

# The Implementation of International Accounting Standards in Thailand

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## Sillapaporn Srijunpetch

*Ph.D., CPA, Assistant Professor,  
Faculty of Commerce and Accountancy,  
Thammasat University*

**Abstract** This research investigates the extent to which the Accounting Reform—a period during which, as part of its efforts to internationalise the economy, the Thai government promoted adoption of international accounting standards—has resulted in changes in the contents of financial statements and in perceptions of the quality of Thai financial reporting. The degree of compliance between Thai accounting practices and the requirements of international accounting standards (IASs) was measured at three points in time by the index of compliance for a selected number of areas of accounting, for individual items required by standards in each area, and for individual companies against all the IASs included in the study.

This study reports that the degree of compliance with the IAS requirements significantly increased over time. It concludes that the IAS adoption in Thai regulations has changed the contents of financial statements. From the questionnaire survey and interviews,

opinions were expressed that the adoption of IAS in Thailand has increased the reliability and the validity of financial information. The results also reveal that financial statements prepared from the adopted IASs provide more information for decision making. To some extent, the IASB standards are considered to be suitable and there was support that Thai accounting standards could be based on IASs but with recognition of the need to localise to the environment.

Multivariate analysis was applied to test the association between companies' compliance levels and factors such as asset size, foreign investment, audit firm, rate of return, earnings margin and leverage. The multivariate tests of the absolute level of company compliance reveal that asset size and appointment of a major international audit firm are significantly related to the degree of compliance for 1998 and 1999, and that audit firm is the only factor that is associated with variations in the compliance for 2000. The results suggest that the regulators of financial accounting and reporting in Thailand should focus more on small companies and companies whose accounts were not audited by an international audit firm.

The most influential factors in the adoption of the IAS in Thailand, as perceived by respondents, are the conditions associated with financial aid from the IMF, multinational corporations, global capital market, international lenders and international audit firms. Thailand faces significant problems in implementation of IAS due to the lack of familiarity with IAS, which has to be overcome through training courses and the availability of technical support. Thai regulators should be more stringent in monitoring and enforcement measures with respect to companies whose financial statements do not conform with the generally accepted accounting principles.

## 1. Introduction

Following the financial difficulties in Thailand, pressure mounted for the development and adoption of global accounting standards. One of the main accounting reforms introduced in Thailand has been to accelerate the formulation and implementation of a new set of practical accounting standards. The primary objective is to adopt internationally accepted accounting practices to the maximum extent possible, in order to improve the comparability, reliability and decision-usefulness of accounting information disclosed by business entities. The Institute of Certified Accountants and Auditors of Thailand (ICAAT) announced in 1998 that the Thai Accounting Standards (TASs) were in the future to be based on the International Accounting Standards (IASs). The changes in accounting standards, including the adoption of new accounting issues, had the potential to change the recognition criteria, the measurement criteria and the ways to disclose accounting information in Thailand.

The research investigates the extent to which the Accounting Reform has resulted in changes in the contents of financial statements and in perceptions of the quality of Thai financial reporting. Compliance of Thai reporting practices with the IAS requirements is measured for a selection of areas of accounting practice and against specific items required by the IASs within each area.

The study also considers factors that may influence the impact of reform by examining the association between individual companies' characteristics and their compliance with the IAS requirements. Knowledge of the relationships among the level of compliance and the characteristics of reporting firms may be of use to regulators, and also assists accounting researchers in understanding the measurement/disclosure behaviour

of companies. This examination is of special interest in the drive to adoption of IAS as common standard to the IASB for assessing factors that may be influential for reporting globally.

**Table 1** The Link of Research Questions, Objectives, and Methods

Research Questions	Research Objectives	Methods Used
1. Has the implementation of IASs changed the contents of financial statements in Thailand?	1. To determine the degree of compliance between Thai reporting practices and the IAS requirements.	Index of Measurement, Disclosure and statistic tests on the significant changes in the degree of compliance.
2. What is the association between specific company characteristics and compliance with the IAS requirements?	2. To identify the association between IAS compliance and company specific variables.	Regression Analysis
3. How has the adoption of IASs affected perceptions of the quality of Thai financial reporting?	3. To collect views of participants on perceptions of quality of Thai financial reporting after the IAS endorsement.	Questionnaire Surveys and Interviews
4. What factors have influenced the adoption of IAS in Thailand and what problems have hindered the process?	4. To collect views of participants on the adoption of IASs in Thai regulations.	Questionnaire Surveys and Interviews

## 2. Research Objectives and Questions

The research questions and objectives, together with the related methods of investigation, are set out in the schedule in Table 1.

## 3. Analysis of Compliance with the IAS Requirements

In order to identify the changes in financial statements, this study utilises an index to measure the degree of compliance between Thai reporting practices and the IAS requirements. The related elements of compliance with the IAS requirements are discussed below.

### 3.1 Development of the List of Compliance Items

An investigation is made of the degree of compliance between Thai reporting practices and the IAS

requirements during 1998-2000. The selection of this period is to investigate the effect of the endorsement of IAS by ICAAT in 1998 (but standards approved and to be effective from 1999 onwards).

