IFRS CONVERGENCE AND EARNINGS FORECASTS: MALAYSIAN IPO COMPANIES

By

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ABSTRACT

The study sheds light on the Malaysian initial public offering (IPO) management earnings forecasts by examining the effect of International Financial Reporting Standards (IFRS) convergence and the forecast errors. It examines whether the convergence of IFRS is a credible signal of improved quality of financial information. Besides, the study also investigates the other factors that influence the forecast errors of the earnings forecasts. A sample of 98 IPO companies that went public during the period 2004-2007 is used. The time frame of this study includes the years 2004 to 2005 (i.e., pre-IFRS convergence) and years 2006 to 2007 (i.e., post-IFRS convergence). Forecast errors as a dependent variable is used to proxy the earnings forecast error and to represent financial disclosure quality.

By examining the forecast errors in two different periods (i.e., pre-IFRS convergence & post-IFRS convergence), the study finds that the forecast errors has increased under the post-IFRS convergence. In addition, the findings reveal the size of the company is significantly negative with the forecast errors. This study has implications on the disclosure regulations of earnings forecasts in the prospectuses in Malaysia and provides evidence regarding disclosure of the earnings forecasts being changed from mandatory to voluntary in Malaysia.

ABSTRAK

Kajian ini menyiasat tentang kesan penggunaan Piawai Kewangan Laporan Antarabangsa (PLKA) terhadap unjuran pendapatan pengurusan iaitu ralat ramalan sama ada ralat ramalan menurun atau meningkat selepas penumpuan PLKA. Kajian ini menyiasat sama ada PLKA merupakan salah satu faktor yang menyumbang kepada kualiti penyata kewangan di Malaysia. Selain itu, kajian ini juga menyiasat faktor-faktor lain yang mempengaruhi ralat ramalan kepada ramalan pendapatan. Sampel kajian ini terdiri daripada 98 buah syarikat-syarikat tawaran awam permulaan yang tersenarai di Bursa Malaysia pada tahun 2004 sehingga 2007. Tempoh masa kajian ini meliputi tahun 2004 hingga 2005 (iaitu, sebelum penggunaan PLKA) dan tahun 2006 hingga 2007 (iaitu, selepas penggunaan PLKA). Ralat ramalan digunakan sebagai pembolehubah bersandar untuk mengukur ralat ramalan pendapatan dan mewakili kualiti penyata kewangan.

Dengan membandingkan ralat ramalan dalam dua tempoh yang berbeza iaitu (iaitu sebelum dan selepas penggunaan PKLA), kajian ini mendapati ralat ramalan meningkat selepas penggunaan PKLA. Tambahan pula, hasil kajian ini mendapati saiz syarikat merupakan faktor yang paling mempengaruhi ralat ramalan dan penting secara statistiknya. Kajian ini memberi implikasi terhadap polisi di Malaysia dalam melaporkan ramalan pendapatan dalam prospektus di Malaysia dan menyediakan bukti tentang perubahan dalam melaporkan ramalan pendapatan daripada wajib kepada sukarela.

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AGAAP	Australian GAAP
FRA 1997	Financial Reporting Act 1997
FRF	Financial Reporting Foundation
FRS	Financial Reporting Standards
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
IFRS	International Financial Reporting Standards
IPO	Initial Public Offerings
KLSE	Kuala Lumpur Stock Exchange
MASB	Malaysian Accounting Standards Boards
MFRS	Malaysian Financial Reporting Standards
MIA	Malaysian Institute of Accountant
SC	Securities Commission
SOPs	Standards of Procedures

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The interconnectedness of the capital market across the globe has fuelled the demand for the harmonization of the accounting language. Harmonized accounting language, which is widely postulated in literature will add more value to reporting quality, and at the same time, understandability of financial information across different regulatory settings (Stovall, 2010). The International Accounting Standards Board (IASB) has been at the forefront in the course of accounting standards harmonization. The body previously known as the International Accounting Standards Committee (IASC) is committed to developing a single set of accounting standards that can be applied globally. Interestingly, international organizations, like the United Nations, the International Organization of Securities Commissions, the World Bank and the World Trade Organization have endorsed the International Financial Reporting Standards (IFRS) as a set of global high quality accounting standards (Stovall, 2010).

The adoption of IFRS in many reporting jurisdictions will improve financial reporting transparency and comparability and consequently contribute to the efficient functioning of the global capital market (Firth, Gounopoulus and Pulm, 2013). The IFRS has now become a global trend with many countries in the European Union, Asia, Africa and some other continents converting their local standards to IFRS. The IFRS are principle-based accounting standards. Compared to rule-based accounting standards, principle-

based accounting standards require the use of professional judgment when drawing up a financial statement.

The Malaysian Accounting Standards Board (MASB) is the only regulatory body charged with standard setting process in Malaysia. The MASB announced that effective from 1st January 2006, all public listed companies must prepare their financial report in accordance with the provisions of IFRS. Dato' Zarinah Anwar, the former chairman of the Securities Commission (SC), said global competitiveness in capital markets has made convergence to IFRS imperative for Malaysian companies; therefore, convergence to IFRS will make public listed companies operate in accordance with international best reporting practices. However, convergence of Malaysia accounting standards with IFRS is expected to affect accounting figures, and as such, the preparation of earnings forecasts for initial public offering (IPO) companies in Malaysia.

IPO companies are supposed to prepare a prospectus before going public. The information to be disclosed varies with each country's laws and regulations. For example, some countries prohibit the disclosure of forecast information due to the legal risk involved when companies fail to meet their forecast. In the U.S. the earnings forecasts are not allowed. The main information required is information on past performance of the company, the present financial situation and expected future earnings forecasts (Harnett and Romcke, 2000). The Malaysia Securities and Exchange Commission mandates all IPO companies to include information on financial forecasts in their prospectus (Hussin, Sulong and Osman, 2004). In Malaysia, quantified profit forecast disclosure is only

required when a company issues a prospectus in the IPO process. With effect from July 1987, the Capital Issue Committee (the predecessor to the SC) made it mandatory that prospectus issued by companies should include an estimate of future profit of at least the current year (Ismail, 2005).

Chen, Firth and Krishnan (2001) are of the view that investors assess the value of IPO companies and base their investing decisions on such valuation. Hence, it is essential for IPO companies to build and maintain investors' confidence by ensuring the accuracy of management earnings forecast (Ahmad-Zaluki and Wan-Hussin, 2010). An erroneous forecast might mislead potential investors in their investing decision. Accordingly, the Malaysia Securities and Exchange Commission holds the board of directors of IPO companies responsible in the event of a substantial difference between the forecasted earnings figure and the actual figure (Hussin, Sulong and Osman, 2004).

However, with the conflicting argument regarding the economic benefits of IFRS (Ball, 2006; Jeanjean and Stolowy, 2008), issues arise as to whether earnings forecasts prepared under IFRS will be more accurate, or will lead to more biased estimates. Literature in support of IFRS argues that compared to local standards, IFRS are of high quality and restrict reporting discretion. Consequently, this improves transparency and reduces financial reporting biases. Hence, companies save costs when raising capital and increase their market liquidity (Daske and Gebhardt, 2006). In a counter-argument, literature against the perceived economic benefits believes that the result is not pronounced and

might reduce reporting quality (Jeanjean and Stolowy, 2008). In fact, the various incentives available in the reporting environment, such as legal, institutional and cultural, affect the quality of reported figures (Ball, 2006). Landsman, Maydew and Thornock (2011) found information content of earnings announcement in countries reporting under IFRS regime to be more informative compared with those reporting under the local Generally Accepted Accounting Principles (GAAP). Another study by Barth, Landsman and Lang (2008), reported that the quality of accounting numbers prepared under IFRS are higher compared to the financial statements under the domestic standards. The above findings conflict with the theoretical argument of Ball (2006), that reporting quality does not only depend on the quality of accounting standards.

Since, investors depend on the IPO earnings forecasts for their investment decisions, this study investigates the quality of the earnings forecasts in the prospectuses in terms of its forecast error, and whether the convergence of IFRS reduces the forecast errors of the IPO earnings forecasts (Firth et al., 2013). There are numerous empirical studies on earnings forecasts. For example, Ahmad-Zaluki and Wan-Hussin (2010) examined the relationship between earnings forecasts and the various corporate governance mechanisms, while Jelic, Saadouni and Briston (1998) examined those factors that determine earnings forecasts. However, the association between the IFRS and earnings forecasts of IPO companies has not been thoroughly investigated, especially in the Malaysian context.

1.2 Problem Statement

Many factors are mentioned in extant literature as factors that determine forecast errors of IPO companies. In Malaysia, Jelic, Saadouni and Briston, (1998) identified eight factors that affect forecast accuracy. The factors identified by the authors include company size, proportion of shares retained by owners, forecast horizon, age of the company, financial leverage, auditor, industry and changes in actual earnings. In a similar study by Ahmad-Zaluki and Wan-Hussin (2010), both board characteristics and audit committee characteristics are corporate governance mechanisms found to impact earnings forecasts.

To the best of the researcher's knowledge, so far, studies on the effect of regulatory changes on IPO forecast errors are still lacking in Malaysia. The study by Firth, Gounopoulos and Pulm (2013) found that the introduction of IFRS in Australia was characterized by higher forecast errors relative to the previous Australian GAAP (AGAAP). Studies from other countries have reported a contrasting relationship. Taking into consideration the statement by the former chairman of the SC that public listed companies must operate in accordance with international best reporting practices, this present study investigates the effect of the convergence on the earnings forecasts of IPO companies in Malaysia. In Malaysia, existing empirical research on earnings forecasts have been conducted in periods before the regulatory changes. The present study investigates whether management forecast error is reduced or enhanced after IFRS convergence.

1.3 Research Objectives

The present study investigates management earnings forecasts of IPO companies in Malaysia by examining the effect of IFRS convergence on earnings forecasts. This research investigates whether IFRS convergence lessens forecast errors. Additionally, the present research identifies those factors that influence earnings forecast errors in the pre- and post-IFRS convergence periods. The specific objectives are:

(i) To determine whether the convergence of IFRS in Malaysia reduces error in earnings forecast of IPO companies.

(ii) To examine whether company specific factors, such as age, size, forecast horizon, leverage, auditors' reputation and company's industry determine earnings forecast errors of IPO companies in Malaysia.

1.4 Research Question

1. Does the convergence of IFRS in Malaysia reduce errors in earnings forecasts of IPO companies?
2. Do company specific factors like age, size, forecast horizon, leverage, auditors' reputation and company's industry determine earnings forecast errors of IPO companies in Malaysia?

1.5 Significance of the Study

This study provides empirical evidence on the factors that influence forecast error, specifically whether the recent change in accounting standards influences management forecast errors. The sustainability and the success of the IPO companies in Malaysia, partly contribute to the development of the country's capital market. Due to the contribution of the IPO companies, it is important to explore whether IFRS convergence reduces information asymmetry between management and prospective investors. As mentioned by Chen, Firth and Krishnan (2001); Karamonou and Vafeas (2005), forecast accuracy is a fundamental research problem with implications for policy makers, the business community and academics. Thus, this study will benefit these parties as explained below.

1.5.1 Investors

Hernett and Romcke (2000); and Jaggi (1997) note that the prospectuses of IPOs companies are an important source of information for investors. This is because it contains useful information that guides investors' investment decisions. Consequently, the exactness in forecasted profit is of great concern to the investors (Chan, Sit, Tong, Wong and Chan, 1996). The present study can give hindsight to prospective investors about the accuracy and company specific factors that affect forecast errors. This will help them distinguish between companies that are worth investing in and those that are not.

1.5.2 Regulators

Daske, Hail, Leuz and Verdi (2008) suggest that regulators expect that preparing financial report in accordance with the provisions of IFRS will enhance comparability of financial statements, improve corporate transparency, and consequently, improve the overall financial reporting quality. With this assertion, it can be said that research of this nature will be of interest to regulators, as they can know the extent to which the stated benefits of IFRS have been achieved. It is believed that empirical findings of this nature will guide the MASB in their future regulatory decision-making. For instance, investigation into those factors that affect forecast errors and the effect of IFRS convergence might expose the weakness in the current reporting regime. In addition, this study will assist the MASB to see the extent to which IFRS improve financial reporting quality, thereby reducing earnings forecast errors for IPO companies. Beyond the MASB, the IASB, which is the international regulatory body responsible for setting IFRS, can also use the findings of this study to assess the attainment of its goals in an emerging economy like Malaysia.

1.5.3 Business community in Malaysia

This study will also be of benefit to the business community in Malaysia with respect to how they prepare their financial reports under the IFRS regime. Empirical findings from this study will inform them how IFRS is likely to be of benefit to them. As envisaged, financial reporting under IFRS signals their company's performance and attracts more potential investors to their company. This will further reduce their cost of raising capital.

1.6 Scope of the study

The study investigates the effect of IFRS convergence on earnings forecasts of IPO companies in Malaysia. The study covers 98 public listed companies on the main board of Bursa Malaysia that issued IPOs between 2004 and 2007. The 2004-2005 period is the pre-IFRS convergence period, while the 2006-2007 period represents the post-IFRS convergence period. Financial institutions are excluded due to the different regulations that govern the disclosure practices of these institutions.

1.7 Organization of the study

This study is structured into five chapters. This chapter begins with the background of the study which gives insight on the development of IFRS and its likely effect on management earrings forecasts. Also, this chapter contains the problem statement, the research questions, and research objectives, significance of the study and the scope of the study.

Chapter two contains the underpinning theory related to the present study, empirical literature in relation to earnings forecast errors and other factors identified in previous literature as determinants of forecast error.

Chapter 3 discusses the theoretical framework, based on which the research hypotheses is established to determine the relationship between the study's proposed independent variables and the dependent variable. In addition, the research methods and design used in the study are discussed. The sources of data are identified and justification for the

choice of sample, data collection method, definition and measurement of variables of interest and model specification are discussed in this chapter.

Chapter four reports the result of empirical findings that test the association between earnings forecast error and the study's explanatory variables.

Chapter five summarizes the overall findings, conclusion, limitation and recommendations for future research.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter explains the previous literature on earnings forecast and is organized as follows: Section 2.1 explains the theoretical framework of earnings forecasts; section 2.2 discusses the conceptual framework of management earnings forecast; section 2.3 details IFRS convergence in many countries, including Malaysia; section 2.4 describes the roles of MASB in the convergence of IFRS; section 2.5 discusses the empirical results on IFRS, IPOs and earnings forecast; section 2.6 delineates the factors that influence earnings forecast error; and section 2.7 summarizes the chapter.

2.1 Theoretical framework

A previous study by Chan et al. (1996) explains the signaling theory with regards to the possible factors influencing the accuracy of prospectuses' earnings forecast in Hong Kong. Under this theory, they describe the information asymmetry problem, which occurs between buyer and seller. In the literature on earnings forecast, information asymmetry occurs between management of the IPO companies and the potential shareholders. This is due to the reasons provided by Cheng and Firth (2000) and Firth (1998) who explain that there is very limited information for potential investors about companies listed for the first time, leading to information asymmetry and higher risk of investing in IPO companies compared to the existing public listed companies. Jog and McConomy (1999) explain that asymmetric information in the earnings forecast literature

is between managers (insiders) and the investing public (outsiders). In addition, according to Hernett and Romcke (2000), information asymmetry and signaling research suggests the forecast disclosure can be useful method for conveying news about company value. The same is addressed by Chen and Firth (1999), who explain that information asymmetry occurs when the potential investors face problem of insufficient information from the prospectuses in order to make decisions to buy the shares issued by the IPOs. This is because the level of reliance towards the earnings forecast by the management involved with uncertainty is influenced by many predictable and unpredictable factors.

