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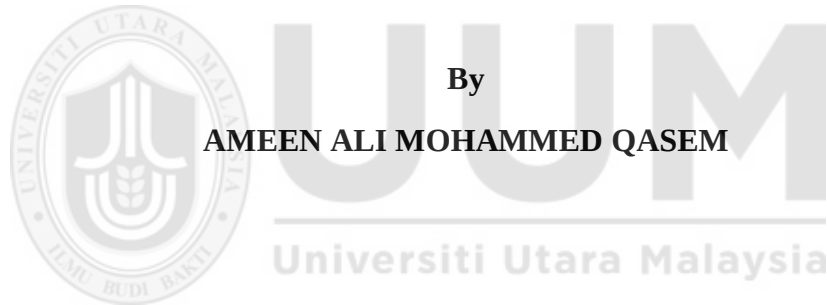
**CORPORATE SOCIAL RESPONSIBILITY,
INSTITUTIONAL INVESTORS' OWNERSHIP,
FINANCIAL RESTATEMENTS AND SELL-SIDE
ANALYSTS' STOCK RECOMMENDATIONS**



AMEEN ALI MOHAMMED QASEM

**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
April 2018**

**CORPORATE SOCIAL RESPONSIBILITY, INSTITUTIONAL INVESTORS'
OWNERSHIP, FINANCIAL RESTATEMENTS AND SELL-SIDE ANALYSTS'
STOCK RECOMMENDATIONS**



By

AMEEN ALI MOHAMMED QASEM

**Thesis Submitted to
Tunku Puteri Intan Safinaz School of Accountancy,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy**

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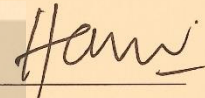
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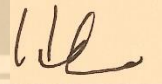
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ABSTRACT

In Malaysia, the capital market regulators have recently given prominent attention to issues such as corporate responsibility (CSR), shareholder activism and integrity in financial reporting by issuing the Sustainability Reporting Guide (2015) and Malaysian Code for Institutional Investors (2014). Given the importance of these issues, this study examines whether CSR, institutional investors' ownership, and financial restatements influence stock recommendations made by analysts. It employs a dataset from a panel of 285 Malaysian public listed companies (PLCs) for the period 2008 to 2013 (737 company-year observations). The results show a positive and significant influence of CSR reporting on the stock recommendations, which means that analysts issue more favourable stock recommendations for companies with higher CSR disclosures. Further, the findings indicate that the presence of both transient and dedicated institutional investors are viewed positively by analysts. In particular, the results indicate that analysts issue more favourable stock recommendations for the companies with higher levels of transient and dedicated institutional investors' ownership. In addition, the results also show that analysts tend to give favourable stock recommendations for companies that restated their financial statements, contrary to expectation. These findings imply that analysts tend to echo government initiatives by giving favourable stock recommendations to companies with greater engagement in CSR activities and the ability to attract institutional investors. The findings also suggest that analysts view financial restatements as informative rather than opportunistic. Overall, these findings should be useful to PLCs and policymakers. PLCs might use the findings to understand the preferences of sell-side analysts towards CSR engagement. Furthermore, policymakers might use it to recognize the important role played by institutional investors in monitoring investee companies and to understand how analysts perceive and evaluate restated companies.

Keywords: CSR reporting, institutional investors' ownership, financial restatements, stock recommendations.

ABSTRAK

Di Malaysia, pengawal selia pasaran modal baru-baru ini memberi perhatian penting kepada isu-isu seperti tanggungjawab korporat (CSR), aktivisme pemegang saham dan integriti dalam pelaporan kewangan dengan mengeluarkan Panduan Pelaporan Kelestarian (2015) dan Kod Malaysia untuk Pelabur Institusi (2014). Mengambil kira kepentingan isu-isu ini, kajian ini mengkaji sama ada CSR, pemilikan saham pelabur institusi, dan pernyataan semula penyata kewangan mempengaruhi syor-syor saham yang dibuat oleh penganalisis. Kajian ini menggunakan set data panel terdiri daripada 285 syarikat tersenarai awam Malaysia untuk tempoh 2008 hingga 2013 (737 pemerhatian). Keputusan menunjukkan pengaruh positif dan signifikan pelaporan CSR terhadap syor-syor saham, yang menunjukkan bahawa penganalisis memberi syor-syor saham yang lebih baik untuk syarikat yang mempunyai pendedahan CSR yang lebih tinggi. Selanjutnya, penemuan menunjukkan bahawa kehadiran kedua-dua pelabur institusi sementara dan berdedikasi dilihat secara positif oleh pihak penganalisis. Khususnya, dapatan menunjukkan bahawa penganalisis membuat syor-syor saham yang menggalakkan untuk syarikat-syarikat yang mempunyai pemilikan pelabur institusi sementara dan berdedikasi yang lebih tinggi. Di samping itu, keputusan menunjukkan penganalisis cenderung untuk membuat syor-syor saham yang lebih baik bagi syarikat yang membuat pernyataan semula penyata kewangan, bertentangan dengan jangkaan. Penemuan ini menggambarkan bahawa penganalisis cenderung untuk menyokong inisiatif kerajaan dengan memberikan syor-syor yang lebih baik bagi syarikat yang mempunyai lebih banyak penglibatan aktiviti CSR dan keupayaan untuk menarik pelabur institusi. Hasil dapatan juga mencadangkan bahawa penganalisis melihat pernyataan semula penyata kewangan sebagai berinformasi, dan bukannya oportunistik. Secara keseluruhan, penemuan ini dijangka bermanfaat kepada syarikat tersenarai awam dan penggubal dasar. Syarikat boleh menggunakan penemuan ini untuk memahami keutamaan penganalisis terhadap penglibatan CSR. Selain itu, penggubal dasar mungkin menggunakan penemuan ini untuk mengiktiraf peranan penting yang dimainkan oleh pelabur institusi dalam memantau syarikat pelabur dan memahami bagaimana penganalisis melihat dan menilai syarikat-syarikat yang membuat pernyataan semula.

Kata kunci: Pelaporan CSR, pemilikan pelabur institusi, pernyataan semula penyata kewangan, syor-syor saham

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LIST OF ABBREVIATIONS

AAER	Accounting and Auditing Enforcement Releases
ASNB	Amanah Saham Nasional Berhad
BAFIA	Banking and Financial Institutions Act
BANK	Banks
BINDP	Board Independence
BSIZE	Board Size
BTM	Book to Market Ratio
CAP	Consumers' Association of Penang
CBRS	Capital Market Development Fund (CMDF)–Bursa Research Scheme
CEOs	Chief Executive Officer
CFP	Corporate Financial Performance
CG Blueprint	Malaysian Corporate Governance Blueprint 2011
CIFR	Securities and Exchange Commission's Advisory Committee on Improvements to Financial Reporting
CMDF	Capital Market Development Fund
CMSA	Capital Market Securities Act
COMTY	Community
CSP	Corporate Social Performance
CSR	Corporate Social Responsibility
DUAL	Duality
EC	European Commission
ENVMT	Environment
EP	Earnings to Price Ratio
EPF	Employees Provident Fund
ESG	Environmental, Social, and Corporate Governance
FASB	Financial Accounting Standard Board
FCCG	Finance Committee on Corporate Governance
FELDA	Federal Land Development Authority
FOMCA	Federation of Malaysian Consumers' Association
FTSE	Financial Times Stock Exchange
GAAP	Generally Accepted Accounting Principles
GAO	Government Accountability Office
GLCs	Government-Linked Companies
GLICs	Government-Linked Investment Companies
GPF	Government-Managed Pension Funds
GPL	Government-Managed Pilgrimage Funds
GUT	Government-Managed Unit Trust Funds
I/B/E/S	Institutional Brokers' Estimate System
IASB	International Accounting Standards Board
INS	Insurance Companies
IO_DEDI	Dedicated institutional investors
IO_GPF	Government-Related Pension Funds
IO_PRMF	Private-Managed Mutual Funds
IO_TRNST	Transient Institutional Investors

IPC	Infrastructure Project Companies
IR	investors relation
KHAZANAH	Khazanah Nasional Berhad
KLD	Kinder, Lydenberg and Domini
KLSE	Kuala Lumpur Stock Exchange
KWAP	Kumpulan Wang Persaraan (Diperbadankan) or Retirement Fund Incorporated
LEVGE	Leverage
LTAT	Lembaga Tabung Angkatan Tentera or Armed Forces Fund Board
LTH	Lembaga Tabung Haji or Pilgrimage Fund
MAS	Monetary Authority of Singapore
MCCG	Malaysian Code on Corporate Governance
MESDAQ	Malaysian Exchange of Securities Dealing and Quotation Berhad
MESRA	Malaysia Environmental and Social Reporting Awards
MFRS	Malaysian Financial Reporting Standard
MKD	Menteri Kewangan Diperbadankan or Minister of finance Incorporated
MNCs	Multinational Companies
MNS	Malaysian Nature Society
MOF, (Inc.)	Minister of Finance (Incorporated)
MOWN	Managerial Ownership
MSWG	Minority Shareholder Watchdog Group
MTPLC	Marketplace
MTUC	Malaysian Trade Unions' Congress
NASD	National Association of Securities Dealers
NAV	Net Asset Value
NEP	New Economic Policy
NGOs	Non-Governmental Organizations
NYSE	New York Stock Exchange
OLS	Ordinary Least Square
PERKESO	National Social Security Organization of Malaysia
PETRONAS	Petroleum Nasional Berhad
PLCs	Public Listed Companies
PNB	Permodalan Nasional Berhad
R&D	Research and Development
REC	Stock Recommendations
REITS	Real Estate Investment Trusts
RESTATE	Financial Restatements
RETURN	Market Return
ROA	Return on assets
RPTs	Related Party Transactions
S&P	Standard & Poors
SC	Securities Commission Malaysia
SEC	U.S. Securities and Exchange Commission
SERI	SGX Equity Research Insights
SGX	Singapore Stock Exchange
SIZE	Company Size

SMEs	Malaysian Small and Medium Enterprises
SWFs	Sovereign Wealth Funds
TBL	Triple Bottom Line
UTMCs	Unit Trust Management Companies
ValueCAP	ValueCAP Sdn Bhd
VIF	Variance Inflation Factor
WRPLC	Workplace
Xtoprobit	Random Effects Ordered Probit Model



CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The timeliness, relevance and quality of corporate information is one of the significant issues in financial markets (Firth, Rui, & Wu, 2011; Orens & Lybaert, 2010). In this regard, the efficient flow of information among the participants in the financial markets, such as investors, companies and financial analysts, is critical (Barker, 1998; Holland & Johanson, 2003), especially in emerging markets where there are weaknesses in the corporate governance and disclosure mechanisms (Lang, Lins, & Miller, 2004). Emerging markets such as Malaysia are often regarded by the investors in developed markets as too risky, too exotic, too hard to research and too difficult to invest in (Moshirian, Ng, & Wu, 2009). Thus, there should be a significant informational role for sell-side analysts¹ to provide stock recommendations (Bellando, Ben Braham, & Galanti, 2016; Lang *et al.*, 2004; Moshirian *et al.*, 2009).

According to Securities Commission Malaysia (2011), financial analysts work as “influencers” in the financial market, where they contribute towards integrity, a culture of transparency and accountability in companies. Therefore, it is essential to explore their role in influencing social norms toward corporate governance practices. Financial analysts, who are mostly industry professionals (Brown, Beekes, & Verhoeven, 2011; Dong, Lin, & Zhan, 2017), are key players in the financial market, acting as intermediaries who follow

¹ See section 2.3 for more details about the financial analysts (types, roles, and analysts’ reports).

public companies, and providing earnings forecasts and stock recommendations (Aggarwal, Mishra, & Wilson, 2017; Bradshaw, 2004; Caylor, Cecchini, & Winchel, 2017; Cowen & Marcel, 2011; Healy & Palepu, 2001; Rees, Sharp, & Wong, 2017). They are commonly assumed to have expertise and awareness to analyse companies' financial information (Bradley, Gokkaya, Liu, & Xie, 2017; Chen Xia, Cheng, & Lo, 2010).

Financial analysts' role as well-informed information intermediaries in the financial market has been documented in many studies (Bradshaw, 2004; Brown, Call, Clement, & Sharp, 2015; Ioannou & Serafeim, 2015; Rees *et al.*, 2017). The regulators, financial media and investors seem to agree that financial analysts provide valuable advice and information, which help them to evaluate and monitor the company's activities (Brown *et al.*, 2011; Hamrouni, Benkraiem, & Karmani, 2017; Schantl, 2016; Yezegel, 2015). Previous studies have also documented the significant effect of financial analysts' stock recommendations on companies' stock prices, market returns and trading volume (Barber, Lehavy, McNichols, & Trueman, 2001; Chen Jing, Jung, & Ronen, 2016; Kecskes, Michaely, & Womack, 2017; Stickel, 1995; Womack, 1996).

In order to evaluate companies' activities, strategies and financial performance, financial analysts depend on the information published in the companies' financial statements (Barron, Byard, & Yu, 2016). Furthermore, previous studies have found a positive relationship between the accuracy of sell-side analysts' earnings estimations, analyst following and informative companies' disclosure, which might include both financial and non-financial information (Hamrouni *et al.*, 2017; Lang & Lundholm, 1996). Recently, in

order to meet stakeholders' needs and expectations, a large number of companies have adopted several corporate social responsibility (CSR) activities (Ioannou & Serafeim, 2015). According to the European Commission (EC) (2011, p. 6), CSR is "*the responsibility of enterprises for their impacts on society*". Companies are now more aware of the importance of CSR disclosures because they are considered as significant non-financial information (Dhaliwal, Radhakrishnan, Tsang, & Yang, 2012). The survey conducted by Lacy, Cooper, Hayward, and Neuberger (2010) found that 93% of 766 Chief Executive Officers (CEOs) worldwide stated that CSR engagement is an important factor in the success of their organizations.

A large number of studies have documented the positive effect of CSR on companies' financial performance. For example, companies with higher CSR disclosures have lower cost of equity capital and cost of borrowing (Dhaliwal, Li, Tsang, & Yang, 2014; Goss & Roberts, 2011; Harjoto & Jo, 2015; Xu, Liu, & Huang, 2015), are less likely to manipulate their operating activities (Alsaadi, Ebrahim, & Jaafar, 2016; Kim, Park, & Wier, 2012), and have better financial performance and stronger corporate governance (Blazovich & Smith, 2011; Jo & Harjoto, 2011, 2012; Lev, Petrovits, & Radhakrishnan, 2010).

Companies with a higher level of CSR activities also attract more institutional investors and more coverage by analysts (Dhaliwal, Li, Tsang, & Yang, 2011; Jo & Harjoto, 2014). Dhaliwal *et al.* (2012) and Harjoto and Jo (2015) stated that there is a negative relationship between companies' CSR reporting and analysts' earnings forecast error. In this regard, Eccles, Serafeim, and Krzus (2011) stated that the implementation and adoption of CSR

activities are generating a growing interest by many parties in the financial markets, especially financial analysts. Luo, Wang, Raithel, and Zheng (2015) interviewed financial analysts and found that they paid greater attention towards corporate social performance (CSP). Similarly, Ioannou and Serafeim (2015) found that sell-side analysts issue optimistic stock recommendations (buy) for companies with a higher CSR rating. However, there are very few studies on how CSR reporting may influence sell-side analysts' stock recommendations in terms of emerging markets such as Malaysia.

In Malaysia, Bursa Malaysia introduced a framework for CSR in 2006 which serves as guidelines for the Malaysian Public Listed Companies (PLCs) in reporting their CSR activities. The framework focuses on four areas: (1) environment, (2) community, (3) marketplace and (4) workplace. From 2007, Bursa Malaysia stipulated that the disclosures of CSR activities in all Malaysian PLCs' financial reports be compulsory (Bursa Malaysia Website). In 2015 Bursa Malaysia issued a Sustainability Reporting Guide ("Guide") with the main objective of helping listed companies in preparing a Sustainability Statement in their annual report. However, according to Securities Commission Malaysia (2011, p. 49), *"Although companies generally comply with this requirement, there is still a gap in that companies do not provide an assessment of the impact of their business operations on communities"*. Therefore, this study attempts to examine the influence of CSR reporting on the sell-side analysts' stock recommendations.

In the last decade, the role of institutional investors as important participants in the financial markets has grown in prominence (Cox & Wicks, 2011; Gillan & Starks, 2007; Tee, Gul,

Foo, & Teh, 2017). The institutional investors may influence the investees' activities and performance directly via their voting powers in board or shareholder meetings or indirectly through their shares trading (Aggarwal, Erel, Ferreira, & Matos, 2011; Gillan & Starks, 2003; Mohd Ali, Hassan, & Mohd Saleh, 2007). In Anglo-American countries, institutional investors play a significant role in the financial markets (Switzer & Wang, 2017; Wang, 2014). For example, 40% of the shares of the public companies in the UK are owned by institutional investors (Office for National Statistics, 2010). Additionally, in the US, the rate of institutional investors' holdings of the total equity ownership increased from 6.1% in 1950 and 28% in 1980 to more than 50% in 2009 (Tonello & Rabimov, 2010).

According to Minority Shareholder Watchdog Group (MSWG) and Securities Commission Malaysia (SC) (2014, p. 2), "*institutional investors are asset owners and asset managers² with equity holdings in corporations listed on Bursa Malaysia*". In Malaysia, the three main types of institutional investors are the mutual funds, pension funds and life insurance companies, together managing a fund size of approximately RM1,321 billion as at 31 December 2015 (Institutional Investor Council Malaysia, 2016). Furthermore, the total fund size of these institutions in domestic equities amounted to approximately RM524 billion which represents 31% of total Bursa Malaysia market capitalization of RM1.69 trillion as at end December 2015 (Institutional Investor Council Malaysia, 2016). Recent statistics ranked the Employees Provident Fund (EPF) as seventh in the 300 largest pension

² "Asset owners are collective investment vehicles which collect funds on behalf of their beneficiaries or clients and manage them internally or externally such as pension funds, private retirement scheme providers, insurance companies, takaful operators and investment trusts. Asset managers are agents that are responsible to manage the funds on behalf of the asset owners through an investment mandate" (MSWG & SC, 2014, p. 2).

funds worldwide with total assets of USD182 billion in 2013 (Towers Watson, 2014). Abdul Wahab, How, and Verhoeven (2007) remarked that the institutional investors' shareholdings in Malaysia are high compared to most other nations in the region.

Previous studies indicated that, compared to individual investors, institutional investors are better informed and more sophisticated in their investment process (Amihud & Li, 2006; Bushee & Miller, 2012; Collins, Gong, & Hribar, 2003; Gibson, Safieddine, & Sonti, 2004; Helwege, Intintoli, & Zhang, 2012; Hribar, Jenkins, & Wang, 2009; Jiambalvo, Rajgopal, & Venkatachalam, 2002; Ke & Petroni, 2004; Trabelsi, 2017). Previous studies also demonstrated that the quality of reported earnings increases with institutional investors ownership (Velury & Jenkins, 2006; Yeo, Tan, Ho, & Chen, 2002), companies' stock returns (Brous & Kini, 1994; Jiambalvo *et al.*, 2002), companies' performance (Hutchinson, Seamer, & Chapple, 2015; Muniandy, Tanewski, & Johl, 2016), and corporate governance (Abdul Wahab, How, & Verhoeven, 2008; Aggarwal *et al.*, 2011). How, Verhoeven, and Abdul Wahab (2014) indicated that institutional investors improve the corporate disclosures, which leads to a reduction in information asymmetry and an increase in analyst following. Likewise, the existence of institutional investors leads financial analysts to issue timely and unbiased earnings forecasts and stock recommendations (Ljungqvist, Marston, Starks, Wei, & Yan, 2007).

Institutional investors monitor the companies whose stocks they own and help increase the availability of information about these companies by improving the effectiveness of financial analysts who cover these companies (Cornett, Marcus, Saunders, & Tehranian,

2007; Frankel, Kothari, & Weber, 2006; James & Karceski, 2006; Ljungqvist *et al.*, 2007; Ruiz-Mallorquí & Santana-Martín, 2011). Frankel *et al.* (2006) stated that the demand for informative analysts' reports increases with higher institutional investors' ownership. Arand, Kerl, and Walter (2013) claimed that institutional shareholding provides a platform to improve the quality of financial reporting which in turn leads to better earnings forecasts and stock recommendations.