To the extent that research foci vary amongst researchers, there is no general theory on item selection. The content and number of items in a compliance index have varied from one research study to another. Choice usually depends on the focus of the research. There are numerous studies about items to be included in the compliance/disclosure index. Most of the studies focus on the items disclosed in annual reports (e.g. Firth, 1979; Hossain et al, 1994). On the other hand, the compliance items may derive from accounting standards. McNally et al (1982) used a source of disclosure requirements in the statements of Standard Accounting Practice (SSAP) issued by the New Zealand

Society of Accountants. The index of Raffournier (1997) consisted of items required under the Fourth and Seventh European Union (EU) directives, in order to relate the extent of compliance in annual reports of listed companies on the Geneva Stock Exchange to possible determinants. The IAS requirements have also been used as a benchmark in numerous studies (e.g. Street and Gray, 2002; Abd-Elsalam and Weetman, 2003).

### 3.2 Index of Compliance

The extent of compliance between Thai accounting practices and the IAS requirements for each area of accounting practices is measured as a total number of instances of compliance compared to the potential instances of IAS compliance. The actual score is divided by the potential compliance to give a proportionate degree of compliance (Singhvi and Desai, 1971; Street and Gray, 2002). An unweighted index of compliance has been proposed and applied in earlier studies by Hossain et al, (1994) and Meek et al (1995). This approach has been used in the present study. The index is used as the basis for developing the checklist to measure the degree of compliance between Thai companies' practices and the IAS requirements for the period of study. This method avoids the subjectivity of using weights based on the perceptions of a particular group of users on the importance of the disclosure/compliance items.

### 3.3 Scoring Mechanism

The score mechanism for the extent and scope of reporting, which will be followed in this study, is based on whether an information item has complied to the IAS requirements or not, i.e. a YES or NO score. All items in this scoring mechanism are, therefore perceived

to be of equal importance, and thus are given (1) when an item is disclosed/complied and (0) when it is not. Companies will be penalised for not disclosing an item. They will not be penalised if it is not relevant to their activities.

## 4. Influences on the Adoption by Companies Measurement Practices

A significant aspect of the analysis is to investigate whether individual company compliance levels are associated with other company related factors such as the involvement of an international audit firm, foreign investments and performance-related factors, such as asset size, rate of return, earnings margin and leverage. Regression analysis, one of the most commonly used tools in economic work, is used to test whether company characteristics have a significant effect on the degree of compliance.

### 4.1 Sample Group

All companies listed on the Thai Stock Exchange, excluding finance companies, are used as a sample. These companies should provide a useful basis for assessing the response to IASs. Finance, Banking and Insurance companies are excluded from the sample as they require special disclosure regulations by the Bank of Thailand and, therefore, are inappropriate for this study. The annual reports and financial statements can be retrieved online or accessed via the SET CD ROM in order to measure the compliance between individual company reporting practices and the IAS requirements.

### 4.2 Questionnaire Surveys and Interviews

One concern of this study is the change in perceptions of the quality of Thai financial reports

after the IAS implementation in Thai legislation and the related issues on the IAS adoption in Thailand. The study, therefore, seeks to obtain supportable and useful insights from a mixed-method research design, consisting of a questionnaire survey and interviews.

**4.2.1 Questionnaire Surveys**

In this study, questionnaires were used to collect views from a large sample of chief financial officers (CFOs), certified public accountants (CPAs) and financial analysts (FAs) on the perceptions of the quality of financial reporting after the IAS endorsement, and also on the process for the adoption of the IAS in Thai regulations, influential factors underlying the application of IAS in Thailand and the suitability of IAS for use in the Thai environment.

**4.2.2 Interviews**

In addition to the mail questionnaire, semi-structured interviews are conducted with a number of analysts, CFOs, CPAs, and regulators in order to collect their views about the debate on the adoption of IAS in Thailand.

**5. Results**

In this study, Individual Company Degree of Compliance (ICDC) with the IAS requirements is calculated in terms of the ratio awarded to the maximum possible appropriate score for that company.

**5.1 The Degree of Compliance**

The degrees of compliance in this study will be measured in three ways: (1) the overall degree of compliance for an individual company; (2) the overall degree of compliance with an individual IAS; and (3) the degree of compliance with each specific IAS item.

**(1) The Overall Degree of Compliance between the Thai Accounting Practices and the IAS requirements**

In order to give an overall summary view of the level of IAS compliance by Thai companies, the results from the different areas of practice can be combined into a single overall score for each point in time studied. The resulting average of scores for all 249 companies for each period are presented in Table 2.

**Table 2** Descriptive Statistics of Individual Company Degree of Compliance

	1998 (%)	1999 (%)	2000 (%)
Mean	49.6	66.2	77.6
Median	50	68	80
Max	75	92	94
Min	24	33	43
SD	8.9	12.3	9.4
No. of companies	249	249	249

In order to answer the research question regarding the changes in contents of financial statements after the IAS endorsement in Thailand, the following null hypothesis was tested.

Ho: There are no significant differences in the level of compliance between individual Thai company practices and the IAS requirements for 1998, 1999 and 2000.

The paired samples statistics (T-test) was used for testing whether the mean score from 1998 to 2000 had been changed or increased significantly. Table 3 reports that the score of compliance from 1998 to 1999 and to 2000 increased significantly at the 0.01 level. Therefore, the null hypothesis is rejected. The result demonstrates that there are significant differences in the degree of compliance between Thai accounting practices and the IAS requirements from 1998 through

2000. It means that the contents of Thai financial statements have changed significantly after the IAS implementation in Thailand.

