exclusively for income tax purposes* for the 1993/94 income year and at what cost? *(Please estimate.)*

	Number of hours	Direct cost of staff per hour
(a) Directors and managers	☐ hours	$ ☐
(b) Accounting staff	☐ hours	$ ☐
(c) Legal staff	☐ hours	$ ☐
(d) Computer staff	☐ hours	$ ☐
(e) Others _____ (Please state)	☐ hours	$ ☐

3.11 Approximately, what is the breakdown of the *time spent* by internal staff in quesion 3.10 between tax return preparation, tax planning, and other work (tax audit, contesting assessment, etc.)?
(Please estimate.)

	Return preparation	Tax planning	Others	
(a) Directors and managers	☐	☐	☐	(hours)
(b) Accounting staff	☐	☐	☐	(hours)
(c) Legal staff	☐	☐	☐	(hours)
(d) Computer staff	☐	☐	☐	(hours)

(e) Others ☐ ☐ ☐ (hours)

3.12 If accounting profit figures were used to assess income tax in place of taxable income figures, how much time within the group *would have been spent* entirely on work *exclusively for income tax purposes* for the 1993/94 income year and at what cost? *(Please estimate.)*

	Number of hours	Direct cost of staff per hour
(a) Directors and managers	☐ hours	$ ☐
(b) Accounting staff	☐ hours	$ ☐
(c) Legal staff	☐ hours	$ ☐
(d) Computer staff	☐ hours	$ ☐
(e) Others	☐ hours	$ ☐

3.13 Approximately, *what would have been* the breakdown of the *time spent* by internal staff in question 3.12 between tax return preparation, tax planning, and other work (tax audit, contesting assessment, etc.)?
(Please estimate.)

	Return preparation	Tax planning	Others	
(a) Directors and managers				(hours)
(b) Accounting staff				(hours)
(c) Legal staff				(hours)
(d) Computer staff				(hours)
(e) Others				(hours)

Thank you for completing this questionnaire.

Please post it in the reply paid envelope as soon as possible to:

Alfred Tran
Department of Commerce
The Australian National University
GPO Box 4
Canberra, ACT 2601

No postage stamp is required if you post it in Australia.

If you are willing to answer any queries that may arise from this questionnaire, or would like a summary of the results, please state your name, address and telephone number in the space provided below, and tick the appropriate box.

Leave blank if you wish to maintain anonymity.

Name _____

Address _____

_____

Telephone _____

I would be willing to answer further questions.
I would like a summary of the results.

APPENDIX 5
PRACTITIONER SURVEY INSTRUMENT
THE AUSTRALIAN NATIONAL UNIVERSITY

Survey of Opinions of Accountants about Alignment of Taxable Income and Accounting Profit

February 1996

All responses will be kept strictly confidential.

PART 1

The objective of Part 1 is to ascertain your opinions about the relative merits of existing tax laws on the one hand, and existing accounting principles and standards on the other, to serve as the rules to measure the income tax base.

Definitions

'Accounting profit' means the amount of net profit (or net income) before tax computed in the profit and loss statement (or income statement) in accordance with accepted accounting principles and existing Australian accounting standards (hereafter referred to as "existing accounting principles and standards").

'Taxable income' means the difference between assessable income and allowable deductions computed according to existing Australian tax laws.

Instructions

Please indicate the degree of your agreement or disagreement with the thirteen statements in quotation marks below using the seven-point scale provided.

A definition is provided before the statement in 1.1 to 1.7 to ensure a common understanding of the evaluation criteria of a tax system.

Please tick the appropriate box.

1.1 Definition: The criterion of *equality* (or horizontal equity) requires that taxpayers in similar positions be subject to similar tax liability.

"The *equality* criterion is better observed if tax liability is based on accounting profit instead of taxable income."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	19	50	22	25	15	67	23	221
%	8.6	22.6	10.0	11.3	6.8	30.3	10.4	100.0

1.2 Definition: The criterion of *ability to pay* (or vertical equity) requires that the total tax burden be distributed among taxpayers according to their capacity to bear it.

"Taxable income is a better indicator of *ability to pay* than accounting profit."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	13	50	13	26	21	78	20	221
%	5.9	22.6	5.9	11.8	9.5	35.3	9.0	100.0

1.3 Definition: The criterion of *neutrality* (or efficiency) requires that the efficient working of the economy be subject to minimum interference by the tax system to avoid misallocation of economic resources.

"The income tax system is more *neutral* if tax liability is based on accounting profit, rather than taxable income."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	12	70	41	43	15	29	10	220
%	5.5	31.8	18.6	19.5	6.8	13.2	4.5	100.0

1.4 Definition: The criterion of *certainty* requires that tax rules be comprehensible, unambiguous and certain, both to the taxpayer and to the tax administrator.

"Existing tax laws are more *comprehensible, unambiguous and certain* than existing accounting principles and standards to serve as the rules to determine income tax liability."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	9	33	24	24	21	77	33	221
%	4.1	14.9	10.9	10.9	9.5	34.8	14.9	100.0

1.5 Definition: The criterion of *continuity* requires that tax rules be changed infrequently and changes be made only in the context of a systematic tax reform.

"Existing accounting principles and standards have a higher level of *continuity* than existing tax laws."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	29	108	33	23	14	11	3	221
%	13.1	48.9	14.9	10.4	6.3	5.0	1.4	100.0

1.6 Definition: The criterion of *cost effectiveness* requires that the costs incurred by government in assessing and collecting tax, and in auditing taxpayer, be kept to minimum.