Chan et al. (1996) and Jeny and Jeanjean (2007) suggest that to improve the information asymmetry problem, companies must signal the project's value and disclose it in the form of earnings forecast in order to attract more investors. Clarkson, Dontoh, Richardson and Sefcik (1992) explain in their study that the signaling theory is related to the method of communication of private information by the management to the outsiders. Therefore, in the earnings forecast literature, the communication method which is the signal by the companies must be in the form of earnings forecasts with higher level of accuracy and less forecast errors. The accuracy of the earnings forecast will provide the investors with reliable information in order to study and analyze the earnings forecast of the IPO companies prepared by the management effectively and efficiently. Consequently, the management earnings forecast is a signal for the investors to make a decision wisely whether to invest in the IPO companies by reviewing the prospectuses, while for the public listed companies, the investors can access the information through the annual report.

Other than the signaling theory, in the management earnings forecast studies, the literatures also is related to the agency theory where the assumption is the management of the IPO companies is the agent and the principal is the potential shareholder. The management, as the agent, is responsible for providing the earnings forecast in order to show transparency to their potential shareholders. Ahmad-Zaluki and Wan-Hussin (2010) explain that the transparency of the financial disclosure minimizes the agency problems by reducing the asymmetry of information between management and shareholders. The same argument is put forth by Firth et al. (2013); they explain that the main purpose of preparing the earnings forecast in the prospectuses is to minimize the level of information asymmetry between the insiders (management of the company) and outsiders (investors); as well as to improve the problems in the IPOs market which is the adverse selection. Moreover, the earnings forecast provided in the prospectus will enhance and benefit the relationship between both parties. This also will reflect the efficiency level of the market by providing more reliable information on the market. This reliable information is a reflection of the accuracy of the earnings forecast, which in turn, indicates that the more accurate the earnings forecast with less forecast errors, the more reliable will it be for the potential investors.

Information asymmetry between potential investors and the management can be reduced by a standard mechanism or tool, i.e., by the issuance of the earnings forecast of the IPO companies by their management. This scenario occurs when the management tries to get outside capital to finance their business activities run by the companies which the companies are listing the companies to the public where the private information of the

company is in the possession of the management. This is a situation where the potential investors do not have sufficient information to make a decision to be the shareholders of the IPO companies, as indicated by the adverse selection problem by Akerlof (1970).

As a consequence of the insufficient information, due to there being no perfect market in this world, there is no such thing as full disclosure by the management of IPO companies. Moreover, there is no guarantee regarding the accurateness of the earnings forecast made by the management. However, the earnings forecast provided in the prospectuses is still very crucial since it reflects the commitment made by the management of the IPOs to their potential shareholders (Firth et al., 2013). The earnings forecast are important information that the potential investors can rely on to make decisions. Thus, to prepare the most accurate earnings forecast, the management must consider many influential factors. This is the reason why there are many factors that have been studied that influence the level of forecast error in the earnings forecast (Jelic et al., 1998; Ahmad-Zaluki and Wan-Hussin, 2010; Firth et al., 2013). One of the factors that are expected to reduce the forecast error is the IFRS convergence by the IPOs (Firth et al., 2013). Due to the credibility of the IFRS as the international accounting standards, it is reported to enhance the preparation of the earnings forecast, consequently reducing the forecast error and minimizing the agency problem, as well as the information asymmetry between the management of IPOs and the potential shareholders (Firth et al., 2013).

2.2 Conceptual framework of management earnings forecast

Management earnings forecast is defined as the prediction of profit that will be earned for the company by the management for the next accounting year (Firth, 1998). The management earnings forecast is important for the IPO companies to show to the potential shareholders the ability and the strength of the company to provide favorable profit to its shareholders. The earnings forecast is prepared by the management of the IPO companies under the supervision of the underwriter and the reporting accountant (Firth, 1998). The definition of IPO companies is any company which was previously private and wants to be listed to the public that will involve issuing new shares to raise capital from the outsiders or investors (Jog and McConomy, 1998; Firth and Smith, 1992). Cheng and Firth (2000) define IPO company as a company having for the first time public issues and gaining capital from the issuance of the new shares from the public.

In order to list the company as a public listed company, and gain more capital for the company, the management must provide attractive earnings forecast to attract potential investors, by demonstrating increment in the earnings forecast to reflect good news to the potential investors (Jog and McConomy, 2003). The disclosure of the earnings forecast in some countries are on a voluntary basis which differentiates them from other IPO companies in demonstrating their better financial position in the future (Clarkson et al., 1992) which has the same purpose, which is to attract the potential investors.

The purpose of disclosing the earnings forecast on a mandatory basis is to minimize the information asymmetry for management and shareholders by providing fair and equitable forecasted earnings for the investors to make decisions wisely (Jaggi, Chin, Lin and Lee, 2006). Their studies also explain that the issue that might deviate from the purpose of minimizing the information asymmetry is manipulation of the earnings forecast in order to ensure the forecast errors are within the limit of the threshold set by the regulators. Yau and Chun (1999) explain that the function of earnings forecast is to maximize the confidence of the decision makers to buying the new issues by the IPO companies.

In order to maximize the confidence level of the potential investors, Firth et al. (2013) and Bedard, Coulombe and Corteau (2008), indicate that the research related to management earnings forecast particularly in forecast error and accuracy is very crucial since the IPO earnings forecast is the main signaling tool used by the companies' management to convince the potential investors. The accurateness of the earnings forecast is very important because it is the formal documentation that is accessible to the potential shareholders (El-Rajabi and Gunasekaran, 2006). This is because the reliability and reliance of the earnings forecast depend on its accuracy (Firth and Smith, 1992). According to Chen, Firth and Krishnan (2001), the earnings forecast contained in the prospectuses helps investors to value the company, make decisions to buy the new shares, and decide whether to invest on the first day of trading in the company. The same suggestion is put forward by Yau and Chun (1999), that the management earnings

forecast is very crucial since the potential investors use it for their investment decision-making.

In addition, Firth (1998) studied the three functions of earnings forecasts, i.e., to signal the market valuation; describe the initial returns; and explain the performance of the long-term shares of the IPO companies. Additionally, Cheng and Firth (2000) explain that it is significant for the earnings forecast to be accurate in order to provide credibility and usefulness for its users. Thus, the accurateness of the earnings forecast acts as a credible signal that can be relied on by the investors.

The management of the IPO companies reveals the forecast information through prospectuses which are regulated by the Securities Commission or the regulatory dictate (Cheng and Firth, 2000). According to Firth and Smith (1992), Firth (1998), Cheng and Firth (2000) and Lonkani and Firth (2005), the earnings forecast information in the prospectuses of the IPO companies is very crucial for the potential investor as the signaling device to determine the companies' value. Bilson, Powel and Shi (2006) also explain the importance of the earnings forecast or the valuation of the IPO companies. That is the reason why, the management earnings forecast included in the prospectuses issued by the IPO companies must contain several essential information, including the objective of the company, the structure of the company's management and historical performance of the company (Jaggi, 1997; Cheng and Firth, 2000), so as to provide relevant and reliable earnings forecast. Furthermore, the prospectuses must contain the

company's age and the date of its establishment, share price, assets, the retained insiders, company's underwriter and reporting accountant, as well as the compensation of the management (Brown, 2003). All this information is provided in order to help the individual investors who have low capability in valuing the IPO companies to make wise decisions to invest (Lonkani and Firth, 2005). Chen and Firth (1999) and Firth and Smith (1992), also explain that the information that must be included in the prospectuses is the earnings forecast for the next accounting year as required by the regulations which will be a measurement for the potential investors to value and invest in the company.

In the study by Hernett and Romcke (2000), the authors explain that in some markets, such as in New Zealand, the earnings forecast is mandatory and this is subject to the fact that the management earnings forecast also depends on the country's rules and regulations. On the contrary, in Australia, the management earnings forecast is on a voluntarily basis (Firth et al., 2013). Jelic et al. (1998) suggest that the studies regarding management earnings forecast is limited due to the rules and regulations in some countries that the earnings forecast need not be included in the prospectuses. Thus, the management earnings forecast is heavily dependent on the rules and regulations of each country, i.e., whether the disclosure of the earnings forecast is permissible, mandatory or voluntary.

The prospectuses are the crucial sources which contain useful information on past performance, present performance and forecast performance for the potential investors. In Malaysia, the prospectuses must include the profit and liquidity of the previous five years

to signal the financial position of the company and the history of the operations must be disclosed for at least three years as required by the Securities Commission (Jelic et al., 1998). In addition, the prospectuses must provide the company's information, such as management quality, the business and financial risk and the scope of diversification, as well as the forecast for the next year's profit (Jelic et al., 1998).

These types of information are very significant for the potential investors because specifically, the earnings forecast give meaningful information for the potential shareholders to evaluate the future performance of the company, as well as guide them whether or not to buy the IPO shares (Jaggi, 1997). Moreover, the management can use the information contained in the prospectuses to convince the investors to make favorable investment decisions (Jaggi, 1997). In addition, the potential investors are not the only users of the management earnings forecast; the analyst is also considered as one of the significant users of the forecasted earnings (Blouin, 2012). In the study by Anabila and Whang (2014), they explain three reasons for the significance of the management earnings forecast: as a guide for users to forecast the company's profit; as a tool for management to minimize the information asymmetry; and as a proxy to influence the value of companies and industry in the open market.

Studies conducted by several researchers in many countries on management earnings forecast include voluntary vs. mandatory disclosure of forecast, factors that influence earnings forecast, pricing of the IPO (Jaggi, 1997), corporate governance characteristics and management earnings forecast (Karamonou and Vafeas, 2005; Ahmad- Zaluki and

Wan-Hussin, 2010; Karim, Ahmed and Hassan, 2013). Factors that influence the management earnings forecast involve the companies' characteristics, such as age of the companies, forecast horizon, industries involved in by the companies, auditors of the companies, level of leverage and the size of the company. All of these factors have been tested in previous researches.

Studies regarding the accuracy and forecast error of earnings forecast have been undertaken by many researchers because understanding the extent to which published forecasts can accurately predict the future should be of concern to the market. Any forecast perceived as unreliable is discounted whilst those considered more accurate command greater attention (Hernett and Romcke, 2000). Recent research on the IFRS adoption and convergence associated with the forecast error of the earnings forecast takes into consideration that accounting standards are also one of the factors that influence the forecast error and forecast accuracy of management earnings forecast. In their recent study, Firth et al. (2013) find that IPOs listed during IFRS adoption are associated with a higher level of forecast error.

From the research on forecast error, optimistic and pessimistic forecast can be determined. The forecast bias (forecast error) also can be derived from these types of research. According to Ahmad-Zaluki and Wan-Hussin (2010), the bias occurs when the actual earnings is over or under the forecasted earnings. In the research by Firth et al. (2013), the finding shows that the forecast bias is positive under the IFRS, which indicates that the management is pessimistic on the companies' future performance. The

management will be motivated to present a positive picture of the company's future operations because this information is likely to play an important role in order to gain positive investors' response to the shares offered. To encourage prospective investors to respond positively to IPOs, managers are likely to present optimistic forecasts (Jaggi, 1998). In the study by Jaggi et al. (2006), they suggest that the management tends to under-value the earnings forecast in order to achieve higher offering proceeds.

With the continuation of the studies and research regarding the forecast bias or error, it implies that earnings forecast will always involve forecast error. However, the level of the forecast error is being studied in order to find ways and factors that can reduce or minimize the forecast error level to an acceptable level.

2.3 IFRS convergence in many countries including Malaysia

The IFRS are the standards issued by the International Accounting Standards Board (IASB), which is an independent accounting standards setter. The study by Barth, Landsman, and Lang (2008) states that a goal of the International Accounting Standards Committee (IASC), and its successor body, the IASB, is to develop an internationally acceptable set of high quality financial reporting standards and the aim of its convergence and adoption in many countries is to enhance the financial reporting quality (Cairns, 2003). This is to provide standardized accounting standards around the globe and minimize the differences in financial reporting. Furthermore, the IFRS deals with fair value accounting (IASB, 2013) which is claimed to have better reflections due to the

current condition that deals with the market volatility, and provides more meaningful information.

In addition, the IFRS has been successfully adopted in many countries, such as in the European Union (EU), starting in the year 2005, Argentina, Australia, and Brazil (IASB, 2013; MASB, 2013). Other countries also followed with their own significant reasons and the evidence of beneficial adoption of IFRS in the EU. Although, there are many countries adopting the same accounting standards, however, the variation in terms of enforcement and monitoring are different for each country (Ball, 2006). This is due to the fact that the accounting standards setter for each country depends on the local institution. In Malaysia, (i.e., the MASB). This local institution has the authority to comply with accounting standards suitable to the Malaysian environment and economic conditions.

To adopt and converge towards this international accounting standard, many researchers have examined its advantages and disadvantages. Among the benefits that have been argued by the proponents of IFRS, are that it improves market transparency and reduces financial reporting uncertainty due to the higher quality and restricted accounting discretion of the IFRS. Firth et al. (2013) also agree with this in their studies; other proponents argue that IFRS are of higher quality than local standards and restrict accounting discretion. This higher quality will lead to the improvement of market transparency and reduce financial reporting uncertainty. In addition, Firth et al. (2013) found that the introduction of IFRS is associated with reduced forecast accuracy. However, the study conducted by Horton, Serafeim, and Serafeim (2008) proposes

another finding, i.e., the mandatory adopters of IFRS experience improved earnings forecast accuracy and the improvement is greater for companies with accounting practices that diverge the most from IFRS. In addition, the study by Cotter, Tarca and Wee (2012) report that the accuracy of the profit forecasted by the analyst under the IFRS has improved, which indicates that these accounting standards enhance the quality of knowledge acquired by the analyst in forecasting the earnings.

In addition, Firth et al. (2013) provide three reasons in their studies regarding the adoptions of the IFRS: first, IFRS can limit the choice of accounting methods, thus constraining managerial discretion; second, IFRS require accounting measurements and recognition that reflect better a companies' underlying economic position, hence providing more relevant information for investment decisions; and third, IFRS increases required disclosures, thereby mitigating information asymmetries between firms and their shareholders. Consequently, the earnings forecasts reported under the IFRS regime will be more useful for investors with the presence of the minimization of the information asymmetry. Moreover, in the EU (2002), the policy setters and financial regulators expect that IFRS is the common set of high quality financial reporting standards and these standards will enhance the transparency and comparability of financial statements across different jurisdictions, thereby contributing effectively to an efficient functioning as well as global integration of capital markets (Firth et al., 2013).

Furthermore, as reported by the Malaysian Institute of Accountants (MIA), IFRS convergence has gained steady support. The standards are now used by more than a

hundred countries around the world, and emerging economies, such as Korea, India, Australia, South Africa, the United Kingdom and Canada. Significantly, the United States (US), one of the major economic contributors in the world, also has a plan to converge from the US Generally Accepted Accounting Principles (GAAP) to IFRS (MASB, 2013).

As for Malaysia, it has its own reason for converge the IFRS; the convergence became effective on 1st January 2006, and the full convergence was in the year 2012. MASB (2013) states that, as the capital market have become increasingly global, the changeover from Financial Reporting Standards (FRSs) to Malaysian Financial Reporting Standards (MFRSs), equivalent to IFRS will help place the Malaysian businesses on a level playing field with its international counterparts. This is to make the companies in Malaysia competitive internationally and in running their business globally. Moreover, it is also for the purpose of enhancing the accounting standards and financial reporting quality in Malaysia.

2.4 Roles of MASB towards the convergence of IFRS

The MASB is an independent body that is responsible for developing and issuing accounting and financial reporting standards in Malaysia. It was established under the Financial Reporting Act, 1997 (FRA, 1997) with the Financial Reporting Foundation (FRF) providing the financial reporting framework in Malaysia. The framework is represented by all involved in the standard setting process, comprising preparers, users,

regulators and the accountancy profession that provides an independent standards-setting structure.