There are studies that highlight that institutional investors are not homogeneous (El-Diftar, Jones, Ragheb, & Soliman, 2017; Garel, 2017; Muniandy *et al.*, 2016), and classify them according to trading behaviour (Chan Kam, Zhang, & Zhang, 2013), and investment horizon (Bushee, 1998; Li & Lu, 2015). In Malaysia, How *et al.* (2014) examined the institutional investors' heterogeneity and concluded that the EPF is a significant determinant of analyst following. Similarly, Bamahros and Wan-Hussin (2015) found that short-term institutional investors (transient) increase earnings management, whereas the long-term institutional investors (dedicated) do not have a significant relationship with earnings management in Malaysia. Given that previous studies in Malaysia show that types of institutional investors have a differential effect on analyst following and earnings management, this study extends the influence of types of institutional investors on sell-side analysts' stock recommendations in Malaysia.

In addition to CSR and institutional investors, this study examines the influence of financial restatements on sell-side analysts' stock recommendations. As proposed by Anderson and Yohn (2002) and Kim and Koo (2014), financial statements are the main and significant

sources of information which many parties who participate in the financial markets use to evaluate companies' activities. These financial statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP), which offer companies several choices of accounting policy. This flexibility may provide a platform for companies to window-dress their income statements and the accounts of balance sheets without following the GAAP, which in turn leads to financial restatements (Albring, Huang, Pereira, & Xu, 2013). According to the US Government Accountability Office (GAO) (2002, p. 2), *“an accounting irregularity is defined as an instance in which a company restates its financial statements because they were not fairly presented in accordance with GAAP. This would include material errors and fraud”*.

In recent years, financial restatements have become a very important issue and concern among practitioners, regulators and academics (Abdullah, Yusof, & Mohamad Nor, 2010; Archambeault, Dezoort, & Hermanson, 2008; Chen Ken, Elder, & Hung, 2014; Dao, Huang, Chen Ken, & Huang, 2014; Desai, Hogan, & Wilkins, 2006; Du, 2017). According to GAO (2006), financial restatements cause billions of dollar-losses in market capitalization. These losses are portrayed through adverse market reaction towards companies' restatement of their prior reported earnings. These misstatements have shaken the confidence of the public and investors particularly for restated companies (GAO, 2002, 2006; Gleason, Jenkins, & Johnson, 2008; Weng, Chen, & Chi, 2017; Wilson, 2008; Ye & Yu, 2017a).

Many studies have documented the adverse economic consequences of financial restatements (Dao *et al.*, 2014; Xu & Zhao, 2016). These consequences include negative market reaction towards restating companies (Anderson & Yohn, 2002; Chen Ken *et al.*, 2014; Du, 2017; Firth *et al.*, 2011; Kravet & Shevlin, 2010; Palmrose, Richardson, & Scholz, 2004; Scholz, 2008; Wu, 2002) and increased cost of equity capital (Bardos & Mishra, 2014; Firth *et al.*, 2011; Hribar & Jenkins, 2004). Financial restatements also contribute to higher audit fees (Feldmann, Read, & Abdolmohammadi, 2009), higher dependency on the revised forecasts of financial analysts (Barniv & Cao, 2009), increased litigation risk (Palmrose & Scholz, 2004), and higher management turnover for restating companies (Arthaud-Day, Certo, Dalton, & Dalton, 2006; Burks, 2010; Dao *et al.*, 2014; Desai *et al.*, 2006; Xu & Zhao, 2016).

Financial analysts and regulators are concerned with the potential adverse effect of financial restatements on the value relevance of accounting information (Wilson, 2008). For instance, one of the senior investment strategists for Morgan Stanley asserts, *“Investors do not have confidence that the corporate numbers game will end soon. We need a restoration of trust from every entity”* (Borrus, 2002). After the announcement by McKesson HBOC Inc. of the need to restate its earnings for the financial year 1999, one of the financial analysts from Merrill Lynch commented, *“this clearly raises the question about whether any number can be trusted at HBOC”* (Abate, 1999).

In Malaysia, financial restatements are important issues and have received considerable attention from the regulators, particularly in recent years because many cases of financial

restatements have been reported (Abdullah *et al.*, 2010; Shafie & Zainal, 2016). Several Malaysian studies have examined the reasons and determinants of financial restatements in annual reports (Abdul Wahab, Gist, & Nik Abdul Majid, 2014; Abdullah *et al.*, 2010; Hasnan & Hussain, 2015; Wan Mohammad, Wasiuzzaman, Morsali, & Mohd Zaini, 2018), amendments to quarterly unaudited results (Ku Ismail & Abd Rahman, 2011), and consequences of financial restatements (Chin, Tang, & Che Ahmad, 2017). However, there are few studies in Malaysia that show corporate governance is an important determinant of annual restatements or quarterly amendments; very few examine the consequences of financial restatements, which makes this study timely. Therefore, this study enriches the literature by examining the influence of financial restatements on sell-side analysts' stock recommendations for companies listed on the Bursa Malaysia.

1.2 Problem Statement

The results of the survey of CEOs conducted by Graham, Harvey, and Rajgopal (2005) indicated that managers recognize financial analysts as one of the most significant groups influencing their companies' share price. However, financial analysts' reports are mainly available only for large companies, and their coverage for small and medium companies has decreased significantly, especially in the last decade (He, Shivakumar, Sidhu, & Simmonds, 2010; Mahoney, 2000). In short, small companies find it difficult to gain the attention of financial analysts (Mahoney, 2000).

Similarly, in Malaysia there is an imbalance of research coverage on Malaysian PLCs; smaller market capitalization companies tend to be under-researched by financial analysts

compared to their big-cap counterparts (Lim, Hooy, Chang, & Brooks, 2016). This situation could lead to low levels of stock liquidity in small-cap companies. In order to enhance the liquidity and generate investors' interest in stocks of less-followed and low-profile companies, Bursa Malaysia introduced the Capital Market Development Fund (CMDf)–Bursa Research Scheme (CBRS) in 2005. The main objective of CBRS is to generate research coverage for relatively unknown Malaysian PLCs. The initiative is open for all Malaysian PLCs and research houses in Malaysia; two participating research houses are assigned to follow a participating company for at least a 2-year period.

According to Qasem, Aripin, and Wan-Hussin (2015), at the initial stage, more than 300 companies participated in Scheme 1, which ended in July 2007. The number increased to 436 companies in Scheme 2, which ended in October 2010. However, the interest of participating companies declined considerably in Scheme 3 which is still ongoing, with more than half of Scheme 2's participating companies discontinuing their involvement with CBRS³. The number of research houses also steadily decreased across the three Schemes, from 24 research houses in Scheme 1 to 18 in Scheme 2 and 14 in Scheme 3 (see Figure 1.1).

The decreasing trend in the number of CBRS participating companies and research houses raises a question about the relevance of the CBRS scheme, in particular the usefulness of the analysts' reports produced by the research houses. Thus, there is a need to further

³ According to the CBRS website, the number of participating companies was 122 as at 31 January 2017. A random check made in 2018 indicate that CBRS analysts' reports are available for companies such as Pantech Group Holdings Berhad, Tenaga Nasional Berhad and Berjaya Auto Berhad.

investigate factors that influence the stock recommendations given by the financial analysts in the CBRS⁴ reports.

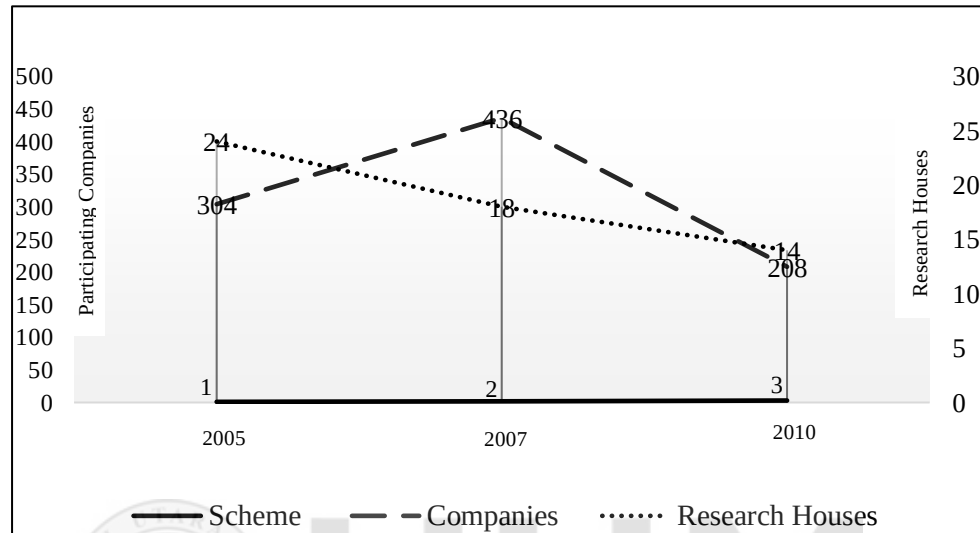


Figure 1.1

Participating Companies and Research Houses in CBRS Schemes

Source: The figure is constructed based on data taken from (Qasem *et al.*, 2015)

This study adds to the work of Foo (2013), who asserted that there is little evidence whether CBRS schemes achieve the goal of increasing companies' liquidity. She found that the number of analysts' reports positively influenced stock turnover. She recommended that future studies expand the investigation by analysing the type of recommendations (buy, hold and sell) contained in the CBRS analysts' reports.

In the last two decades, a significant amount of time and resources have been devoted to CSR issues in the academic field and also in the business world (Cheng, Ioannou, & Serafeim, 2014; Dhaliwal *et al.*, 2014; Martinez-Conesa, Soto-Acosta, & Palacios-

⁴ <http://www.bursamalaysia.com/market/listed-companies/research-repository/cmdf-bursa-researchscheme-cbrs>.

Manzano, 2017). There is also increased interest in CSR reporting by financial analysts (Dong *et al.*, 2017; Eccles *et al.*, 2011; Luo *et al.*, 2015). For instance, Bruce M. Kahn, Director and Senior Investment Analyst at Deutsche Bank, claimed that an increased number of clients now ask for the Environmental, Social, and Corporate Governance (ESG) criteria to be integrated in investment analysis (Gitman, Chorn, & Fargo, 2009). In this regard, Tan (2014a) called for more studies about the sell-side analysts' work, in particular the ways in which ESG issues are included in sell-side analysts' research.

Similarly, the rate at which CSR issues have attracted the interest of stakeholders in Malaysia is on the increase. According to Securities Commission Malaysia (2011), companies are encouraged to report more clearly their commitment towards environmental, social, governance and sustainability agendas. On 22 December 2014, Bursa Malaysia and Financial Times Stock Exchange (FTSE) introduced an ESG index for the Malaysian market. This index is one of the first in Asia to be part of the worldwide benchmarks FTSE4Good Index Series. Its aim is to support investors in making ESG investments in Malaysian companies and enhance the profile of companies with leading ESG practices⁵. Consistent with the recognition of the importance of CSR, this study attempts to investigate the influence of CSR reporting on sell-side analysts' stock recommendations in Malaysia.

The study also focuses on the influence of institutional investors' ownership on sell-side analysts' stock recommendations, given the recent emphasis placed on the role of Malaysian institutional investors as an active monitor of company behaviour. In 2014

⁵ <http://www.bursamalaysia.com/market/sustainability/ftse4good-bursa-malaysia-index/overview>

MSWG and SC issued the Malaysian Code for Institutional Investors 2014 in order to guide institutional investors in the best practices and explain how to adapt corporate governance as investment criteria, and the measures used to influence, guide and monitor their investee companies. Some studies argue that the presence of institutional investors is expected to improve the quality of financial reporting which in turn leads to better earnings forecasts and stock recommendations by analysts (Arand *et al.*, 2013; Cowen, Groysberg, & Healy, 2006; Frankel *et al.*, 2006; Ljungqvist *et al.*, 2007). However, other studies have raised the issue of a conflict of interest faced by analysts, leading them to issue biased reports (Gu, Li, & Yang, 2013).

However, previous studies recommended researchers to consider the institutional investors' heterogeneity rather than to cast them as a homogeneous group, in particular considering the differences in the institutional investors' investment horizons in several decision fields (Chan Kam *et al.*, 2013; Chichernea, Petkevich, & Zykaj, 2015; El-Diftar *et al.*, 2017; Garel, 2017; Koh, 2007; Mintchik, Wang, & Zhang, 2014; Muniandy *et al.*, 2016; Wang & Zhang, 2009). Bushee (1998) investigated whether the behaviour of corporate managers is related to share ownership by long-term (dedicated) or short-term (transient) institutional investors. However, there is still limited knowledge on how the two types of institutional investors (transient vs dedicated) in Malaysia may influence the recommendations provided by CBRS analysts.

Over the last decade, numerous financial restatements have been announced in the US, including famous cases such as Qwest, Worldcom and Tyco, and several less controversial

restatements (Wilson, 2008). This increasing trend has received substantial regulatory attention. For example, in 2002 the US Securities and Exchange Commission (SEC) Chairman Harvey L. Pitt remarked that *“the increase in the financial restatements caused investors around the world to loss the confidence on the American business”* (SEC, 2002b).

It is alleged that adverse consequences of financial restatements also impact the participants in the financial markets, including financial analysts. They show concern about the influence of financial restatements on the market’s assessment of the quality of reported financial information (Wilson, 2008). A recent example of the immediate impact of financial restatements is Toshiba Corp., which announced the likely restatements of its earnings from 2013 and earlier. As a result, the company’s stock dropped by 17% and seven analysts stopped following and rating the company. In this regard, Takeo Miyamoto, an analyst at Mitsubishi UFJ Morgan Stanley remarked, *“This raises questions about the reliability of the financial figures on which our earnings estimates are based”* (Alpeyev & Amano, 2015).

In the literature, there is a dearth of empirical evidence for the relationship between financial restatements and sell-side analysts’ stock recommendations. A few studies show that the number of analysts covering these companies declined in the period after restatements, and analysts were more likely to revise their earnings forecast downward following financial restatements (Griffin, 2003; Kryzanowski & Zhang, 2013; Palmrose *et al.*, 2004; Ye & Yu, 2017b). Thus, this study fills this gap in the literature by investigating

the influence of financial restatements on the sell-side analysts' recommendations for Malaysian listed companies.

In order to respond to the suggestions of previous researchers and to better understand the current practices, this study focuses on how the CBRS analysts generate their stock recommendations. In particular, it examines the influences of CSR, institutional investors' ownership and financial restatements on the sell-side analysts' stock recommendations for companies participating in Schemes 2 and 3 of the CBRS.

1.3 Research Questions

Based on the discussions in the research background and problem statement, the following research questions are proposed for this study:

- 1- Do CSR disclosures have an influence on sell-side analysts' stock recommendations?
- 2- Do levels of ownership by transient and dedicated institutional investors have an influence on sell-side analysts' stock recommendations?
- 3- Do financial restatements have an influence on sell-side analysts' stock recommendations?

1.4 Research Objectives

This study aims to achieve the following objectives:

- 1- To examine the influence of CSR disclosures on sell-side analysts' stock recommendations for the CBRS participating companies.

- 2- To examine whether the levels of ownership by transient and dedicated institutional investors have an influence on sell-side analysts' stock recommendations for the CBRS participating companies.
- 3- To examine the influence of financial restatements on sell-side analysts' stock recommendations for the CBRS participating companies.

1.5 Significant of the Study

This study investigates the influence of CSR reporting, institutional investors' ownership and financial restatements on sell-side analysts' stock recommendations for CBRS participating companies. Through its findings, the study makes theoretical and practical contributions to the body of knowledge, as explained below.

a) Theoretical Contribution

This study contributes to the literature on CSR and sell-side analysts' stock recommendations. Few studies have examined this relationship, and all were conducted in developed countries. These studies also used the Kinder, Lydenberg and Domini (KLD) database for CSR rating, although KLD's ratings are not optimal or wholly reliable as they use only publicly available data, and their environmental measures do not accurately predict pollution levels or compliance violations. The present study fills this gap in the literature by using a wide-ranging set of CSR disclosure indexes, in terms of both qualitative and quantitative approaches plus narrative information. Further, Wang, Tong, Takeuchi, and George (2016) call researchers to pay more attention to the evolution of CSR in terms of emerging markets. Consequently studying the effect of CSR reporting in

developing countries such as Malaysia would be a fruitful area for research (Abdul Hamid, Atan, & Md Saleh, 2014; Ioannou & Serafeim, 2015; Jamali & Mirshak, 2007). Furthermore, the present study adds to the understanding of stakeholder and legitimacy theories in terms of emerging markets.

This study also contributes to the literature of institutional investors' ownership and analysts' stock recommendations through examining the influence of institutional investors' ownership on the sell-side analysts' stock recommendations. In the existing literature, there are debates about this relationship. While some studies show a positive relationship between institutional investors and the informativeness of analysts' stock recommendations (Arand *et al.*, 2013; Cowen *et al.*, 2006; Frankel *et al.*, 2006; Ljungqvist *et al.*, 2007), others state that the higher ownership by institutional investors leads sell-side analysts to issue less informative stock recommendations (Gu *et al.*, 2013).

Therefore, this study fills the gap in the literature by separating institutional investors into two groups, namely transient and dedicated institutional investors. In the literature, most studies that emphasize the behaviour of institutional investors are conducted in developed markets (Li & Lu, 2015). In particular, there is a scarcity of studies that examine the relationship between different types of institutional investors and sell-side analysts' stock recommendations. Therefore, this study contributes to the current literature through examination of the previous relationship in the scenario of Malaysia as a developing market. In addition, this study adds to the understanding of the agency theory in an emerging market.

This study contributes to the literature of financial restatements and stock recommendations by examining the influence of financial restatements on the sell-side analysts' stock recommendations. In the extant literature, few studies examine the behaviour of financial analysts around irregular events such as financial restatements (Griffin, 2003), and most are conducted in developed countries such as the US (Abdullah *et al.*, 2010; Sellers, 2014). In particular, there are very few studies that examined the consequences of financial restatements in the Malaysian context. Thus, this study contributes to the literature by examining the influence of financial restatements on sell-side analysts' stock recommendations in the scenario of Malaysia as one of the emerging markets. Further, this study adds to the understanding of signalling theory, in particular in term of emerging markets.

b) Practical Contribution

From the practical perspective, this study provides scientific knowledge on the role of sell-side analysts in the financial markets as important financial intermediaries. The results should help the regulatory bodies such as Bursa Malaysia and SC to assess the usefulness of CBRS analysts, and to understand why listed companies and research houses discontinued their participation in the CBRS schemes.

The results of this study help to understand the situation of CSR reporting among Malaysian PLCs, benefitting financial analysts and investors in the assessment of CSR practices. The findings also enhance market efficiency by providing new ideas about how financial analysts incorporate non-financial information in their stock recommendations.

In 2014 MSWG and SC jointly issued the new Malaysian Code for Institutional Investors, the main principles of this code being to guide institutional investors in monitoring the investee companies and making investment decisions by incorporating sustainability and corporate governance considerations in the process of investment decision making. Therefore, the present study adds to the understanding of how the institutional investors' role may affect the quality of information used by security analysts to evaluate companies. It will also help many parties in the financial markets, such as investors, policymakers and listed companies, to understand better how CBRS financial analysts perceive and evaluate share ownership by different types of institutional investors.

The findings will be useful to many parties in the financial markets by highlighting the impact of financial restatements on the restated companies. The study should provide regulatory bodies such as Bursa Malaysia and SC with the trend of financial restatements among Malaysian PLCs and how CBRS analysts perceive and respond to them.

1.6 Scope of the Study

The scope of this study is the examination of the influence of CSR disclosures, institutional investors' ownership, and financial restatements on sell-side analysts' stock recommendations. All Malaysian companies with stock recommendations from CBRS research analysts during the period 2008 to 2013 have been considered. This period was chosen based on Foo's (2013) recommendation to expand the investigation to the later schemes of CBRS, so this study covers the stock recommendations issued for companies that participated in Schemes 2 and 3. The CSR reporting data is captured based on the CSR

disclosure in companies' their annual reports or stand-alone CSR reports. The content analysis of CSR reporting in this study is based on the Bursa Malaysia CSR Framework for Malaysian PLCs. The CSR index comprises 28 items overall which are used here for scoring CSR reporting.

With regards to institutional ownership, this study considers all institutional investors in the Malaysian market. The transient institutional investors include banks, privately managed unit trusts and mutual funds and insurance companies, and the dedicated institutional investors government-managed unit trust funds, government-managed pension funds, government-managed pilgrimage funds, government-managed sovereign wealth funds, and other Government-Linked Investment Companies (GLICs). In addition, companies that restated their financial statement during the period from 2008 to 2013 are identified from their annual reports, searching on the keywords "restatement", "restate", "restated" or "prior year adjustments" for each annual report.