"Income tax based on taxable income is more *cost-effective* to assess, collect and audit than income tax based on accounting profit."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	9	37	23	51	15	71	15	221
%	4.1	16.7	10.4	23.1	6.8	32.1	6.8	100.0

1.7 Definition: The criterion of *convenience* requires that assessment and collection of tax cause taxpayer as little inconvenience and compliance costs as possible.

"Existing tax laws are *easier and less costly* to comply with than existing accounting principles and standards."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	4	18	15	33	27	95	29	221
%	1.8	8.1	6.8	14.9	12.2	43.0	13.1	100.0

1.8 "*Compliance level* will be enhanced if income tax is based on accounting profit instead of taxable income."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	12	37	35	55	16	53	13	221
%	5.4	16.7	15.8	24.9	7.2	24.0	5.9	100.0

1.9 "Overall, accounting profit should replace taxable income as the basis to compute income tax liability."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	12	33	33	32	19	64	26	219
%	5.5	15.1	15.1	14.6	8.7	29.2	11.9	100.0

The reasons for your agreement or disagreement with the above statement are: *(optional)*

_____
_____
_____

1.10 "Overall, taxable income should replace accounting profit as a measure of operating results in company financial reports."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	1	18	10	20	14	109	46	218
%	0.5	8.3	4.6	9.2	6.4	50.0	21.1	100.0

1.11 "Usually, a firm's annual taxable income and accounting profit are similar in dollar amount."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	3	28	35	18	31	90	16	221
%	1.4	12.7	15.8	8.1	14.0	40.7	7.2	100.0

1.12 "I would prefer to have one set of rules for both financial accounting and income tax purposes."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	41	84	23	18	14	29	12	221
%	18.6	38.0	10.4	8.1	6.3	13.1	5.4	100.0

1.13 "I would prefer to keep the current status of having two separate sets of rules, one for income tax purposes and one for financial accounting and reporting."

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree	TOTAL
Count	11	33	26	22	18	84	27	221
%	5.0	14.9	11.8	10.0	8.1	38.0	12.2	100.0

1.14 Which of the following areas of financial accounting principles and standards would you like to recommend adoption by the income tax authorities? *(Please tick as many boxes as appropriate.)*

		%			%
(a)	Financial and operating leases	41.6	(j)	Events occurring after balance date	21.3
(b)	Foreign currency transactions	24.4	(k)	Consolidated accounts	12.7
(c)	Financial derivatives	8.1	(l)	Employee entitlements	40.7
(d)	Inventory valuation	51.6	(m)	Materiality principle	44.8
(e)	Long-term construction contracts	34.8	(n)	Conservatism (or prudence)	13.6
(f)	Purchased goodwill	45.2	(o)	Matching principle	46.6
(g)	Depreciation: non-current assets	44.8	(p)	SAC4 Definitions & recognition rules	8.1
(h)	Revaluation: non-current assets	17.6	(q)	Current cost accounting	4.5
(i)	Accounting policy changes	10.0	(r)	Other (Please state) _____	0.0

PART 2

The objective of Part 2 is to collect some data about the demographic features of our respondents.

2.1 Which of the following best describes your field of employment? *(Please tick one box.)*

	Count	%
Public accounting practice	185	84.1
Tax agent's practice	31	14.1
Legal practice	0	0.0
Other	4	1.8
TOTAL	220	100.0

2.2 The total number of staff (including partners) in your firm is: *(Please tick one box.)*

	Count	%		Count	%
More than 1,000	10	4.5	21 - 50	30	13.6
501 - 1,000	3	1.4	11 - 20	42	19.1
101 - 500	6	2.7	6 - 10	41	18.6
51 - 100	10	4.5	1 - 5	78	35.5
			TOTAL = 220		100.0

2.3 Which of the following most closely describes your position (level of responsibility) within the firm?
(Please tick one box.)

	Count	%		Count	%
Managing partner	19	8.6	Manager	51	23.2
Partner	60	27.3	Staff	26	11.8
Sole practitioner	61	27.7	Other	3	1.4
			TOTAL = 220		100.0

2.4 Which of the following most closely describes your primary job function? *(Please tick one box.)*

	Count	%		Count	%
Taxation	193	88.1	Information technology	0	0.0
Financial accounting & reporting	19	8.7	Company secretarial services	0	0.0
Auditing	1	0.5	Finance and investment services	0	0.0
Insolvency and reconstructions	0	0.0	Management services	5	2.3
Legal services (other than tax)	0	0.0	Other	1	0.5
			TOTAL = 219		100.0

2.5 Please indicate if you are a member (or registered person) of any of the following bodies:
(Please tick one or more boxes.)

	Count	%
(a) The Australian Society of Certified Practising Accountants	122	55.2
(b) The Institute of Chartered Accountants in Australia	137	62.0
(c) Law Institute or Society of any State or Territory in Australia	2	0.9
(d) Tax Agents Board of any State or Territory in Australia	95	43.0

(e) Other _____ 40 18.1

(Please state)

TOTAL = 221 100.0

2.6 The total number of years of your work experience in the *income tax* area is: *(Please tick one box.)*

	Count	%		Count	%
More than 20 years	73	33.2	2 - 5 years	12	5.5
11 - 20 years	74	33.6	Less than 2 years	3	1.4
6 - 10 years	58	26.4	None	0	0.0

TOTAL = 220 100.0

2.7 The total number of years of your work experience in the *financial accounting and reporting* area is:
(Please tick one box.)