Under the FRA, 1997, the MASB is eligible and empowered to issue, review, revise and adopt the new or existing accounting standards as approved by the accounting authority. It also takes charge of issuing the statements of principles for financial reporting and is responsible for the development of accounting standards in Malaysia. This is the reason the MASB decided to fully converge to IFRS in 2012. Parallel to its clear mission is the following:

'*to develop and promote high quality accounting and reporting standards that are consistent with international best practices for the benefit of users, preparers, auditors and the public in Malaysia as well as to contribute directly to the international development of financial reporting for the benefit of users, preparers and auditors of financial reports.*' (MASB, 2012).

The MASB is also responsible for ensuring that the accounting standards practiced in Malaysia provide the best quality of financial reporting for the companies in Malaysia. Thus, the decision by the MASB to adopt IFRS is to enhance and improve the quality of Malaysian financial reporting.

The previous chairman of the MASB, Dato' Zainal Abidin Putih, is convinced that converging to IFRS will further enhance the capital and financial markets of Malaysia.

The IFRS is really a robust set of standards (MASB, 2013). The ex-chairman of the SC also supports that the convergence towards IFRS will provide Malaysian companies with international recognition under the current global business competition. The MASB is also convinced of convergence with the IFRS because more than 100 countries all over the world also comply and adopt the IFRS to facilitate comparability and enhanced transparency.

MASB is fully committed towards IFRS convergence. There are several advantages of convergence listed by the MASB: first, the investors and potential investors would be provided with better understanding of the financial statements prepared by companies operating in Malaysia. This will enable them to compare the companies in Malaysia with other companies outside Malaysia under IFRS jurisdiction since IFRS has been established as the preferred international accounting language; second, the national reputation of Malaysia will be improved due to the compliance with the international accounting standards; third, financial reporting in Malaysia will enjoy better credibility and transparency, whereby foreign investors can depend and rely on the financial statements issued by the Malaysian companies; and fourth, the cost of compliance and the translation risk that is borne by the Malaysian multinational companies can be reduced with a single set of consolidated financial statement under the IFRS (MASB, 2013).

Besides the annual report for the companies, the prospectuses that contain the earnings forecast also must be prepared in line with the IFRS. With the preparation of the earnings

forecast under IFRS, thereby, the quality of financial reporting in Malaysia is expected to increase with the convergence of IFRS. In consequence, the preparation of earnings forecast under the IFRS is also expected to improve in terms of its forecast error. The convergence towards IFRS is expected to minimize the forecast error in the earnings forecast of the IPO companies.

Thus, many countries all over the world are adopting and converging towards IFRS, providing an important signal that the IFRS is a recognized set of accounting standards that can be complied with by the companies and its benefits include improvement in the quality of financial reporting, generally and the preparation of the earnings forecast, specifically.

2.5 Empirical results on IFRS, IPOs and earnings forecasts

Several studies have researched on forecast error and accuracy of IPO earnings forecast. However, there is a lack of literature that focuses on the influence of IFRS on the forecast error of IPO earnings forecasts in Malaysia. The studies regarding the IFRS' influence on the level of forecast error is lacking in Malaysia, since it just started its convergence on the 1st January 2006.

There are many consequences regarding IFRS convergence. The IFRS will affect financial disclosure as well as the quality of financial reporting from many aspects. The studies by Daske, Hail, Leuz and Verdi (2008), find that there are economic consequences on mandatory IFRS including on the market liquidity and cost of capital. The ultimate expectation from the regulators towards the adoption of the IFRS is to the investors' benefit to ensure those investors have more informative and comparable corporate reporting due to the IFRS will provide comparability of financial statement will be improved, more transparent on the corporate reporting and increased the quality of financial reporting (Daske et al., 2008).

Covrig, Defond and Hung (2007) investigate whether the IFRS is able to attract more foreign investors. In addition, Covrig et al. (2007) argue that IFRS is able to provide more information and is easily understood by the foreign investors since this accounting standard is an international standard that ensures investors are familiar with the accounting information under it. Thus, it leads to minimizing the home bias among

foreign investors and enhances the efficiency of the allocated capital (Covrig et al., 2007). Consequently, with these effects, IFRS adoption enhances the ability to have more foreign investors in the market (Covrig et al., 2007). Realizing on the business nature is running in the international basis, thus leading to a single accounting standard to be adopted and implemented, bringing the IFRS into the picture (Jeanjean and Stolowy, 2008). This indicates that the IFRS also functions as 'financial reporting language' in addition to 'business language'.

Ashbaugh and Pincus (2001) explain that the required disclosures are tighter under the IFRS, resulting in minimizing the agency problem between management of companies and shareholders. Thus, the tighter disclosures ensure management discloses less error in reporting the earnings forecast leading to lesser forecast error. The tighter disclosures under the IFRS have resulted in higher quality in reporting the accounting numbers (Barth, Landsman and Lang, 2008), and consequently, with better reporting, less forecast error. The study by Barth et al. (2008) found that there is less earnings management in companies from 21 countries that apply International Accounting Standards (IAS). Further evidence reported by Gebhardt and Faskas (2011) shows the IAS 39 rules are tighter; with the restriction to recognize only incurred losses, this IAS 39 has significantly reduced the discretionary behavior, as measured by less income smoothing. This indicates that the convergence of IFRS can improve the quality of financial reporting and environment.

The financial reporting prepared under the IFRS regime with tighter required disclosures provides more quality in accounting numbers. As a result, these accounting numbers are prepared with less error, especially the earnings forecast, and this lower forecast error indicates greater accuracy (Ahmad-Zaluki and Wan-Hussin, 2010). The greater accuracy will give more confidence to potential investors to make their investment decisions. The IFRS is also expected to reduce the information asymmetry and the agency problem between management and the potential shareholders. These could be reduced with the existence of lower forecast error reported under IFRS.

Byard, Li and Yu (2011), in their studies, found that the absolute forecast error and forecast dispersion by the financial analysts decrease in mandatory adopters domiciled in countries with excellent enforcement by the accounting regulatory bodies for financial reporting prepared under IFRS. Byard et al. (2011), recommend that the financial analyst information environment will improve if the adoption of IFRS is mandatory and all the accounting standards imposed by the IASB have strong enforcement by the Securities Commission in each country.

Landsman, Maydew and Thornock (2012) report that there is an increment in the information content of the earnings announcement in the financial report prepared under mandatory adoption of IFRS along with excellent enforcement. This improvement in the information content has increased investment by foreign investors. In addition, Leuz and Verrechia (2000) report that for financial reporting under international accounting standards, the IFRS urge companies to increase the level of disclosures. In addition, the

increase in the level of disclosures may increase market efficiency (Ball, Robin and Wu, 2003). The increase in the information content is parallel to the economic theory that posits that the information asymmetry problem will be reduced provided that there is an increment in the level of disclosure (Leuz and Verrechia, 2000).

The IFRS also has several drawbacks. The study by Jeanjean and Stolowy (2008) investigate the impact of IFRS adoption on earnings management. The earnings management might increase due to principle basis which involves considerable judgment and private information in preparing the financial report under IFRS (Jeanjean and Stolowy, 2008).

However, Firth et al. (2013), also argue that the most important factor that influences the quality of financial reporting is law and enforcement by the accounting regulatory board of each country, instead of the accounting standards that have been implemented. This is due to the fact that the implementation of the accounting standards largely depends on the rules and regulations of the country to suit its culture and business activities.

As far as empirical results for the forecast errors for Malaysian data are concerned, it has been documented by several studies including Mohamad, Nassir, Kuing and Ariff (1994); Jelic et al. (1998); Ismail and Weetman (2008); and Ahmad-Zaluki and Wan-Hussin (2010). In the study by Mohamad et al. (1994), for the IPO companies included in the study during the year of 1975 to 1988, the mean of the forecast error is reported as 9.34 per cent, with a maximum value of 219.97 percent and minimum value -232.05 per cent.

This study found that the relationship between leverage of the company and the forecast error is statistically significant.

Jelic et al. (1998) report a mean for forecast error of 33.37 per cent with the maximum value of 4110.53 per cent and the minimum value of -136.17 per cent. The mean forecast error indicates that on average, the managers in Malaysia, between the years 1984 to 1995, under-estimated their profits for the next accounting year. The findings for this study show that the statistically significant association between forecast errors is only the company age and the classified industry.

In another Malaysian study by Ismail and Weetman (2008), the data for the years 1996, 1998 and 2000 report the mean for the forecast error of -69.67 per cent which is contradictory to what is reported by Jelic et al., (1998). The managers, on average, under-estimated their earnings with the maximum value of 426.95 per cent and the minimum value of -453.69 per cent.

The study by Ahmad-Zaluki and Wan-Hussin (2010) report the data during the years 1999 to 2006, which found the mean of the forecast error of -3.50 per cent, which showed a lot of improvement in the management earnings forecast with the forecast error falling under the acceptable range as compared to the previous study in Malaysia. The maximum and minimum values of the forecast error for this study are 451.29 per cent and -270.47 per cent, respectively. The results from this study reveal that the earnings

forecast of IPO companies in Malaysia are more accurate when the percentage of the non-executive directors is higher in the audit committee of the company.

A recent study by Firth et al. (2013) in Australia also examined the effect of the IFRS adoption on the earnings forecast accuracy and other factors that influence the forecast error (i.e., the company age, forecast horizon, retained shares, company size, reputation of the auditor and the underwriter). This study documents the mean for the forecast error is -11.64 per cent for the IPO companies listed during the years 2001 to 2009. The range for the forecast error for this Australian IPO sample is between -298.34 per cent and 143.85 per cent. The result of this study demonstrates that under the IFRS regime, the forecast error experiences increment which is caused by the several difficulties that the companies faced during the adaption phase which led to the reduced management ability to forecast the company's earnings accurately.

With all of these evidences, it clearly shows that the study of IPOs and the management earnings forecast is ongoing globally. Many researchers have been continuously investigating the factors that can influence the forecast accuracy in order to provide reliable information to the users of the earnings forecast.

2.6 Factors that influence the earnings forecasts error

Previous literature in Malaysia has recognized several factors that influence the accuracy of earnings forecasts of IPOs, but there is a lack of studies on IFRS convergence as one of the factors. Thus, this study includes IFRS as one of the factors of earnings forecast accuracy.

Firth, et al. (2013) have identified eight determinants that influence forecast accuracy, including company (AGE), length of the forecast horizon (HORIZON), proportion of shares retained by insiders (RETAIN), company size (SIZE), auditor reputation (AUDITOR) and the reputation of the underwriter (UNW). Another research by Ismail and Weetman (2008) and El-Rajabi and Gunasekaran (2006) tested five factors that influence the earnings forecast accuracy, i.e., size of the company, age of the company, the reputation of the auditor, leverage (percentage of debt) of the company and the ownership by the management.

Firth and Smith (1992), in their study, also tested several factors, including company size, age of the company, forecast horizon (interval), leverage (level of debt), operating history and the auditor's reputation to test the forecast error. A previous study by Dev and Webb (1972) has identified six potential determinants of forecast accuracy, namely; firm size, length of forecast period, year of forecast, industrial classification, issuing house and type of issue.

In the study by Chan et al. (1996), they found that prospectuses' earnings forecasts accuracy in the Hong Kong context tends to increase if the past profit variability is lower, the change in economic conditions is smaller, and the company's listing is more recent. They tested several variables, including forecast horizon, company size, financial leverage, past profit profitability, change in the general economic condition, reporting accountant, industrial classification and year of flotation.

Gounopoulos (2011) studied eight factors to investigate the potential determinants of absolute forecast error. These independent variables are company size, forecast horizon, age, financial leverage, and underwriter's reputation, proportion of shares retained by inside owners, industry classification and general economic conditions.

In addition, Jelic et al. (1998) investigated the accuracy of earnings forecasts included in the prospectuses of 124 Malaysian companies seeking listing on the Kuala Lumpur Stock Exchange (KLSE) during the period 1988 to 1995. They report higher errors than those reported by Mohamad, Nassir, Kuing, and Ariff (1994), specifically a mean forecast error of 33.37 percent and a mean absolute forecast error of 54.91 percent. They examined eight determinants: age, size, forecast interval, industry classification, level of gearing and inside ownership, earnings reduction and auditor. The study by Firth, Kwok, Liau-Tan and Yeo (1995) reports comparatively small errors. The study by Mohamed et al. (1994), found that leverage is negatively and statistically significantly related to the absolute forecast error; the negative sign is counter to expectations and implies that higher risk companies, as proxied by the debt to gross assets ratio, are easier to forecast.

On the contrary, the study by Firth et al. (1995) found a positive association between the forecast horizon and forecast errors.

Thus, from all the factors that have been tested in the previous studies, this study investigates the seven factors that influence the forecast error namely: age of the company, the company size, auditor's reputation, leverage, forecast horizon, classification of industry and the IFRS convergence (the influence of the accounting standards on forecast error).

2.6.1 Age of the company

The company with longer operations before going public with a history of reporting the financial report or profit tends to have more accurate earnings forecast. This is because forecasting also depends on the operating history of the companies. The older the companies are, the more experienced they are in forecasting their earnings. This is due to the fact that the most crucial information in making the forecast for the earnings is the historical data of the company (Jelic et al., 1998). The historical data can direct and guide the management to make more accurate earnings forecast. Jelic et al. (1998) explain that using other companies' earnings in the same industry as a proxy to forecast the newly established company's earnings could lead to less reliable forecast. Therefore, if the company is new in the industry, it is slightly difficult to forecast its earnings since there is no evidence or patterns of its earnings before this had been documented or lack (Firth, 1998).

Another research by Hernett and Romcke (2000) suggests that the older and more mature businesses are, the more likely they are to have established trading histories and stable growth patterns, which provide more conducive evidence and support for greater forecasting precision. Moreover, the study by Firth and Smith (1992) found that the age of the company has a negative relationship with the forecast accuracy which indicates that the older the company, the less forecast error it has. This relates to a study by Berlinger and Robbins (1986) which suggests that the younger company has difficulty in forecasting its profit. Other studies by Jelic et al. (1998); Yau and Chun (1999); Ismail and Weetman (2008); and Firth et al. (2013) also consider company age as one of the determinants of the accuracy of earnings forecast. Jelic et al. (1998) report that the age of the company is significant at 10 percent level which supports their hypotheses that this variable has negative relationship with the forecast errors. With the evidence from previous research, therefore, the age of the company has a relationship with the forecast errors of the earnings forecast.

2.6.2 Size of the company

The study by Firth and Smith (1992) and El-Rajabi and Gunasekaran (2006) suggest that the size of the company determines its capability to have control on its own market, particularly for larger companies. This provides an idea that the size of the company determines its ability to forecast its earnings since it has an influence on its own market. Another explanation by Lonkani and Firth (2005) is that a lot of resources can be acquired by the larger company in order to produce its earnings forecast with less forecast

errors. Large companies tend to have better management capability, because they consist of many departments; in addition, larger companies are more systematically managed leading to more systematic and accurate earnings forecast. Generally, previous findings show that the size of the company determines its earnings stability, i.e., the larger companies lean towards more stable earnings. Thus, the earnings stability will lead the management to make more accurate earnings forecast (Jelic et al., 1998). Firth et al. (2013), Ismail and Weetman (2008), El-Rajabi and Gunasekaran (2006) and Yau and Chun (1999), in their studies, also include company size as one of the factors that influences the earnings forecast accuracy.