**Table 3** Paired Sample Test for 1998, 1999 and 2000

	1998	1999	2000
Mean (%)	49.6***	66.2***	77.6***
P-Value	(0.000)	(0.000)	(0.000)

\* Significant at the 0.10 level

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

The Significance Level in Brackets

**(2) The Degree of Compliance with an Individual IAS**

This section discusses the results of the degree of compliance with the total requirements in each individual IAS. The following findings present the degree of compliance for an area of accounting covered by an individual IAS, in order to convey an overall picture of compliance before and after of the IAS endorsement. The Z score was computed so as to confirm whether the contents of financial statements deriving from each IAS were changed significantly by using the following formula:

$$z = \frac{(\mu_1 - \mu_2)}{\sqrt{\frac{S_1^2}{n_1} + \frac{S_2^2}{n_2}}}$$

Where

$\mu_1$  = Mean of sample group 1

$\mu_2$  = Mean of sample group 2

$S_1^2$  = Variance of Sample group 1

$S_2^2$  = Variance of Sample group 2

$n_1 = n_2$  = Sample size

Note: The Z score is computed in order to identify significant changes in the degree of compliance overtime, for example, the change in compliance from 1998 to 1999 can be calculated by the above formula. In this case, sample group 1 is 1998 and sample group 2 is 1999. When making calculation of changes from 1999 to 2000, sample group 1 is 1999 and sample group 2 is 2000.

The Z score in Paired Samples

Note: To determine whether the compliance was high or low in 1998, the mean (54.6%) of overall degree of compliance for all 12 IASs was used as a benchmark. It was “high” compliance in 1998 if the degree of compliance with a specific IAS was more than 54.6%, or “low” otherwise.

**(3) Compliance with the IASB requirements on each Area of Accounting**

This section describes the degree of compliance with each specific IAS item across companies within the headings of different accounting standards. Selected results were presented in this section.

**IAS 1: Presentation of Financial Statements**

Table 5 shows that the overall degree of compliance between Thai accounting practice and the IAS 1 (or TAS 35) increased from 26.9% in 1998 to 59.3% in 1999, and to 75.6% in 2000. The Z statistics indicate that there were significant changes in the contents of financial statements concerning IAS 1 from 1998 to 1999, and from 1999 to 2000. The table also reveals, however, that there is considerable variation in the level of compliance with individual requirements of IAS 1 and this is commented upon in this section.

**Table 4** The Overall Degree of Compliance with an Individual IAS, Categorised by the Compliance Patterns

Pattern	1998	1999	2000
1. High early compliance in 1998, followed by little change in 1999 and 2000			
IAS 22: Business Combination	77.7	80.2 (0.98)	81.7 (0.71)
IAS 27: Consolidated Financial Statements	99.5	99.9 (0.12)	99.9 (0.00)
IAS 28: Investments in Associates	99.5	99.6 (0.13)	100.0 (0.78)
2. High early compliance in 1998, followed by little change in 1999, and significant change in 2000			
IAS 23: Borrowing Costs	71.2	63.1 (0.43)	73.1*** (2.86)
IAS 24: Related Parties	85.9	86.7 (0.24)	93.5*** (2.67)
3. Low early compliance in 1998, followed by significant immediate change in 1999, and less change in 2000			
Framework for the Preparation and Presentation	3.7	76.7*** (22.6)	80.0 (0.66)
IAS 16: Property, Plant and Equipment	50.7	71.0*** (4.85)	74.9 (1.01)
4. Low early compliance in 1998, followed by significant change in 1999 and 2000			
IAS 1: Presentation of Financial Statements	26.9	59.3*** (9.37)	75.6*** (4.0)
IAS 18: Revenues	50.6	69.5*** (4.40)	82.3*** (3.39)
IAS 36: Impairment of Assets	18.6	53.4*** (8.73)	64.2** (2.44)
5. Low early compliance in 1998, followed by little subsequent change in 1999 and 2000			
IAS 39: Financial Instruments: Recognition and Measurement	49.4	50.1 (0.15)	51.8 (0.39)
6. Low early compliance in 1998, followed by little change in 1999 and significant change in 2000			
IAS 32: Financial Instruments: Disclosure and Presentation	31.7	33.3 (0.38)	75.2*** (8.86)

\* Significant at the 0.1 level, \*\* Significant at the 0.05 level, \*\*\* Significant at the 0.01 level

**Table 5** Measuring the Degree of Compliance between Thai Accounting Practices and IAS 1

<b>IAS 1: Presentation of Financial Statements</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
2-A complete set of financial statements includes a statement showing either changes in equity statement or comprehensive income	100	100	100
Notes to financial statements should disclose the following:			
3-Statement of compliance with accounting standards	18.5	64.1	78.5
4-A description of the nature of the enterprise's operations and its principal activities	67.5	96.9	100
5-The domicile of the enterprise	0.4	42.8	64.1
6-The country of incorporation	1.2	58.6	89.2
7-The legal form of the enterprise	0.2	59.4	89.6
8-The address of the registered office	0.1	41.4	61.3
9-The name of the parent enterprise and the ultimate parent enterprise of the group	8.7	91.5	96.5
10-The number of employees	3.6	59.8	86.4
11-Definition of cash and cash equivalents	38.6	48.6	58.6
12-Definition of business and geographical segments	71.0	77.9	88.1
13-The basis for allocation of costs between segments	9.2	9.6	11.3
<b>Degree of Compliance with IAS 1</b>	<b>26.9</b>	<b>59.3</b>	<b>75.6</b>
<b>Z Score</b>		<b>9.37***</b>	<b>4.0***</b>

\* Significant at the 0.1 level,

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

## 5.2 Factors Affecting Individual Companies' Degree of Compliance

Variables have been selected for inclusion in this study if they meet all of the following conditions. First, the factor should be likely to be associated with the degree of compliance based on either a priori assumption or other theoretical considerations. Second, it should be easily measured for the purpose of statistical analysis. Third, data should be available on that corporate attribute. Finally, the attribute should be relevant to the environment of Thailand.