	Count	%		Count	%
More than 20 years	71	32.4	2 - 5 years	18	8.2
11 - 20 years	74	33.8	Less than 2 years	6	3.7
6 - 10 years	43	19.6	None	7	3.2

TOTAL = 219 100.0

2.8 In which of the following areas of industry specialisation are you involved?
(Please tick one or more boxes.)

		%			%
(a)	Primary production	40.3	(h)	Media and communications	5.0
(b)	Mining	4.5	(i)	Finance and investment	28.5
(c)	Manufacturing	28.5	(j)	Insurance	7.2
(d)	Construction	29.0	(k)	Real estate and property	31.2
(e)	Electricity, gas and water	1.8	(l)	Hotels, restaurants and entertainment	24.0
(f)	Wholesale and retail trade	51.6	(m)	Professional and other services	54.3
(g)	Transport and storage	16.3	(n)	Other _____ (Please state)	8.6

n = 221

2.9 Which of the following is an appropriate description of your clientele seeking income tax related services?*(Please tick one or more boxes.)*

		%
(a)	Companies and trusts listed on the Australian Stock Exchange	6.3
(b)	Medium and large companies *not* listed on the ASX	24.0
(c)	Medium and large unincorporated businesses	16.3
(d)	Small companies *not* listed on the ASX	85.1
(e)	Small unincorporated businesses	80.5

n = 221

2.10 Please indicate if you have any of the following qualifications: *(Please tick one or more boxes.)*

		%
(a)	An accounting qualification from an institute of TAFE	6.3
(b)	A *bachelor* degree in accounting, business, commerce or economics	73.8
(c)	A *higher* degree in accounting, business, commerce or economics	7.7
(d)	A *bachelor* degree in laws	2.3
(e)	A *higher* degree in laws	1.8
(f)	A *higher* degree in taxation	3.6
(g)	Other (Please state) _____	11.3
(h)	None of the above	6.3

n = 221

2.11 In which of the following State or Territory are you working? *(Please tick one box.)*

	Count	%
Australian Capital Territory	3	1.4
New South Wales	65	29.5
Northern Territory	3	1.4

Queensland	44	20.0
South Australia	18	8.2
Tasmania	6	2.7
Victoria	60	27.3
Western Australia	21	9.5
TOTAL	220	100.0

PART 3

The objective of Part 3 is to ascertain the likely financial impact on the revenues and profits of your firm if accounting profit figures were used to assess the income tax liability of your clients in place of taxable income.

3.1 For the 1994/95 income year, the sources of revenue of your firm were: *(Please tick one or more boxes.)*

	%		%
(a) Taxation	99.1	(f) Information technology	19.5
(b) Bookkeeping and accounting	82.8	(g) Company secretarial services	66.5
(c) Auditing	68.8	(h) Financial and investment services	33.9
(d) Insolvency and reconstructions	16.7	(i) Management services	47.1
(e) Legal services (other than taxation)	3.2	(j) Other _____ (Please state)	1.8

n = 221

3.2 For the 1994/95 income year, the *income tax related services* offered to clients were: *(Please tick one or more boxes.)*

	%
(a) Income tax return preparation and review	98.6
(b) Income tax planning	92.8
(c) Tax audits, contesting assessments	62.0
(d) Other (please state) _____	5.4

n = 221

3.3 What is the main reason(s) for your clients using your income tax related services? *(Please tick one or more boxes.)*

	%
(a) Technical knowledge is not readily available within the client's organisation.	83.7
(b) It is more cost effective for the client to use outside advisers.	46.6
(c) Client's policy requires independent review of internally generated opinions.	10.4
(d) Tax laws are complex.	89.1
(e) To get calculation of taxable income right.	70.1
(f) To minimise exposure to penalties.	57.9
(g) Other (please state) _____	4.1

n = 221

Please estimate, whether or not you have access to your firm's financial information.

3.4 If accounting profit figures were used to assess the income tax liability of *your clients* in place of taxable income figures, you would estimate that your firm's *gross revenues* for 1994/95 from *income tax related services* would have: *(Please tick one box.)*

	Count	% of those who estimated		Count	% of those who estimated
increased by 50% or more	2	1.1	*decreased* by less than 10%	28	15.5
increased by 40 - 49%	1	0.6	*decreased* by 10 - 19%	19	10.5
increased by 30 - 39%	2	1.1	*decreased* by 20 - 29%	10	5.5
increased by 20 - 29%	4	2.2	*decreased* by 30 - 39%	3	1.7
increased by 10 - 19%	12	6.6	*decreased* by 40 - 49%	1	0.6
increased by less than 10%	11	6.1	*decreased* by 50% or more	2	1.1
remained *unchanged*	86	47.5	been unable to estimate	35	-

TOTAL = 216 100.0

3.5 If accounting profit figures were used to assess the income tax liability of *your clients* in place of taxable income figures, you would estimate that the *total costs* incurred by your firm in 1994/95 to provide *income tax related services* would have: *(Please tick one box.)*