To address the objectives of this study, secondary data was collected from the CBRS website, CBRS analysts' reports, companies' annual reports, and the DataStream database.

1.7 Organization of the Study

This study comprises five chapters.

Chapter one presents the background to the study, the problem statement, research questions, and research objectives. It also outlines the significance and the scope of the study. The second chapter starts with an overview of the Malaysian stock market, including

the development of the Bursa Malaysia and CBRS scheme. It reviews the literature on the main variables: sell-side analysts' stock recommendations, CSR, institutional investors, and financial restatements. It discusses the literature related to the impact of the study's independent variables on the sell-side analysts' stock recommendations, and reviews the theories relevant to this study.

The third chapter describes the research methodology used to achieve the study objectives. It involves development of a theoretical framework and hypotheses, research design, definitions and measurements of variables, population and sample, data collection procedures, and finally techniques of data analysis. The results and discussion are provided in chapter four. Finally, chapter five presents summarizes the study, its implications and limitations, and suggestions for future research.

1.8 Summary of the Chapter

This chapter explains the motivation for this study and introduces the research context. Detailed discussions of the study background, problem statement, research questions, research objectives, significance of the study, its scope and organization are provided. The next chapter reviews the related literature.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Overview

This chapter reviews the literature related to the variables of this study. It discusses the previous studies related to stock recommendations, CSR, institutional investors' ownership, and financial restatements. This chapter also explains the association between the independent variables and stock recommendations. Finally, the theories that underpin the study are deliberated.

2.2 Overview of Malaysian Stock Market

This section outlines the history of the Malaysian stock market, the changes in the financial market that took place during the last two decades, and the CBRs.

2.2.1 Bursa Malaysia

The first securities business association in Malaysia was the Singapore Stockbrokers' Association, established in 1930. It was re-registered as the Malayan Stockbrokers' Association in 1937. The Malayan Stock Exchange was established in 1960 and the public trading of shares began in that year. The Stock Exchange of Malaysia and Singapore was established in 1964 but in 1973 it split into the Kuala Lumpur Stock Exchange Berhad (KLSE) and the Stock Exchange of Singapore (Bursa Malaysia Website).

The implementation of the Securities Industries Act 1976 witnessed the integration of KLSE as a new company limited by guarantee. The KLSE was demutualized with the objective of producing a more efficient and competitive market. On 14 April 2004, the KLSE formally changed its name to Bursa Malaysia, and was listed on the main board of the Bursa Malaysia Securities Berhad in March 2005 (Bursa Malaysia Website).

Prior to the new regulations of August 2009, Bursa Malaysia comprised the Main Board, Second Board and Malaysian Exchange of Securities Dealing and Quotation Berhad (MESDAQ) (Foo, 2013). The Main Board was the platform for listing large companies (at least RM60 million of paid capital), and the Second Board was established to encourage smaller and feasible companies with strong possible growth (at least RM40 million of paid capital) to be listed (Foo, 2013). In October 1997, aiming to become an Asian-Pacific centre for communication and information technology, the Malaysian Government launched MESDAQ as a separate market for technology-related and higher growth companies listings (Hamzah, Hassan, Mohamed, Ahmad, & Saad, 2013; Madun, 2009). The Main and Second Boards were combined into a single integrated board for established companies and called the Main Market. In contrast, the MESDAQ market was changed into another market for developing companies of all sectors and sizes, called the ACE (Access Certainty and Efficiency) Market (Bursa Malaysia Website).

As of 8 May 2017, 920 companies are listed on Bursa Malaysia, with 806 on the Main Market and 114 on the Ace Market (Bursa Malaysia Website). Similar to other stock exchanges in Asia, Bursa Malaysia is a completely order-driven market without specialists

or market makers. Transactions take place from Monday to Friday, except for public holidays. Shares trading on Bursa Malaysia is completely automated, with instructions entered in WinSCORE (a broker front-end system). All prices in the market are determined by the supply and demand of market forces over a process where offers and bids are complementary. In each transaction, a security will be sold to the highest bidder and purchased at the lowest offer (Foo, 2013).

2.2.2 CBRs Scheme

He *et al.* (2010) claimed that analyst coverage of small and medium companies significantly decreased, especially in the previous decade, for many reasons, including Global Research Analysts Settlement, Regulation FD, Sarbanes Oxley Act, and the growth of low-cost internet brokerage. However, great efforts have been employed by some exchange markets worldwide to enhance liquidity and to attract investors' interest in small and medium-sized companies by increasing research coverage for these companies.

Foo (2013) stated that the Singapore Stock Exchange (SGX) was the pioneering exchange, implementing a research incentive scheme in December 2003, sponsored by the Monetary Authority of Singapore (MAS). In 2009, in order to satisfy the needs of investors and listed companies, the SGX founded a new research scheme, the SGX Equity Research Insights (SERI) (Singapore Exchange Website). In 2009, the American NYSE Euronext made a deal with Virtua Research to provide research coverage for a group of NYSE and NYSE Amex-listed companies to be made accessible to all investors (NYSE-Euronext, 2009). Similarly, NASDAQ-OMX agreed a special contract with Morningstar, by which

Morningstar would provide research reports to the companies listed on NASDAQ-OMX Exchanges (He *et al.*, 2010).

In Malaysia, there is an imbalance of research coverage on Malaysian PLCs, whereby smaller market capitalization companies tend to be under-researched by financial analysts compared to their big-cap counterparts, resulting in low levels of liquidity in small-cap companies. In order to enhance the liquidity and generate investors' interest in stocks of the less-followed and low-profiled companies, Bursa Malaysia implemented CBRS (Lim *et al.*, 2016). In November 2004, Bursa Malaysia received from CMDF a grant of RM7.5 million for the promotion of a financial analysts' research scheme for small-capitalized companies (Bursa Malaysia, 2004).

Bursa Malaysia launched this research scheme jointly between the CMDF and Bursa Malaysia, namely the CBRS. Under this agreement, Bursa Malaysia administers the scheme, while the CMDF funds 50% of the cost. By the end of December 2005, around 449 research reports had been posted on the Bursa Malaysia website, and 21 research houses were participating in the scheme (Bursa Malaysia, 2005). The implementation of the CBRS involved three different parties, namely Bursa Malaysia as administrator, the participating listed companies as research subjects, and participating research houses to conduct the research and prepare the research reports. All listed companies and licensed investment advisors were invited to join the scheme voluntarily, with final approval granted by Bursa Malaysia. Representatives from SC and Bursa Malaysia were appointed to the Allocation Committee to match the participating research houses to the participating listed

companies. The independence of both parties was maintained, and they remained together for two years.

The participating companies were expected to provide financial and non-financial information to the research houses allocated to them. Using this information with other publicly available information, the research houses conducted research for that particular participating companies and produced a report. The research reports were freely available on the Bursa Malaysia website and included charts, graphs and narrative information about past performance and future prospects, concluding with a valuation of the companies, and recommendations. Scheme 1 of the CBRS involved 304 participating companies and 24 research houses was completed in June 2007. Scheme 2 was implemented from July 2007 until October 2010 with 436 companies and 18 research houses. Scheme 3 began in October 2010 and is on-going to date, with 208 companies and 14 research houses (Qasem *et al.*, 2015).

Teen and Sequeira (2007), analysed how the participating companies on the Bursa Malaysia reacted to CBRS analysts' reports, particularly those reported by Standard & Poors (S&P). They found that companies with favourable recommendations (i.e. buy or hold) gained positive returns, while the sell-recommended companies had significant negative returns over the 5-day and 30-day holding periods. They found a positive relationship between abnormal trading volume and favourable stock recommendations. In general, their results indicate that CBRS announcements influenced the market activity level, especially significant with the favourable stock recommendations.

Foo (2013) examined whether the CBRS Scheme is associated with the stock turnover and information asymmetry for CBRS participating companies. She found that stock turnover is positively associated with the frequency of coverage; the association is stronger for companies with higher information asymmetry. Furthermore, she found that during the Scheme 1 period, when the stock market experienced a downturn, analysts' coverage has a significant constraining effect on the reduction in stock turnover.

More recently, on 25 May 2017, the SC and Bursa Malaysia jointly launched a new research scheme called "The Mid- and Small-Cap (MidS) Research Scheme" with the main objective to elevate the mid- and small-cap companies' profiles, and encourage this potentially high-growth market segment. Initially, a batch of 100 mid- and small-cap Malaysian PLCs will receive research coverage from the licensed research houses. Similar to the CBRS scheme, two research houses will be assigned to each PLC participating in the MidS Scheme. Selected PLCs undergo a screening process encompassing both qualitative and quantitative criteria, and representing a market capitalization range of RM200 million to RM2 billion.

2.2.2.1 Objective of CBRS

CBRS is a platform which brings together participating Malaysian PLCs and research houses, with the main objective of generating research coverage for the PLCs. According to Bursa Malaysia (2007), the three main objectives were:

- To improve the investors relation (IR) culture in Malaysian PLCs by making a connection between investors and issuers, and making sure that the company profile is correct with constant and consistent information flow.
- To improve and increase the number of financial analysts in the market.
- To increase investors' choices among the listed companies, by providing them with consistent and credible information about how these companies increase the volume of information flow to the investing public.

2.2.2.2 Expected Benefits from CBRS

By establishing the CBRS, Bursa Malaysia intended to provide investors with timely and consistent information that would help them to better understand Malaysian PLCs. The research scheme would lead to increased transparency, developing the public perception about the listed companies, and drawing investors' attention to trading on the market (Madun, 2009). In other words, Bursa Malaysia aimed to increase the liquidity, trading volume, visibility and profile of participating companies (Bursa Malaysia, 2004). In summary, many parties on the stock market would benefit from CBRS, including:

▪ *Investors*

Easy and free access to the CBRS website to access analysts' research reports will lead them to make informed investment decisions.

▪ *Listed Companies*

Increasing the company profile with good-quality coverage provided by qualified and licensed professional financial analysts. Building a knowledgeable investment community through increasing the investors' confidence in the listed companies.

- *Research Companies*

Seeking to build up a pool of research analysts and expand sector expertise with coverage of participating companies from diversified industries. Using economies of scale to finance the cost of research coverage (Bursa Malaysia Website).

2.2.2.3 CBRS Framework

Eligibility

According to the Bursa Malaysia website, all companies listed on Bursa Malaysia are eligible to participate in the CBRS, with research coverage for a period of two years for a total fee of RM15,000. For the research houses, all research companies licensed as investment advisors under the Capital Market Securities Act (CMSA) 2007 are permitted to join CBRS. Based on the research scheme, each participating listed company must be covered by at least two research companies, and the coverage research reports must be publicized on the Bursa Malaysia website and be free and available to the public.

Research Report Frequency

The occurrence of research coverage should be consistent and should take into account events and developments that would have an impact on the participating companies' liquidity and financial position. Coverage should take into consideration the company's

prospects including their material acquisition/assets divestments, change in the management team, takeover of the company, change in business direction, etc.

For each participating company, research companies are required to produce at least the following reports, distributed to them throughout the two-year period:

- One initiation coverage report within 3 months of the initiation date.
- For the results report, research companies should produce a minimum of eight coverage reports, consistent with the listed company's quarterly and yearly results announcements.
- At least two update reports produced at the direction of the research company at any time within the year.

Research Report Content

The quality of coverage reports issued by research companies should be similar to those reports that they currently issue on their own. Financial analysts, in producing research reports, should apply professional judgement and industry knowledge (Bursa Malaysia Website).

2.3 Stock Recommendations

Financial analysts play a significant role in the financial markets, by gathering and processing information about companies, and distributing this information to individual and institutional investors (Chen Carl, Chan Kam, & Steiner, 2002; Jiang, Xu, Yuan, & Chan, 2016). The vital information provided by financial analysts is the earnings forecast

and stock recommendations. Stock recommendations are one of the results of widespread analysis including forecasting the companies' future earnings, cash flow, target price and valuation models (Abhayawansa & Guthrie, 2016; Michael & Womack, 2005).

Analysts' stock recommendations help investors in their investment decision making through analysing and interpreting complex information and converting it to simple buy, hold and sell recommendations (Jegadeesh, Kim, Kriscshe, & Lee, 2004). Previous studies have revealed that analysts' stock recommendations provide valuable information about the rated companies and produce important responses to the stock price (Loh & Stulz, 2011; Mola, Rau, & Khorana, 2013; Moshirian *et al.*, 2009; Womack, 1996).

Many parties in the financial markets clearly value financial analysts' reports. For example, every year investors pay millions of dollars to get the stock recommendations and earnings forecast data from sellers such as Zacks, Institutional Brokers' Estimate System (I/B/E/S), and First Call (Ivković & Jegadeesh, 2004). The value of the analysts' stock recommendations comes from two main sources. First, analysts are skilled in analysing the importance of the public information. For example, they can interpret the financial data in companies' reports and the long-term implications for quarterly earnings. Second, they can gather a wide range of information unavailable to the investors, and process it professionally (Ivković & Jegadeesh, 2004; Kumar, Chaturvedula, Rastogi, & Bang, 2009). Similarly, according to the CBRF Framework, CBRF analysts should consider all financial and non-financial data for the participating companies. They should also take into consideration the change in the companies' management team and business direction.

Further, the quality of CBRS analysts' reports should be similar to other reports produced by non-CBRS analysts.

2.3.1 Types of Financial Analyst

The literature distinguishes two types of financial analyst: sell-side and buy-side analysts.

2.3.1.1 Sell-side analysts

Sell-side analysts are the main players in financial markets (Bellando *et al.*, 2016; Tan, 2014b). They are hired by investment banks, brokerage companies and independent research providers (Beyer, Cohen, Lys, & Walther, 2010; Huang, Li, & Shi, 2016; Pinho & Madaleno, 2013). These analysts are responsible for producing research reports for the companies and institutional investors that they follow (Cheng, Liu, & Qian, 2006; Frey & Herbst, 2014). These reports are available to the public and can be found in many sources that specialize in reporting financial information, such as Thomson Reuters' First Call (Abhayawansa & Guthrie, 2016). The reports contain crucial and valued information such as stock recommendations (buy, hold or sell), earnings forecasts and target prices. They regularly present general qualitative and quantitative analysis, which enhances the summary of their measurements (Asquith, Mikhail, & Au, 2005; Caylor *et al.*, 2017; Cheng *et al.*, 2006; Givoly, Hayn, & Lehavy, 2009).

2.3.1.2 Buy-side analysts

Buy-side analysts are hired by investment management companies, pension funds, mutual funds, hedge funds, trusts and money management companies as portfolio managers

(Cheng *et al.*, 2006; Groysberg, Healy, & Serafeim, 2013; Kothari, 2001). They play a significant role in the financial markets because their research reports directly influence the portfolio managers' investment decisions (Brown, Call, Clement, & Sharp, 2016; Frey & Herbst, 2014). According to Rebello and Wei (2014), fund managers depend heavily on the research reports from buy-side analysts who work specially for them, unlike the reports of sell-side analysts' research who normally work for brokerage companies. Buy-side analysts are less worried about their relationship with the management of the companies they follow; they have a longer investment horizon, are more concerned about the risk of financial misrepresentation and are less likely to use price-earnings-growth or simplistic price-earnings models (Brown *et al.*, 2016).

2.3.1.3 Differences between Sell-Side and Buy-Side Analysts

According to Groysberg, Healy, and Chapman (2008), both sell-side and buy-side analysts have similar functions. Both study the company situation for making stock recommendations, whether to buy, hold or sell particular securities. However, they differ in several ways:

- *Compensation*

The compensation for buy-side analysts comes from their stock recommendations, whereas compensation for the sell-side analysts comes from their industry knowledge (Brown *et al.*, 2016).

- *Scale and scope of coverage*

Research departments of the sell-side companies are bigger than those of the buy-side companies. Financial analysts in buy-side companies are regularly responsible for covering the entire sector, whereas sell-side analysts are typically responsible for covering one segment of an industry (Groysberg *et al.*, 2008).

- *Sources of information*

Sell-side analysts improve their reports through connection with their companies' traders and with many of their customers (Groysberg *et al.*, 2008). They privately interact with the managers of the publicly traded companies to obtain the information (Soltes, 2014). Buy-side analysts do not have the opportunity to obtain new ideas and feedback. They give their stock recommendations only to their managers and staff (Groysberg *et al.*, 2008).

- *Private versus public dissemination*

Buy-side analysts are employed to generate earnings forecasts and stock recommendations for their employers. Therefore, their reports are private and rarely available to the public and are used for internal investment recommendations only (Cheng *et al.*, 2006; Frey & Herbst, 2014; Kothari, 2001). The information from sell-side analysts is available to the public and widely distributed to retail and institutional clients (Groysberg *et al.*, 2008).

This study focuses on the sell-side analysts. According to Brown *et al.* (2015), academic researchers and practitioners have extensive interest in sell-side analysts because of their

significant role in analysing, interpreting and distributing financial information to participants in financial markets. Understanding the behaviour of sell-side analysts is useful to academics who are concerned with developing a framework to describe capital markets. Managers of public companies need to communicate with analysts to know what kind of information they need and how they process it. Regulators are interested in the flow of the information to facilitate the liquidity and functioning of the markets (Bradshaw, 2011).

Sell-side analysts have a tendency to cover companies within an industry that is biased to larger companies (Bradshaw, 2011). Normally they follow from 10 to 15 companies (Burgman & Roos, 2007). Furthermore, they concentrate on the exact industry or segment of these companies (Dunn & Nathan, 2005; Groysberg *et al.*, 2008). Sell-side analysts are considered as experts on the companies and industry segment they cover (Bradley *et al.*, 2017; Brown *et al.*, 2011; Dong *et al.*, 2017; Ho & Harris, 2000).

For issuing stock recommendations, sell-side analysts have access to a wide variety of information, including industry data, companies' operating and financial information, macro-economic factors, and security prices for the covering companies (Bradshaw, 2011; Hamrouni *et al.*, 2017). They typically think through the company strategies, earnings growth, accounting policies, historical financial performance, and forecasting of sales in the future for issuing earnings forecasts and stock recommendations (Bradshaw, 2011; Tan, 2014b). More specifically, financial analysts gather this information to generate earnings forecasts. Next, they input these forecasts into valuation models to calculate the company's

intrinsic value, before issuing stock recommendations. This is done by comparing the estimates from the current stock price and the valuation models. Consequently, financial analysts would issue buy recommendations if the estimated intrinsic value is higher than the current stock price (Barniv, Hope, Myring, & Thomas, 2009; Bradshaw, 2004; Chen & Chen, 2009; Jegadeesh *et al.*, 2004).

Previous studies also discuss the benefits of sell-side analysis. Barber *et al.* (2001), Barber, Lehavy, McNichols, and Trueman (2003), Dimson and Marsh (1984), Elton, Gruber, and Grossman (1986), Farooq and Ali (2014), Jegadeesh *et al.* (2004) and Chen Jing *et al.* (2016) found a positive relationship between sell-side stock recommendations (buy) and companies' high stock returns. Howe, Unlu, and Yan (2009) suggested that a change in sell-side analysts' stock recommendations content can predict the companies' future stock returns, while Jegadeesh and Kim (2006) found the largest price reaction around stock recommendation revisions. He, Grant, and Fabre (2013) provided evidence that companies with favourable stock recommendations on average outperformed the benchmarking index.

The following provides more detail of the role of sell-side analysts on the financial markets.

2.3.2 The Role of Sell-Side Analysts in the Capital Market

Sell-side analysts form an important part of capital market operations (Jegadeesh & Kim, 2006). They facilitate the dissemination of financial information through their reports, earnings forecasts and stock recommendations, and provide valuable information to the participants about the financial markets (Lo, 2012; Soltes, 2014). They are regarded as

‘critics’, as they shape the market patterns through their products (Zuckerman, 1999). They are considered as ‘gatekeepers’, who monitor the companies’ management and alert stakeholders to opportunistic corporate behaviour (Coffee, 2006). They act as ‘status groups’ who can legitimately make claims in the financial market (Preda, 2005).

This section briefly reviews the sell-side analysts’ role as an important participant in the financial market, including the literature regarding their ability to process, monitor and communicate information to the interested users in the financial markets.

2.3.2.1 Sell-Side Analysts as Sophisticated Information Processors

The International Accounting Standards Board’s (IASB) framework for the preparation and presentation of financial statements indicated financial analysts as the main user group of financial statements (IASB, 2009). Day (1986, p. 295) claimed that the nature of sell-side analysts’ job makes them the “*most informed and articulate user group*” of corporate information. In addition, many researchers identify them as the main group of users to whom financial reporting must be addressed; by doing so, better services can be delivered to investors (Schipper, 1991).