### (1) Variables Affecting Individual Companies' Degree of Compliance with IAS

In this study, the following variables have been selected and used as the basis for testing: asset size, foreign investment, audit firm, rate of return, earnings margin, and leverage. The conceptual relationship between the individual companies' degree of compliance (ICDC) with the IAS requirements and the above mentioned variables is reflected in the following formula:

$$\text{ICDC} = f(\text{Asset Size, Foreign Investment, Audit Firm, Rate of Return, Earnings Margin, Leverage})$$



## (2) Theoretical Framework

Agency theory and Signalling theory are relied upon to rationalise the choice of variables in this section. The separation of ownership from control of the firm is widespread in public corporations. Such separation results in information asymmetry between the managers as agents and shareholders as principals. This gives rise to the theory of the firm, emphasising the importance of monitoring the performance of parties to the firm. This incentive influences agents and principals to invest in information systems and control mechanisms to reduce the agency costs associated with information asymmetry (Jensen and Meckling, 1976). Many empirical studies of compliance and disclosure practices have drawn on agency theory. The existence of agency and political costs may be used to explain the attitude of companies towards the disclosure/compliance of information (Watts and Zimmerman, 1978). According to agency theory, management, under contractual arrangements, would be motivated to provide the required and voluntary disclosures in order to minimise the agency costs they would have to bear (Holthausen and Leftwich, 1983). It has been argued that one way of reducing agency costs is to produce accounting reports and to increase the amount of information included in these reports (Jensen and Meckling, 1976; Morris, 1987). Therefore, corporate disclosure practices and compliance with regulations have long been a primary tool for owners (e.g. present and potential shareholders) to assess the accountability of management.

Another related explanation for financial information policy followed by companies is *signalling*. Signalling theory addresses problems of information asymmetry in markets (Ross 1979; Morris, 1987). The theory shows how this asymmetry can be reduced

by the party with more information signalling it to those with less. Whenever there is information asymmetry between a company and its investors, this is in management's self-interest to adequately signal the company's value in order to increase the shareholders' wealth. There are many potential mechanisms to signal the value of a company, such as disclosure, selection of auditors, capital structure decisions and payout policies (Olson, 1982).

Signalling theory (Ross, 1979) suggests that financial reporting stems from management's desire to disclose its superior performance. Good performance enhances management's reputation and position in the market for management services, and good reporting may be one aspect of good performance. Financial information may be used by firms to indicate underlying reality, and to influence external users when making decisions. It may be argued that only good companies will use this instrument, because the quality of companies can be better observed without difficulty, and companies would be punished by the market if they sent inappropriate and unsubstantiated signals (Morris, 1987). Accounting numbers can also serve as a means of signalling, although one limitation is that conveying the value of the company via accounting numbers may be constrained by generally accepted accounting principles (GAAP). Compliance with IAS can serve as one such supplemental signalling device.

## 5.3 Opinions on the Implementation of IAS in Thailand

The remainder of this section analyses the results from questionnaire surveys. The initial analysis consisted of computing the mean score for each question and the percentage of respondents categorised by answer. The responses are analysed and reported

by group in three major categories: (1) perceptions on the quality of Thai Financial Reporting after IAS adoption; (2) factors to be considered in Thai Accounting Standard Setting; and (3) influences on the adoption of IAS in Thailand. Additional analysis, derived from the comments made during interviews, is added in interpreting the results. Table 6 shows the number of questionnaires that were distributed, the number returned (response rate) for each group, and the overall response rate.

#### Questionnaires Mailed and Responses Received

Table 6 reveals the overall response rate of 43.2%. This response rate represents 74.7% for CFOs, 34.5% for CPAs and 50% for FAs. The questionnaire response compares very favourably with other research studies and can be considered satisfactory. It shows a good response when 20% is average for most questionnaires (Bourque and Fielder, 1995). In particular, the rate of response from CFOs and FAs is very pleasing, although the latter suffers from the small size of the population. However, the response level is much higher than normally can be expected in a mail questionnaire and many respondents provided comments and opinions that were additional to the information directly sought. Substantial interest was expressed in the research, with approximately 10% of respondents requesting a summary of the results.

#### 5.3.1 Perceptions on the Quality of Thai Financial Reporting after the IAS Endorsement

This section provides evidence on perceptions of the quality of financial reporting after the implementation of IAS in Thai regulations, and the importance of the issue that is frequently debated—the suitability of IAS to Thailand.