	Count	% of those who estimated		Count	% of those who estimated
increased by 50% or more	2	1.1	*decreased* by less than 10%	32	17.5
increased by 40 - 49%	1	0.5	*decreased* by 10 - 19%	13	7.1
increased by 30 - 39%	0	0.0	*decreased* by 20 - 29%	9	4.9
increased by 20 - 29%	5	2.7	*decreased* by 30 - 39%	1	0.5
increased by 10 - 19%	8	4.4	*decreased* by 40 - 49%	0	0.0
increased by less than 10%	15	8.2	*decreased* by 50% or more	1	0.5
remained *unchanged*	96	52.5	been unable to estimate	34	-
			TOTAL = 217		100.0

3.6 If accounting profit figures were used to assess the income tax liability of *your clients* in place of taxable income figures, you would estimate that your firm's *net profit* for 1994/95 from *income tax related services* would have: *(Please tick one box.)*

	Count	% of those who estimated		Count	% of those who estimated
increased by 50% or more	2	1.1	*decreased* by less than 10%	30	16.6
increased by 40 - 49%	0	0.0	*decreased* by 10 - 19%	19	10.5
increased by 30 - 39%	1	0.6	*decreased* by 20 - 29%	10	5.5
increased by 20 - 29%	1	0.6	*decreased* by 30 - 39%	2	1.1
increased by 10 - 19%	8	4.4	*decreased* by 40 - 49%	0	0.0
increased by less than 10%	20	11.0	*decreased* by 50% or more	2	1.1
remained *unchanged*	86	47.5	been unable to estimate	35	-
			TOTAL = 216		100.0

3.7 If accounting profit figures were used to assess the income tax liability of *your clients* in place of taxable income figures, you would estimate that your firm's *gross revenues* for 1994/95 from *financial accounting and auditing services* would have: *(Please tick one box.)*

	Count	% of those who estimated		Count	% of those who estimated
increased by 50% or more	1	0.5	*decreased* by less than 10%	16	8.8
increased by 40 - 49%	1	0.5	*decreased* by 10 - 19%	7	3.8
increased by 30 - 39%	1	0.5	*decreased* by 20 - 29%	1	0.5
increased by 20 - 29%	5	2.7	*decreased* by 30 - 39%	2	1.1
increased by 10 - 19%	14	7.7	*decreased* by 40 - 49%	0	0.0
increased by less than 10%	19	10.4	*decreased* by 50% or more	1	0.5
remained *unchanged*	114	62.6	been unable to estimate	32	-
			TOTAL = 214		100.0

3.8 If accounting profit figures were used to assess the income tax liability of *your clients* in place of taxable income figures, you would estimate that overall the *net profit* of your firm for 1994/95 *from all services* would have: *(Please tick one box.)*

	Count	% of those who estimated		Count	% of those who estimated
increased by 50% or more	1	0.6	*decreased* by less than 10%	32	17.9
increased by 40 - 49%	1	0.6	*decreased* by 10 - 19%	15	8.4
increased by 30 - 39%	1	0.6	*decreased* by 20 - 29%	4	2.2

increased by 20 - 29%	1	0.6	*decreased* by 30 - 39%	0	0.0
increased by 10 - 19%	9	5.0	*decreased* by 40 - 49%	0	0.0
increased by less than 10%	23	12.8	*decreased* by 50% or more	1	0.6
remained *unchanged*	91	50.8	been unable to estimate	36	-
			TOTAL = 215		100.0

Thank you for completing this questionnaire.

Please post it in the reply paid envelope as soon as possible to:

Alfred Tran
Department of Commerce
The Australian National University
GPO Box 4
Canberra, ACT 2601

No postage stamp is required if you post it in Australia.

If you are willing to answer any queries that may arise from this questionnaire, or would like a summary of the results, please state your name, address and telephone number in the space provided below, and tick the appropriate box.

Leave blank if you wish to maintain anonymity.

Name _____

Address _____

_____

Telephone _____

I would be willing to answer further questions.
I would like a summary of the results.

APPENDIX 6
PRETEST OF THE SURVEY INSTRUMENTS

A sample of 40 listed companies was drawn from the ASX Yearbook 1995 using a random number table for the purpose of pretesting the draft company instrument. Two versions of the instrument were pretested: a full version and a simple version (both printed on white paper). Parts 1 and 2 were the same for both versions. Part 3 of the 'full version' requested respondents to estimate the dollar amount of changes in various components of external and internal compliance costs if accounting profit figures were used to assess income tax for the 1993/1994 income year. The 'simple version' only asked the respondents to state whether the different components of compliance costs would have been 'significantly reduced', 'about the same amount', or 'significantly increased', if there had been an alignment of tax rules with accounting rules. Twenty copies of the full version and 20 copies of the simple version of the instrument were dispatched on 1 and 4 December 1995 respectively with a cover letter and a stamped reply envelope, followed by a reminder on 15 December. Only eight valid responses were received. Contrary to expectation, five of the eight valid responses were the full version of the survey instrument (25 percent response rate), and three were the simple version (15 percent response rate). It was decided, therefore, that the full version be used for the survey proper, so that the potential savings in compliance costs could be quantified.