When compared with retail investors, sell-side analysts are regarded as a sophisticated processor of corporate information (Bradshaw, 2011; García-Ayuso, 2003; Lee & Lo, 2016; Schipper, 1991). Chen Xia *et al.* (2010) stated that because sell-side analysts have more experience, better training and deeper understanding about the companies and industry, they possess higher information-processing abilities and better public

announcement interpretation. With the rapid growth in financial markets and the complexity of the processes in the present knowledge-intensive economy, non-professional investors are encouraged to depend more on the sell-side analysts' recommendations (Abhayawansa, 2010). Previous studies found that retail investors rely more on additional information sources such as analysis of company situations and forecasting of financial performance obtained from sell-side analysts' reports (Campbell & Slack, 2008; Hamrouni *et al.*, 2017; Schantl, 2016).

Groysberg *et al.* (2008) suggested that, compared to buy-side analysts, sell-side analysts are more accurate in their earnings forecasts, reflecting their pre-eminence in financial analysis. Further, buy-side analysts use different sources of information but they depend heavily on the sell-side analysts' reports (Campbell & Slack, 2008). Campbell and Slack (2008) also claimed that most investment houses direct their fund managers to follow sell-side analysts' advice. This implies that buy-side analysts depend on the sell-side analysts' reports for their analysis, which indicates sell-side analysts as the main user group of corporate information in the capital markets (Abhayawansa, 2010).

2.3.2.2 The Monitoring Role of Sell-Side Analysts

There are many reasons for the public to be more reliant on financial analysts' reports. First, analysts typically develop close relationships with the covered companies' management. Second, they are expected to be more aware of the companies' activities than the general public (Healy & Palepu, 2003). However, the corporate financial scandals in US companies in 2000 and 2001, such as Enron, Worldcom and Tyco, put financial

analysts' profession under enormous pressure and scrutiny. They were blamed for their failure to discover uncertain financial statements earlier (Madun, 2009).

Jensen and Meckling (1976) claim that the agency cost associated with the separation of ownership and control through publicly operating companies can be reduced by monitoring events conducted by the security analysts. Previous studies found that security analysts act as an external monitoring mechanism that helps to reduce companies' agency costs and enhances the financial reporting quality (Chava, Kumar, & Warga, 2010; Chen, Ding, Hou, & Johan, 2016; Chen Tao, Xie, & Zhang, 2017; Doukas, Kim, & Pantzalis, 2005). According to Chen Tao, Harford, and Lin (2015), sell-side analysts work as an external governance mechanism over at least two channels. First, they track companies' financial statements on a consistent basis and interface directly with management by raising questions in earnings-release conference calls, which can be considered as direct monitoring. Second, they provide indirect monitoring by distributing private and public information to a huge number of individual and institutional investors through media channels and their research reports.

Sell-side analysts monitor the companies they are following by collecting and analysing corporate information and distributing the information to the individual and institutional investors. Thus, the weaknesses of the management can be recognized through this process (Chen Carl *et al.*, 2002). This monitoring role by the analysts is logically understood because financial analysts typically have more access to companies' information than the normal investors (Madun, 2009). They play a significant role in moving the financial

markets towards informational efficiency and facilitating prices to be more revealing, by providing new information in their reports (Chung & Jo, 1996). Chen Tao *et al.* (2017) found that higher quality of financial analyst earnings forecasts increases the information environment and external monitoring, which in turn increases investment efficiency.

2.3.2.3 Sell-Side Analysts as Market Intermediaries

As information intermediaries, financial analysts depend on private and public sources for gathering information about the companies they cover, evaluating their current performance, generating earnings forecasts, and issuing stock recommendations to investors on whether to sell, hold or buy (Healy & Palepu, 2001; Simpson, 2010). According to Lang and Lundholm (1996), sell-side analysts can be either information providers or information intermediaries. If they act as information providers, they compete with the companies that provided the information, but if they act as information intermediaries, the flow of information goes from the companies to the financial analysts, who analyse and transform the information for the financial markets. Therefore, the analysts' reports must contain incremental informativeness over company-provided information.

The role of sell-side analysts as information intermediaries is widely documented in the literature. For instance, Ljungqvist *et al.* (2007) stated that the major role of sell-side analysts is to work as information intermediaries, as they are responsible for channelling information about earnings forecasts, stock recommendations and other detailed reports from companies to investors. Huang, Leheavy, Zang, and Zheng (2014) and Pinho and

Madaleno (2013) claimed that sell-side analysts work as intermediaries in the financial markets through the provision of informative reports to help investors in understanding the company better than evaluating it by themselves.

Additionally, having sophisticated information processing skills will allow sell-side analysts to interpret and analyse information since they are saddled with the responsibility of producing new information (Johansson, 2007). Therefore, sell-side analysts transmit both company-provided private and public information and individual information (Abhayawansa, 2010). For example, Daphne, Markov, and Tamayo (2007, p. 630) said that *“in general, sell-side analysts add value through (1) aggregating publicly available information and (2) generating new information”*. However, the reports of financial analysts are the significant intermediary through which they transfer information to the financial markets.

In view of the above, the following sub-section reviews the literature that relates to analysts' reports in order to identify their significance as an important source of information in the capital market.

2.3.3 The Analyst's Report

According to Healy and Palepu (2001), agency conflict and information asymmetry between intermediaries, outside investors and company managers engender the request for more financial reporting and disclosure. However, reports in the business press, corporate disclosures, financial analysts' reports, and corporate performance discussion decrease the

information asymmetry between investors and the market participants such as company management (Kothari, Li, & Short, 2009). Hall and Tacon (2010) claimed that sell-side analysts promote the efficiency of financial markets by decreasing the information asymmetry between external market participants and company management. However, sell-side analysts notify institutional investors, retail investors and many participants in the financial market about the companies they follow, through publication of analysts' notes⁶, one-to-one verbal discussions⁷, and reports (Abhayawansa, 2010; Baker & Dumont, 2014; Johansson, 2007).

New York Stock Exchange (NYSE) Rule 472 (2002) and National Association of Securities Dealers (NASD) Rule 2711 (2002) define a research report as *“a written or electronic communication which includes an analysis of equity securities of individual companies or industries, and which provides information reasonably sufficient upon which to base an investment decision and includes a recommendation”* (NASD, 2002). After obtaining the information about their covered companies, sell-side analysts evaluate and analyse it and communicate the results via published reports (De Franco & Hope, 2011). In general, the analyst reports have three main components; earnings forecasts, stock recommendations and target price (Asquith *et al.*, 2005; Bradshaw, 2002; Caylor *et al.*, 2017; Hall & Tacon, 2010).

⁶ Sell-side analysts' comments or notes are written documents that disclose the product of sell-side day-to-day work. These notes provide sell-side analysts with a vehicle for communicating their information in more detail than the summary of earnings forecast and stock recommendations. These notes are disseminated to large institutional clients as part of the brokerage companies' sales process (De Franco & Hope, 2011).

⁷ One-to-one verbal discussions are one of the main sources of information for buy-side analysts. They enrich and complement the information in sell-side analysts' main reports (Campbell & Slack, 2008).

The main body of analyst reports comprises qualitative and quantitative analyses and the results of the key indicators (Asquith *et al.*, 2005). According to Huang, Zang, and Zheng (2014), the main body exists as text and provides incremental information. Because the reports are publicly disclosed, they are clearly and precisely worded (Campbell & Slack, 2008). They supply comprehensive information which covers a wide range of the company's activities, allowing investors to use them as a unique source of information (Huang *et al.*, 2014).

The informativeness of analyst reports has been widely examined in previous studies via exploring the impact of the information, including: earnings forecasts, stock recommendations, target prices and narrative arguments in the financial markets. Several studies have been carried out regarding the market's response to the issue and revisions of earnings forecasts provided by sell-side analysts (Clement & Tse, 2005; Cooper, Day, & Lewis, 2001; Francis & Soffer, 1997; Lys & Sohn, 1990). There is also research on the reaction of financial markets to the initial publication and the revisions of stock recommendations provided by sell-side analysts (Aggarwal *et al.*, 2017; Barber *et al.*, 2001; Bellando *et al.*, 2016; Beneish, 1991; Ivković & Jegadeesh, 2004; Jiang, Lu, & Zhu, 2014; Kecskes *et al.*, 2017; Loh & Stulz, 2011; Rees *et al.*, 2017; Sorescu & Subrahmanyam, 2006; Stickel, 1995; Womack, 1996).

Research relating to the market's response to the publication and revisions of target prices issued by sell-side analysts has also received attention from researchers (Asquith *et al.*, 2005; Bilinski, Lyssimachou, & Walker, 2013; Bradshaw, Brown, & Huang, 2013; Brav

& Lehavy, 2003; Da & Schaumburg, 2011; Dechow & You, 2013; Gerritsen, 2015; Gleason, Johnson, & Li, 2013). Asquith *et al.* (2005), Caylor *et al.* (2017) and Krishnan and Booker (2002) conducted research regarding the market's response to the power of the arguments included in the analyst reports.

The results from the literature suggest that financial analysts' reports are informative and deliver significant information to the financial market. For example, Lys and Sohn (1990) indicated the informativeness of analysts' earnings forecasts, even when they came first through forecasts prepared by other financial analysts or by disclosures of corporate accounting. Francis, Schipper, and Vincent (2002) concluded that while analyst reports are, commonly, less informative than the announcement of earnings, the market reactions to analyst reports are greater than those to earnings announcements. Frankel *et al.* (2006) showed that analyst reports are especially informative when the prospective profits for the brokerage are higher, and lower when the costs of processing information are high.

Similarly, numerous studies claim that sell-side analysts' stock recommendations are informative and have an impact on the financial markets (Irvine, 2004; Ivković & Jegadeesh, 2004; Liu, Smith, & Syed, 1990; Loh & Stulz, 2011; Stickel, 1995; Womack, 1996). Jiang *et al.* (2014) examined the market reactions to sell-side analysts' recommendations in the Chinese stock market. They found that the stock market significantly reacts to both upgrades and downgrades of analysts' recommendations, although more strongly to upgrades. Cliff (2007) found that the markets significantly and

positively react to sell-side analysts' stock recommendations buy, and negatively react to sell recommendations.

The findings of empirical studies suggest that the sell-side analysts' stock recommendations stated in the Wall Street Journal in the column Heard-on-the-Street produce significantly abnormal returns (Beneish, 1991; Liu *et al.*, 1990). Previous studies have also documented the significant effect of financial analysts' stock recommendations on companies' stock prices and trading volume (Chen Jing *et al.*, 2016; Kecskes *et al.*, 2017; Stickel, 1995; Womack, 1996). In addition, the revision of stock recommendations has an impact on companies' stock prices, which influence the companies' wealth and the analysts' clients investment positions (Barber *et al.*, 2001; Rees *et al.*, 2017; Sorescu & Subrahmanyam, 2006).

Asquith *et al.* (2005) and Brav and Lehavy (2003) examined the target price provided in analyst reports and discovered the incremental value of these target prices. Da and Schaumburg (2011) similarly concluded that target price provides investors with valuable information. Bradshaw *et al.* (2013) stated that the market significantly reacts to sell-side analysts' target price, while Ho, Strong, and Walker (2016) found that analysts' target price revisions are significantly associated with market returns. These target prices reveal the analysts' opinions on the prospective stock price level within a particular period. They typically forecast the target prices over a 12-month time horizon (Bilinski *et al.*, 2013; Gerritsen, 2015). Gleason *et al.* (2013) showed that sell-side target prices can predict future

returns, and this effect is incremental to analysts' buy-sell recommendations of returns predictability.

The above studies discussed the financial market reactions to the three measurements included in the sell-side analyst reports (earnings forecast, stock recommendations and target price). Additionally, Asquith *et al.* (2005) showed that the strength of the justifications and arguments included in the analyst reports are significantly related to financial market reactions to the reports. Caylor *et al.* (2017) found that information contained in the justifications in analysts' reports are related to the profitability of favourable stock recommendations. Krishnan and Booker (2002) noted that the strength of analyst reports' arguments and the supporting information offered in these reports to rationalize stock recommendations helps to reduce possible investors' disposition mistakes.

Previous studies have shown that companies with higher-quality corporate disclosure and higher ownership by institutional investors are followed by more financial analysts. In Malaysia, How *et al.* (2014) examined whether institutional investors' ownership drives financial analyst following. They found a positive relationship between institutional ownership, especially by EPF, and financial analyst following.

The above literature review indicates that sell-side analysts' activities, as shown in their reports, significantly contribute to the efficiency of the financial market through their discretion concerning information about security prices (Frankel *et al.*, 2006). Zhang

(2008) claims that sell-side analysts facilitate the efficiency of the financial market through a process and interpretation of important value-relevant information with their responsive forecasting revisions. The results also suggest that analyst reports are widely used by a variety of users in the financial market.

Previous studies stated that the analyst reports act as a proxy to meet the capital market's needs (Healy & Palepu, 2001). This proxy status is justified by the studies that indicate the reactions of financial markets to the issuance and changes of stock recommendations, earnings forecast and target price along with narrative information and common use of the reports by participants in the markets. The availability of sell-side analysts' reports to the public and distribution through databases that record analysts' stock recommendations, earnings forecasts, and target price, also make them suitable for academic study. Consequently, analyst reports have been used in many studies regarding the collection of sell-side analysts' information, process and use behaviour and their influence on the financial market (Abhayawansa, 2010).

2.4 Corporate Social Responsibility

This section reviews the literature on CSR, including its background, definition, consequences, the Malaysian context, and CSR and stock recommendations.

2.4.1 CSR Background

The concept of CSR reporting includes providing *“nonfinancial information to key stakeholders, those people affected by a company's actions, on the company's operational,*

social, and environmental activities and its ability to deal with related risks” (Ballou, Heitger, Landes, & Adams, 2006, p. 66). CSR reporting is not new in the accounting profession, but in more recent times has attracted significant interest (Pencle & Mălăescu, 2016). According to Spector (2008), the origins of the CSR movement can be traced back to the earlier years of the Cold War. The book by Howard R. Bowen published in 1953, titled *Social Responsibility of the Businessman*, is regarded as the landmark work in the era. Some researchers proposed Bowen as the “father of CSR” (Carroll, 1999). Carroll and Shabana (2010) claimed that from the 1960s transition into the 1970s and beyond, the specific importance of the concept of CSR was mainly conveyed through academic studies and the slowly emerging realities of business practices.

The trend of globalization and increased requests from investors for companies to adopt CSR activities has encouraged their participation in CSR (Chapple & Moon, 2005). Thus, a significant amount of time and resources have been devoted to CSR reporting in both the academic field and the business world (Cheng *et al.*, 2014; Dhaliwal *et al.*, 2014). Companies are more aware of CSR issues because they are considered as significant non-financial information (Dhaliwal *et al.*, 2012). For example, the volume of socially responsible investment in the USA in 2011 was around USD 3.74 trillion (USSIF, 2012).

2.4.2 Definition of CSR

The literature offers a wide range of definitions for the concept of CSR. According to Dahlsrud (2008), in both academia and the corporate world there is ambiguity about how to define it. He summarized five dimensions of CSR and 37 definitions, although the

current definitions to a large degree correspond. He also concluded that the confusion is not in how to define CSR, but how CSR is socially constructed in a particular circumstance. Doane (2005) also argued that the important thing beyond the definitional stand of the concept of CSR is the implied expectation that the business aims to provide better environmental and social results. According to George (2007), there is no single widely accepted definition of CSR. Matten and Moon (2008) claimed that there is a considerable amount of universal evidence that CSR differs in terms of the underlying issues and meanings to which it is addressed, and the modes employed. A summary of the common CSR definitions follows:

EC (2011, p. 6) defines CSR as *“the responsibility of enterprises for their impacts on society”*.

The definition by the World Bank Institute is *“the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve quality of life, in ways that are both good for business and good for development”* (Petkoski & Twose, 2003, p. 1).

Huang and Watson (2015, p. 2) define CSR as *“firms’ efforts to surpass compliance by voluntarily engaging in actions that appear to further some social good, beyond the interests of the firm and that which is required by law”*.

Christensen, Peirce, Hartman, Hoffman, and Carrier (2007, p. 351) define it as *“The voluntary actions taken by a company to address economic, social, and environmental impacts of its business operations and the concerns of its principal stakeholders”*.

Rupp (2011) remarked that CSR includes actions that are not only within the main function of the company, but others that are directed towards external parties, ecological environments, and communities. Carroll (2004) identified four characteristics in defining CSR: philanthropic responsibility, ethical responsibility, legal responsibility, and economic responsibility.

Bursa Malaysia’ website claims that CSR is a key to sustainability, and defines sustainability as *“Sustainability generally refers to the adoption and application of environmentally responsible practices, sound social policies and exceptional governance structures in order to minimize risks and volatility and to enhance the long-term development impact of corporate activities”*. It also defines sustainability in business as *“managing a company in a way that takes into account the social, economic and environmental aspects that can be referred to as the “triple bottom line” or “People, Planet, Profit”*. Sustainability is about obtaining a good balance of these three aspects” (Bursa Malaysia, 2011, p. 14). However the definitions of CSR may vary, in general they all indicate serving people, society and the environment in ways that go beyond and above what is legally required of the company (Barnea & Rubin, 2010; Jo & Harjoto, 2011).

2.4.3 Consequences of CSR

The relationships between CSR performance and company value have been examined widely in previous studies. For example, Cho, Lee, and Pfeiffer (2013) examined the relationship between information asymmetry and CSR performance, concluding that information asymmetry is reduced by both negative and positive CSR performance, and the influence of negative CSR performance is stronger than the positive one. In contrast, Lu and Chueh (2015) concluded that CSR is significantly and negatively associated with information asymmetry, meaning that markets respond to CSR with a small gap between bid-ask spreads.

In addition, companies with higher CSR disclosure have a lower cost of equity capital and lower cost of borrowing (Dhaliwal *et al.*, 2014; Goss & Roberts, 2011; Harjoto & Jo, 2015; Xu *et al.*, 2015). Guiral (2012) examined how the request for loans to intensify CSP will influence the loan officers' lending decisions and credit judgements. They found that loan officers interpret CSP investment as an indication of superior corporate financial performance. Dhaliwal *et al.* (2011) and Jo and Harjoto (2014) found that companies with a higher level of CSR activities attract more institutional investors and more analyst coverage. Dhaliwal *et al.* (2012) and Harjoto and Jo (2015) found that there is a negative association between companies' CSR disclosure and analysts' earnings forecast error.

Companies with good CSR also have a higher firm value and good corporate governance (Arouri & Pijourlet, 2015; Blazovich & Smith, 2011; Jo & Harjoto, 2011, 2012). Kim *et al.* (2012) concluded that socially responsible companies have less tendency to manage

earnings over discretionary accruals and manipulate their operating activities. Similarly, Barton, Kirk, Reppenhagen, and Thayer (2015) found that socially responsible companies manage their earnings in order to meet financial analysts' earnings forecasts, and reduce the cost of finance and tax, more willingly than to opportunistically increase equity stakes and management compensation. These results are consistent with the assumption that socially responsible companies display more responsible motivations for earnings management (Huang & Watson, 2015).

Companies with better CSR also have a higher sales rate (Lev *et al.*, 2010). Edmans (2011) and Roberts and Dowling (2002) found that those with a better reputation, paying special attention to the welfare of their employees via CSR activities, attract more talented employees and motivate them to increased productivity. Another aspect in which CSR can develop financial performance is by strengthening a company's reputation. For example, according to Chakravarthy, DeHaan, and Rajgopal (2014), CSR companies can repair reputational damage subsequent to earnings restatements. On the other hand, companies with sin stocks have lower demand from institutional investors and receive a less coverage from financial analysts (Durand, Koh, & Limkriangkrai, 2013; Hong & Kacperczyk, 2009). Matsumura, Prakash, and Vera-Muñoz (2014), investigating the relationship between carbon emissions and company value, found that company value is reduced by \$212,000 for each thousand metric tons of carbon emitted. Additionally, when a company does not disclose its carbon emissions, the rate at which its value decreases is higher than for companies that disclose the information.

Huang and Watson (2015) claimed that the relationship between tax avoidance and CSR has drawn substantial interest because both tax payments and CSR distribution of resources to non-shareholders reflect some notion of corporate citizenship. Hoi, Wu, and Zhang (2013) found that companies with lower CSR activities are more aggressive in tax avoidance, and Lanis and Richardson (2015) found that companies with higher CSR are less likely to avoid taxation. In contrast, Davis, Guenther, Krull, and Williams (2016) found that socially responsible companies are related to tax avoidance, meaning that company managers do not show payment of corporate tax as part of their CSR. Watson (2015) delivers some clearance for these findings by showing that the association between CSR and tax avoidance depends on earnings performance; both socially responsible and socially irresponsible companies are more likely to engage in tax avoidance when their earnings performance is poor, although these effects are weak and mostly disappear when earnings performance is strong.