With regards to questions 1 and 2, as indicated in Table 7, the overall perceptions towards the adoption of IAS in Thailand were positive, and there was no significant difference between the mean answers between CFOs, CPAs, and FAs. However, from the responses to question 3, the results surprisingly seem to indicate that all three groups are unsure about the suitability of the IASs to the Thai environment. This is because question 3 refers to asking opinion of whether all IASs are suitable to Thailand. In contrast, the result for question 4 suggests that CFOs and CPAs agreed that TAs should be based on IASs. However, the mean responses for question 3 indicates a significant difference among the three groups. Compared to CFOs and FAs, CPAs tend to have more negative attitudes towards the suitability of the IASs to the Thai environment. Although CFOs and CPAs believed that TAs should be based on IASs, they don't think that all IASs are suitable to Thailand, as indicated by the following interview comments:

**Table 6** Questionnaires Mailed and Responses Received

Group	Population	Mailed	Received	Response Rate (%)
CFOs	249	249	186	74.7%
CPAs	920	920	317	34.5%
FAs	36	36	18	50%
<b>Total</b>	<b>1,205</b>	<b>1,205</b>	<b>521</b>	<b>43.2%</b>

**Table 7** Views of CFOs / CPAs / FAs on Perceptions of the Quality of Thai Financial Reporting after the IAS Endorsement

	CFOs		CPAs		FAs		Kruskal-Wallis Chi-Square P Value
	Mean	Agree* (%)	Mean	Agree* (%)	Mean	Agree* (%)	
1. Financial statements prepared from the newly adopted IASs provide more information for decision making	2.26	66.6	2.32	61.5	2.06	61.1	0.376
2. Adoption of IAS increases the reliability of Thai financial reporting	2.10	73.1	2.08	77.9	1.72	77.8	0.171
3. All IASs are suitable for the Thai environment	2.35	51.1	3.0	43.1	2.5	55.6	0.000***
4. TAs should be based on IASs	2.19	72.1	1.9	55.5	1.9	n/a	0.110

Mean Values-Scoring: 1= Strongly Agree; 3 = Indifferent; 5 = Strongly Disagree

The agreed column represents scores of 1 = Strongly Agree and 2 = Agree

\* Significant at the 0.1 level

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

Significant level in brackets (2-tailed)

n/a : questions not asked

\* Proportion responding with score of 1 or 2

*“Thailand could not adopt all IASs as issued by the IASB. Some standards could not be applied to the Thai environment. The standards selected by ICAT provide some room to choose what is suitable for the local environment. For example, comparing to IAS 36, SFAS 15 and 114 for troubled debt restructurings, are more suitable because they provide more details. Anyhow, if Thailand is to adopt the IASs, accounting standards that follow the US GAAP should be revised. I encourage the standard setter team reviews standards carefully in case of no applicable IAS.”*  
(Standard Setter C)

*“...if certain companies in a developing market are as sophisticated as the ones in a well-developed market, the same accounting standards should be issued.*

*“Self-selection process will be set in place by itself. Small companies will have no need to adopt some IASs.... Education is crucial for developing markets.”*  
(Controller A)

All interviewees stated that IASs are viewed as the most suitable standards for Thai accounting standards. Standard Setter B stated that this position is justified on the basis that adoption of IASs is consistent with moving towards the global concept of harmonisation. Standard Setter A mentioned that IASs are suitable to the Thai environment because IASs are not too strict and provide a certain flexibility to amend or localise within the overall boundary of standards. Regulator A also added that:

**Table 8** Views of CFOs / CPAs on Factors to be considered in Thai Accounting Standard Setting

	CFOs		CPAs		Kruskal Wallis Chi-Sq p-Value
	Mean	Agree* (%)	Mean	Agree* (%)	
1. Difficulties when using newly adopted IASs					
1.1 Understandability of comprehensive context of standards	2.15	71.0	1.94	74.5	0.109
1.2 Too broad	2.37	58.6	2.02	69.0	0.147
1.3 Translation problem from English to Thai language	1.87	82.2	1.75	84.8	0.142
2. Obstacles for the IAS implementation in Thailand					
2.1 Capability of Accountants to prepare financial statements based on IASs	1.95	78.5	1.68	93.4	0.002***
2.2 Attitude of Management	1.88	81.2	1.77	91.2	0.009***
2.3 IASs are costly to apply	2.15	67.7	1.81	86.4	0.000***
3. TAS should eliminate alternative accounting treatments as allowed in IAS	2.94	35.2	2.93	41.3	0.952
4. Accounting research is needed on new accounting standards prior to the enforcement	1.42	96.3	1.50	90.2	0.336
5. Adequate knowledge on new standards is needed prior to the enforcement	1.29	98.4	1.38	97.8	0.154
6. Companies should be allowed to use new standards for a certain period prior to the enforcement	2.01	69.9	1.97	76.7	0.330
7. More interest groups should participate in the standard setting process	1.48	95.1	1.49	95.6	0.857

Mean Values-Scoring: 1= Strongly Agree; 3 = Indifferent; 5 = Strongly Disagree

The agreed column represents scores of 1 = Strongly Agree and 2 = Agree

\* Significant at the 0.1 level

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

Significant level in brackets (2-tailed)

\* Proportion responding with score of 1 or 2

*“It is necessary for Thailand to adopt or base our standards mainly on one of the internationally accepted accounting like IASs and the adoption of IASs is a cheaper route than preparing own standards and has the great advantage for domestic and foreign companies with international connections.”*

### 5.3.2 Procedures of Adoption of IAS in Thai Regulations

In order to improve the procedures of adoption of IAS in Thai regulations, the results for questions 4, 5, 6, and 7 suggest that prior to the enforcement, accounting research, adequate knowledge, transition period and the active involvement of interest group in standard setting process, are necessary.