The draft practitioner instrument was sent to a random sample of 30 Certified Practising Accountants (CPAs) across Australia (printed on blue colour paper) on 30 November 1995, and to a random sample of 30 Chartered Accountants (CAs) in the State of New South Wales (printed on green colour paper) on 4 December 1995, with a cover letter and a stamped reply envelope, followed by a reminder in mid December. Again two versions of the instrument were pretested. Part 3 of the 'full version' requested the respondents to estimate the changes in revenues from income tax related services, accounting and auditing services, and total revenues assuming that for the 1993/94 income year accounting profit figures were used to assess the income tax liability of their clients. The 'simple version' asked the respondents to state if the revenues of their firm would have been 'substantially reduced', 'slightly reduced', 'about the same', 'slightly increased', or 'substantially increased' had there been an alignment. Nineteen valid responses were received. The response rate was 32 percent. The response rate of CAs was significantly higher than that of CPAs. The difference might have been attributable to the dispatch of the survey instrument in the Institute's envelope and the letter of support from a director of ICAA accompanying the survey instrument. Again, contrary to expectation, the number of valid responses using the full version of the survey instrument exceeded the number of simple version received. However, seven respondents returning the full version did not estimate changes in revenues from different services. Reasons given by respondents included "data are not available", and "don't have access to firm's financial information". It appeared that unless the respondents were partners or proprietors, they might not have had access to the financial information of the practice. It was decided, therefore, that an improved simple version of practitioner instrument be used in the survey proper. Based on the information gathered from the pretest, the vague descriptors such as 'slightly' and 'substantially' were replaced by precise grades such as 'less than 10%', '10% to 19%', and so on.

To enhance the response rates for the survey proper, it was decided that an advance letter be mailed to companies and CPAs one week before the dispatch of the survey instruments to inform them of the study and to invite participation.[137] It was also decided that the survey instruments be accompanied by a letter of support from an authoritative figure, i.e. the Head and Professor of Department of Commerce, The Australian National University, in the case of company instrument, and a director of the relevant accounting body in the case of the practitioner instrument.[138] Prior studies show that the colour of the questionnaire cover affects the response rates [Gullahorn and Gullahorn 1963; Pressley and Tullar 1977]. One explanation is that colour paper tends to stand out on the respondent's desk, so it is less likely that the questionnaire will be misplaced or overlooked. Green versus white are the colours that have been tested in previous studies of colour effect. The survey instrument sent to CAs for pretesting was printed on green colour paper, and CAs also happened to have the highest response rate in the pretest. Therefore, it was decided that both survey instruments be printed on green colour paper. However, to keep the total costs within the budget constraints, it was decided that reply paid service of the Australian Post be used in the survey proper, instead of using stamped reply envelope as in the pretest, even though the latter method has been found to produce slightly higher response rates because it was thought that some respondents did not want to waste the stamp [Brook 1978].

Both survey instruments were refined as a consequence of the pretest. Two new questions also were added to Part 1 of both instruments: (a) an optional open-ended question which invited respondents to give reasons for their agreement or disagreement with the alignment of tax rules with accounting rules (second part of Question 1.9), and (b) a list of accounting principles and standards for respondents to recommend to the income tax authorities for adoption on an item by item basis (Question 1.14). These two questions were not subjected to any pretest.

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137 See Heaton [1965], and Schegelmilch and Diamantopoulos [1991].

138 See Doob et al. [1973], and Roeher [1963].

APPENDIX 7

REASONS GIVEN BY COMPANIES FOR AGREEING OR DISAGREEING TO ALIGNMENT IN QUESTION 1.9

Q1.9*	REASONS
1	(1) Simplification. (2) Compliance with other countries.
1	(1) Less work. (2) Same long run effect.
1	Cost of compliance will be reduced and cash flow increased particularly in companies with high level of F.I.T.B in balance sheet.
2	It would simplify and ensure compliance as companies currently try to maximize accounting profit but minimize taxable income. Problem is the reliability of non-audited companies.
2	Usually the only difference between the two is a timing difference which neutralises in the long term.
2	Convenience.
2	Should come to the same answer over time.
2	Provided the accounting profit is a true and fair view of the profit effectively earned in the period, it should be the basis upon which tax is calculated.
2	This would eliminate/consolidate two advice industries (accounting and tax) - Concepts of "materiality" will need to be addressed. [Mr. Tran, given the ability of large companies to defer tax payments relative to the accounting result, The government would probably be supportive (in a revenue sense) to such a change. The extent of the deferral of income tax is recorded as a net "provision for deferred of income tax" in the annual reports of public companies. Have you quantified this?
2	This implies one set of comprehensible rules, in this event tax/accounting statements would be the same and the process more effective.
2	Nothing could be more difficult to interpret or comply with than the overbearing and constantly changing tax laws in Australia. If you get it wrong - you are made to feel like a criminal!
2	Compliance and convenience.
2	Equality, single system of accounting.
2	Some items may require special attention to prevent double taxation e.g. inter-corporate dividends.
2	Some people organisations are able to produce artificially contrived taxable incomes which bear little semblance to "real" income.
2	It is a nonsense for the tax authorities to ignore or disallow an immediate tax deduction for accruals e.g. provision for doubtful debts, long service leave and annual leave. These are timing differences that wash out in the end anyway.
2	More appropriate "profit" is "profit" . So why not equate tax to it!
2	Having one set of "rules" is more efficient and effective. Any special incentives/concessions (e.g. investments allowance, R&D allowance) could be handled outside the system, similarly to the exports market development scheme.
2	(1) Lower compliance cost. (2) Less scope for Australian Taxation Office to interpret tax laws as they see fit.
2	Once a "profit" has been defined consistent with standard then that should be the end of it, with tax applicable at a predetermined appropriate rate.
2	Only if accounting standards are simplified.
2	Only one "system" needs to be followed and I believe the standards are becoming universal and feel if coupled with a GST type tax with a low tax rate.
2	Accounting income is more likely to neglect an accurate measure of economic worth and is less likely to be manipulated through use of legal technicalities.
2	(1) Eliminate the need to keep "two sets of books". (2) Eliminate tax effect accounting and the need to identify/distinguish between permanent and timing differences.
3	In a perfect world accounting profits would be a good indicator of true income-generating performance.