Overall, previous studies as discussed above show the importance of CSR reporting disclosures. They found that companies with higher CSR disclosures have lower information asymmetry, lower cost of equity capital and lower cost of borrowing. Previous studies also found that companies with higher CSR disclosures have a good firm value, good corporate governance, and have less tendency to manage earnings. Further, companies with higher CSR disclosures have a higher sales rate and attract more talented employees. Those with higher CSR activities attract more analyst coverage and increase the accuracy of analysts' earnings forecasts. In general, higher CSR disclosures by the

companies leads to better performance and market return, which may be reflected in the sell-side analysts' stock recommendations.

2.4.4 The Malaysian Context

According to Ismail, Ibnu Kassim, Mohd Amit, and Mohd Rasdi (2014), CSR drivers in Malaysia can be separated into two groups: internal and external influences. The internal influences include Malaysian government incentives and encouragement for promoting CSR disclosure among Malaysian PLCs (Said, Zainuddin, & Haron, 2009). For example, the emphasis on CSR may be discovered in several Malaysian laws. Among others, the Environmental Quality Act (1974) relates to the prevention, reduction and control of pollution in the environment; the Anti-corruption Act (1997) focuses on preventing corruption; and the main objective of the Human Rights Commission of Malaysia Act (1999) is to protect and promote human rights (The Commissioner of Law Revision Malaysia, 2006a,b,c).

In addition to these regulations, the emphasis on CSR by the government can also be seen in several awards with the main objective to promote CSR commitment amongst corporate players. For instance, in 2007 the government announced the Malaysian Prime Minister's CSR Award to encourage PLCs with the best CSR practices (Ahmed Haji, 2013). Other incentives include the StarBiz-ICR Malaysia Corporate Responsibility Awards and ACCA Malaysia Environmental and Social Reporting Awards (MESRA). The establishment of Non-Governmental Organizations (NGOs), such as the Consumers' Association of Penang (CAP), WWF Malaysia, Federation of Malaysian Consumers' Association (FOMCA),

Malaysian Trade Unions' Congress (MTUC) and Malaysian Nature Society (MNS) aims to encourage CSR disclosure (Abd-Mutalib, 2014). These organizations provide guidelines to reinforce the CSR management undertaken by several companies in Malaysia.

In contrast, external influences are the direct or indirect consequences of globalization, for example, the emergence of the Global Compact Network Malaysia, the development of CSR waves, and the spread of multinational companies (MNCs) to emerging countries (Chapple & Moon, 2005; Ismail *et al.*, 2014). As a result of both external and internal pressures, the CSR role has extended not only to community development but also to socially responsible employee relations and socially responsible production processes (Chambers, Chapple, Moon, & Sullivan, 2003).

In the following sub-sections, a brief explanation of the Malaysian CSR framework and a review of the CSR literature in the Malaysian context are presented.

2.4.4.1 Malaysian CSR Framework

According to Yam (2013), even though CSR in Malaysia is relatively new compared to developed countries, it attracts increased recognition under to the mandatory requirement that started in 2007, under the Malaysian CSR framework. Bursa Malaysia introduced the framework for CSR in 2006 (Rajandran & Taib, 2014) as guidelines for Malaysian PLCs that wanted to report their CSR activities. In 2007, Bursa Malaysia announced that the disclosure of CSR activities in all Malaysian PLCs' financial reports was compulsory (Bursa Malaysia Website). The disclosure requirement was gazetted in the Bursa Malaysia

Listing Requirements under Appendix 9C, Para 29 (Abd-Mutalib, Muhammad-Jamil, & Wan-Hussin, 2014b). The framework focuses on four areas: (1) environment, (2) community, (3) marketplace, and (4) workplace, as follows:

Environment

The Bursa Malaysia booklet, *Powering Business Sustainability: A Guide for Directors* (2011), defines environment as activities aimed at conserving ecosystems and biodiversity and managing the influence of a company's operations on the environment. The booklet, (p. 31) identifies indicators related to the environment, such as (1) total greenhouse gas emissions (CO₂), (2) total energy consumption, and (3) total water consumption.

Community

Similarly, the guideline define community as practices through which companies invest or donate money, products, time, influence, management knowledge, services and other resources that may positively influence deserving local communities. This guideline uses the following indicators related to community: (1) total community investment (RM), (2) number of hours spent on community initiatives, and (3) number of community initiatives.

Marketplace

The same guideline defines marketplace practices as activities aimed to encourage and influence shareholders, vendors, suppliers and consumers to act in a sustainable manner across the value chain, supporting the company's own sustainability agenda. The guide uses three indicators: (1) number of supplier audits, (2) percentage of suppliers meeting environmental criteria, and (3) customer satisfaction results.

Workplace

Finally, the sustainability guide defines workplace as the activities that aim to maintain high standards of recruitment, development and retention of employees. The Bursa assesses three indicators for the workplace; (1) time lost through injuries, (2) percentage of females in senior management, (3) average of training hours per employee (Bursa Malaysia, 2011, p. 31).

Bursa Malaysia and FTSE developed the ESG index for the Malaysian market. This FTSE4Good Bursa Malaysia Index is one of the first in Asia to be part of the worldwide benchmarking FTSE4Good Index Series. This index mainly aims to provide support to investors making ESG investments in Malaysian listed companies, with increased exposure and profile for companies with leading ESG practices; it encourages best practices disclosure and helps the transition to a lower carbon and more sustainable economy. This index, which began on 22 December 2014, fulfils the demand for data on sustainable and responsible companies by stockholders and investors who are progressively aware of the importance of long-term sustainability for their investment. As of 10 May 2017, 42 Malaysian PLCs had joined this index (Bursa Malaysia Website).

2.4.4.2 CSR: Malaysian Studies

In addition to the government's encouragement of the best CSR practices among Malaysian listed companies, several independent studies have been conducted. According to Abd-Mutalib (2014), these studies can be divided into two types: those considering CSR reporting awareness and disclosure, and those related to the motivating factors which encourage CSR engagement. Each type is briefly reviewed below.

2.4.4.2.1 CSR Reporting Awareness and Disclosure in Malaysia

CSR research initially dealt with the level of awareness of CSR reporting and commitment among Malaysian listed companies (Abdul Rashid & Ibrahim, 2002; Amran & Siti-Nabiha, 2009; Hasnah, Sofri, Sharon, & Ishak, 2006; Nik Ahmad, Sulaiman, & Siswanto, 2003; Ramasamy & Hung, 2004; Teoh & Thong, 1984; Thompson & Zakaria, 2004; Zulkifli & Amran, 2006). The researchers tried to understand the awareness and perceptions of Malaysian companies towards the practice and nature of CSR reporting.

Teoh and Thong (1984) undertook one of the earliest studies on CSR awareness in Malaysia, concluding that it was still low as the majority of companies were concentrating on the activities related to products/services and employees. Ramasamy and Hung (2004) conducted a comparative study on CSR awareness among companies in Malaysia and Singapore, and found that both countries displayed a low level of awareness. Zulkifli and Amran (2006) found no consistency between the level of awareness and the perceptions of accounting professionals towards CSR concepts.

There are several reasons for the weakness in the CSR reporting of awareness and disclosure in Malaysia during the primary stages of implementation. The main reason was the initial absence of legislation and rules on CSR disclosure. Second, was companies' perception that CSR disclosure would not provide many tangible benefits, such as improving financial performance (Teoh & Thong, 1984; Thompson & Zakaria, 2004). Third, the absence of education on environmental and social responsibility played a significant role in the lower CSR awareness (Ramasamy & Hung, 2004).

In contrast to the initial stages, recent studies on CSR awareness and disclosure indicate that the level of CSR awareness is high. According to Muniandy and Barnes (2010), 83% of the Malaysian listed companies make a CSP disclosure, even though these disclosures differ in content, scope and structure across the companies. Zainal, Zulkifli, and Saleh (2013a) conducted a longitudinal study of CSR disclosure by the top 300 Malaysian listed companies for the period 2005 to 2009, reporting an increase in CSR quality and quantity over the study period. Sadou, Alom, and Laluddin (2017) and Ahmed Haji (2013) also found that, in general, there has been a significant increase in both the quality and extent of CSR disclosure by Malaysian listed companies.

Malaysian professions and companies also have positive attitudes towards CSR commitment (Abdul Rashid & Ibrahim, 2002; Zulkifli & Amran, 2006). Mohd Said, Sulaiman, and Nik Ahmad (2013) found that fund managers evaluated several environmental elements as significant in the process of decision making, possibly affecting the company's financial position. These positive attitudes towards CSR commitment were found not only in the listed companies but also amongst Malaysian Small and Medium Enterprises (SMEs) (Nejati & Amran, 2009), meaning that awareness of CSR practices is increasing.

2.4.4.2.2 Motivation for CSR Reporting in Malaysia

Many factors are responsible for the improvement in the level of CSR reporting disclosure by Malaysian companies, including government influence, corporate governance characteristics, companies' profitability and size, and Islamic influences. For example,

Mahenthiran, Terpstra-Tong, Terpstra, and Rachagan (2015) recognized that the power and influence of the Malaysian government was an incentive for engaging in CSR, to improve corporate image and develop legitimacy in the government's eyes.

For instance, the development of the CSR framework in 2006, the launch of the Silver Book in 2006, and the announcement of the CSR award in 2007 were the main internal drivers for CSR in Malaysia (Ismail, Alias, & Mohd Rasdi, 2015; Ismail *et al.*, 2014). The Silver Book contains a set of guidelines for Malaysian Government-Linked Companies (GLCs) on how these companies can contribute to society in a socially responsible manner (Abdul Hamid *et al.*, 2014). In this regard, many researchers in Malaysia have examined the relationship between government ownership and CSR reporting disclosure (Abdul Hamid *et al.*, 2014; Esa & Mohd Ghazali, 2012; Said *et al.*, 2009; Subramaniam, Samuel, & Mahenthiran, 2016; Wan Abd Rahman, Mohamed Zain, & Yahaya Al-Haj, 2011), and the results of these studies are consistent: government ownership does enhance CSR reporting and disclosure.

Other studies have focused on corporate governance characteristics as motivating factors for CSR reporting and disclosure. For example, Haniffa and Cooke (2005) examined the impact of multiple directorships, board composition, and type of shareholders. They found a significant association between CSR disclosure and Malay directorships, a chair with multiple directorships, executive directors, and foreign ownership. In contrast, Said *et al.* (2009) examination of the relationship between CSR disclosure and corporate governance characteristics found only audit committee and government ownership were significantly

and positively related to CSR disclosure. Sundarasan, Je-Yen, and Rajangam (2016) found that the presence of women directors positively affected the level of CSR initiatives, and Alazzani, Hassanein, and Aljanadi (2017) found a positive relationship between social performance and the presence of female directors on the board. Katmon, Mohamad, Mat Norwani, and Al Farooque (2017) found a positive effect of board education level, board tenure diversity, and board gender diversity on CSR disclosure, although they found a negative relationship between board age and nationality diversity with CSR disclosure.

The size of the company is another factor found in the Malaysian studies which may be linked to CSR disclosure. For example, Ahmed Haji (2013), Amran and Devi (2008), Haniffa and Cooke (2005), Sadou *et al.* (2017) and Sundarasan *et al.* (2016) found a positive association between company size and CSR disclosure. In contrast, Othman, Darus, and Arshad (2011) and Smith, Yahya, and Amiruddin (2007) found no relationship between company size and CSR reporting disclosure. Companies' profitability is another factor studied with regards to CSR reporting disclosure in Malaysia, although the results are not consistent. Some researchers found a significant and positive association between CSR and profitability (Haniffa & Cooke, 2005; Othman *et al.*, 2011; Said *et al.*, 2009), while others found no significant relationship (Amran & Devi, 2008; Mohd Ghazali, 2007). These inconsistent results may due to different periods and samples selection for the studies.

Islamic influence is another factor related to Malaysian companies' engagement in CSR reporting disclosure. Zainal, Zulkifli, and Saleh (2013b) compared Shariah and non-

Shariah approved companies in terms of the quantity and quality of CSR reporting disclosure, concluding that in general there were no significant differences, except that Shariah-approved companies disclosed more environmental CSR than non-Shariah companies. Darus, Amran, Nejati, and Yusoff (2014) found that Islamic financial institutions directed their CSR activities towards the social improvement of the community and the development of community education.

In summary, previous Malaysian studies have identified the motivating factors which may influence the level of CSR reporting disclosures among Malaysian PLCs. The results of these studies showed that government initiatives have a significant influence in determining CSR reporting in Malaysia. These studies also examined the influence of corporate governance characteristics on CSR reporting. Among others, the results indicated that Malay directorship, foreign ownership, audit committee, executive directors, board education level, board tenure diversity, and board gender diversity have an influence on CSR reporting. The results also showed that company size, profitability and Islamic influence encouraged CSR reporting. These factors motivate Malaysian PLCs to engage more in CSR activities to improve their corporate image and to enhance their performance, which may be reflected in sell-side analysts' stock recommendations.

However, Abdul Hamid *et al.* (2014), Jamali and Mirshak (2007) and Mohd Ghazali (2007) claimed that in developing countries, especially Malaysia, there are limited studies that track the development of CSR initiatives. Ismail *et al.* (2014) similarly claimed that CSR research in Malaysia was limited in its coverage of CSR issues. Previous studies, especially

the earlier ones, were limited to characteristics of CSR disclosure in industrial companies. Despite the many studies conducted in Malaysia to identify CSR disclosures, few examined how these disclosures might influence sell-side analysts' stock recommendations.

In Malaysia, several initiatives have been introduced by regulatory bodies to enhance the importance of CSR disclosures, including the CSR Framework (2007) and Sustainability Reporting Guide (2015) for PLCs. These initiatives demonstrate the importance of CSR for the capital market in Malaysia. Therefore, this study enriches the literature on CSR in the Malaysian capital market by examining the influence of CSR reporting disclosure on sell-side analysts' stock recommendations.

2.4.5 CSR and Stock Recommendations

Undeniably, financial analysts add value for investors by converting private and public information into earnings forecasts and stock recommendations which are widely used by the investors in the investment decision process (Chen Xia *et al.*, 2010; Elgers, Lo, & Pfeiffer, 2001). Extensive disclosure by companies enables financial analysts to produce valuable and new information, such as accurate earnings forecasts and stock recommendations, which in turn increase the demand for the analysts' services (Barron *et al.*, 2016; Healy & Palepu, 2001). Previous studies found that companies' disclosure of both financial and non-financial information is positively associated with the accuracy of analysts' earnings forecasts and analyst following (Hamrouni *et al.*, 2017; Lang & Lundholm, 1996).

Orens and Lybaert (2010) concluded that sell-side analysts use non-financial information in assessing companies. Dhaliwal *et al.* (2012) claimed that among the non-financial information disclosed in companies' annual reports, CSR is considered as an important element. Thus, the implementation and adoption of CSR activities generates a growing interest by many parties, especially financial analysts, in the financial markets, (Eccles *et al.*, 2011; Fieseler, 2011). Luo *et al.* (2015) conducted interviews with financial analysts and found increased attention to CSP. A survey conducted in Europe by CSR Europe, Deloitte, and Euronext (2003) for financial analysts and fund managers revealed that social management has a positive impact on companies' value in the long term. Consequently, understanding how participating parties in the financial markets, such as sell-side analysts, evaluate companies' CSR activities is critical (Ioannou & Serafeim, 2015).

However, as mentioned in section 1.2, there is a lack of studies examining the relationship between CSR reporting disclosure and sell-side analysts' recommendations. Huang and Watson (2015) reviewed the research related to CSR published in 13 top accounting journals during the last decade, and found no studies related to CSR and sell-side analysts' stock recommendations. They also remarked that most studies about the consequences of CSR in the accounting literature are shareholder oriented. They recommended future studies to examine how non-shareholders use and benefit from CSR disclosure. Similarly, Dhaliwal *et al.* (2012) stated that there is little evidence about value creation from reporting CSR to stakeholders. Ioannou and Serafeim (2015) remarked that future studies should empirically and theoretically examine how financial analysts evaluate CSR practices.

Beyer *et al.* (2010) similarly remarked that until now there have been few studies about the relationship between companies' voluntary disclosure policies and the information produced by sell-side financial analysts. Tan (2014a) called for more studies about the sell-side analysts' work, in particular the ways in which ESG issues are included in sell-side analysts' research. Garrido-Miralles, Zorio-Grima, and García-Benau (2016) claimed that there is little evidence of the effect of CSR on sell-side analysts' activities. On the other hand, in the context of emerging markets, Saeidi, Sofian, Saeidi, Saeidi, and Saaeidi (2015) stated that most CSR studies are conducted in developed countries and based on US and European data.

In addition, Ismail *et al.* (2014) claimed that, compared to western countries, few studies have been conducted on CSR in Asia, and in particular Malaysia. Therefore, this study fills this gap in the literature by examining how CSR reporting disclosure influences on sell-side analysts' stock recommendations in an emerging market, specifically Malaysia. This is consistent with the great efforts employed by capital market regulatory bodies to enhance CSR disclosure among Malaysian PLCs. These initiatives include mandatory CSR disclosure, which started in 2007. Further, Bursa Malaysia and FTSE introduced a new ESG index in 2014 to support investors in making ESG investments. This scenario makes the Malaysian capital market a unique environment in which to conduct this study.

With the exception of Ioannou and Serafeim (2015) and Luo *et al.* (2015), there is a scarcity of studies in this area. Ioannou and Serafeim (2015) studied the relationship between analysts' stock recommendations and companies' CSR rating in US companies, conducting

a time-series study to see how CSP may influence sell-side stock recommendations. The study sample consisted of 16,064 observations for 3,580 companies covering the period 1993 to 2007. Using CSR scores from KLD as a proxy for measuring CSR strategies and I/B/E/S for collecting analysts' recommendations, they found that sell-side analysts issue optimistic stock recommendations (buy recommendations) for companies with high CSR ratings.

Luo *et al.* (2015) examined the mediating role of sell-side analysts' stock recommendations in the relationship between CSP and corporate financial performance (CFP), using both qualitative and quantitative methods. In the qualitative study they interviewed 28 financial analysts and found that the majority monitored CSP in the companies they covered. For the quantitative method, the study sample consisted of 349 US companies covering the period 2000 to 2010 with a total of 3,839 company-year data points with KLD-based CSP. An ESG-based sample also included 857 companies covering the period 2002 to 2010 (7,713 company-year observations). They found that CSP positively and significantly influences sell-side analysts' stock recommendations, and concluded that these recommendations mediate the association between CSP and company stock returns.

However, there are distinct differences between those of Ioannou and Serafeim (2015) and Luo *et al.* (2015) and the current study. The earlier studies examined the influence of CSR on analysts' stock recommendations in developed countries, while the current study focuses on the Malaysian context. Further, Ioannou and Serafeim (2015) and Luo *et al.* (2015) used KLD rating as an indicator for CSR reporting. However, Chatterji, Levine and

Toffel (2009) raised questions about the reliability of the KLD rating data. Thus, the current study utilizes a wide-ranging set of CSR disclosure indexes (qualitatively and quantitatively) to measure the quality of CSR disclosure.

Muslu, Mutlu, Radhakrishnan, and Tsang (2016) studied the association between the CSR disclosure scores and financial analysts' earnings forecasts. Their sample consisted of 2,462 company-year observations for the period 2000 to 2011. They found that companies with CSR reporting and high disclosure scores are related to more accurate earnings forecasts from financial analysts. In contrast, companies with lower CSR scores for disclosure are not related to greater accuracy of earnings forecasts.

Garrido-Miralles *et al.* (2016) examined the influence of voluntary sustainability reporting on sell-side analysts' earnings forecasts in the Spanish context. The study sample consisted of 527 observations covering the period 2005 to 2010. They found that a negative statistically significant relationship between sell-side analysts' earnings forecasts error and the publication of sustainability reports.

Fieseler (2011) conducted 42 semi-structured expert interviews with representatives of sell-side and buy-side analysts for the period May 2006 to October 2006, to show how equity financial analysts perceive ethical, legal, economic and philanthropic responsibility strategies. He found that corporate responsibility issues were gradually becoming part of mainstream investment analysis, meaning that financial analysts consider ethical, legal, economic and philanthropic strategies when issuing their stock recommendations.