The studies by Chan et al. (1996) and Firth and Smith (1992) also suggest that the bigger the size of the company, the more accurate is the earnings forecast. This is due to the larger firms usually being more diversified and having more control over their market settings. Moreover, they have better information gathering and forecasting systems. Furthermore, the economies of scale operate in their favor. Their earnings forecast should therefore be more accurate than smaller firms. In addition, the study by Chan et al. (1996), is also in line with other researches, which found that between the company size and absolute forecast errors (AFE), there is negative relationship which is the same as the evidence in most of the studies.

On the contrary, Lonkani and Firth (2005) recognize that the relationship between company size and AFE is positive, which means that the larger the company size, the less accurate the forecasts, and this is unexpected findings with further justification by the

researchers. The measurement of the age of the company in the study by Jelic et al. (1998), is determined by the total asset after new issue, end of year market value after the new issue, and average turnover achieved during a period of three years prior to the listing as the proxies for the company size.

With all the evidence from previous studies, it is proven that the size of the company has relationship with the forecast error of the earnings forecast. Thus, size can be considered as one of the factors that influences the earnings forecast due to larger companies having more resources and better ability to make a forecast compared to small companies.

2.6.3 Forecast interval (horizon)

The forecast interval is the time interval between the prospectus date and the end of the forecast period. This period is the period when the management runs the business activity to meet the targeted earnings forecast to report the actual profit, i.e., whether the management was able to meet the targeted and forecasted earnings.

In general, the expectation that can be concluded is the increment of the forecast interval will increase the forecast error (Chan et al., 1996 and El-Rajabi and Gunasekaran, 2006). This is due to the reason of the longer the forecast interval providing the opportunity for the unexpected occurrence in the market to intervene the earnings forecast as predicted (Yau and Chun, 1999). The same suggestion is made by Firth and Smith (1992), that the forecast error is lesser with shorter forecast interval.

Furthermore, Chan et al. (1996) explain that uncertainty and risk are included in the forecasting process because forecast itself is not a guarantee. That is why, when the forecast interval is longer, there is a probability of unexpected economic conditions occurring that might disturb the earnings forecast. According to Jelic et al. (1998), the forecast horizon is measured in terms of the number of months between the prospectus date and the end of the forecast period.

Another study by Firth et al. (2013) includes length of the forecast horizon as a factor that influences forecast accuracy. In addition, a study by Chan et al. (1996) also tested forecast horizon for IPO companies in Hong Kong. In the hypotheses development of this study, it is indicated that the longer the forecast horizon, the more likely the occurrence of unexpected changes. Moreover, Chan et al. (1996) provide a hypothesis which indicates that the shorter the forecast horizon, the higher the prospectuses' earnings forecast accuracy, which indicates the negative relationship between forecast horizon and forecast accuracy.

Another argument regarding forecast horizon is that when the forecast period is longer, it enables the management to thoroughly examine its capital expenditure decision and perform the trading activities to achieve the forecasted earnings, consequently leading the management to have the ability to more accurately predict their earnings (Ferris and Hayes, 1977; El-Rajabi and Gunasekaran, 2006). With all the evidence from previous researches, therefore, the forecast horizon has an influence on the forecast errors of the earnings forecast.

2.6.4 Leverage (the gearing ratio)

Previous researches define that financial leverage is the interest that needs to be expensed by the company, where the expenses, such as interest, depends on the changes in the market condition. Due to this fact, the interest expense involves the risk element (Chan et al., 1996). The study by Jelic et al. (1998) documents that Malaysian conditions for earnings forecast of IPOs must be verified by the companies' advisers. Basically, the companies' advisers are the domestic banks who are the lead underwriters. This indicates that the bank and the management of IPOs are responsible for the earnings forecast. This scenario shows that the banks will provide loans to the company that potentially has the ability to repay the debt accordingly and the earnings of the companies are predicted to be more stable.

When the bank is able to take a risk to provide loans to the companies, it shows that the bank is monitoring the earnings forecast of the company. With the confidence towards the IPO companies, the bank expects less forecast error in their earnings forecast. This leads to the idea that the higher the level of debt for the IPO company, the less forecast error it has. The same argument is put forth by El-Rajabi and Gunasekaran (2006) who explain that the forecast is more accurate when the leverage of the company is higher. Another argument by Firth and Smith (1992) opines that the earnings of IPOs with large percentage of debt is slightly more difficult to be forecasted because of the high level of debt, indicating high level of interest expenses to be paid by the companies will affect their actual earnings. Additionally, the same argument is provided by Ismail and

Weetman (2008) and Yau and Chun (1999), that high leverage of the IPO companies leads to the decrease in the accuracy of the earnings forecast due to the interest expenses which affect its earnings fluctuation. Therefore, all the evidences and arguments by previous studies show that the leverage of the company has an influence on forecast error of the earnings forecast.

2.6.5 Auditor's reputation

Watts and Zimmerman (1986) explain that the auditor has the ability to enhance the quality of the financial statement by monitoring the chances of misreporting. With this added value by the auditor towards the financial reporting, it demonstrates that the forecast errors of the management earnings forecast is also influenced by the reputation of the auditor of a particular company, since the disclosure of the earnings forecast is part of the financial reporting under the responsibility of the reporting accountant. The auditor's capability to audit the earnings forecast of the IPO company will influence its accuracy level. Almost all literature to date considers the Big Four audit firms as the most reputable auditors (Karim et al., 2013). The reputation held by the well-known auditors, like the Big Four audit firms, make the auditors perform their audit work thoroughly and systematically, thus, leading them to really examine the earnings forecast reported by companies. Furthermore, the study by Firth and Smith (1992), provide the same argument, where the Big Eight audit firms (currently Big Four audit firms) involved in the production of the earnings forecast of the IPOs will lead to less forecast error. In addition, the study conducted by Lee, Taylor and Taylor (2006) also reports that the

earnings forecast audited by the Big Six audit firms (currently Big Four audit firms) are more accurate as compared to other audit firms due to the characteristics acquired by these Big Six audit firms, i.e., audit quality and audit conservatism. The reputation of these audit firms is because of the important characteristics possessed by them, which can influence the audit work performed by the auditor to assist the management of IPO companies produce less forecast errors for their earnings forecast.

Furthermore, the audit firms with well-established brand names, like Big Four audit firms, are motivated to maintain their reputation by maintaining high quality standards (Yau and Chun, 1999). The confidence level of the potential investors will be improved with the examination and verification by the high quality of the external auditors towards the earnings forecast (El-Rajabi and Gunasekaran, 2006; Yau and Chun, 1999). The study by Chan et al. (1996) states that the listing rules require that the accounting and calculation of the earnings forecast must be checked and certified by the reporting accountant. Moreover, in producing the earnings forecast, the auditor is responsible for certifying the earnings forecast that has been reported in true and fair view according to the accounting standards and policies provided by the company (Firth and Smith, 1992). This responsibility and obligation performed by the auditors show the importance of auditors' reputation in influencing the level of the forecast error of the earnings forecast.

Similarly in Malaysia, the earnings forecast must be certified and reported by the reporting accountant (auditor). As reported by Jelic et al. (1998), for the Malaysian environment, the responsibility of the auditor to verify and confirm the forecast accuracy

according to the accounting policies practiced by the company is required by the Securities Commission. In addition, according to the study by Chen and Firth (1999), the responsibilities of the reporting accountants are to certify the calculations and accounting methods used in the earnings forecast by the IPO companies. This is to ensure that the earnings forecast is prepared in accordance with the accounting standards and there is no misleading information in the prospectuses' earnings forecast and the forecast errors are within the acceptable range set by the relevant authority.

In the study by De Angelo (1981), the researcher suggests that the Big Six audit firms (currently known as Big Four audit firms) are the high quality producers of audits and are likely to be associated with more successful new issues. It shows that the better the reputation of the auditor, the more accurate the earnings forecast by the management, since the earnings forecast has been verified by the auditors (El-Rajabi and Gunasekaran, 2006). In the study conducted by Firth et al. (2013), El-Rajabi and Gunasekaran (2006) and Jelic et al. (1998), the auditors' reputation is also tested in the hypothesis. However, Jelic et al. (1998) and Yau and Chun (1999) found that the earnings forecast accuracy in Malaysia is not really associated with the reputable auditor and is negatively related, even though the Big Six audit firms (currently known as Big Four) are associated with high reputation and well-established brand-name.

Lee, Taylor and Taylor (2006) find that after controlling for other factors associated with forecast error, there is some evidence that forecasts audited by Big Six auditors prove more accurate than those audited by a non-Big Six auditors, although this result is not

robust across alternative measures of forecast accuracy. Thus, with all these explanations, it shows that the auditors' reputation has an influence on the forecast error of the earnings forecast.

2.6.6 Industry

Chan et al. (1996) and Firth and Smith (1992) explain that the profits for companies in some industries may be inherently more difficult to predict than others. Thus, the industries of the IPO companies also influence the accuracy level of the earnings forecast. According to Jelic et al. (1998), it is suggested that for some industries, forecasting may be easier, because their profits are likely to be less sensitive to economic cycles and also because they might be heavily regulated. In their studies, they found that the construction, services and special activities have a higher forecast error when compared to companies in other industries. Thus, the forecast error of the earnings forecast is also influenced by the industry involved in by the companies.

2.6.7 IFRS convergence

Several studies, including Firth et al. (2013) and Horton et al. (2013) include IFRS adoption in their research as one of the factors that influences earnings forecast (forecast error). In the study by Horton et al. (2013), they found that companies that report their earnings forecast under IFRS experience decline in their forecast error. Moreover, Firth et al. (2013), in their studies on Australian IPOs, found that the result of the total sample

reveals that the IFRS coefficient estimates have a strongly positive sign across the regression models. The introduction of IFRS, at least during the adaptation period, restrains the ability of Australian IPO companies to predict accurately.

It is predicted that the convergence of IFRS will improve the forecast error level of the earnings forecasts of IPOs. This is due to the compliance with the high standards of accounting. Several evidences therefore identify that the convergence of IFRS improves the accuracy of earnings forecast of the IPO companies.

Tan, Wang and Welker (2011) explain that the more comprehensive disclosure requirements under IFRS may make earnings easier to understand and predict, for companies in IFRS-adopting countries than for firms in non-IFRS adopting countries. In addition, Horton, Serafeim, and Serafeim (2008) also found that mandatory adopters experience improved earnings forecasts accuracy and the improvement is greater for firms with accounting practices that diverge the most from IFRS. Another study by Wang, Young, and Zhuang (2008) found that the forecast errors of the earnings forecast and the earnings forecast dispersion decrease after mandatory adoption dates for both voluntary and mandatory adopters in 17 EU countries.

Furthermore, the study conducted by Yu (2010) explains that the adoption of IFRS assists the investors regarding information asymmetry problem. In addition, the study by Gebhardt and Farkas (2011) found that under the disclosure of IFRS, the restrictions recognize that losses incurred under IAS 39 significantly reduce income smoothing. This

indicates that the convergence of IFRS enhances the financial reporting quality. Since the management earnings forecast depends on the quality of historical financial reporting, this will lead to the improvement of earnings forecast. According to Barth, Landsman, and Lang (2008), the companies that apply IAS generally evidence an improvement in accounting quality between the pre- and post-adoption periods. Thus, the IFRS convergence has an influence on the forecast errors of the earnings forecast.

2.7 Summary

The signaling theory provides tools to minimize information asymmetry between management of the IPO companies and the potential shareholders. As for the IPO companies, the prospectuses act as a tool to signal the shareholders of the company's performance and expected performance through the earnings forecast included in the prospectuses. This earnings forecast in the prospectuses is prepared by the management of the company to attract the potential investors and to be analyzed by them to make investment decision. The study by Hornett and Romcke (2000) explain that the level of forecast error is very important to provide the investors the most reliable earnings forecast. In order to minimize the forecast errors, one of the factors that contributes to its reduction, is the convergence of the IFRS. Thus, Malaysia and many countries adopt this international accounting standard.

Prior researches find mixed results on the relationship between IFRS convergence and earnings forecast. However, it is believed that the full IFRS adoption and convergence in

Malaysia will improve the forecast error. Furthermore, this study incorporates several variables that potentially influence the effect of IFRS on the earnings forecast, including age of the company, size of the company, auditors' reputation, forecast horizon, leverage and classification of industry.

CHAPTER THREE

METHODS

3.0 Introduction

This chapter discusses the research framework which underlies the formulation of the study research hypothesis along with the overall approach use in data collection and analysis. Section 3.1 shows the research framework, which provides the graphical view of the effect of regulatory changes and other firm specific attributes on forecast error. Based on the research framework seven (7) hypotheses were developed and was discussed in section 3.2. In the section, 3.3 demonstrate the sample size. Lastly, the overall research design was provided discussed in section 3.4.

3.1 Research Framework

Impact of IFRS on earnings forecast

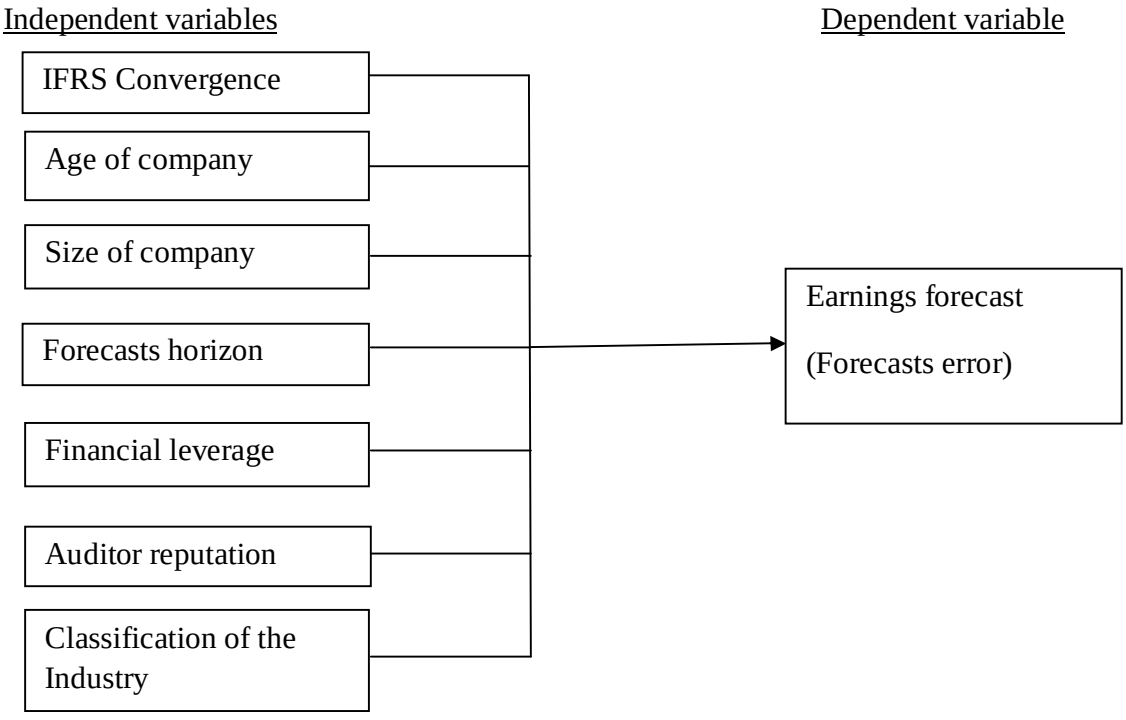

Figure 3.1 *Research framework*

Referring to Figure 3.1, the research framework for multivariate analysis was developed base on Jelic et al. (1998) research model. The present study investigates the extent of error contained in forecast earnings included in the prospectus of IPO before and after IFRS convergence. In addition, other factors that influence forecast error are examined.