3	Accounting profit is calculated as the starting point in calculating taxable income. Some tax adjustments are useful incentives to stimulate the economy e.g. investment allowance
3	Compliances costs reduced.
3	Generally agree, however there are some instances where incentives may be required to encourage certain types of expenditure.
3	There is some conformity in reporting profit in most industries. However, there are industries, such as the property industry, where there is no conformity in accounting for profit and no guidance by accounting standards.
4	I wonder if auditors work would increase, or the perceived level of risk for them would increase, if the audited accounting also determined the amount of tax to be paid. Eg - Would they accept goodwill written off policies as easily. ie, would auditors cost increase and tax review decrease at the same amount?
4	Accounting profit can be variable depending on interpretations and application of accounting standards. eg. goodwill.
4	For most companies, converting accounting profit to taxable income is a comparatively small part of the accounting compliance process. "Not a big deal!"
5	Accounting profit is open to manipulation.
5	In certain industries, start up costs (on revenue account) are capitalized for accounts for representing an intangible asset. A change in accounting principle would have to occur in order to preserve the tax deduction.
5	Higher subjectivity of accounting profit.
5	Accounting profit has more discretion than taxable profit and can therefore be manipulated.
6	Accounting profit should be the start point with variations by client to allow for differing asset structures and expenditure. It is the multiplicity of changes & interpretations in getting to taxable income that are the problem. [This questionnaire seems to call for one or the other method only. I believe taxable income varies from accounting profit - it is the number of differences in opinion that need to be reduced. Two taxpayers with the same accounting profit will have different taxable income according to asset structure & expenditure incurred.]
6	Accounting profit is too loosely defined and ambiguous. Furthermore, its calculation is not rigorously based on accounting standards - materially distorts its basis.
6	For mining and exploration companies where exploration costs/initial mining costs may be capitalised will result in unreasonable taxes if accounting profit is used. Other than such adjustments, accounting profit would be a reasonable method.
6	Taxable income is more or less based on verifiable cash flows and transactions, whereas accounting profits are the result of the subjective accrual accounting process.
6	Accounting profit is rather more easy to manipulate. Tax system should be simplified and then the compliance issues would disappear.
6	Accounting profit is too divergent between companies.
6	The accounting standards in some cases give an unrealistic income result - LSL liability for instance.
7	Only if items such as goodwill amortisation, certain types of depreciation (building etc) and timing differences (holiday pay etc) are brought into line.
7	Often accounting figures are extremely rubbery and only real net cash flow gives a better indication of ability to bear tax. In some instances tax law tries to achieve this by disregarding accounting entities.
7	The notion of accounting profit as the tax base does not recognise different rules of income and expenses such as dividends, capital items which require different treatment. It would encourage manipulation because there can be several different accounting treatment for a particular transaction.
7	Accounting standards are too loose. Accelerated depreciation & other incentives enable businesses to invest but this is not a measure of profitability.
7	Your questionnaire is bent towards getting a particular conclusion and ignores the economic importance of taxation law as a tool for economic activity. It is too simplistic. The fact that tax law is difficult does not lead to a conclusion that accounting profit is the solution.

7	Accounting profit is not a precise concept and is subject to much interpretation and potential manipulation.
7	Whilst we do have accounting standards, they are nevertheless broad guidelines and interpretation of which can be modified to suit particular circumstances.
7	Fundamental bases of accounting profit are the accrual and matching concepts - these together do not reflect the capacity to pay tax.
7	Accounting standards allow discretion on treatment of certain items. Future accounting standards will be drafted in the knowledge they will affect tax (cash flow).
7	Does not allow for risk factors associated with some industries.
7	Income tax liability should be determined as realized/realizable profits. Income tax expense then a measure of realized, as distinct from "paper" profits. aka Bond, Rothwells etc, indicating "accounting" gymnastics.
7	If accounting results were used, many companies would be faced with higher tax payments associated with the start up of new ventures, thereby reducing the ability to finance them. Hence, Australia as a whole would be worse off. Accounting lacks consistency in treatment as between entities. (Accounts of joint ventures often show different results.)
7	Income tax levied on accounting profit would not take into account the real risks in petroleum exploration in Australia.

* Question 1.9 reads "Overall, accounting profit should replace taxable income as the basis to compute income tax liability."