Dhaliwal *et al.* (2012) studied the association between non-financial information and the accuracy of analysts' earnings forecasts by using company-level data from 31 countries. The study sample consists of 7,108 stand-alone CSR reports for 1,297 companies for the period 1994 to 2007. They concluded that CSR disclosure is negatively associated with analysts' forecast error.

Laohapolwatana, Smith, and Howieson (2005) investigated the influence of voluntary disclosure on sell-side financial analysts' stock recommendations revision. They use information released by the companies' announcements and related media reports as a proxy for non-financial disclosures. The study sample contained 200 analysts' stock recommendation revisions for 40 listed Australian companies as at March 2003. The authors found a positive relationship between a number of stock recommendations and non-financial disclosures. They also observed that disclosure with favourable signals or with sensitive content is significantly associated with the direction and type of analysts' revisions.

In summary, the results from previous studies show that companies' CSR activities attract the interest of many parties in the financial market, including financial analysts. Further, the results of these studies indicate that companies with a higher level of CSR disclosures have more analyst coverage, more accurate earnings forecasts, and more favourable stock recommendations. In addition, most of these studies call for further research on the value creation of CSR to stakeholders, and also empirical and theoretical examination of how

financial analysts evaluate CSR practices. Therefore, this study attempts to fill this gap in the literature. Table 2.1 summarizes the previous literature.

Table 2.1

Summary of Literature on the Relationship between CSR and Stock Recommendations

Authors	Country	Sample & Period	Findings
Ioannou and Serafeim (2015)	U.S.	3,580 companies (16,064 observations) – for the period 1993 to 2007.	Sell-side analysts issue optimistic stock recommendations for high CSR rating companies.
Luo <i>et al.</i> (2015)	U.S.	- 28 interviews. - 349 companies (3,839 observation) – for the period 2000 to 2010 with KLD-based CSP. - 857 companies (7,713 observation) – for the period 2002 to 2010 with ESG-based CSP.	Majority of analysts monitored CSP in the covered companies. CSP positively and significantly associated with sell-side analysts' recommendations. Further, analysts' recommendations mediate the relationship between CSP and company stock returns.
Muslu <i>et al.</i> (2016)	U.S.	2,462 company-year observations for the period 2000 to 2011.	Companies with higher CSR disclosure have more analysts' earnings forecasts accuracy.
Garrido-Miralles <i>et al.</i> (2016)	Spain	527 observations cover the period 2005 to 2010.	They found a negative relationship between analysts' earnings forecasts error and the publication of a sustainability report.
Fieseler (2011)	Germany	42 semi-structured expert interviews during the period May 2006 to October 2006.	Corporate responsibility issues gradually become part of mainstream investment analysis.
Dhaliwal <i>et al.</i> (2012)	31 countries	1,297 companies (7,108 stand-alone CSR reports) - for the period 1994 to 2007.	Issuance of stand-alone CSR reports is associated with lower analysts' forecast error.
Laohapolwatana <i>et al.</i> (2005)	Australia	200 stock recommendation for 40 listed companies at March 2003.	Positive relationship between a number of stock recommendations and non-financial disclosures.

2.5 Institutional Investors

This section reviews institutional investors as sophisticated and key players in global financial markets, specifically institutional investors' background, types of institutional investor, the Malaysian context, and institutional investors and analysts' stock recommendations.

2.5.1 Institutional Investors' Background

Institutional investors are regarded as the main actors in the greatest financial markets and their impact on companies' performance is growing with the privatization policies implemented by numerous countries (Che Ahmad & Jusoh, 2014). They may have an impact on managements' activities and performance directly via their ownership or indirectly through the power of their trading shares (Gillan & Starks, 2003; Huang *et al.*, 2016). Compared to individual investors, they normally trade and hold higher volumes of company stocks, and can consequently strongly influence company stock prices (Bushee & Miller, 2012; Helwege *et al.*, 2012).

Naturally, institutional investors are specific organizations that invest enormous pools of money in securities in the financial markets (Luo, Zhang, Zhang, & Aspara, 2014). Lang and McNichols (1997, p. 1) define institutional investors "*as large investors who exercise discretion over the investment of others*". Velury and Jenkins (2006) define them as large investors such as insurance companies, bank trusts, mutual funds, and pension funds that make an investment for others and manage a minimum \$100 million in equity. Dhaliwal (1992) states that institutional investors are financial intermediaries responsible for

providing liquidity to short-term money markets and making long-term investments in both primary and secondary financial markets.

The role of institutional investors has widened as important participants in the financial markets (Cox & Wicks, 2011; Gillan & Starks, 2007; Tee *et al.*, 2017). They play a key international role in financial markets because they manage assets of enormous size (Ajina, Lakhal, & Sougné, 2015). At the end of December 2007, the total assets under the management of the main global institutional investors reached US\$ 81.90 trillion (Jiang, 2010b). A large number of studies indicate that institutional investors are better informed and more sophisticated than individual investors, given their access to resources, underlying incentive schemes and dedication to the investment process (Amihud & Li, 2006; Bushee & Miller, 2012; Collins *et al.*, 2003; Gibson *et al.*, 2004; Helwege *et al.*, 2012; Hribar *et al.*, 2009; Jiambalvo *et al.*, 2002; Ke & Petroni, 2004; Trabelsi, 2017). The presence of institutional investors in a company's ownership structure is associated with various benefits. For example, several studies have focused on the institutional investors' role as main players in the corporate governance structure and found a positive relationship between corporate governance and institutional investors (Abdul Wahab *et al.*, 2008; Aggarwal *et al.*, 2011; Chung & Zhang, 2011).

Cornett *et al.* (2007) claimed that institutional investors are increasingly ready to use their ownership rights in mitigating agency problems by monitoring companies' managers acting in the best interests of shareholders. Hsu and Koh (2005) and Koh (2003) stated that the existence of institutional investors in the companies' ownership structure may lead to

diminishing earnings management, as evidenced specifically when the institutional investors have substantial shareholdings. Therefore, they may constrain managers from engaging in earnings management, such as decreasing or increasing reported profits based (Chung, Firth, & Kim, 2002). Tai, Lai, and Lin (2014) found that institutional investors are effective in monitoring corporate risk management to enhance the possibility and magnitude of hedging.

The percentage of institutional investors has a significant and positive consequence on the liquidity of stock markets (Ajina *et al.*, 2015) and companies' performance (Hutchinson *et al.*, 2015; Muniandy *et al.*, 2016). Jiambalvo *et al.* (2002) found that the extent to which stock prices lead earnings is positively related to the percentage of institutional ownership. Huang (2015) concluded that the existence of institutional investors plays a price-stabilizing role in the financial markets. Brous and Kini (1994) found a significant and positive relationship between abnormal stock returns and institutional investors.

2.5.2 Types of Institutional Investor

Investment preferences and incentives are likely to differ between different types of institutional investor (Connelly, Tihanyi, Certo, & Hitt, 2010). The CDA/Spectrum Institutional Holding database by Thomson Financial categorizes institutional investors into five types based on the S&P definition: insurance companies, banks, independent investment advisors, mutual funds, and others (e.g. university endowments, foundations, internally managed pension funds, employee stock option plans, and individuals who invest the money of others but are not otherwise categorized) (Jiang, 2010a). Hsu and Koh

(2005) and Koh (2003) suggested more categories: superannuation and pension funds, insurance companies (life and non-life), investment trusts (containing unit trusts), investment companies, financial organizations (containing bank nominee companies and banks, finance institutions, building societies and credit cooperatives), and other nominee companies related to the above classifications of organizations.

In addition to the types of institutional investor, their investment horizon is another dimension in which they differ. Based on Porter's (1992) description, Bushee (1998, 2001, 2004) classified institutional investors as transient, dedicated, and quasi-indexers according to their investment horizon, strategies and behaviour. Transient institutions have higher portfolio diversification and turnover. Dedicated institutions invest large stakes in a few companies and follow a long-term buy and hold strategy. Quasi-indexing indicates a high diversification and low turnover portfolio; these investors are regarded as passive because they are more likely to make buy and hold investments in a wide-ranging set of companies (Ramalingegowda, 2014).

However, Chourou, Ni, and Zhong (2014) and Serafeim (2015) claim that Bushee's classification is applicable only in the US context. Previous studies have classified institutional investors as long-term (dedicated) and short-term (transient) based on their investment horizon (Abd-Mutalib, Muhammad-Jamil, & Wan-Hussin, 2015; Bamahros & Wan-Hussin, 2015; Chang, Chen, & Dasgupta, 2012; Connelly *et al.*, 2010; Cox & Wicks, 2011; Derrien, Kecskés, & Thesmar, 2014; Dong & Ozkan, 2008; Heinle & Hofmann, 2013; Serafeim, 2015; Switzer & Wang, 2017; Wang & Zhang, 2009; Yan & Zhang, 2009).

Based on the discussion above and following previous studies, this study classifies institutional investors into two types by investment horizon, i.e. transient and dedicated. For the purpose of this study, the following sub-sections review the literature related to these two types of institution.

2.5.2.1 Transient Institutional Investors

These investors are characterized by a higher portfolio turnover in addition to a highly differentiated portfolio; they are investors with a short-term focus and their interest in companies' stocks depends on the possibility of short-term trading earnings (Bushee, 1998; Chan Kam *et al.*, 2013; Hribar *et al.*, 2009; Koh, 2007). By this definition, transient institutions hold stocks for short periods; they have less motivation for investing in monitoring and consequently affecting corporate governance. They act as traders rather than owners (Lin, 2014). Dong and Ozkan (2008) stated that transient institutions have a tendency to sell and buy their investments very frequently and show a higher portfolio turnover. Chang *et al.* (2012) claimed that trading activities by transient institutional investors lead to their incorporating private information in companies' stock prices. They also found that companies with higher transient ownership are more likely to issue equity as opposed to debt.

Yan and Zhang (2009) found that the positive relationship between future stock returns and institutional investors' ownership is driven by transient institutions. Additionally, transient institutions' trading forecasts future stock returns. Chang *et al.* (2012) found that the existence of transient institutions leads to improved information environment transparency

and allows companies to issue securities at a lower cost. Chen Yue, Li, Wang, and Wang (2015) found that companies with transient institutions follow additional conservative accounting practices. Switzer and Wang (2017) found that trading by transient institutional investors reduces companies' credit spreads, suggesting that bondholders benefit from the better-quality information environment created by transient institutions.

In contrast, a number of previous studies have contended that transient institutional investors are myopically pricing companies, to the detriment of the company. Myopia combined with a higher ownership level by transient institutions can force managers to implement adverse short-term strategies that could impair the companies' long-term prospects (Switzer & Wang, 2017). Porter (1992) also referred to transient institutional investors as myopic short-term institutional investors focusing on existing earnings more willingly than on long-term earnings. Bushee (2001) claimed that transient institutions are more likely to show a higher preference for short-term incomes. Therefore, they are likely to encourage opportunistic practices by management if they create important abnormal returns (Njah & Jarboui, 2013). Consistent with this argument, previous studies have shown that the existence of these institutions is more likely to increase motivation for earnings management (Burns, Kedia, & Lipson, 2010; Cheng & Reitenga, 2009; Koh, 2007; Lin & Manowan, 2012).

However, Luo *et al.* (2014) claimed that transient institutions participate in various information searches of extensive collections of companies in order to extensively gauge probable investment prospects. They have a tendency to employ diverse pieces of

information that might (a) have associations with companies' earnings forecasts and (b) influence the short-term sentiment associated with a stock. Ke and Petroni (2004) stated that transient institutions have a greater need for information which helps them in achieving short-term transaction earnings. This kind of information can be obtained from sources inside the company (such as communicating with the companies' management), institutions' own research, and from outside information intermediaries (e.g. the Internet, media, and financial analysts) (Chan Kam *et al.*, 2013).

2.5.2.2 Dedicated Institutional Investors

These investors are characterized by investing in a few selected companies with lower portfolio turnover and a long-term investment horizon. They often have a large investment in the stocks they are holding (Chan Kam *et al.*, 2013; D'Souza, Ramesh, & Shen, 2010; Eaton, Nofsinger, & Varma, 2014; Hribar *et al.*, 2009; Luo *et al.*, 2014). According to Bushee (1998, 2001), consistent with long-term investment strategies, these institutions have long-term holding periods and more concentrated ownership. In this regard, previous studies have proposed that institutional investors with a long-term investment horizon and more concentrated share-focused holdings are more likely to monitor companies' managers (Chen Xia, Harford, & Li, 2007; Hartzell & Starks, 2003; Ramalingegowda & Yu, 2012). Indeed, they have the power, incentives and resources essential for control-related actions such as restructuring activities and takeovers (Kim, Kim, & Kwon, 2009).

Elyasiani and Jia (2010) remarked that long-term horizon institutional investors help management to increase Wall Street coverage for a company. This in turn increases the

demand to improve the quality of companies' shares and reduce financing and transaction costs. Since this type of investor holds large stakes in companies mainly for the purpose of long-term investment, they are highly motivated to incur the cost of openly keeping relations with the managers to obtain private pre-disclosure information (Ali, Klasa, & Li, 2008; Bushee & Goodman, 2007). Ramalingegowda (2014) found that these institutions are better known and have greater information processing capabilities, in that they sell more stocks of forthcoming bankrupt companies than of corresponding companies in minimum one-quarter ahead of bankruptcy.

Current studies show that dedicated institutional investors are actively involved in corporate governance (Lin, 2014). For instance, Chen Xia *et al.* (2007) stated that independent institutional investors with a long-term investment horizon are more likely to focus on monitoring rather than trading. Therefore, through monitoring actions, they are more likely to limit discretion accruals available and implemented by managers (Njah & Jarboui, 2013). Koh (2007) also found that the ownership of dedicated institutions can mitigate aggressive earnings management. Connelly *et al.* (2010) found a positive relationship between dedicated institutions and strategic competitive activities.

2.5.3 The Malaysian Context

In Malaysia, after the financial crisis in Asian countries in 1997-98, the new mechanism for corporate governance by the Finance Committee on Corporate Governance (FCCG) emphasized the need for greater participation of institutional investors in corporate governance (Ashrafi & Muhammad, 2013). Consequently, in 1999, the FCCG issued two significant recommendations: to establish the MCCG to outline the best corporate

governance practices; and to establish the MSWG (Abdul Wahab *et al.*, 2007). The MSWG group works as independent association with the main aim of recommending and encouraging the best corporate governance practices among Malaysian listed companies, and protecting the smaller shareholders from majority shareholders' activities (How *et al.*, 2014). This group seeks to harness the power of institutional investors to institute and monitor changes in their invested companies (Abdul Wahab *et al.*, 2007).

In Malaysia the five largest public institutional investors are all members of MSWG (Abdul Wahab *et al.*, 2008): these include two pension funds, the Lembaga Tabung Angkatan Tentera or Armed Forces Fund Board (LTAT), and EPF, the pilgrimage fund or Lembaga Tabung Haji (LTH); an investment fund (Permodalan Nasional Berhad (PNB); and an insurance company (National Social Security Organization of Malaysia (PERKESO) (Benjamin, Mat Zain, & Abdul Wahab, 2016). According to Abdul Wahab *et al.* (2008), together these institutions have about 70% of total institutional shareholding in companies listed on the Main Board of Bursa Malaysia. By December 2013, Bursa Malaysia reported that institutional investors transacted 75% of the daily trading in the Bursa Malaysia Exchange (Benjamin *et al.*, 2016).

In 2014 MSWG and SC issued the Malaysian Code for Institutional Investors 2014 in order to guide institutional investors in the best practices, as explained below.

2.5.3.1 Malaysian Code for Institutional Investors

In 2011, the SC delivered the Corporate Governance Blueprint (CG Blueprint), which defined strategic initiatives targeted at strengthening self and market discipline. One of the Blueprint's deliverables is the Malaysian Code for Institutional Investors 2014 (Code).

As stated by CG Blueprint:

“The formulation of a new industry-driven code can strengthen the accountability of institutional investors to their own members and investors. The new code will require institutional investors to explain how corporate governance has been adopted as an investment criterion and the measures they have taken to influence, guide and monitor investee companies. It is also important for institutional investors to include governance analysis in their investment appraisal to help identify better governed companies.” (Securities Commission Malaysia, 2011, p. 16).

This code is voluntary and aims to set out the comprehensive principles for effective stewardship and guidance in helping institutional investors to a better understanding and implementation of the principles. The code proposes six key principles for institutional investors, including disclosure of their stewardship responsibilities. They are also required to engage in and monitor their investee companies appropriately, publishing any conflict of interest and voting policy, and integrating corporate governance and sustainability considerations in the process of decision making (MSWG & SC, 2014). Malaysia is the first ASEAN and second in Asia among emerging markets to launch a code for institutional investors (Institutional Investor Council Malaysia, 2016).

2.5.3.2 Malaysian Institutional Investors and Their Investment Horizon

According to Abdul Wahab *et al.* (2008), the institutional investors' market in Malaysia is tightly controlled by the government, as the boards of major institutions are chosen by the government. These institutions are known as GLICs, and include three main pension funds:

EPF, Kumpulan Wang Persaraan (Diperbadankan) or Retirement Fund Incorporated (KWAP), LTAT, a unit trust fund namely the PNB, LTH, a sovereign wealth fund namely the Khazanah Nasional Berhad (KHAZANAH), and an investment arm which is the Menteri Kewangan Diperbadankan or Minister of Finance Incorporated (MKD) (Institutional Investor Council Malaysia, 2016; Putrajaya Committee on GLC High Performance, 2014).

The institutional investors' shareholdings in Malaysia consist of other types of institution, mostly in the finance, insurance and banking sectors. However, the reason why the institutional investors' market in Malaysia is tightly controlled by the government is associated with the introduction of the New Economic Policy (NEP) in 1970 (Amran & Devi, 2008). One of the main objectives of the NEP is to increase the Bumiputera's⁸ shares in the financial market (Abdul Wahab *et al.*, 2014).

The following sub-sections describe the major institutional investors in Malaysia and their investment horizons.

2.5.3.2.1 Pension and Provident Funds

Pension and provident funds are defined as collecting, pooling and investing the funds donated by beneficiaries and sponsors for the provision of retirement income to the beneficiaries (Davis, 2002). Their main objective is thus to provide employees with a

⁸ Bumiputera or Bumiputra means "son of earth" in Malay; translated accurately it means "princes of the earth" and is a formal explanation commonly used in Malaysia, embracing ethnic Malays in addition to other indigenous ethnic groups (Amran & Devi, 2008).

steady and generous income during retirement (Kumara & Pfau, 2013). While the objectives of both funds are the same, providing a retirement income to the depositors, the key difference between them is in how the income is paid. Pension funds allow the depositors to receive part of the income throughout their retirement, while the other portion is paid at retirement age. In contrast, provident funds allow the beneficiaries to receive income upon retirement (Abd-Mutalib, 2014).

In Malaysia, there are three main provident and pension funds, EPF, KWAP and LTAT, all government-controlled organizations (Abd-Mutalib, Muhammad-Jamil, & Wan-Hussin, 2014a). EPF is a social security organization based on the Laws of Malaysia, Employee Provident Fund Act 1991 (Act 452), providing retirement benefits for the members through management of their savings in a reliable and an efficient way. As at September 2016, EPF reported a total of 14.72 million members (www.kwsp.gov.my). KWAP, formerly known as the Pension Trust Fund, was established in 1991 to act as a pension fund for pensionable public sector employees (www.Kwap.gov.my). LTAT was founded in 1972 with two main objectives: to serve as the retirement fund and other benefits for the Malaysian armed forces; and to offer support to retired and retiring personnel of the armed forces (www.ltat.org.my). In addition to these government-controlled funds, there are private and foreign funds typically owned by local companies, such as the Public Bank Officers' Retirement Benefit Fund, the Tenaga Nasional Berhad Retirement Benefit Trust, and foreign pension funds (Abd-Mutalib, Muhammed Jamil, & Wan-Hussin, 2013).

Regarding the pension and provident funds' investment horizon, they are commonly considered as dedicated institutional investors (Chang *et al.*, 2012; Derrien *et al.*, 2014; Johnson & Greening, 1999; Oh, Chang, & Martynov, 2011; Ryan & Schneider, 2002; Serafeim, 2015; Sethi, 2005). Cox and Wicks (2011) stated that pension plans, including those of local authority employers, nationalized industries and some federal (central government) plans, are expected to have a long-term investment horizon. Cox, Brammer, and Millington (2004) remarked that pension funds have a long-term investment horizon, while Abd-Mutalib *et al.* (2015), Abd-Mutalib *et al.* (2013) and Bamahros and Wan-Hussin (2015) classified these pension and provident funds as dedicated institutional investors.