3.2 Hypotheses Development

3.2.1 IFRS Convergence

The relationship between IFRS adoption and earnings forecasts have been subjected to empirical research (Byard, Li and Yu, 2010; Firth et al., 2013). Ball (2006), Choi and Meek (2005), Yu (2010), found that the adoption of IFRS improves foreign mutual fund holdings, cross-border holdings and reduce the cost of information processing for foreign investors. These findings imply that the convergence of IFRS minimizes information asymmetry between shareholders and managers. Base of on the findings of these previous studies, it can argue that IFRS convergence will attract more foreign investment into the domestic market. Likewise, it is expected that IFRS convergence will cause significant change in the accounting figures provided in the prospectus of IPO companies. Such figures according to past literature are reliable and enhance the quality of forecast earnings. Base on the preceding theoretical justification, the following hypothesis is developed.

H_1: The forecast errors of earnings forecasts decreases after IFRS convergence.

3.2.2 Age

Another factor established in prior literature that affect earnings forecast is company age (Ahmad-Zaluki and Wan-Hussin, 2010; Jelic et al., 1998; Firth et al., 2013). It is argued in extant studies that business that have been in the period for years are considered to be matured and experience in managing business operation. Apart from this Jelic et al. (1998) mentioned that it is more difficult to forecast earning for new companies compare to companies that have been in existence for long. This is because the earnings forecast depend on past operating history of the company. Old companies already have historical information about their performance (measured by profit). Thus, earning forecast for such company can be more accurate and precise due to past antecedent. Accordingly, Hernett and Romcke (2000) predict that earning forecast accuracy improves with company age. Jelic et al. (1998) as well found that, the level of forecast accuracy for this variable; age for the companies are at the level of 10 percent and indicate that the forecast errors are less for the companies with longer operating history. In this study, company's age is measured by the number of days between dates of incorporation and company listing divides by 365 days. Consequently the present study hypothesizes that:

H_2: Age of the company has a negative relationship with forecast error before and after IFRS convergence.

3.2.3 Size

Previous literature's findings show that the size of the company determines its earnings stability; i.e. large companies witness more stability in earnings. Consequently, big companies are able to make more accurate earnings forecast (Firth et al., 2013; Jelic et

al., 1998). Arguing further Chan et al. (1996) explained that the size of the company determines its ability to gather information and manage its forecast. They found that, between the company size and AFE, there is a negative relationship. Big companies have systematic and efficient system to manage their earnings. As a result, it is documented that earnings forecast is more accurate for large companies compare to small ones.

In contrast to Chan et al. (1996) findings Lonkani and Firth (2005), found a positive relationship between company size and AFE. It implies that forecast accuracy decline with company size. Using total asset, end of year market value and average turnover as a proxy for company size Jelic et al. (1998) for a period of three years also found that a large company has low forecast error. Base on previous findings and their proxies the following hypothesis is develop:

H_3: The size of the company has a negative relationship with the forecast error before and after IFRS convergence.

3.2.4 Forecast horizon

Forecast horizon is another determinant of management earnings forecast. Findings from previous literature show that the relationship between forecast horizon and forecast error to be positive. Short interval lead to improve earnings forecast accuracy. The study of Chan et al. (1996) shows that earnings forecast involve a high degree of uncertainty and risk. Therefore, long forecast horizon result in more unexpected change. Their study found a positive relationship between forecast horizon and forecast error Hagerman and Ruland (1979) suggest that the accuracy of management earning forecast decline horizon

increased. Similarly, Dev and Webb (1972) and Mak (1989) also found significant positive relationship between forecast horizon and forecast error in UK and New Zealand respectively. Forecast error is measured in term of the number of months between the prospectus date and the end of the forecast period (Jelic et al., 1998).

This study envisage a positive association between forecast horizon and forecast error where short interval lead to less forecast error. Hence, the following hypothesis will be tested:

H_4: The forecast horizon has a positive relationship with the forecast error before and after IFRS convergence.

3.2.5 Leverage

Debt (gearing) and forecast is hypothesizes to have a negative relationship. High level of debt is argued to result in high monitoring by financial institution due to the weak financial condition of the company. Thus, the companies will prepare financial statement and forecast earnings with less error since they have to prepare the financial statement to be viewed by a third party. It is predicted that the high level of debt will lead to lower forecast error.

As suggested by agency theory companies with higher gearing will have high bonding and monitoring cost (Jelic et al., 1998). The study by Chan et al. (1996), explained that the higher the financial leverage, the higher the risk faced by the company. Therefore, it

is expected that companies with high gearing ratio will have lower earnings forecast accuracy in their prospectus.

In this study financial leverage is measured by total liabilities scaled by total assets of the company at year-end date of the year under forecast. The higher the financial leverage, the lower will be the forecast error. Thus, this study hypothesis the relationship between forecast error and leverage in negative association.

H_5: There is a negative relationship between the financial leverage and forecast error, before and after IFRS convergence.

3.2.6 Auditors' reputation

Malaysia Securities Commissions mandate IPO companies to disclose their forecasted earnings in the prospectus. In line with this regulation, auditors must provide reasonable assurance that the earnings forecast disclosed are prepared in accordance with accounting standards and policies guiding the preparation of accounts (Jelic et al., 1998). In a related study Chan et al. (1996) investigated the association between status of audit firm and forecast error. The reputation of audit firms is associated with the ability of the firms to perform better. It is hypothesized that well known auditors with high reputation are associated with financial reporting quality. Chan et al. (1996) examined the association between auditor status whether Big four or non-Big four and forecast error. Also, Jelic et al. (1998) tested the relationship between auditors' reputation proxied by a dummy variable (1 assigned for Big Four auditor and 0 otherwise) and forecast error.

Base on the preceding argument it is hypothesized that,

H_6: Forecast error will be lower for IPO companies audited by Big Four before and after IFRS convergence.

3.2.7 Classification of Industry

It is difficult to forecast the profit of some companies due to the nature of their business and the industry where they operate. Example includes companies operating in the food industry.

There are also some industries that difficult to forecast the trend of the sales or profit for certain sectors. In a study by Chan et al. (1996), it is argued that industry classification may have an association with the level of forecast accuracy. Forecasting profits for companies in some industries may inherently be more difficult. Jelic et al. (1998), compare companies in the service sector, construction and special activities with other industries. Their study documented the relationship as industrial companies have higher forecast error compare to companies in other industries. Dev and Webb (1972), provide empirical evidence that shows that forecast error in some industries is significantly lesser compare to other companies in the entire sample.

Industry classification is measured according to the proxy use by Jelic et al. (1998) and Chan et al. (1996). Industry is classified in this study as trading services, construction, properties, technology, and plantation as industrial companies, and consumer products and industrial products as non-industrial companies.

H_7: Companies industry membership has higher forecast error compared to companies in other industries before and after IFRS convergence.

3.3. Sample Size

Public listed companies on Bursa Malaysia represent the population of this study and stands as unit of analysis. For the purpose of achieving the study's research objectives, the sample size consists of IPO companies between the periods of 2004 to 2007.

IFRS convergence started effective from 1st January 2006 thus; IPO companies listed on the main board and second board of bursa Malaysia between the periods of 2004 to 2007 are taken as the sample of the study. Year 2004 to 2005 serves as the pre IFRS period while 2006 and 2007 are the post convergence period. Initially, the total sample for the IPO companies from year 2004 to 2007 is 115. However, following Ahmad-Zaluki et al. (2007) excluded companies carrying out infrastructure project due to the high market capitalization. Another issue that was taken care of is companies with insufficient information. As a result, the total sample reduces to 100 companies representing 86.96 per cent of the total population.

Based on the above sample selected, the percentage of industry represented in the sample includes 41 per cent from the industrial product, 25 per cent from trading and services, 23 percent from consumer product four percent from construction, plantation four per cent, and properties two percent while technology is only one per cent. 33 IPO companies are under convergence period while 67 IPO companies are listed before IFRS convergence.

Table 3.1:
Derivation of sample size

Descriptions	No. of companies
Total of IPO companies in 2004	41
Total of IPO companies in 2005	33
Total of IPO companies in 2006	18
Total of IPO companies in 2007	23
Total of IPO companies in Main Board and Second Board (2004 to 2007)	115
Companies with infrastructure project	(2)
Companies with insufficient data	(13)
Final sample size	100

Table 3.2:
Sector of samples companies

Sectors	No. of companies
Trading/services	25
Construction	4
Properties	2
Technology	1
Plantation	4
Consumer products	23
Industrial products	41
Total	100

3.4 Research Design

3.4.1 Definition and Measurement of Variables

Following Firth et al. (2013), Jelic et al. (1998), Keasey and McGuiness, (1991), Cheng and Firth, (2000), and Chan et al. (1996), this study uses forecast error (FE) as the dependent variable. According to Jelic et al. (1998), forecast error is defined as the difference between forecast and actual profits scaled by forecast profit. The present study investigates whether IFRS convergence influence earnings forecast error. Forecast errors are derived by comparing forecast earnings after tax disclosed inside the prospectus with the actual profit figures in the annual report. It is the difference between real profit and forecast profit divided by the absolute value of the forecast profit.

In the present study by Firth et al. (2013), they had tested forecast error (FE) as its dependent variable to test the impact of IFRS on forecast bias. The forecast error is used to measure the bias in the forecast (Firth et. al., 2013).

Forecast earnings are as disclosed in the company prospectus. This study is following Jelic et al. (1998), where the forecast error is calculated according to the figure presented in the prospectuses; forecast earnings after tax and compare with the actual earnings after tax in the annual report. This is to ensure the comparison is on the same basis.

$$FE_i = (AP_i - FP_i) / |FP_i|$$

Where:

AP_i = actual profit of company *i*,

FP_i = forecast profit of company *i*

Positive value base on the computation above that is FE greater than zero indicates that the profit that was forecasted is underestimated from the actual profit and it is called pessimistic forecast. However, a negative value signals an overestimation of actual profit meaning that forecast error is less than zero, and it is called optimistic forecast. According to Jelic et al. (1998) if forecasts are unbiased that is, company management do not systematically over or under predict earnings, then the mean of the forecast errors should not be significantly different from zero.

During the periods 2004-2007, it is mandatory for IPOs companies to disclose their earnings forecast. However, effective from 2008 disclosure of forecast earnings in the prospectus is voluntary (SC, 2008).

All data in this study are collected from secondary sources. The financial features of the issuing companies are sourced from their prospectuses that are downloaded from the listed companies in the IPOs prospectuses. Figures in the annual reports are obtained from the Bursa Malaysia. Information on actual profit is sourced from the annual report

of IPO companies downloaded from the Bursa Malaysia website. Data for the forecast horizon, company age, auditor, industry of, company's leverage and company's size are collected from the prospectuses.

Earnings forecast for each company was hand-collected from the prospectus, and it is properly taken in order to ensure it is matched with the actual earnings from the annual reports. The figures for forecast profits are taken accordingly under the forecast earnings after tax. To ensure consistency between actual earnings picked from the annual report also taken from the actual earnings after tax. All other data like the company age, company size, the forecast interval, the leverage of the company and the auditor for the company are also taken from the prospectuses. As for the industry involved by the company are taken from the website of Bursa Malaysia.

Following Firth et al. (2013) this study classifies companies into two groups: (i) forecasts for financial years before IFRS convergence (2004-2005) and forecasts for the financial year after IFRS convergence. Hence, the explanatory variable IFRS is a dichotomous. It takes the value of zero for forecast 2004-2005 (pre-IFRS convergence) and the value of one for forecast 2006-2007 (post-IFRS convergence).

The age of the company is measured by the number of years that each IPO company has been in operation before the year of listing. As for company size, this study follows previous researchers, (Firth and Smith, 1992; Mohamad et al., 1994, Jelic et al., 1998), the measurement used is log total assets, after the new issue. Forecast horizon is

measured according to the proxy use by Jelic et al. (1998) in their study. This is the number of month between the prospectus date and the end of the forecast period. As for financial leverage, it is proxied by gearing ratio. With respect to auditors' reputation, KPMG, Ernst and Young, PricewaterhouseCooper, Deloitte and Kassim Chan are classified under BIG4 audit firm which takes the value of 1. While those audit firm outside the above mentioned are classified under non-BIG4 and takes the value of 0. Industry classifies companies and those under trading, service, construction and properties take the value of one while those in the consumer product and industrial product take the value of 0 (Chan et al., 1996 and Jelic et al., 1998)

Lastly, consistent with Firth et al. (2013), the study control for INDUSTRY and YEAR to mitigate the industry and year effect in forecast error. The YEAR variable control was introduced in order to reduce regulatory regime changes effect.

Table 3.3: *Variables and their measurement*

Variables	Operational Definition	Measures	Sources(s)
FE	Forecasts errors	Actual profit minus forecast profit over forecast profit	Prospectuses and annual report
Experimental factors:			
IFRS	IFRS convergence	A dummy variable, 1 for post IFRS convergence, 0 for pre-IFRS convergence	Prospectuses
AGE	Company age	The number of years that each listing companies has been in operation before the year of listing (difference between listing date and incorporate date)	Prospectuses
SIZE	Company size	Use log total assets after the new issue as proxy for size.	Prospectuses
HORIZON	Forecast horizon	The number of months between the prospectus date and the end of the forecast period	Prospectuses
LEVERAGE	Financial leverage	Gearing ratio (i.e Total liabilities over Total assets) of the company at the year-end date of the year under forecast	Prospectuses
AUDITOR	Auditors' reputation	A dummy variable, 1 for BIG4 audit firms, 0 for non-BIG4 audit firms	Prospectuses
INDUSTRY	Classification of industry	A dummy variable, 1 for industrial companies and 0 for non-industry companies	Bursa Malaysia website
Control variables:			
INDUSTRY	Classification of industry	A dummy variable, 1 for industrial companies and 0 for non-industry companies	Bursa Malaysia website
YEAR	Year of listing IPO	The 2004 until 2005 before the IFRS convergence and 2006 until 2007 after the convergence	Bursa Malaysia website

3.4.2 Research Model

This study uses the multivariate analysis to investigate the relationship between experimental variables and the forecast error before and after IFRS convergence. This study uses ordinary least squares (OLS) multiple regression to perform a multivariate analysis.

In line with the theoretical framework and proposed hypotheses, the relationship between experimental variables and earnings forecast is model in equation 3.1 below. This model is developed base on Firth et al. (2013) and Ahmad-Zaluki and Wan-Hussin (2010) and El-Rajabi and Gunasekaran (2006) Jelic et al. (1998). To test all of the hypotheses with the error metrics.

$$FE = \beta_0 + \beta_1 IFRS + \beta_2 AGE + \beta_3 SIZE + \beta_4 HORIZON + \beta_5 LEVERAGE + \beta_6 AUDITOR + \beta_7 INDUSTRY + \varepsilon_i \quad (3.1)$$

Where:

FE = the actual profit minus forecast profit over forecast profit.

IFRS =a dummy variable, 1 for post-IFRS convergence, 0 for pre-IFRS convergence.

AGE =the number of years that each listing companies has been in operation before the year of listing (difference between listing date and incorporate date).

SIZE =company size, measured by log total assets, after the new issue.

HORIZON =the number of months between the prospectuses date and the end of the forecast period.

LEVERAGE =gearing ratio (i.e., total liabilities over total assets) of the company at the year-end date of the year under forecast.

AUDITOR =a dummy variable, 1 for Big Four audit firms, 0 for non-Big Four audit firms.

INDUSTRY =a dummy variable, 1 as industrial companies, 0 for non-industry companies, and

εi =error terms.

3.5 Summary

This study investigates whether earnings forecast error for Malaysian IPOs companies would reduce as a result of IFRS convergence. The unit of analysis is Malaysian IPOs companies, and the time frame covers the period of 2004 through 2007. The sample size consists of 100 IPOs companies representing difference industry drawn from the main and the second board of Bursa Malaysia. The forecast error is proxied by the actual profit and the forecasted profit divided by the absolute value of the forecasted profit. Based on previous researches, this study hypothesizes that the IFRS convergence will reduce earnings forecast error of Malaysian IPOs.