1 Strongly agree
2 Agree
3 Slightly agree
4 Neither agree nor disagree
5 Slightly disagree
6 Disagree
7 Strongly disagree

APPENDIX 8

REASONS GIVEN BY PRACTITIONERS FOR AGREEING OR DISAGREEING TO ALIGNMENT IN QUESTION 1.9

Q1.9*	REASONS
1	Many other countries seem to be able to do this (especially in Europe) without losing their company tax collections! On the whole, compliance and administration "dead weight" costs will be reduced.
1	Accounting profit provides a "true and fair" profit whereas taxable income has political overcomes.
1	Obviously controls must be in place to avoid abuse but generally speaking business will only incur costs which they believe are necessary to operate effectively.
1	(1) Tax based on taxable income is less cost-effective to assess, collect and audit than tax based on accounting profit. (2) Existing tax laws are more difficult and costly to comply with than existing accounting principles and standards.
1	When you apply the "matching" process in its true form, the tax payable will be a true reflection of the year's result and would replace "tax effect accounting" to a great degree.
1	For a considerable number of years the tax principles have been changed in many cases only to keep a government in power. This leads to uncertainty and a misallocation of resources to comply with the tax laws.
1	The same accountants, generally, produce both sets of figures - therefore would save money, ie duplication - The differences are mostly only timing anyway.
2	Because rank and file people do not understand "add-backs" or partial or non-claims of expenditure incurred.
2	Accrual of various unpaid - probable and very likely liabilities - such as employee entitlements.
2	Accounting profit purports to and endeavours to state the results of entity on an equitable basis.
2	Clients have difficulty in understanding why all the adjustments are made for tax purposes. Clients believe there are two sets of accounts drawn up.
2	There is a need to cut out the gobbledegook and grey areas of tax laws and simplify rules for tax computation. If accounting principles are acceptable as a fair basis for profit computation, why have different laws to complicate matters?
2	Matching of income and expenses concept.
2	Under tax laws, no allowance is made for doubtful debts, provisions for holiday pay and long service leave, etc.
2	Tax act is not user friendly.
2	Cost of compliance would reduce as most taxpayers have accounts prepared and then adjusted for the income tax return.
2	Profit is better indicator of ability to pay than taxable income (fairness). Should a minimum (say $500) where accounting principles do not apply (materiality, cost).
2	Over time accounting profit will become an easier measure (refined by the judiciary) as a basis for tax liability than the series of rules contained in the ITAA, eg. UK, NZ.
2	Accounting profit is, in my opinion, related to the exact result for partners, shareholders and individuals rather than an amended or varied profit results after taxation, special allowances, etc.
2	Less laws are required. Net profit = Taxable Income
3	This "simplification" is highly likely open up another can of worms in its own right. Accounting profit is certainly not the ideal measure of a basis for levying income tax. Tax incentives should be available to encourage economically productive activities.
3	Subject to adjustment to accounting profit for specific measures such as investment allowance, etc.
3	Taxable income should not slavishly follow accounting profits because governments may wish to provide incentives via the tax system.
3	Overall I agree with the statement but there still needs to be tax incentives to create industry or development which would not otherwise occur.

3	Though this is dependent on what controls are in place to control evasion of tax through creative application of accounting results.
3	The suggestion that accounting profit would solve the efficiency and equality definitions is flawed. Taxpayers will then seek to legally reduce accounting profit. Further taxation concepts and accounting concepts would conflict.
3	It would be much simpler if accounting profit or loss was the basis but government incentives like investment allowances, R&D or film incentives, would be harder to implement. I think it is impractical.
3	Not convinced accounting profit is the definitive answer but do agree it will provide a better case than the present "Band-Aid" legislation.
3	There has to be scope for notional deductions, eg. 150% write-off R&D.
3	I believe that there would still be arguments and differences of opinion in calculating accounting profit if it became the benchmark for tax liability.
3	Constant changes in ATO policy - eg. accruing of interest on bank bills.
4	Accounting profit may be manipulated and is thus no better measure to one's tax liabilities.
4	Some taxation concessions.
4	May place extra undue pressure on directors and auditors to manipulate accounting profit. Also, the difficulties with establishing accounting profit where operations are international.
4	Both are nebulous concepts.
4	Tax Law, while complex, is more certain. Accounting standards are subject to individual interpretation.
4	The same problems in interpreting accounting standards exist as interpreting tax legislation.
4	People will only pay what tax they think fair in their circumstances. Accounting profit or taxable income will be adjusted accordingly.
?	Adoption of certain standards may allow subjectiveness to affect profit results.
4	Tax assessment is for a different reason to profit assessment, therefore it is not always good for government to apply the same standards as it could be detrimental to the fiscal or other economic policy.
5	Accounting profit is subject to judgemental matters such as provisions etc. This would be hard to validate for tax purposes.
5	In many circumstances there are tax incentive deductions available - eg. building allowances, film investment incentives etc. How will these be accommodated in your model?
5	Existing accounting standards allow certain discretion to the accountants in determining accounting profit which would of itself make it an unsuitable basis.
5	Ambiguities and uncertainties are endemic in both methods of income calculation.
5	In our practice, most clients are small business, where accounting profit and taxable income are fairly similar. I don't have a strong opinion about this.
5	Accounting treatments are often too flexible and different methods can be used to effectively "smooth profits".
5	Ability to pay must be taken into account.
5	Accounting profit lends itself to greater manipulation notwithstanding the current flawed taxation system.
5	Generally for small businesses the cost of obtaining accounting profit is far greater than the cost of obtaining taxable income.
5	Government policy is to a certain extent enacted via the tax system (incentives).
5	I have not had a case presented supporting this argument so am not sure of likely conclusion.
6	Accounting profit is often the result of the application judgement and manipulation. Also Corporation Law simplification means less companies have to comply with accounting standards.
6	Changes over of existing taxpayers on tax accounting systems to accounting based system too costly in country based areas. City based corporate world may differ due to existing set up of accounting based systems.