All interviewees, except for Standard Setters A and B, suggested that accounting research is needed on new accounting standards prior to the enforcement. Controller B commented that *ICAAT should seek opinions from participants regarding the potential effect of the IAS application to the Thai business and to make sure that companies are ready for changes. Prior to the enforcement, a transition period may be needed for some sophisticated standards because companies need more time to gain understanding of these new standards.*

In addition, Controller C pointed out that interest parties who would be directly affected by the standards should be interviewed and included in the discussion for drafting standards so that they know why standards should come out that way. External Auditor C added:

*“The standard setter should be careful about the timing to announce what should be sufficient time for people to make themselves understand, what is the impact on the existing financial reporting system, and the way to remedy. In other words, ICAAT should gain*

*more acceptance from business by way of getting all practitioners involved in the process from the standard setting, public hearing and until the announcement.”*

## 6. Factors Affecting Individual Companies' Degree of Compliance

This test is to examine whether the firm characteristics are found to be associated with the level of IAS compliance and whether the results are to be relevant in previous country studies.

### 6.1 Measurement of Variables

The rationale for the selection of the variables discussed above is summarised below, together with the measures used for each variable.

- (i) Asset Size-to test the influence of company size on compliance with IAS, measured by total assets.
- (ii) Foreign Investment-to test the influence of foreign investments in a company on compliance, measured as 1 if foreign investments in a company are 25% or more of ordinary share capital, or 0 otherwise. The 25% foreign shares was used as a cut-off point because this percentage proportion assumes significant influence or control over a company.
- (iii) Audit Firm-to test the influence of the type of audit firm on compliance with IAS, measured as 1 if it is a major international firm or 0 otherwise.
- (iv) Rate of Return-to test the influence of performance on compliance with IAS, measured as the ratio of net profits to total assets.

- (v) Earnings Margin-to test the influence of company capacity for absorbing rising costs, measured as a ratio of net profit before tax to net sales.
- (vi) Leverage-to test the influence leverage on compliance with IAS, measured as the ratio of debt to total assets.

**6.2 Correlation and Regression Analysis**

A regression model was used in order to determine the association between the six variables (asset size, foreign investment, audit firm, rate of return, earnings margin and leverage) outlined in the previous section and the ICDC. Ordinary least squares (OLS) regression estimates were used to examine the incremental explanatory power of the variables (Lang and Lundholm, 1993). If the dependent variable is expressed as a ratio (constrained to lie between zero and one), the application of the standard ordinary least-squares (OLS) regression should not be considered appropriate since the OLS approach assumes an unconstrained dependent variable (Ahmed and Nicholls, 1994). Therefore, transformation involving the dependent variable is generally required before the OLS regression can be applied. Ahmed and Nicholls (1994) suggested the transformation of the dependent variable logarithmically.

$$Y = \log(I/P)$$

Where

- Y = the transformed individual company degree of compliance with the IAS requirements.
- P = the individual company degree of compliance with the IAS requirements.

Asset size variables were also logarithmically transformed in order to prevent outlier problems. The individual company degree of compliance (ICDC) with the IAS requirements was then regressed on the independent variables, using the following equation:

$$ICDC_j = \beta_0 + \beta_1 \text{asset} + \beta_2 \text{foreign} + \beta_3 \text{auditor} + \beta_4 \text{return} + \beta_5 \text{earnings} + \beta_6 \text{leverage} + e_j$$

Where

- ICDC<sub>j</sub> = the compliance score for each of sample firm (j = 1, ..., 249) divided by the total available scores, log transformed for regression procedures
- β<sub>0</sub> = the intercept
- β<sub>i</sub> = the constant or parameters to be estimated (i = 1, 2, ..., 6)
- e<sub>j</sub> = the residual
- Asset = Total assets of a firm at the end of reporting year log transformed for regression procedures
- Foreign = This is a dummy variable: 1 = 25% or more of foreign shares in a firm; 0 if otherwise
- Audit = This is a dummy variable: 1 = a major international firm; 0 if otherwise
- Return = the ratio of net profit to total assets in the reporting year
- Earnings = the ratio of net profit before tax to net sales for the reporting year
- Leverage = the ratio of debt to total assets at the end of the reporting year

The regression based on this equation analysis tests the following null hypothesis: There are no significant differences in the relationship between the degree of IAS compliance (ICDC) associated with asset size, foreign investment, audit firm, rate of return, earnings margin and leverage

### 6.3 The Correlation Test

In order to examine the correlation between the dependent and independent variables, Pearson correlation coefficients (r) were computed for 1998, 1999 and 2000 as shown in Tables 9, 10 and 11 respectively.

Tables 9-11 reveal that ICDC shows a significant correlation with asset size and audit firm at the 0.01 level, but no significant correlation with rate of return, earnings margin, leverage and foreign investment for 1998, 1999 and 2000. The results are consistent for all of the three years under study.

In addition, a Pearson Correlation (r) was computed to determine the correlation between the independent variables themselves. Table 9 reveals statistically significant r statistics between audit firm and asset size (p = 0.02; r = 0.191), asset size and leverage (p = 0.026; r = -0.141), asset size and foreign investment (p = 0.013; r = -0.157), rate of

**Table 9** Pearson Correlation Coefficients between the Dependent and Independent Variables for 1998

	Asset Size	Foreign Invest	Audit Firm	Rate of Return	Earn. Margin	Lever	ICDC
Asset Size	1	-	.191**	.005	-.040	-	.344***
p-value		.157** (.013)	* (.002)	(.334)	(.533)	.141** (.026)	* (.000)
Foreign Investment		1	.059	-.061	.064	.081	-.054
p-value			(.356)	(.339)	(.317)	(.206)	(.397)
Audit Firm			1	-.036	.061	.084	.368***
p-value				(.573)	(.338)	(.188)	(.000)
Rate of Return				1	.324***	-.067	.022
p-value					(.000)	(.295)	(.730)
Earnings Margin					1	.020	-.007
p-value						(.749)	(.917)
Leverage						1	.072
p-value							(.259)
ICDC							1
p-value							

\* Significant at the 0.1 level

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

Significant level in brackets (2-tailed)

return and earnings margin ( $p = 0.000$ ;  $r = 0.324$ ) for 1998.