Other than the main hypothesis, this study as well develops several other hypotheses. The study determines whether other experimental variables (i.e., age of the company, the company's size, financial leverage, auditors, forecast horizon and the industry) have any association with forecast error for the before and after IFRS convergence.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter discusses the results and interpretation of the empirical findings from the various analysis conducted between forecast error and the study explanatory variable. This chapter is organized as follows: section 4.1 presents the descriptive statistic and section 4.2 present the result of multivariate analysis and section 4.3 summarized the whole chapter.

4.1 Descriptive statistics

4.1.1 Descriptive statistics for dependent variable

This table 4.1 presents summary descriptive statistics of the forecast errors (FE). The samples comprise a total of 100 IPOs. Panels A, B and C further report result of one sample t-tests (Wilcoxon signed-rank tests) to test whether the mean differ significantly from zero. Panel D displays results of two sample t-tests with unequal variances using Welch's degrees of freedom to test equality of error means of the partitioned samples.

The summary statistics used forecast error (FE) as dependent variable is shown in Table 4.1. The mean, median and standard deviations are separated into four panels: Panel A for total sample, Panel B for pre-IFRS convergence and Panel C for post-IFRS convergence and Panel D for the test for differences in means.

Panel A shows that the mean FE for the overall sample is 2.71 percent. The positive sign (FE > 0) indicate that, on the average, managers underestimate actual earnings. This figure is in contrast with the figure reported by Ahmad-Zaluki and Wan-Hussin (2010) that found -3.50 per cent increase indicating an improvement during the period of their study. Though, the finding is consistent with that of Jelic et al. (1998) that reported a mean FE of 33.37 per cent. The mean forecast error also contradicts the figure reported by Firth et al. (2013) which is -11.64 per cent. The result shows that, on the average, the management of IPO companies during the period 2004 to 2007 made pessimistic biased forecasts as indicated by the positive sign in FE figure. The highest forecast error is 238.27 per cent and the lowest forecast error is -85.49 per cent.

Table 4.1: *Descriptive statistics of dependent variable*

	FE (%)	FE(%)*
Panel A: Total sample		
N=100		
Mean	2.71	-1.04
Median	0.52	0.28
Std. Dev	40.22	29.72
Min	-85.49	-85.49
Max	238.27	93.43
Panel B: Pre-IFRS convergence		
N=67		
Mean	-0.44	-6.20
Median	-3.65	-3.65
Std. Dev	46.98	32.61
Min	-85.49	-85.49
Max	238.27	93.43
Panel C: Post-IFRS convergence		
N=33		
Mean	9.12	9.12
Median	5.90	5.90
Std. Dev	19.76	19.76
Min	-35.09	-35.09
Max	74.58	74.58
Panel D: Test for difference in means		
t-statistic	-	-2.48
p-value	-	0.02

Notes: *Recomputed the FE descriptive statistics after remove the two outliers with (Panel A; N=98), (Panel B; N=65) and (Panel C; N=33).

From the descriptive statistics outliers are discovered in the data set, the study truncates the data by removing them. The normality test was use to check whether the data are normally distributed. From the test, two companies are discovered to have the value of their FE to be above 100 percent.

The normality test had been used on this data to ensure the data is normally distributed. From the test there are two companies of the dependent variables above the 100 percent range which made the data reduced to 98 companies from 100 companies. Ahmad-Zaluki and Wan-Hussin (2010) and Jelic et al. (1998) suggest that outliers should be removed from the study sample. This is because if they are not removed the mean result for FE will be biased. Consequently, two companies KBB Resources Berhad and G.A Blue International Berhad with 135.39 and 238.27 FE were deleted from our sample, making our final sample to become 98.

This is because the outlier may affect the result on the means of FEs (Jelic et al., 1998). After removing the outliers companies, the mean FEs are (-1.04) per cent. This indicates that on average after removing the outliers, the on average managers overestimate actual earnings for the companies listed during 2004 to 2007. This mean FE (-1.04) per cent has same negative sign with the previous study (-3.50) per cent by Ahmad-Zaluki and Wan-Hussin (2010) during the period 1999 to 2006.

Panel B and C show the descriptive statistics for forecast errors under two period; pre-IFRS convergence and post-IFRS convergence period. Focusing on Panel B, there are 67 IPO companies between 2004 and 2005 and the mean FE is -0.44 percent. The negative sign i.e. FE less than zero indicates that on the average, managers overestimate actual earnings during the pre-IFRS convergence. Accordingly, it means that forecasted earnings are optimistically biased before IFRS convergence. The result is consistent with Firth et al. (2013) finding in Australia.

The same negative sign had been reported by Firth et al. (2013) on average forecast error during Australian GAAP (AGAAP) which the mean error (-16.12) per cent. After removing the outliers which fall in the Panel B (the two companies categorized as outliers fall under pre-IFRS sample), the sample reduced to 65 companies and the mean FE is (-6.20) per cent. The negative sign still the same however, after removed the outliers the mean FE show that the forecast error increased by (5.76) per cent.

In Panel C the mean FE for the 33 samples shows a positive sign (i.e. FE greater than 0) of 9.12 per cent. As explained under the overall sample, the positive sign indicates that earnings forecast during post IFRS convergence is conservative and within the ± 10 per cent acceptable range by regulatory authority. Meanwhile, the result is not consistent with what was reported by Firth et al. (2013) during the post-IFRS convergence period for Australia IPO companies.

4.1.2 Descriptive Statistic for Independent variable

Table 4.2 present the descriptive statistics for the independent variables that are used in the study after removing outliers. There are seven independent variables for this study which are: IFRS, AGE, SIZE, HORIZON, LEVERAGE, AUDITOR and INDUSTRY. The table is made up of four panels. Panel A gives the descriptive statistic for the combine period. While panel B and panel C shows the descriptive statistics for the partitioned sample into pre and post IFRS convergence respectively. Panel D presents results of two sample t-tests to test equality of means of the partitioned samples.

This table presents summary descriptive of the independent variables after removing the outliers (n=98), (Panel B;n=65) (Panel C;n=33) which are the AGE- the numbers of years that each listing companies has been in operation before the year of listing (difference between listing date and incorporate date), SIZE-log total assets after the new issue, HORIZON-the number of months between prospectuses date and the end of the forecast period, LEVERAGE-gearing ratio (total liabilities over total assets) of the company at the year-end date of the year under forecast, AUDITOR-1 for BIG4 audit firms, 0 for non-BIG4 audit firms, INDUSTRY-1 for trading services, construction, properties, technology, plantation and 0 for consumer and industrial products, IFRS-1 for post-IFRS convergence and 0-for pre-IFRS convergence.

Table 4.2: *Descriptive statistics of independent variables*

	Age (years)	**Size (RM million)**	**Horizon (month)**	**Leverage (%gearing ratio)**	**Auditor (%BIG4)**	**Industry (%industrial)**
Panel A:Total Sample (N=98)						
Mean	3.09	272.67	7.64	52.78	52.04	37.76
Median	1.35	97.95	7.00	48.97		
Standard Deviation	4.91	790.98	2.99	24.46		.
Min	0.15	35.12	3.00	3.86		
Max	33.06	6313.79	13.00	100.01		
Panel B:Pre-IFRS convergence						
Mean	2.62	296.18	7.83	50.07	52.31	27.69
Median	1.19	94.41	8.00	46.73		
Standard deviation	3.94	945.08	3.04	23.19		
Min	0.15	35.12	3.00	3.86		
Max	21.04	6313.79	13.00	100.00		
Panel C:Post-IFRS convergence						
Mean	4.03	226.36	7.27	58.12	51.52	57.58
Median	1.71	130.44	7.00	54.61		
Standard deviation	6.38	326.84	2.92	26.34		
Min	0.19	38.38	3.00	16.99		
Max	33.06	1903.95	13.00	100.00		
Panel D:Test for difference in means						
t-statistic	-1.3475	0.4112	0.8694	-1.5523		
p-value	0.1810	0.6818	0.3868	0.1239		

In panel A, the mean for the age is 3.09, which indicate that, the average age of the listed IPO between 2004 and 2007 is three years. Company age ranges between 33 years to about 12 month old. Before IFRS convergence the average age is 2.62 years compare with an average of 4.03 years in the post convergence period.

The size of the company measured by total asset, in panel A, B and C for the IPO companies is RM 272.67 million, RM 296.18 million, and RM 226.36 million respectively. This shows that total assets of majority of the IPO companies during the period of 2004 to 2007 are approximately the same size during the period of pre and post IFRS convergence. The largest company has a total asset amounting to RM6, 313.79 million whereas the smallest company has a total asset worth of RM35.12 million.

In panel A, the mean forecast horizon for the overall sample is 7.64 months. It shows that on the average the forecast horizon for the IPO companies in the pre and post-IFRS convergence is less than a year. However, the mean for forecast horizon in Panel B (i.e. 7.83) and C (7.27) are relatively the same. The forecast horizon varied between 3 to 13 months.

The mean figure for leverage measured by total liabilities divided by total assets is 52.78 per cent with a wide range of 3.86 per cent and 100.01 per cent for the whole sample.

This can be interpreted to mean that on the average IPO companies are partially finance by debt.

52.04 per cent of the total samples use the services of BIG4 firms to audit their financial accounts. Making reference to panel B the pre-IFRS convergence period shows that 52.31 per cent of the IPO companies are audited by the BIG4 audit firms and in the post-IFRS convergence period 51.52 per cent of the sample is audited by BIG4 audit firm. From the information provided, more than half of the companies between 2004 to 2007employ the service of reputable audit firms. In addition, 37.76 per cent of the IPO companies are classified as industry companies and the remaining 62.24 per cent are from the non-industry companies. Lastly, from the total sample there are 65 per cent IPO companies in the pre-IFRS convergence period and 33 per cent IPO companies falls under the post-IFRS convergence period.

4.1.3 Distribution of FE

In order to clearly identify the number of companies in each FE category, this study report the distribution of FEs in 10 per cent bands in Table 4.3 below. It shows that out of 100 IPO companies, 53 sample companies (53 per cent) meet the regulatory limit of 10 per cent range required by regulators in Malaysia (Ahmad-Zaluki and Wan-Hussin, 2010). On the other hand, 47 per cent of the companies in the sample did not meet up with FEs with the required 10 per cent tolerance level. This percentage is 3.6 per cent lower than what was reported by Ahmad-Zaluki and Wan-Hussin (2010).

In addition, this study percentage is still lower than what was reported by Jelic et al. (1998). Jelic et al. (1998) reported 6.4 per cent in their study during the period 1984-1995. Out of the total samples 54 per cent of IPO companies exceeded the earnings forecast, while the remaining 46 per cent of the IPO companies' actual earnings falls below what was forecasted in the prospectus.

Table 4.3: *Distribution of Forecast Errors (FEs)*

Forecast error (%)	Number of companies
>100	0
90 to 100	1
80 to 90	0
70 to 80	3
60 to 70	0
50 to 60	1
40 to 50	2
30 to 40	2
20 to 30	6
10 to 20	7
0 to 10	30
-0 to -10	23
-10 to -20	5
-20 to -30	3
-30 to -40	5
-40 to -50	5
-50 to -60	1
-60 to -70	2
-70 to -80	1
-80 to -90	1
-90 to -100	0
< -100	0
Total number of sample	98

4.1.4 Univariate analyses

Panel D of table 4.1 and 4.2 present the result for the univariate analyses which is the test for difference in means. This study examine whether forecast errors decrease or increase in the post-IFRS convergence period. The t-statistic presented in table 4.1 shows a figure of -2.48 and it is statistically significant. The mean of FE reported under the pre-IFRS convergence is lower than what was reported in the post-IFRS convergence period. The mean for FE after remove the outliers for pre-IFRS convergence (Panel B) is (-6.20 per cent) and mean for FE post-IFRS convergence (Panel C) is (9.12 per cent).

The t-statistic shows that there is an increment of the FE under the post-IFRS convergence and the hypothesis H_1, is not supported. As for the panel D under Table 4.2, the t-statistic shows that the differences are not statistically significant.

Table 4.4 shows the bivariate Pearson correlation between dependent and independent variables. The number of samples is 98 after removing the outliers. The result is significantly different from zero at the *0.05 and **0.01 levels, respectively, using two-tailed tests. The bivariate correlation analysis reported in Table 4.4 shows moderate correlations between forecast horizon (HORIZON) and age of the company (AGE), and between classification of industry (INDUSTRY) and IFRS, with correlations of 0.284, and -0.2913, respectively. However, none of the independent variables has high correlations, which suggests multicollinearity is not likely to be an issue in the regression models.

In addition, to investigate the existence of multicollinearity in the estimation of the relationship between forecast error and the determinants of forecast error, the variance inflation factors (VIFs) for each of the independent variables was computed. Consistent with the previous correlation matrix (e.g Ahmad-Zaluki and Wan-Hussin (2010); Jelic et al., (1998); Chan et al., (1996)), VIFs for the independent variables as reported in column of Table 4.6 are always below 2.0, suggesting that multicollinearity is not likely to be a major factor influencing the results.

Table 4.4: Correlation matrix for variables in the determinants of forecast error regressions

	FE	IFRS	AGE	SIZE	HORIZON	LEVERAGE	AUDITOR
IFRS	0.245*						
AGE	-0.024	0.136					
SIZE	-0.121	-0.042	0.075				
HORIZON	-0.071	-0.088	0.284**	-0.048			
LEVERAGE	-0.020	0.156	-0.108	-0.122	0.210*		
AUDITOR	0.050	0.007	0.048	0.190	-0.074	-0.192	
INDUSTRY	-0.097	-0.291**	-0.068	-0.133	0.133	0.006	-0.200*

Note that FE represents the forecast errors measured by the difference between actual earnings and the forecast earnings divided by actual earnings forecast. IFRS is a dummy variables equal to 1 for post-IFRS convergence and 0 for pre-IFRS convergence, AGE is measured by the numbers of years that each listing companies has been in operation before the year of listing (difference between listing date and incorporate date), SIZE measured by the log total assets after the new issue, HORIZON measured by the number of months between prospectuses date and the end of the forecast period, LEVERAGE measured by gearing ratio (total liabilities over total assets) of the company at the year-end date of the year under forecast, AUDITOR is a dummy variable 1 for BIG4 audit firms, 0 for non-BIG4audit firms, INDUSTRY is a dummy variables which 1 for trading services, construction, properties, technology, plantation and 0 for consumer and industrial products.

4.2 Regression result

The multivariate analysis in this study is performed to see those factors that affect FE using the ordinary least square (OLS) regression method. Specifically, this study regresses the FE with the independent variables describes in the chapter three which are IFRS, AGE, SIZE, HORIZON, LEVERAGE, AUDITOR, INDUSTRY and YEAR. Three multiple regression results are reported in this study and presented in Table 4.5. Panel A present the result for the whole IPO companies sampled between the period 2004 to 2007. Both panel B and C excludes IFRS explanatory variable from the regression model, thus splitting the whole sample into pre and post-IFRS convergence period. The purpose of running multivariate analysis in this study is to determine the factors that influence the most the level of forecast errors.

For Panel A, B, and C in Table 4.5, all independent variables are included in the multiple regression model which are IFRS, AGE, SIZE, HORIZON, LEVERAGE, AUDITOR, INDUSTRY and YEAR. Following Firth et al. (2013) study, INDUSTRY and YEAR are treated as control variables. Thus, two sets of regression result are presented. The first control for INDUSTRY and YEAR effect while the second model is run without controlling for their effect. In Panel A, the coefficient for all variables, except for forecast horizon (HORIZON), auditors' reputation (AUDITOR) and IFRS convergence (IFRS), has the expected sign. In Panel A, for the (1) set, it demonstrates 8.93 per cent of the variation in forecast error.