2.5.3.2.2 Mutual Funds and Unit Trusts

Mutual funds or unit trusts are defined as investment vehicles shaped by asset management companies concentrating on assembling savings from both institutional and retail investors, with the main objective of helping the investors to increase their wealth via diversification of their investment portfolios (Abdullah, Hassan, & Mohamad, 2007). In Malaysia, mutual funds, which are commonly known as unit trusts, experienced substantial growth during the last decade in relation to a number of other funds offered, and the size of capital managed by the Unit Trust Management Companies (UTMCs) (Abdullah & Abdullah, 2009). Recent statistics from the SC show that on 17 April 2017 there were 637 launched unit trust funds with a total net asset value (NAV) of RM392 billion (Securities Commission Malaysia, 2017).

Mutual funds and unit trust funds in Malaysia have a unique position as they may be separated into privately managed and government-managed funds. The latter are funds under Amanah Saham Nasional Berhad (ASNB) management, which is completely owned by PNB, one of the GLICs (Abd-Mutalib *et al.*, 2014a). PNB was founded on 17 March 1987 to act as an essential tool in the Government's NEP, with the main objective to encourage the Bumiputeras' share ownership in the corporate sectors (www.pnb.com.my). On the other hand, some of the privately managed mutual funds and unit trusts which belong to the UTMCS are under the control of banks. For example, Maybank Investment Management Sdn Bhd acts as the fund management company under the control of Maybank Group, while Public Mutual Berhad is a completely owned subsidiary of Public Bank Berhad. In addition to these locally managed private mutual funds and unit trusts, some are managed by foreign investment companies (Abd-Mutalib *et al.*, 2014a).

Regarding the privately managed mutual funds and unit trusts investment horizon, they are classified as institutions with a short-term investment horizon (transient), as they can be converted by the investors through selling them back on any business day. In addition, the close relationship between these institutions and the banking sector confirms their classification as short-term investment horizon institutions (Abd-Mutalib *et al.*, 2015; Bamahros & Wan-Hussin, 2015; Chang *et al.*, 2012; Cox *et al.*, 2004; Cox & Wicks, 2011; Derrien *et al.*, 2014; Johnson & Greening, 1999; Serafeim, 2015; Zera & Madura, 2001). On the other hand, the government-managed unit trusts are classified as long-term institutions (dedicated) (Serafeim, 2015). In Malaysia, these institutions are under the management of PNB, one of the GLICs. Therefore, following previous Malaysian studies

and in line with the central objective of PNB, they are classified as dedicated institutions (Abd-Mutalib *et al.*, 2015).

2.5.3.2.3 Pilgrimage Fund

The pilgrimage fund is another major institution in the Malaysian institutional investors market, commonly known as Lembaga Tabung Haji (LTH). LTH was established in 1963 with the main objective of providing investment services and opportunities while equally managing pilgrimage activities for the Malaysian Muslim community. LTH has become the largest Islamic fund manager in Malaysia, managing more than RM55 billion funds. In addition to saving funds for future pilgrims, LTH also attempts to provide excellent hajj management services and strengthens the depositors' resources by making strategic investments globally and locally to ensure continuous and sustainable growth (www.tabunghaji.gov.my).

Regarding the LTH investment horizon, there is limited evidence to determine whether it is a transient or dedicated institutional investor. However, earlier studies such as Abd-Mutalib *et al.* (2015) and Cox *et al.* (2004) suggested that organizations which engages in social responsibilities, such as charities and foundations, may have long-term investment horizon “dedicated”. As the aim of LTH is social responsibility towards future pilgrims, and as it is classified as a GLIC, making sustainability obligations an important agenda, it is expected to exhibit dedicated behaviour in the process of investment decision making (Abd-Mutalib *et al.*, 2014a; Abd-Mutalib *et al.*, 2015; Bamahros & Wan-Hussin, 2015).

2.5.3.2.4 Other GLICs

In addition to the GLICs described above, there are other government-controlled institutions: KHAZANAH, MKD, Social Organisation Security (SOCSO), ValueCAP, Federal Land Development Authority (FELDA), and Petroliam Nasional Berhad (PETRONAS). These institutions contribute to the institutional investor markets in the Bursa Malaysia listed companies. More details about these institutions follow.

2.5.3.2.4.1 Sovereign Wealth Fund (SWFs)

SWFs are defined as government-controlled or government-owned institutions that make long-term investments either locally or globally and take various forms in order to achieve several economic and financial purposes (Bortolotti, Fotak, & Megginson, 2015; Truman, 2008). Their size alone makes them significant political and financial players in the global economy (Boubakri, Cosset, & Grira, 2017), with an estimated \$5.4 trillion total assets under their management in 2012 (Lenihan, 2014). Morgan Stanley projected that SWFs might increase to \$12 trillion by 2015 (Dewenter, Han, & Malatesta, 2010). SWFs are commonly classified into many categories such as investment corporations, savings funds, stabilizing funds and pension reserve funds (Kunzel, Lu, Petrova, & Pihlman, 2011).

In Malaysia, on 3 September 1993 KHAZANAH was established as a public limited company governed by the Companies Act, 1965. All KHAZANAH share capital is owned by the Ministry of Finance, which makes KHAZANAH a completely owned unit of the Malaysian Government. KHAZANAH is the government's investment arm with the aim of encouraging economic growth and creating strategic investment in long-term interests,

and contributing to nation-building (www.khazanah.com.my). The SWFs' investment horizon is classified as long-term (dedicated) (Bamahros & Wan-Hussin, 2015; Serafeim, 2015), so KHAZANAH is a dedicated institutional investor.

2.5.3.2.4.2 Minister of Finance (Incorporated) (MOF, Inc)

The Minister of Finance (Incorporated) or MOF (Inc.) was established as a corporate body under the Minister of Finance (Incorporated) Act 1957, to manage the investments made by the federal government of Malaysia. The act authorizes MOF (Inc.) to enter into acquisitions, contracts, holdings, possessions and maintaining tangible and intangible assets on behalf of the federal government (www.treasury.gov.my). MOF (Inc) holds shares in several private and public companies, involving many sectors such as the social, technology, infrastructure and public facilities and economic sectors.

2.5.3.2.4.3 Social Organization Security (SOCSO)

SOC SO, which is also known as PERKESO, was founded in 1971 under the Ministry of Human Resources. This institution was established with its main objective to administer and implement the Social Employees' Security Act 1969 and Social Employees' General Safety Regulations 1971. It offers social security protection to employees and their dependants through social security systems and increasing awareness of occupational health for employees' social welfare (www.perkeso.gov.my).

2.5.3.2.4.4 ValueCAP

ValueCAP Sdn Bhd (ValueCAP) was incorporated on 16 October 2002 as an investment holding company principally involved in investments in listed securities on Bursa Malaysia, equally owned by PNB, KWAP and KHAZANAH (www.valuecap.com.my). ValueCAP is a long-term investor in listed companies, with around RM 20 billion in assets (The World Bank, 2012). In September 2015, the Malaysian Government announced that ValueCAP would be assigned RM20 billion explicitly for the domestic capital market, seeing ValueCAP's role as an institutional investor in the Malaysian market.

2.5.3.2.4.5 Federal Land Development Authority (FELDA)

FELDA was founded on 1 July 1956 with the main aim of poverty annihilation through the cultivation of rubber and oil palm. Its main purpose is to support agricultural activities and land development projects, and the industrial and commercial social economy. By 1990 FELDA was no longer recruiting new settlers, and the government entrusted it to depend on its own financial resources and become a legislative body producing its own revenue to fund different developments over a diversity of businesses. Accordingly, since 1994 the government has not made any provision for the schemes. In order to raise an income, FELDA has established many private corporate units such as Felda Investment Corporation (FIC), Felda Global Ventures (FGV), and FELDA Capital Cooperative (Cooperative FELDA) (www.felda.net.my).

2.5.3.2.4.6 Petroliam Nasional Berhad (PETRONAS)

PETRONAS was founded in 1974; as Malaysia's completely integrated oil and gas organization it is ranked internationally among the largest companies on FORTUNE Global 500®. PETRONAS is the custodian of Malaysia's national oil and gas resources, exploring, producing and delivering energy to meet society's growing needs. It has successfully and consistently implemented several social, environmental and community programmes for the benefit of both the current and future generations (www.petronas.com.my).

2.5.3.2.5 Banks

The financial system in Malaysia can be generally separated into the banking system and non-banking financial intermediaries. The major component is the banking system, which holds roughly 70% of the financial system's total assets (Sufian, 2008). The market of the banking sector is controlled by the domestic banks, as about 75% of the market share belongs to them in terms of total deposits and total assets (Bank Negara Malaysia, 2001). Even though the domestic banks control the largest share of the market, the existence of foreign banks is relatively important. Foreign banks' operations started in Malaysia with the establishment of the Standard Chartered Bank in 1875, with 146 branches of 16 foreign banks throughout the country by the end of 1994 (Marashdeh, 1994). Consequently, foreign banks have become main players in the Malaysian economy, which holding 27% of the banking sectors' share in 2012 (Bank Negara Malaysia, 2012).

The banking system in Malaysia is divided into many groups such as money brokers, commercial banks, merchant banks, finance companies and discount houses. All are certified under the Banking and Financial Institutions Act (BAFIA) 1989 and controlled by Bank Negara Malaysia (Bank Negara Malaysia, 2001). The commercial banks are the key actors in the banking system. They are the biggest and most important suppliers of funds, enjoying the broadest range of acceptable activities employed in a wide range of banking services (Sufian, 2008). The banking system is also divided into Islamic and conventional systems, the former working within the borders of Shariah principles. The uniqueness of the Malaysian banking system is that conventional banks are permitted to provide Islamic banking and financial products together with conventional products (Sufian, 2007).

Regarding the banks' investment horizon, earlier studies have classified them as short-term investment horizon institutions (transient) (Abd-Mutalib *et al.*, 2015; Bamahros & Wan-Hussin, 2015; Zahra, 1996). Banks, insurance companies and mutual funds are mostly under similar corporate control and subject to peer-group benchmarking, which may shorten their investment horizon in order to avoid under-performance (Cox & Wicks, 2011).

2.5.3.2.6 Insurance Companies

In Malaysia, the insurance sector is different from other countries because it works under a dual operating system, including takaful (Islamic) and conventional operating systems. While takaful is newer than the conventional insurance system, its effectiveness is

considered to be competitive (Md Saad, Abd Majid, Mohd Yusof, Duasa, & Abdul Rahman, 2006). Many insurance companies in Malaysia are under the control of banks and work separately. For example, Etiqa Insurance and Takaful work under the control of Malayan Banking Berhad, whereas CIMB Bank Berhad has a private investment arm in CIMB Aviva Assurance, CIMB Aviva Takaful, and BIMB Holdings Berhad has Syarikat Takaful Malaysia Berhad as a subsidiary (Abd-Mutalib, 2014).

Insurance companies are classified as having a short-term investment horizon (transient) (Abd-Mutalib *et al.*, 2015; Bamahros & Wan-Hussin, 2015), for many reasons. First, insurance companies are usually divisions under the control of banks and therefore under pressure to perform well as they are monitored by peer group benchmarking. This need to perform well, and the competition, may shorten their investment time horizon because the need for profit will increase in order to avoid under-performance compared to other divisions. Secondly, the shares of insurance companies are similar to mutual funds. Previous studies have identified life insurance and mutual funds as making similar investment decisions, as both target liquidity as a preference in the process of investment decision making, which obviously indicates a transient investment orientation (Cox & Wicks, 2011; Abd-Mutalib *et al.*, 2015). Thirdly, insurance companies have a tendency to invest mainly in mortgages and bonds; thus, they view their partial equity holdings with a short-term investment horizon (Ryan & Schneider, 2003). Table 2.2 summarizes institutional investors and their investment horizons as identified in previous studies.

Table 2.2

Summary of Institutional Investors and their Investment Horizons as Identified in Previous Studies

Type	Investment Horizon	Reference
1 Pension and Provident Fund	Dedicated	(Abd-Mutalib <i>et al.</i> , 2015; Abd-Mutalib <i>et al.</i> , 2013; Bamahros & Wan-Hussin, 2015; Cox <i>et al.</i> , 2004; Cox & Wicks, 2011; Johnson & Greening, 1999; Oh <i>et al.</i> , 2011; Ryan & Schneider, 2002; Serafeim, 2015; Sethi, 2005)
2 Unit Trust and Mutual Funds	Transient	(Abd-Mutalib <i>et al.</i> , 2015; Bamahros & Wan-Hussin, 2015; Cox <i>et al.</i> , 2004; Cox & Wicks, 2011; Johnson & Greening, 1999; Serafeim, 2015)
3 Pilgrimage Funds	Dedicated	(Abd-Mutalib <i>et al.</i> , 2015; Bamahros & Wan-Hussin, 2015)
4 Sovereign Wealth Fund	Dedicated	(Abd-Mutalib <i>et al.</i> , 2015; Bamahros & Wan-Hussin, 2015; Kunzel <i>et al.</i> , 2011; Serafeim, 2015)
5 Banks	Transient	(Abd-Mutalib <i>et al.</i> , 2015; Bamahros & Wan-Hussin, 2015; Oh <i>et al.</i> , 2011; Zahra, 1996)
6 Insurance Companies	Transient	(Abd-Mutalib <i>et al.</i> , 2015; Bamahros & Wan-Hussin, 2015; Cox & Wicks, 2011; Ryan & Schneider, 2003)

2.5.3.3 Institutional Investors: Malaysian Studies

Even though institutional investors in Malaysia hold more than 5% share ownership in 94% of the Top 100 listed companies (Asian Development Bank, 2014), and institutional investors are heterogeneous (Abdul Wahab *et al.*, 2007; How *et al.*, 2014), there is a lack of studies on whether the type of institutional investors (transient, dedicated) may affect the outcomes of the capital market. According to Lai, Tan, and Chong (2013), there is a dearth of participation, particularly amongst institutional investors, in academic research in Malaysia, and this tendency has become widespread over the last 15 years. Therefore,

the current study fills this gap in the literature by studying the influence of the different types of institutional investor on sell-side analysts' stock recommendations in Malaysia. A brief review of studies related to institutional investors and their types in the Malaysian context follows.

Ismail and Rahman (2011) examined the impact of board characteristics and institutional investors in monitoring the level of risk management disclosure in Malaysia. The study sample consisted of 124 companies listed on the Bursa Malaysia Main Market during the period 2006 to 2008, and they concluded that, compared to the board of directors, sensitive institutional investors (i.e. are institutional investors who have business relationship with portfolio companies consisting of bank, financial institutions and insurance companies) and insensitive institutional investors (i.e. are institutional investors who do not have a relationship with the portfolio companies)⁹, play a significant role in monitoring companies' risk management. This study implied the heterogeneity of institutional investors in the Malaysian context.

Che Ahmad and Jusoh (2014) investigated the association between institutional ownership and company performance of Malaysian PLCs, using a sample of 730 companies for the period 2007-2009. They found that the existence of institutional investors in controlling and monitoring activities helps to reduce agency conflict and enhances corporate performance in emerging markets.

⁹ They also classify pressure insensitive investors as unit trusts, pension funds and state-owned institutions. On the other hand, the pressure sensitive investors include banks, financial institutions and insurance companies.

Ashrafi and Muhammad (2013) investigated company characteristics which attract Malaysian institutional investors. Using data from 237 companies listed on the Bursa Malaysia Main Market, they found that Malaysian institutional investors invested in companies with more tangible assets, larger size, more growth, more ROA, less leverage, less stock price volatility, less managerial ownership and less business risk. They also found some differences among the preferences of different types of institutional investor (pressure-sensitive, pressure-insensitive).

Abdul Jalil and Abdul Rahman (2010) examined the influence of institutional shareholdings on earnings management activities of their portfolio companies during the period 2002 to 2007, based on the market capitalization of the top 94 companies listed on the Bursa Malaysia as at 31 December 2007. The results indicated that only MSWG was active in mitigating the earnings management behaviour of their portfolio companies, with PNB as the most active.

Abd-Mutalib *et al.*'s (2013) study of the institutional investors' investment styles for Malaysian listed companies was related to their level of sustainability reporting. The study sample was 100 companies for the financial year 2009. They found that the institutional shareholdings level in total had a positive association with the extent of sustainability reporting. They also found that long-term institutional investors such as pension funds and short-term institutional investors such as mutual funds and banks were not associated with sustainability reporting.

Abd-Mutalib *et al.* (2015) examined whether sustainability reporting exerted different influences on the share ownership of dedicated and transient institutional investors in Malaysia, based on 285 companies listed on the Bursa Malaysia in 2010 and 2011. They found that sustainability reporting has a positive influence on ownership by dedicated institutions, but no impact on the ownership by transient institutions. Bamahros and Wan-Hussin (2015) investigated the association between the types of institutional investor and the level of discretionary accruals for Malaysian PLCs. Based on 525 Malaysian listed companies for the financial year 2009, the results of the study indicate that short-term institutional investors (transient) worsen discretionary accruals, whereas the long-term investors (dedicated) have no significant relationship with the discretionary accruals level.

How *et al.* (2014) examined whether political connection and institutional investors' ownership are significant drivers for financial analyst following in Malaysia. Based on the sample of 940 company-year observations for 1999 to 2009, they found a positive relationship between institutional ownership, especially by EPF, and financial analyst following. These results support the governance role played by institutional investors to encourage corporate transparency.

Tee *et al.* (2017) examined the association between ownership by institutional investors and audit fees for Malaysian companies. Based on a sample of 3,077 company-year observations for 2003 to 2011, they found a positive relationship between them, particularly stronger for politically connected companies. They also found that ownership

by foreign institutional investors plays a more significant monitoring role than ownership by local institutional investors.

2.5.4 Institutional Investors and Stock Recommendations

Institutional investors have considerable market power, impact, and superiority in collecting and interpreting information about companies (Abdul Wahab *et al.*, 2007). These characteristics provide them with a significant advantage over other investors in monitoring corporate activities (How *et al.*, 2014). Earlier studies provided evidence of a significant and positive effect of institutional investors on the quality of financial reporting (Velury & Jenkins, 2006; Yeo *et al.*, 2002). In addition, institutional investors play a major role in financial markets by enhancing good corporate governance and transparency in the largest companies (Abdul Wahab *et al.*, 2007; Abdul Wahab *et al.*, 2008; Aggarwal *et al.*, 2011; Chung & Zhang, 2011; How *et al.*, 2014; Mizuno, 2010).

Fernando, Gatchev and Spindt (2012) claimed that individual investors are unsophisticated and rely more on external sources, such as financial analysts and brokerage, for providing them with information about companies. In contrast, other studies indicated the superiority of institutional investors in monitoring the companies they own and enhancing corporate disclosure, leading to improving the effectiveness of financial analysts (Cornett *et al.*, 2007; Frankel *et al.*, 2006; How *et al.*, 2014; James & Karceski, 2006; Ljungqvist *et al.*, 2007; Ruiz-Mallorquí & Santana-Martín, 2011). In other words, the existence of institutional investors in the companies' ownership leads to improved financial reporting,

helping financial analysts to issue more informative earnings forecasts and stock recommendations (Arand *et al.*, 2013).

As indicated in section 1.2, there are debates about the influence of institutional investors on financial analysts. Gu *et al.* (2013), for example, claimed that institutional investors have paradoxical roles as both monitors and predators in analyst research. One argument maintains that there is a relationship between a high level of institutional ownership and better informativeness of analysts' research, largely because the analysts are more diligent and less biased when they cover companies with greater institutional investor ownership (Arand *et al.*, 2013). For example, Ljungqvist *et al.* (2007) stated that the existence of the institutional investors provides financial analysts with good incentives to issue unbiased or less biased reports.

Cowen *et al.* (2006) also found that financial analysts' opinions are timelier and less biased in the presence of institutional investor clients. Additionally, financial analysts who provide accurate, reliable, timely and unbiased earnings forecasts and stock recommendations build up their reputations and generate more business for their brokerage companies (Irvine, 2004; Jackson, 2005). They are expected to be hired by major investment banks (Hong & Kubik, 2003) and obtain higher compensation (Kothari, 2001). How *et al.* (2014) argued that institutional investors can reduce information asymmetry by forcing companies to disclose information, as they play a significant governance role through promoting corporate transparency.