At the same time, Table 10 reveals statistically significant  $r$  statistics between audit firm and asset size ( $p = 0.000$ ;  $r = 0.223$ ), and rate of return and earnings margin ( $p = 0.000$ ;  $r = 0.321$ ). Table 11 reveals statistically significant  $r$  statistics between audit firm and asset size ( $p = 0.002$ ;  $r = .190$ ), rate of return and earnings margin ( $p = 0.000$ ;  $r = .327$ ), and asset size and leverage ( $p = 0.028$ ;  $r = 0.144$ ).

#### 6.4 Univariate Analysis of Compliance

As a result of the variation that exists between the company's scores, this section employs the Ordinary

Least Squares (OLS) regression analysis in order to assess the effect of each independent variable on the ICDC. Table 12 shows the estimated value for each of the independent variables, constant, the regression coefficient, the coefficient of determination (R square), and the adjusted R square.

In 1998, the univariate analysis shows that both asset size and audit firm were significant at the 0.01 level. R square, which represents how well the model can explain the variation in degree of compliance for asset size and audit firm, is 11.9% and 13.5% respectively. Specifically, it could be said that on a univariate basis, 11.9% of variation in the ICDC could be associated with asset size, and 13.5% with audit

**Table 10** Pearson Correlation Coefficients between the Dependent and Independent Variables for 1999

	Asset Size	Foreign Invest	Audit Firm	Rate of Return	Earn. Margin	Lever	ICDC
Asset Size	1	.007	.223***	.004	-.050	-.036	.237***
p-value		(.916)	*	(.955)	(.437)	(.572)	*
			(.000)				(.000)
Foreign Investment		1	-.072	.065	.000	-.002	.070
p-value			(.258)	(.306)	(.998)	(.972)	(.270)
Audit Firm			1	-.018	.065	.087	.505***
p-value				(.772)	(.309)	(.170)	(.000)
Rate of Return				1	.321***	-.030	-.016
p-value					(.000)	(.638)	(.800)
Earnings Margin					1	-.001	-.095
p-value						(.982)	(.135)
Leverage						1	-.081
p-value							(.203)
ICDC							1
p-value							

\* Significant at the 0.1 level

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

Significant level in brackets (2-tailed)



firm. In 1999, the univariate analysis also reveals that both asset size and audit firm were significant at the 0.01 level and the R square for asset size and audit firm is 5.6% and 25.5% respectively. Therefore, it could be said that 5.6% of variation in the ICDC could be explained by asset size and 25.5% by audit firm. Again in 2000, the result shows that both asset size and audit firm were significant at the 0.01 level. The R square for asset size and audit firm, is 3.1% and 23% respectively. The high computed R square indicates that the model is reasonably well-specified and has an explanatory power similar to that reported in earlier studies (e.g. Cooke, 1989 and 1991). It seems appropriate to reject the null hypotheses concerning

the relationship between the asset size and the audit firm and the ICDC for 1998, 1999 and 2000.

The above results imply that Thai companies, with a high concern for the appearance of their financial reports, tend to use the service of highly reputable audit firms. Major international firms might be able to encourage their clients to comply with accounting standards and provide comprehensive information in order to increase their reputation and reduce their potential exposure of legal liability. In addition, it is more likely that large companies have the resources and expertise necessary for the preparation of more sophisticated financial statements than do small companies.

**Table 11** Pearson Correlation Coefficients between the Dependent and Independent Variables for 2000

	Asset Size	Foreign Invest	Audit Firm	Rate of Return	Earn. Margin	Lever	ICDC
Asset Size	1						
p-value		-.096 (.130)	.100** * (.002)	-.005 (.934)	-.049 (.538)	.144** (.028)	.177*** * (.005)
Foreign Investment		1					
p-value			.072 (.262)	-.056 (.377)	-.055 (.391)	.082 (.199)	-.122 (.156)
Audit Firm			1				
p-value				-.030 (.578)	.067 (.388)	.085 (.198)	.479*** (.000)
Rate of Return				1			
p-value					.327*** (.000)	-.087 (.297)	-.004 (.952)
Earnings Margin					1		
p-value						.028 (.778)	.099 (.119)
Leverage						1	
p-value							.001 (.987)
ICDC							1
p-value							

\* Significant at the 0.1 level

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

Significant level in brackets (2-tailed)