In panel A, under the first regression the coefficient of IFRS is positive and not statistically significant. This explains that forecast error increases after IFRS convergence and is not in support of the first hypotheses postulated. However, when INDUSTRY and YEAR are excluded in the second regression result under panel A, the coefficient for IFRS still remain positive but now significant at 5 per cent level. This still contradict the first postulated hypothesis, since the result can still be interpreted to mean that under IFRS regime forecast errors increase. This result is similar with Firth et al. (2013), which found under the IFRS regime the forecast accuracy decrease, when forecast accuracy decrease means the forecast error increase. The reason for the increment in forecast error during IFRS regime might be due to first time effect. Management of companies is still learning to adapt with IFRS convergence.

Another reason provided by Firth et al. (2013) in the Australian study is the initial difficulties consists of three issues which are to have single business language with sharing rules, the motivation of management function and the determinants of the national institutional to frame the attributes of the financial reporting.

In the entire multiple regression panel, AGE variable exhibit the same coefficient sign and it is negative but not statistically significant. The result is consistent with the findings of previous studies for example Jelic et al. (1998). Though not significant, the argument states that longer operating history decrease forecast error, which is consistent with second hypothesis postulated in this study.

This result supports the argument that the more mature the companies will lead to more earnings stability, therefore result in the less forecast error. Hence, the H_2, which indicate that the longer the operating history of the company, decrease the forecast error, is empirically supported by the negative coefficient sign.

The coefficient of SIZE is shown to be negative and significant at 5 per cent in panel A and B. This is consistent with the third hypothesis postulated and other previous studies like Firth et al. (2013). The finding suggests that big size companies are able to manage their resources, thus are efficient in their earnings forecast compare to small companies. However, in panel C, under the post convergence period and controlling for INDUSTRY and YEAR reveals a positive coefficient but not statistically significant.

Horizon variable in panel A and B reveal a negative coefficient and was not significant. The negative sign contradict the positive sign that is been expected. Although, the finding is consistent with that of Firth et al. (2013) who reported that forecast error reduce when forecast interval is longer in pre- and post-IFRS convergence period. It is argued that long time horizon provide companies with greater flexibility in making decision on maintenance and capital expenditure which will result improving forecast accuracy. However under panel C, where INDUSTRY and YEAR effect was controlled for, positive sign as postulated in the study hypothesis is get but it is not significant. This explain that the long interval tend to result in unexpected change in the economic situation of the business.

This result indicate that the during the IFRS convergence the shorter the forecast interval will result in the less forecast error. Hence, the result under Panel C, empirically support H_4 in chapter 3.

The result for LEVERAGE reveals a negative coefficient as postulated in the hypothesis, though not statistically significant in the entire panel. This result support the 5th hypothesis developed in this study that, high gearing result in low forecast error and in accordance with the findings of Chan et al.,1996; Jelic et al.,1998). The result under panel C appears to be positive sign but after controlling the INDUSTRY and YEAR effect, the result is negative as expected. Meaning that, IPO companies in Malaysia between the period of 2004 and 2007 have about 50 per cent of their capital structure in debt. Thus, it indicates that IPO companies in Malaysia produce has less forecast error with the presence of high percentage of leverage. Under both pre- and post-IFRS convergence period, it shows that the higher the gearing of the IPO companies lesser will be the forecast error. Hence, H_5 is empirically supported by this result.

AUDITOR variable has an unexpected positive coefficient sign and is not statistically significant in panel A and B. This result is consistent with Jelic et al. (1998) and Mohamad et al. (1994), which reported the reputable auditors do not really have association with the forecast error in Malaysia. However, under panel C, after controlling for INDUSTRY and YEAR effect, the coefficient sign shows a negative sign as expected, though not statistically significant as well. This indicates that the IPO companies that

were audited by BIG4 have less forecast error when compare to non-BIG4 in the IFRS regime. It is argued that BIG4 audit firm has enough international experience to handle effectively and efficiently international accounting standards. Therefore, under the post-IFRS convergence, the IPO companies audited by BIG4 audit firms have less forecast error. Hence, the sixth hypothesis is empirically supported in the post-IFRS convergence period.

INDUSTRY variable shows a positive coefficient sign and is not statistically significant under panel A and C. This result indicates that companies classified under industry companies witness an increase in forecast error. The positive coefficient sign support the argument that companies in the industry sector have higher forecast error compared to other industries. Result after IFRS convergence also reveals same finding using total sample. Consistent with result by Jelic et al. (1998) the study found that companies in the industry membership have more forecast error relative to other companies. This result supports the argument that forecasting earning for some industries is difficult. Hence, H7 is empirically supported by the result shown under panel A and C.

On the overall, the regression results show that the first hypothesis is not empirically supported, since the sign contradicted the expected sign. The result shows that in the post-IFRS convergence period forecast errors increase as indicated by the positive sign and it is statistically significant. The second variables that affect FE is the AGE of the company where, the result shows that long operating history leads to less forecast error.

The third variables which is the SIZE also conforms to expected sign and is statistically significant, which means that the larger the company the lesser will be the forecast error. The result also shows that HORIZON has positive association with FE and is argued that shorter HORIZON result in less FE after excluding the two control variables.

LEVERAGE which indicates the company's gearing ratio shows that higher debt leads to less FE in both pre and post IFRS regime. As for AUDITOR, in the post convergence period IPO companies being audited by BIG4 audit firm have less forecast error. Consistent with the argument that reputable audit firm are conscious of their integrity thus are more professional. Lastly, the result for INDUSTRY shows that the IPO companies that are classified as industrial have higher FE as indicated by the positive coefficient sign under the post-IFRS convergence and total sample. To conclude, from all the independent variables the SIZE and the IFRS variables have statistically significant result in this study. These results present that the size of the company and the IFRS-convergence influence the most the forecast error of the earnings forecast for the IPO companies in Malaysia during the year 2004 to 2007.

Table 4.5: *Regression result*

	VIF	EXPECTED SIGN	Panel A		Panel B		Panel C	
			1	2	1	2	1	2
Constant			-0.33	0.36	-0.17	0.40	-0.42	0.93
			(-4145.801)	(3.215)	(-3005.925)	(5.166)	(-7492.362)	(11.578)
IFRS	1.16	-	0.75	2.77**				
			(10.879)	(15.879)				
AGE	1.14	-	-0.67	-0.65	-1.03	-1.11	-0.76	-0.62
			(-0.272)	(-0.273)	(-0.536)	(-0.571)	(-0.337)	(-0.332)
SIZE	1.07	-	-2.49**	-2.44**	-2.47**	-2.62**	-0.11	0.14
			(-5.02e-06)	(-4.92e-06)	(-5.05e-06)	(-5.09e-06)	(-9.55e-07)	(1.29e-06)
HORIZON	1.19	+	-0.54	-0.57	-0.70	-0.72	0.86	0.80
			(-0.538)	(-0.538)	(-0.935)	(-0.890)	(0.803)	(0.728)
LEVERAGE	1.14	-	-0.99	-0.99	-0.65	-0.63	0.04	-0.70
			(-0.094)	(-0.097)	(-0.105)	(-0.102)	(0.007)	(-0.081)
AUDITOR	1.12	-	0.53	0.59	0.83	0.82	-1.01	-0.47
			(3.219)	(3.511)	(7.103)	(7.058)	(-7.566)	(-3.901)
INDUSTRY	1.18	+	0.27		-0.16		0.42	
			(1.538)		(-1.212)		(10.679)	
YEAR	1.17		0.33		0.17		0.42	
			(2.069)		(1.503)		(3.735)	
No. of IPO			98		65		33	
F-stastic			2.21	2.96	1.56	2.04	1.28	3.40
R square (%)			8.93	8.75	4.72	4.64	8.97	2.46

Notes: This table reports the results of OLS regressions for total sample which is pre-IFRS and post IFRS convergence (Panel A), pre-IFRS convergence (Panel B), post-IFRS convergence (Panel C). The number of total samples had been reduced to 98 after remove the outliers. The t-statistics reported in the table were adjusted for heteroscedasticity (White's correction). The dependent variable is the FE, measured by the difference actual earnings and the forecast divided by actual earnings forecast. The independent variables are IFRS is a dummy variables equal to 1 for post-IFRS convergence and 0 for pre-IFRS convergence, AGE is measured by the numbers of years that each listing companies has been in operation before the year of listing (difference between listing date and incorporate date), SIZE measured by the log total assets after the new issue, HORIZON measured by the number of months between prospectuses date and the end of the forecast period, LEVERAGE measured by gearing ratio (total liabilities over total assets) of the company at the yearend date of the year under forecast, AUDITOR is a dummy variable 1 for BIG4 audit firms, 0 for non-BIG4audit firms, INDUSTRY is a dummy variables which 1 for trading services, construction, properties, technology, plantation and 0 for consumer and industrial products. The result is significantly different from zero at the *0.10, **0.05 and ***0.01 levels, respectively, using two-tailed tests.

4.3 Summary

Compare to previous studies, the mean of FE dropped by 2.41 per cent. This reduction shows that FE is lesser and it indicates that earnings forecast for Malaysia IPO companies between 2004-2007 periods improved. From the regression result it is shown that IFRS variable affect earnings FE of Malaysia IPO companies has positive coefficient sign and it is statistically significant, this indicate that FE decreases under post-IFRS regime. Most of the variables have the expected sign, though some were not statistically significant. The result for IFRS and SIZE variables show they are statistically significant and are one of those factors that influence FE. There are three multiple regressions in this study. The first is Panel A, where regress all the variables for the total sample. Panel B and C are regress by separating the samples into pre and post-IFRS convergence period. Panel B represent the pre-IFRS convergence and Panel C for post IFRS convergence) and removed the IFRS variables from the model. For these three multiple regressions, each of them had been performed for two set, as the second set remove the INDUSRTY and YEAR to control these two effects. VIF and correlation matrix was run to test for the possibility of multicollinearity. Interestingly, Table 4.4 shows that multicollinearity is not a problem in this study.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter is organized as follows: Section 5.1 is the findings of the study. Section 5.2 discusses limitations of the study and recommendations for future research. Section 5.3 summarizes the chapter.

5.1 Findings of the study

As a summary, the main objective of this study is to investigate whether convergence to IFRS reduces FE of IPO companies in Malaysia. Of concern in this study, are those factors that explain earnings forecasts. With the convergence of IFRS in Malaysia, it is important to carry out an investigation on whether IFRS convergence has improved or dampened FE. Since the goal of the MASB and the SC is to attract more investors into the country by strengthening the reporting quality, therefore, this study hypothesizes that the level of FE will reduce under IFRS. Further, the study hypothesizes that there is an association between the explanatory variables such as: age of the company, size of the company, forecast horizon, financial leverage of the company, reporting accountant (auditor) of the company and classification of industry, and FE.

The sample size of the study is made up of 98 Malaysian IPO companies selected across different industries. The time frame for the study is years 2004 to 2005 for pre-IFRS convergence and years 2006 to 2007 representing the post-IFRS convergence. This study used FE as a dependent variable.

The results in chapter 4 show that IFRS convergence and SIZE are statistically significant with FE. These results answer the research objectives and questions raised in this study. The first objective is whether IFRS convergence reduces FE; the result shows the opposite. The result shows that FE is higher in the post-IFRS convergence period. The result is consistent with the result reported by Firth et al. (2013) in Australia, that found forecast accuracy to have reduced under IFRS regime. This is due to the fact that the study was conducted in the early part of post-IFRS convergence; thus the company's management was still at the learning stage. The second objective of the study is the factors that influence FE the most; the regression result shows that SIZE has the most influence on FE as the result is statistically significant.

Other explanatory variables regressed against FE reveal an expected sign though it is not statistically significant. The multiple regression results displayed in panels A, B and C show a negative coefficient as expected for the association between age of the company and FE. This result is consistent with previous studies by Jelic et al. (1998) which has the same negative sign. This finding further supports that the longer operating history decreases FE.

As for the size of the company, it also has the same negative coefficient sign and statistically as expected throughout the three regression models. This study's results are consistent with previous researchers' work (Jelic et al., 1998; Mohamad et al., 1994; and Firth et al., 1995) that supports the argument that larger size of IPO companies tends to

decrease FE. The regression result shows that the size is the factor that influences FE the most.

Under all multiple regressions, the forecast horizon appears to have negative sign contradicting the expected sign. However, the forecast horizon has the expected positive sign during the post-IFRS convergence. This indicates that the shorter the forecast horizon, the less the FE under the post-IFRS convergence. This finding is consistent with Jelic et al. (1998) and Firth and Smith (1992) which also report a positive sign between forecast interval and FE.

As reported in this study, financial leverage also resulted in the expected sign which is negative. This further supports that company with higher financial leverage experience decrease in FE. As for the auditor's reputation and FE during the post-IFRS convergence, the result indicates that the BIG4 audit firms have an association with the level of FE. After controlling the industry and year effect, the coefficient sign shows the expected negative sign which indicates that the IPO companies audited by BIG4, have less FE. This result signals the capability of the BIG4 to adapt quickly to IFRS convergence in Malaysia. For the industry variable, the result is consistent with previous studies that industry membership has more FE, during the post-IFRS convergence though the result is not statistically significant.

This study contributes to IFRS and IPO literature, by investigating IFRS as one of the factors that influences management earnings forecasts in Malaysian IPOs companies.

This study demonstrates how the accounting standards can play a role in influencing the level of FE for earnings forecasts.

Another contribution of this study is in terms of the issue of voluntary disclosure of the earnings forecasts in the prospectuses. This study provides evidence that FEs increase under the IFRS convergence period which demonstrates that the earnings forecasts always involve errors. Therefore, this study contributes to the reasons for the change in the regulation from mandatory to voluntary disclosure of the earnings forecasts in Malaysia effective in 2008 since the issue of FE still remains in the earnings forecasts.

5.2 Limitations of the study and recommendations

This study has some limitations. The first limitation is that only few explanatory factors are considered in this study. It is suggested that future research should introduce more contextual variables that better reflect the reporting environment of IPO companies in Malaysia. In addition, researchers can test for the interaction between corporate governance variables and IFRS convergence in Malaysia.

Secondly, FE is used as the study's dependent variable to test whether IFRS convergence resulted in a decrease or increase in FE. Other researchers can use other proxies, such as accuracy and biasness in earnings forecasts and how IFRS convergence reduces them.

Thirdly, the findings of this study cannot be generalized to other countries since the rules and regulations for IPO companies for each country are different, and also due to the

status of Malaysia as a developing country. Hence, there is limitation in the generalization of the research findings beyond the Malaysian context.

As for the current condition, effective from 1st January 2012, all listed companies in Bursa Malaysia must comply with the MFRS which is equivalent to the accounting standards under IFRS (SC, 2008). Pertaining to this matter, future researchers can study the IPO companies during this period as well as under the voluntary regulations of the disclosure of the earnings forecast in the prospectuses effective from 2008 (SC, 2008).

5.3 Summary

From the study's findings, post-IFRS convergence shows increased error in forecasted earnings among Malaysian IPOs companies. Consideration should be given to those limitations mentioned above when interpreting the result of the study. This study gives an overview of the effect of accounting standard changes on earnings forecasts, thus providing a basis through which future researchers can develop their framework.