6	The tenor of your questions is naive. For small businesses the adjustment from accounting profit to taxable income is not difficult. Government must determine tax policies. Tax system needs some flexibility - cash/accrual bases of income. Tax rulings should only be released after agreement with professional accounting/tax bodies. The Tax Office would issue "accounting rulings" instead of "tax rulings". Therefore nothing changes.
6	Individual circumstances (eg. capital expenditure) can create unfair/unequal burdens.
6	I do not agree with your proposition. There are many good reason why the present system is used. Too many to go into here. Your approach is too simplistic.
6	Accounting treatment of goodwill will mean that a business which has generated its own goodwill will be taxed higher than a company which has acquired goodwill.
6	Accounting standards have become as long-winded and convoluted as tax law. The average small business person is not interested in recording (or paying for) numerous notes to financial statements.
6	(1) Certain accounting expenses (provision for LSL) should be deductible only when paid for cash flow. (2) Will put pressure on practitioners to overstate expenses on judgement calls.
6	The costs of compliance with accounting standards is far too great for small businesses. (I assume that the reporting entity concept would have to be removed, otherwise there would be no uniformity in calculating taxable income.)
6	I do not agree with some of the standards which are used to calculate accounting profit.
6	Standards are "airy-fairy". They are more subject to "subjectivity" in their interpretation than the tax laws themselves.
6	(1) Business will not use the flexibility in accounting standards to calculate the profit figure that best maximises value to proprietors, but instead calculate minimal profit to minimise tax. (2) Federal government will assume responsibility for regulation of accounting standards and eventually they will regress to the complexity and inefficiency of the current legislation.
6	Manipulation (creative accounting) in determining level of tax payment.
6	The two bear no relation. There would need to be enormous change to apply accounting standards rather than the more definitive income tax laws.
6	Tax incentives are there for a reason.
6	Accounting profit has little bearing or relationship to cash flow due to prepayments, accruals, etc. Tax liability may exist although no cash earned.
6	The "games we play" with taxable income will be the same "games we play" with accounting profit.
6	There are certain items of accounting income or expenditure that would be unfair to be either taxable income or deductible expenses.
6	You are proposing a shelving of the income tax law and accounting standards to take over. Tax law has generated in response to the liability for taxation and case etc reflect this. Accounting standards have completely different application in some areas. So it will be impossible.
6	Calculation of accounting profit is as unclear as that of taxable income.
6	There has to be some basis to assess tax. Whether it is accounting profit or taxable income does not matter. There is still going to be arguments over how the bottom line is derived.
6	It is legally possible to minimize accounting profit.
6	Accounting profits may be influenced by transfers to and from reserves and which may reflect possible changes rather than actual changes. Such variations are unlikely to apply to salaries, rents, interest, etc.
6	Question the relevance and practicality of many accounting standards. Many necessary complexities in taxation would not be adequately accommodated.
6	Accounting standards are not uniformly applied or adopted.
6	There are deliberate government incentives to encourage specific expenditure, eg. R&D and rural project.
6	Many clients require accounting profits to be a figure after all expense write-off even though these expenses are specifically excluded under the tax law.

6	Many adjustments to accounting profit are because of government incentives to try to direct the economy, eg. R&D and accelerated depreciation.
6	Accounting measures profit of business. Tax laws are designed to raise revenue.
6	Accounting profit is more open to ambiguity in relation to deductions and income.
7	In my experience, creative accounting can easily change the accounting profit but not so the taxable income.
7	Many items included in the determination of accounting profit have no relevance to tax liability either present or future. Each "concept" serves a different purpose.
7	The two serve entirely different purposes (performance vs. taxation). There are many valid reasons for the difference in the tax rules.
7	Accounting profit is more open to manipulation than taxable income.
7	Disagree - Tax is levied to finance government expenditure. Priorities are determined by government. Company accounts are measured by manager, banker, etc. Two different purposes. Due to R&D allowances, etc. taxable income is different from profit. Politicians would start making accounting standards etc. more complex and less meaningful to the user.
7	Accounting principles do not take into account the concept of "necessarily incurred" which is the back bone of the income tax regime.
7	Accounting profit may include unrealized gains for which there are no funds to pay a liability. Accounting profits could have readily be manipulated.
7	More scope to manipulate accounting profit than taxable income.
7	A number of taxation concessions are available to certain industries, eg. for research & development and concessional depreciation rules for reducing land degradation for primary producers.
7	Too much subjectivity in the derivation of accounting profit - additional scope for manipulation.
7	For small business the calculation of taxable income is more precise and practical via income tax law than accounting profit.
7	Tax laws are subject to continuous amendment by the courts. Most accounting standards are slow to be released and are not understood by business let alone individuals.
7	Fairer and simpler tax laws are required.
7	There are many deductions and rebates allowed by the ITAA which are not recognized in accounting profit. In addition, income principle can be different, eg. doctrine of mutuality.

* Question 1.9 reads "Overall, accounting profit should replace taxable income as the basis to compute income tax liability."

1 Strongly agree
2 Agree
3 Slightly agree
4 Neither agree nor disagree
5 Slightly disagree
6 Disagree
7 Strongly disagree

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