Table 12 Univariate Analysis of Compliance

Variable	1998	1999	2000
<b>Asset Size</b>			
R Square	0.119	0.056	0.031
Adj R Square	0.115	0.052	0.027
Constant	1.206	1.474	1.716
Regre	0.051***	0.036***	0.003***
Coefficient	(0.000)	(0.000)	(0.005)
<b>Foreign Invest.</b>			
R square	0.003	0.005	0.015
Adj R Square	0.001	0.001	0.011
Constant	1.703	1.821	1.911
Regre	-0.017	-0.009	-0.003
Coefficient	(0.397)	(0.270)	(0.056)
<b>Audit Firm</b>			
R square	0.135	0.255	0.230
Adj R Square	0.132	0.252	0.227
Constant	1.646	1.755	1.849
Regre	0.065***	0.091***	0.062***
Coefficient	(0.000)	(0.000)	(0.000)
<b>Rate of Return</b>			
R square	0.000	0.000	0.000
Adj R Square	0.004	0.004	0.004
Constant	1.688	1.813	1.887
Regre	-0.008	0.005	-0.001
Coefficient	(0.730)	(0.800)	(0.952)
<b>Earnings Margin</b>			
R square	0.000	0.009	0.010
Adj R Square	0.004	0.005	0.006
Constant	1.688	1.814	1.888
Regre	0.000	0.001	0.000
Coefficient	(0.917)	(0.135)	(0.119)
<b>Leverage</b>			
R square	0.005	0.007	0.002
Adj R Square	0.001	0.003	0.004
Constant	1.686	1.813	1.887
Regre	0.001	0.000	0.000
Coefficient	(0.259)	(0.203)	(0.987)

\* Significant at the 0.1 level

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

Significant level in brackets (2-tailed)

### 6.5 Multivariate Analysis of Compliance

This section employs OLS regression analysis in order to assess the effect of all the independent variables on the ICDC together, as presented in Table 13.

In 1998, the regression coefficients for asset size and for audit firm are statistically significant at the 0.01 level, while the regression coefficients for the remaining variables are not statistically significant.

**Table 13** Multivariate Analysis of Compliance

	1998	1999	2000
Observation (N)	249	249	249
R Square	0.214	0.282	0.265
Adjusted R Square	0.195	0.264	0.247
Constant	1.273	1.564	1.801
F	10.966*** (0.000)	15.697*** (0.00)	14.500*** (0.00)
<b>Regression Coefficient</b>			
Asset Size	0.041*** (0.000)	0.021** (0.014)	0.000 (0.155)
Foreign Investment	-0.010 (0.594)	-0.004 (0.518)	-0.003 (0.412)
Audit Firm	0.056*** (0.000)	0.083*** (0.000)	0.057*** (0.000)
Rate of Return	-0.002 (0.928)	-0.009 (0.604)	-0.005 (0.721)
Earnings Margin	-0.001 (0.801)	0.000 (0.604)	0.000 (0.211)
Leverage	0.001 (0.983)	0.000 (0.409)	0.000 (0.462)
<b>Durbin-Watson</b>	1.950	2.027	2.048
<b>Stud. Residual</b>	Minimum -2.468 Maximum 2.375	Maximum -2.041 Minimum 2.132	Minimum -2.176 Maximum 2.044
<b>Cooke's Distance</b>	Minimum 0.000 Maximum 0.591	Maximum 0.000 Minimum 0.827	Minimum 0.000 Maximum 0.475

\* Significant at the 0.1 level

\*\* Significant at the 0.05 level

\*\*\* Significant at the 0.01 level

Significant level in brackets (2-tailed)

In 1999, the regression coefficients for asset size and for audit firm are statistically significant at the 0.05 level and the 0.01 level, respectively. In 2000, the regression coefficient for only audit firm is statistically significant at the 0.01 level, but asset size loses significance. Asset size does not play a significant role in explaining the variation in level of compliance. The result indicates that there is no statistically significant difference in the compliance between large and small firms in 2000.

When comparing between the univariate analysis and multivariate analysis, asset size and audit firm are statistically significant for all three years under study for the univariate analysis, and these same variables are also statistically significant for 1998 and 1999 for the multivariate analysis. However, in 2000, only audit firm is statistically significant under the multivariate analysis.

## 7. Suggestions for Future Research

The current study has examined the degree of compliance with the IAS at three points of time from 1998 through 2000. Further research might attempt to extend this examination to include two or more periods after the recognition of the IAS in Thailand. This would provide additional insights into whether the degree of compliance has developed after the adoption of IAS by Thai registrations.

This study had focused on sixty selected compliance items. The results may be different if the number of items was increased. The study is not addressed to a particular industry and excludes firms in the financial sector. It is possible that additional results would be forthcoming through research focused on a particular industry.

This study on the degree of compliance has focused on listed non-financial companies in Thailand when IASs were first introduced. Future research could also extend to non-listed companies, which might reveal other findings. Moreover, it should enhance our understanding of emerging markets in general if this study could be expanded to include countries other than Thailand. The study may include a comparison between practices in emerging capital markets and those in developed markets or, alternatively, involve comparative studies with other ASEAN countries or Anglo Saxon countries. In addition, there is a need to examine in other countries (developed and developing) where the IASs have been endorsed, whether the perceptions of the quality of financial reporting are different.

This study has attempted to investigate the changes in the contents of financial statements by determining the degree of compliance with the IAS and factors that might affect compliance. The study also investigates the variables, which are likely to associate with the degree of IAS compliance. Although the multivariate analysis findings reveal that 20-25% can be explained by the variables under this study, a direct extension of this research would be to investigate other factors that might affect each variation in individual company degree of compliance with the IAS. Potentially important variables that could possibly be included in the model are type of industry, managers' qualification, and company age. Perhaps future research might also enquire into market-determined characteristics of the firm, such as share prices.

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