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APPENDIX A

Descriptive statistics for all variables for total samples (2004 to 2007), n=100

Statistics

		FE	IFRS	AGE	SIZE	HORIZON	LEVERAGE	AUDITOR	INDUSTRY
N	Valid	100	100	100	100	100	100	100	100
	Missing	0	0	0	0	0	0	0	0
Mean		2.71408	.33	3.0710	268627.09789	7.66	52.386662	.51	.37
Median		.51500	.00	1.3700	97791.50000	7.00	48.391500	1.00	.00
Std. Deviation		40.223542	.473	4.86114	783468.389923	2.992	24.4587572	.502	.485
Minimum		-85.491	0	.15	35122.735	3	3.8612	0	0
Maximum		238.274	1	33.06	6313792.000	13	100.0089	1	1

IFRS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PRE-IFRS (2004 AND 2005)	67	67.0	67.0	67.0
	POST-IFRS(2006 AND 2007)	33	33.0	33.0	100.0
	Total	100	100.0	100.0	

APPENDIX A (cont'd)

AUDITOR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NON BIG 4	49	49.0	49.0	49.0
	BIG 4	51	51.0	51.0	100.0
	Total	100	100.0	100.0	

INDUSTRY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	consumer and industrial products	63	63.0	63.0	63.0
	Trading services, Construction, Properties, Technology, Plantation	37	37.0	37.0	100.0
	Total	100	100.0	100.0	

APPENDIX B

Descriptive statistic for pre-IFRS convergence (2004-2005), n=67

Statistics

		FE	IFRS	AGE	SIZE	HORIZON	LEVERAGE	AUDITOR	INDUSTRY
N	Valid	67	67	67	67	67	67	67	67
	Missing	0	0	0	0	0	0	0	0
Mean		-.44263	.00	2.5991	289446.03382	7.85	49.561181	.51	.27
Median		-3.65000	.00	1.2400	93677.00000	8.00	46.730300	1.00	.00
Std. Deviation		46.977902	.000	3.87941	931453.775917	3.031	23.1604443	.504	.447
Minimum		-85.491	0	.15	35122.735	3	3.8612	0	0
Maximum		238.274	0	21.04	6313792.000	13	100.0089	1	1

IFRS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PRE-IFRS (2004 AND 2005)	67	100.0	100.0	100.0

AUDITOR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NON BIG4	33	49.3	49.3	49.3
	BIG4	34	50.7	50.7	100.0
	Total	67	100.0	100.0	

APPENDIX B (cont'd)

INDUSTRY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	consumer and industrial products	49	73.1	73.1	73.1
	Trading services, Construction, Properties, Technology, Plantation	18	26.9	26.9	100.0
	Total	67	100.0	100.0	

APPENDIX C

Descriptive statistic for post-IFRS convergence (2006-2007), n=33

Statistics

		FE	IFRS	AGE	SIZE	HORIZON	LEVERAGE	AUDITOR	INDUSTRY
N	Valid	33	33	33	33	33	33	33	33
	Missing	0	0	0	0	0	0	0	0
Mean		9.12315	1.00	4.0291	226358.34918	7.27	58.123245	.52	.58
Median		5.90300	1.00	1.7100	130435.00000	7.00	54.614400	1.00	1.00
Std. Deviation		19.760524	.000	6.37608	326843.092394	2.918	26.3398348	.508	.502
Minimum		-35.099	1	.19	38383.000	3	16.9867	0	0
Maximum		74.577	1	33.06	1903953.000	13	100.0000	1	1

IFRS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	POST-IFRS(2006 AND 2007)	33	100.0	100.0	100.0

APPENDIX C (cont'd)

AUDITOR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NON BIG4	16	48.5	48.5	48.5
	BIG4	17	51.5	51.5	100.0
	Total	33	100.0	100.0	

INDUSTRY

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	consumer and industrial products	14	42.4	42.4	42.4
	Trading services, Construction, Properties, Technology, Plantation	19	57.6	57.6	100.0
	Total	33	100.0	100.0	

APPENDIX D

Descriptive statistics for variables after remove the outliers

Total sample (2004-2007), n=98

Statistics

		FE	AGE	SIZE	HORIZON	LEVERAGE	AUDITOR	INDUSTRY	IFRS
N	Valid	98	98	98	98	98	98	98	98
	Missing	0	0	0	0	0	0	0	0
Mean		-1.04345	3.0954	272670.92642	7.64	52.779039	.52	.62	.34
Median		.28250	1.3450	97947.00000	7.00	48.967850	1.00	1.00	.00
Std. Deviation		29.723785	4.90786	790979.835479	2.999	24.4601690	.502	.487	.475
Minimum		-85.491	.15	35122.735	3	3.8612	0	0	0
Maximum		93.433	33.06	6313792.000	13	100.0089	1	1	1

Pre-IFRS convergence (2004-2005), n=65

Statistics

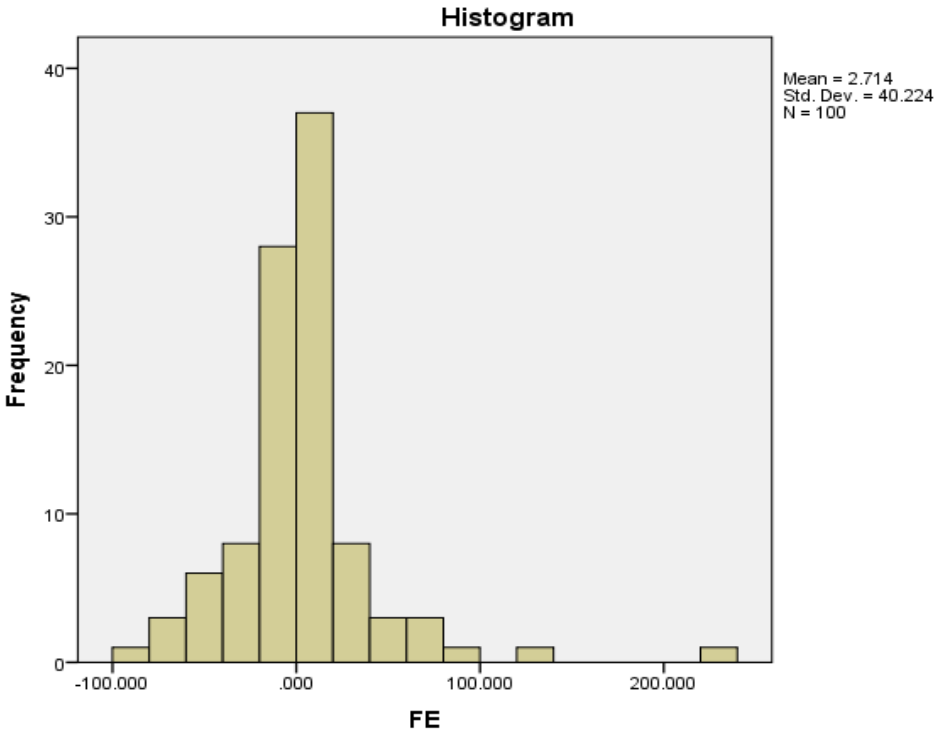
		FE	IFRS	AGE	SIZE	HORIZON	AUDITOR	LEVERAGE	INDUSTRY
N	Valid	65	65	65	65	65	65	65	65
	Missing	33	33	33	33	33	33	33	33
Mean		-6.20495	.00	2.6214	296183.46563	7.83	.52	50.065826	.28
Median		-3.65400	.00	1.1900	94414.00000	8.00	1.00	46.730300	.00
Std. Deviation		32.610863	.000	3.93727	945076.079207	3.044	.503	23.1883960	.451
Minimum		-85.491	0	.15	35122.735	3	0	3.8612	0
Maximum		93.433	0	21.04	6313792.000	13	1	100.0089	1

APPENDIX E

Normality test

Descriptives

			Statistic	Std. Error
FE	Mean		2.71408	4.022354
	95% Confidence Interval for Mean	Lower Bound	-5.26714	
		Upper Bound	10.69530	
	5% Trimmed Mean		-.03214	
	Median		.51500	
	Variance		1617.933	
	Std. Deviation		40.223542	
	Minimum		-85.491	
	Maximum		238.274	
	Range		323.765	
	Interquartile Range		18.757	
	Skewness		2.344	.241
	Kurtosis		12.293	.478



APPENDIX F

Heteroskedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of FE
chi2(1) = 3.62
Prob > chi2 = 0.0571

VIF test

Variable	VIF	1/VIF
IFRS	1.16	0.178563
YEAR	1.17	0.182352
HORIZON	1.19	0.841463
INDUSTRY	1.18	0.845995
AGE	1.14	0.875739
LEVERAGE	1.14	0.880315
AUDITOR	1.12	0.894265
SIZE	1.07	0.934908
Mean VIF	1.03	

APPENDIX G

The Bivariate Pearson correlation between dependent and independent variables

Correlations

		FE	IFRS	AGE	SIZE	HORIZON	LEVERAGE	AUDITOR	INDUSTRY
FE	Pearson Correlation	1	.245*	-.024	-.121	-.071	-.020	.050	.097
	Sig. (2-tailed)		.015	.813	.234	.489	.849	.627	.340
	N	98	98	98	98	98	98	98	98
IFRS	Pearson Correlation	.245*	1	.136	-.042	-.088	.156	-.007	.291**
	Sig. (2-tailed)	.015		.181	.682	.387	.124	.942	.004
	N	98	98	98	98	98	98	98	98
AGE	Pearson Correlation	-.024	.136	1	.075	.284**	-.108	.048	.068
	Sig. (2-tailed)	.813	.181		.465	.005	.292	.639	.505
	N	98	98	98	98	98	98	98	98
SIZE	Pearson Correlation	-.121	-.042	.075	1	-.048	-.122	.190	.133
	Sig. (2-tailed)	.234	.682	.465		.636	.232	.061	.193
	N	98	98	98	98	98	98	98	98
HORIZON	Pearson Correlation	-.071	-.088	.284**	-.048	1	-.210*	-.074	-.133
	Sig. (2-tailed)	.489	.387	.005	.636		.038	.470	.193
	N	98	98	98	98	98	98	98	98
LEVERAGE	Pearson Correlation	-.020	.156	-.108	-.122	-.210*	1	-.192	-.006
	Sig. (2-tailed)	.849	.124	.292	.232	.038		.058	.952
	N	98	98	98	98	98	98	98	98
AUDITOR	Pearson Correlation	.050	-.007	.048	.190	-.074	-.192	1	.200*
	Sig. (2-tailed)	.627	.942	.639	.061	.470	.058		.048
	N	98	98	98	98	98	98	98	98
INDUSTRY	Pearson Correlation	.097	.291**	.068	.133	-.133	-.006	.200*	1
	Sig. (2-tailed)	.340	.004	.505	.193	.193	.952	.048	
	N	98	98	98	98	98	98	98	98

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

APPENDIX H

Ordinary Least Square regression analysis for overall samples during period 2004-2007(PanelA)

Panel A (1) - Regression controlling for heteroskedasticity

	Robust					
FE	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
IFRS	10.87971	14.45221	0.75	0.454	-17.83653	39.59595
AGE	-.2722865	.4094349	-0.67	0.508	-1.085825	.5412519
HORIZON	-.5380634	.9881346	-0.54	0.587	-2.501466	1.425339
SIZE	-5.02e-06	2.01e-06	-2.49	0.015	-9.02e-06	-1.02e-06
AUDITOR	3.219171	6.125887	0.53	0.601	-8.952836	15.39118
LEVERAGE	-.0938925	.1015118	-0.92	0.357	-.2955942	.1078092
INDUSTRY	1.537956	5.761333	0.27	0.790	-9.90969	12.9856
YEAR	2.069747	6.278306	0.33	0.742	-10.40511	14.54461
_cons	-4145.801	12583.14	-0.33	0.743	-29148.24	20856.63

R-squared = 0.0893 F-Static = 2.21

Panel A (2) - Regression controlling for heteroskedasticity without Year and Industry

	Robust					
FE	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
IFRS	15.87954	5.734449	2.77	0.007	4.488762	27.27032
AGE	-.2726505	.4195818	-0.65	0.517	-1.106098	.5607972
HORIZON	-.5383066	.9392115	-0.57	0.568	-2.403935	1.327322
SIZE	-4.92e-06	2.02e-06	-2.44	0.017	-8.93e-06	-9.07e-07
AUDITOR	3.51086	5.958189	0.59	0.557	-8.32435	15.34607
LEVERAGE	-.0972637	.0981634	-0.99	0.324	-.2922533	.0977259
_cons	3.215309	8.83267	0.36	0.717	-14.3297	20.76032

R-squared = 0.0875 F-Static= = 2.96

APPENDIX G

Ordinary Least Square regression analysis for pre-IFRS convergence during period 2004-2005(Panel B)

Panel B(1) - Regression for pre-IFRS

	Robust					
FE	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
IFRS	(omitted)					
AGE	-.5361422	.5207235	-1.03	0.308	-1.578873	.5065886
HORIZON	-.9352006	1.336276	-0.70	0.487	-3.611048	1.740647
SIZE	-5.05e-06	2.04e-06	-2.47	0.016	-9.14e-06	-9.57e-07
AUDITOR	7.102965	8.549632	0.83	0.410	-10.01738	24.22331
LEVERAGE	-.1053226	.1621379	-0.65	0.519	-.4299981	.219353
INDUSTRY	-1.212431	7.79777	-0.16	0.877	-16.8272	14.40234
YEAR	1.502613	9.025112	0.17	0.868	-16.56986	19.57509
_cons	-3005.925	18086.5	-0.17	0.869	-39223.51	33211.66

R-squared = 0.0472 F -Static = 1.56

Panel B(2) - Regression for pre-IFRS without year and industry

Robust						
FE	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
IFRS	(omitted)					
AGE	-.5714527	.5145517	-1.11	0.271	-1.601068	.4581629
HORIZON	-.8900926	1.244588	-0.72	0.477	-3.380508	1.600323
SIZE	-5.09e-06	1.94e-06	-2.62	0.011	-8.98e-06	-1.21e-06
AUDITOR	7.058407	8.596574	0.82	0.415	-10.1433	24.26011
LEVERAGE	-.1015892	.1623852	-0.63	0.534	-.4265213	.2233429
_cons	5.165769	13.06756	0.40	0.694	-20.98235	31.31389

R-squared = 0.0464 F-Static = 2.04

APPENDIX H

Ordinary Least Square regression analysis for post-IFRS convergence during period 2006-2007(Panel C)

Panel C(1) - Regression for post-IFRS

Robust						
FE	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
IFRS	(omitted)					
AGE	-.3373935	.4465059	-0.76	0.457	-1.256989	.5822026
HORIZON	.8033901	.9301612	0.86	0.396	-1.112313	2.719093
SIZE	-9.55e-07	9.05e-06	-0.11	0.917	-.0000196	.0000177
AUDITOR	-7.565755	7.488913	-1.01	0.322	-22.98946	7.857949
LEVERAGE	.0065957	.1490223	0.04	0.965	-.3003214	.3135129
INDUSTRY	10.67941	7.038025	1.52	0.142	-3.815678	25.17449
YEAR	3.735011	8.81282	0.42	0.675	-14.41533	21.88535
_cons	-7492.362	17682.84	-0.42	0.675	-43910.85	28926.13

R-squared = 0.0897 F-Static = 1.28

Panel C(2) - Regression for post-IFRS without year and industry

	Robust					
FE	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
AGE	-.3315684	.536601	-0.62	0.542	-1.432583	.7694458
HORIZON	.7281856	.9147724	0.80	0.433	-1.148772	2.605143
SIZE	1.29e-06	9.39e-06	0.14	0.892	-.000018	.0000205
AUDITOR	-3.901334	8.222017	-0.47	0.639	-20.77152	12.96885
LEVERAGE	-.0808019	.1152018	-0.70	0.489	-.3171765	.1555728
_cons	11.57849	12.48833	0.93	0.362	-14.04545	37.20243

R-squared = 0.0246 F-Static = 3.40