In contrast, a number of studies argue about the conflict of interest faced by financial analysts, leading them to issue biased reports. These studies identified three primary sources of this conflict of interest: (1) the investment banking relationships with companies they cover (Gu & Xue, 2008; Mehran & Stulz, 2007; O'Brien, McNichols, & Lin, 2005); (2) advantage in accessing private information of the companies they cover (Francis & Philbrick, 1993; Lim, 2001); and (3) generating trading commissions from the brokerage businesses (Agrawal & Chen, 2008; Francis, Chen, Willis, & Philbrick, 2004; Jackson, 2005). In this regard, Gu *et al.* (2013) claimed that the positive relationship between financial analysts' trading commissions and their optimistic reports are based on two incentives: (1) to gain more commission fees, or (2) facing pressure from large investors.

Consequently, sell-side analysts who work in investment banking houses face pressure to publish favourable reports for their clients in order to gain more investment banking revenue (Dugar & Nathan, 1995; Michaely & Womack, 1999). For example, according to Boni and Womack (2002), numerous financial analysts in the US stated that they came under pressure, especially from their institutional clients, to issue opinions consistent with the positions of these clients. Lura Unger, who later acted as chairman of the SEC, specifically commented on the pressure that financial analysts face from their institutional clients. She argued that the clients of financial analysts, such as institutional investors who have important positions in the companies covered by the analysts, may take their business elsewhere if they are downgraded by the analysts (Unger, 2001).

Looking more closely at the influence of institutional investors' ownership on sell-side analysts' stock recommendation, this study examines how the heterogeneity of institutional investors' types may affect the sell-side analysts. The results of previous studies suggest that institutional investors differ dramatically in their investment styles and temporal preferences, having different effects on corporate decisions and companies' valuation (Borochin & Yang, 2017; Edmans, 2014; Garel, 2017; Huang & Petkevich, 2016; Zhang & Gimeno, 2016). Chang *et al.* (2012) indicated that institutional investors' heterogeneity as short-term and long-term institutions, means that these groups are more likely to have different objectives and influence the information environment of the companies in very different ways.

Transient institutions are more likely to make companies' stock prices more informative via their trading activities (Edmans, 2009; Sias, Starks, & Titman, 2006). The existence of transient institutions in the companies' ownership attracts greater interest of sell-side analysts in terms of greater analyst following (Brennan & Subrahmanyam, 1995; O'Brien & Bhushan, 1990), leading to improving companies' information environment. On the other hand, dedicated institutions press for more transparency and more effective monitoring, which improves the companies' information environment and reduces the cost of equity to the company (Chang *et al.*, 2012).

Previous studies have also emphasized the importance of considering the differences in the institutional investors' horizons in several decision fields (Koh, 2007; Wang & Zhang, 2009). Chichernea *et al.* (2015) argued that ignoring the heterogeneity of institutions and

studying them as a single group could produce confusing results. Chan Kam *et al.* (2013) indicated that the institutional investors' heterogeneity and their differing demands on the analysts was worth researching; they recommended that future studies separate the different types of institution. Derrien *et al.* (2014) agreed that there were insufficient studies on institutional investors' investment horizons. In particular, the literature lacks studies which examine the impact of different types of institutional investor on sell-side analysts' stock recommendations. Thus, this study fills this gap.

Chang *et al.* (2012) examined the relationship between institutional investors' ownership and companies' financing decisions. Based on 375,332 company-quarter observations (12,507 companies) for the period 1984 to 2010, they found that more transient institutional ownership increases the likelihood of equity issues relative to debt issues. Further, more transient institutional ownership leads to improved transparency of the information environment (e.g. through informed trading and monitoring via "exit"), which in turn leads to improving the quality of sell-side analysts' reporting, earnings forecasts and stock recommendations on the company.

Chan Kam *et al.* (2013) studied the association between types of institutional investor and analyst coverage. They found that this relationship differed according to whether the investors were dedicated or transient. Change in the financial analysts' coverage have a less influence on changes of dedicated institutional investors, while changes in transient institutional investors have a greater influence on financial analysts' coverage than on that of dedicated investors.

Firth, Lin, Liu, and Xuan (2013) examined whether the relationship between mutual funds and brokerage companies affected sell-side analysts' stock recommendations. Based on 40,000 stock recommendations made by 2,717 sell-side analysts from 67 brokerage companies for the period 2004 to 2008, they found that the analysts issue significantly higher stock recommendations if the companies' stock is held by the mutual fund clients of the analyst's brokerage company.

Mintchik *et al.* (2014) studied the relationship between financial analysts' earnings forecast accuracy and the categories of institutional investors. Based on the sample of 12,872 observations for 2,686 companies for the period 1986 to 2005, they found that transient investors prefer companies with fewer earnings forecast errors, and increased their holdings with increases in the earnings forecast accuracy.

Wong (2016) examined whether the information demands of and exposure to institutional investors influenced sell-side analysts to prioritize their research activities and issue different and more accurate earnings forecasts for some of the companies they followed. The study sample was 67,427 annual earnings forecasts issued between the years 2002 and 2010. He found that sell-side analysts' reports are more accurate forecasts for companies with more exposure to institutional investors, and that sell-side analysts issue more informative earnings forecasts for companies with greater exposure to institutions with transient investment strategies.

In sum, from the discussion above, previous studies indicate the role of institutional investors in monitoring companies' activities and enhancing information quality. Studies examining the relationship between the different types of institutional investor and sell-side analysts' stock recommendations are still scarce. On the other hand, Li and Lu (2015) remarked that most studies that emphasize the behaviour of institutional investors are conducted in developed markets, with few focusing on emerging markets in which state ownership plays a significant role.

Accordingly, this study focuses on studying institutional investors' behaviour in Malaysia as an emerging country, for many reasons. First, institutional investors hold more than 5% share ownership of 94% of the Top 100 listed companies (Asian Development Bank, 2014), and most of them tightly controlled by the government (Abdul Wahab *et al.*, 2008). Second, institutional investors are heterogeneous in the Malaysian stock market (Abdul Wahab *et al.*, 2007). Third, according to the CBRS framework, financial analysts under CBRS are independent of the companies they cover, and this enhances the objectivity of their reports. Table 2.3 summarizes the previous literature.

Table 2.3
Summary of Literature on the Relationship between Institutional Investors' Ownership and Stock Recommendations

Authors	Country	Sample & Period	Findings
Ljungqvist <i>et al.</i> (2007)	US	230,268 US company-analyst quarters for period 1994 to 2000.	The existence of institutional investors leads to unbiased or less biased analysts' research.
Chang <i>et al.</i> (2012)	US	12,507 companies (375,332 company-quarter observations) - for period 1984 to 2010.	More transient institutional ownership improve the quality of sell-

Table 2.3 (Continued)

Authors	Country	Sample & Period	Findings
			side analysts' reporting on the company.
Arand <i>et al.</i> (2013)	8 Countries	4,789 companies (687,781 analyst reports) - for the period of 2005 to 2010.	More valuable earnings forecasts when the majority of institutional investors are from strong investor protection countries.
Gu <i>et al.</i> (2013)	China	Brokerage companies and mutual funds during the period of 2003 to 2011.	More optimistic stock recommendations for the companies with high institutional investors.
Firth <i>et al.</i> (2013)	China	40,000 stock recommendations made by 2,717 sell-side analysts for period 2004 to 2008.	More optimistic stock recommendation if the stock is held by the mutual fund.
How <i>et al.</i> (2014)	Malaysia	940 Malaysian company-year for the period 1999 to 2009.	The positive relationship between institutional ownership, especially by EPF, and financial analysts following.
Chan Kam <i>et al.</i> (2013)	US	53,005 company-year observations and 244,577 company-quarter the period 1981 to 2008,	The relationships between analysts following and institutional investors differed through different types of institutional investor.
Mintchik <i>et al.</i> (2014)	US	12,872 observations for 2686 US companies for the period 1986 to 2005.	Transient investors preferred companies with lower earnings forecast errors.
Wong (2016)	US	67,427 annual earnings forecasts issued between the years 2002 to 2010.	Sell-side analysts issued more informative earnings forecasts for companies with greater exposure to institutions with transient investment strategies.

2.6 Financial Restatements

Financial reporting for the publicly trading companies plays a significant role in the effective functioning of financial markets. Companies should report their financial statements to the public quarterly as well as yearly. When the companies publish financial

restatements because of misrepresentation or accounting irregularity, investors lose confidence in them companies change their future investment strategies (Weng *et al.*, 2017). According to Chi and Sun (2014), financial restatements are a serious failure in corporate reporting which cause investors to worry about the reliability of restated companies' financial reporting environment. Ye and Yu (2017a) claimed that the loss of financial reporting credibility will affect the investors' behaviour.

This section reviews the literature related to financial restatements, including their background, definition, causes and consequences, the Malaysian context, and financial restatements and stock recommendations.

2.6.1 Background of Financial Restatements

In recent years, financial restatements and their consequences have become of increasing concern to financial analysts, researchers, investors and government regulators, given their adverse impacts on the restated companies (Abdullah *et al.*, 2010; Archambeault *et al.*, 2008; Chen Ken *et al.*, 2014; Dao *et al.*, 2014; Desai *et al.*, 2006; Du, 2017; Hennes, Leone, & Miller, 2008; Wilson, 2008). SEC (2002a) regarded financial restatements as one of the main reasons undermining the confidence of investors in corporate financial reporting and financial market efficiency. In addition, financial restatements threaten organizational legitimacy¹⁰ (Arthaud-Day *et al.*, 2006; Feldmann *et al.*, 2009) and have a number of cost consequences (Dao *et al.*, 2014). According to the GAO (2006), financial restatements

¹⁰ Legitimacy has been defined as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman, 1995, p. 574).

caused a loss of billions of dollars in market capitalization. These losses are portrayed through market reaction to companies' restatements of their prior earnings reports or financial statements.

In the last decade, numerous financial restatements have been declared (Ye & Yu, 2017a), from the famous cases of companies such as Tyco, Qwest and Worldcom to several less controversial restatements (Wilson, 2008). On 4 October 2002 the GAO issued a report named *Financial Statement Restatements: Trends, Market Impacts, Regulatory Responses, and Remaining Challenges* (GAO, 2002). The GAO compiled a list of 919 financial restatements from 1 January 1997 to 30 June 2002 which had caused an overall loss of market capitalization of \$100 billion (GAO, 2002). This database of financial restatements was announced and made available to the public at the beginning of 2003; a second report issued in 2006 listed 1,390 financial restatements between July 2002 and September 2005 (GAO, 2006). These two reports contain most of the financial restatements arising from the misuse of GAAP, comprising irregularities (intentional misstatements) and errors (unintentional misstatements) (Hennes *et al.*, 2008).

In the US, the severe growth in the number of financial restatements received substantial regulatory attention (Burks, 2011). For example, Henry Paulson, the Secretary of the United States Treasury, in the Financial Times' op-ed piece expressed concern that the numerous financial restatements needlessly alarmed investors, leading to "confusion" over the quality of financial reports¹¹. Similarly, the Securities and Exchange Commission's

¹¹ Paulson stated, "*Restatements pose significant costs on our capital markets. They have the potential to confuse investors and erode public confidence in financial reporting. Some of these restatements might not*

Advisory Committee on Improvements to Financial Reporting (CIFR) worried that financial restatements could be costly for auditors and companies, could reduce confidence in the financial reports, and lead to misunderstandings that reduce the efficiency of investors' analysis (Pozen, 2008). Financial restatements are likely to increase the processing costs for both individual and institutional investors (Burks, 2011), and many studies hypothesized that investors have difficulties which add costly information to the price of assets (Bloomfield, 2002; Hirshleifer & Teoh, 2003).

2.6.2 Definition of Financial Restatements

As proposed by Anderson and Yohn (2002) and Kim and Koo (2014), financial statements are significant and the main source of information for many parties in the financial markets to evaluate company activities. These financial statements are prepared in accordance with GAAP, which offers companies several choices of accounting policy. These flexibilities may provide a platform for companies to expand their income statements and balance sheets without following the GAAP guidelines, which in turn leads to financial restatements (Albring *et al.*, 2013). The SEC describes financial restatements as “*the most visible indicator of improper accounting and source of new investigations*” (Schroeder, 2001). Graham, Li, and Qiu (2008) stated that financial restatements change the restated companies' historical financial figures, and thus change forecasting based on these figures.

The literature indicates differences between accounting misstatements and accounting restatements (Tithe, 2013). Accounting misstatement is defined as the alleged violations of

be material to investors, and others may simply reflect new accounting standards interpretations” (Paulson, 2007).

GAAP by companies; such violations are subject to enforcement actions by regulators such as SEC (Dechow, Sloan, & Sweeney, 1996). Financial restatements correct past errors and can be regarded as improving the quality of financial reporting (Bardos, 2011). Hennes *et al.* (2008) classified the GAO financial restatements database into irregularities and errors. They categorized financial restatements as irregularities if (1) financial restatements are described as an irregularity or fraud over self-disclosure, (2) there is an associated SEC investigation, or (3) there are related independent investigations, and all other GAO financial restatements are errors.

Financial restatements normally happen when a company, often in discussion with the SEC or with its auditors, concludes that its financial statements contain either “errors” resulting from “mathematical mistakes, misunderstanding, or misapplication of facts at the time of preparing financial statements”, or “accounting irregularities” (Wu, 2002). Baber, Kang, Liang, and Zhu (2009, p. 1) define financial restatements “*as corrections of accounting misstatements made previously by negligent, or in the extreme, opportunistic managers*”. Myers, Myers, Palmrose, and Scholz (2005) and Palmrose and Scholz (2004) defined financial restatements as corrections made to financial statements according to non-fulfilment with GAAP. Hribar, Kravet, and Wilson (2014) stated that financial restatements represent cases where the companies issued misstated financial statements. John, Shangquan, and Mateti (2015) defined financial restatement as an event in which a company is required to restate its previous financial statements due to fraud, error or for other reasons.

In summary, financial restatements are corrections made to companies' financial statements when the companies discover that the statements contain either "accounting irregularities" or "errors". This study includes financial restatements occurring as a result of financial fraud, accounting rule application failures, irregularities, errors that come from mathematical mistakes and misrepresentations. Restatements attributable to changes in accounting policies have been excluded (Abdul Wahab *et al.*, 2014; Chin *et al.*, 2017; Paterson & Valencia, 2011; Wang & Wu, 2011).

2.6.3 Reasons for Financial Restatements

Restatement of financial statements indicates serious failures in financial reporting that have various causes and effects on organizations, institutional and individual investors, stock markets and regulatory authorities (Chi, 2012). Financial restatements may occur for several reasons, ranging from adopting new accounting standards and reflecting discontinued operations, to significant errors and fraud which confirm that the company's financial statements are materially misleading and incorrect (Abbott, Parker, & Peters, 2004). The reasons for financial restatements may be benign, for instance arising from changes in accounting policies and principles resulting from the implementation of new accounting policies and standards. Companies may restate their financial statements as a result of dividend distributions, mergers and acquisitions, stock splits, discontinued operations, changes in their accounting period, etc. (Wu, 2002).

According to Eilifsen and Messier (2000), financial statements must be restated if the following four conditions have been met. First, a material misstatement happens as a

consequence of some kind of inherent risk (e.g. personnel problems, misapplication of GAAP, management's aggressive accounting practices, etc.). Second, the misstatements have not been detected or prevented by the company's internal control system. Third, the failures of external auditors to detect the misstatement before issuing audited financial statements. Finally, the misstatement is discovered later and, if considered material, corrections, restatements, and re-issuance of the original financial statements are required. Plumlee and Yohn (2010) stated that the increase in the number of financial restatements over recent years could be attributed to various causes, including reviews of internal control, accounting standards complexity, earnings management, changes in materiality thresholds, increased transaction complexity, the guessing of management judgements by a multiplicity of interested parties, and the excessively conservative nature of auditors.

According to GAO (2002), revenue recognition issues are the primary reason for financial restatements. Issues including revenue recognition (non-reported and misreported revenue) account for nearly 38% of the 919 announced financial restatements during the period from 1997 to June 2002. Similarly, the Huron Consulting Group ranked revenue recognition as the most significant accounting issue driving financial restatements over the period 2000 to 2004 (Huron Consulting Group, 2005). On the other hand, the US Chamber of Commerce, SEC and Financial Accounting Standard Board (FASB) each recognized accounting complexity as a challenging problem (Plumlee & Yohn, 2010), some claiming that it is a primary reason for financial restatements (Ciesielski & Weirich, 2006).

Many studies have tried to discover the characteristics of restated companies. For example, Kinney and McDaniel (1989) analysed the economic characteristics of companies that restated their quarterly earnings. They concluded that these were smaller companies, slower in growth, less profitable, facing more uncertainties, and having a higher debt than comparable industries. Ma, Ma, and Tian (2016) found that companies guilty of misstatements on average are smaller than non-misstatement companies. DeFond and Jambalvo (1991) found that restated companies tend to have lower earnings growth, have diffuse ownership, are less likely to have audit committees, and relatively fewer income-increasing alternatives within GAAP compared to control companies without restatements. Richardson, Tuna, and Wu (2003) concluded that restated companies have a higher level of outstanding debt, and that debt covenants, bonus plans, and heightened capital market pressures generated incentives for them to employ aggressive accounting policies, leading to financial restatements.

Abdullah *et al.* (2010) found that the main reason for misstating the accounts among Malaysian companies is to inflate earnings. In the same vein, Ku Ismail and Abd Rahman (2011) concluded that oversight, mathematical mistakes and typographical errors are the main reasons for the amendments to quarterly financial reports. The other reasons are errors in the application of accounting principles, changes in presentation, and incorrect use of existing facts. Abdul Wahab *et al.* (2014) gave three reasons for financial restatements: accounting rules application failure, accounting irregularities, and misrepresentations. Hasnan and Hussain (2015) concluded that the probability of financial restatement occurrences is higher for companies that frequently carried out RPTs. Wan Mohammad *et*

al. (2018) found that costs and expenses figures and companies' restructuring of assets or inventory are the highest reasons for restatement occurrences among Malaysian PLCs.

2.6.4 Consequences of Financial Restatements

According to Agrawal and Chadha (2005), the negative consequences of financial restatements attract substantial attention from policymakers and resulted in several regulations, involving some requirements of the Sarbanes Oxley Act of 2002. Bardos and Mishra (2014) claimed that these negative consequences may be attributed to (1) expected decrease in future cash flows, and (2) increase in the cost of capital. Akhigbe and Madura (2008) found that negative industry valuation effects are associated with downward earnings restatements. The financial market-adjusted return over three days surrounding financial restatements announcement is related with an average return of -10% (GAO, 2002). The announcement by Enron on 8 November 2001, regarding the restatement of its earnings for the period 1997 to 2001, recorded a \$1.2 billion drop in stockholders' equity. Enron's stock price decreased from more than \$30 to less than \$1 during the period October and November 2001 (Kedia & Philippon, 2009).

Many studies have documented that financial restatements are considered as one of the main causes of adverse economic consequences on the restating companies (Dao *et al.*, 2014). Albring *et al.* (2013) claimed that financial restatements are not insignificant as they can impede the company's ability to gain external funding at a lower cost. They put forward several arguments to support this contention. First, financial restatements result in uncertainty about the reliability of a company's financial reporting system because they

notify investors that they are using inaccurate information for evaluating the company (Karpoff, Lee, & Martin, 2008). Second, financial restatements are posited to lead to a revision in the opinions about the company's future cash flow. Third, financial restatements lead to future litigation that may worsen the company's forecasts (Palmrose & Scholz, 2004). Finally, financial restatements can damage a company's reputation with negative effects on cash flow and accordingly lowering the company's valuation (Graham *et al.*, 2008).

Other studies illustrated how financial restatements decrease a company's value (Callen, Livnat, & Segal, 2006; Chen Ken *et al.*, 2014; Drake, Myers, Scholz, & Sharp, 2015; Du, 2017; Hirschey, Palmrose, & Scholz, 2005; Ma *et al.*, 2016; Myers, Scholz, & Sharp, 2013; Palmrose *et al.*, 2004; Richardson *et al.*, 2003; Scholz, 2008). They found that the market reacts negatively to restating companies and that negative abnormal returns after restatement announcements are related to income-decreasing financial restatements. In addition, the company's stock price is negatively affected after the announcement of financial restatements (Anderson & Yohn, 2002; Firth *et al.*, 2011; Palmrose *et al.*, 2004; Wu, 2002).

Gleason *et al.* (2008) concluded that in addition to the adverse effect on shareholders' wealth for restated companies, financial restatements also cause the share price to decline for non-restated companies in the same industry. Albring *et al.* (2013) found that a company's growth rate declines after the announcement of financial restatement. Chen Xia, Cheng, and Lo (2009) concluded that after the announcement of financial restatements,

restated companies become more financially constrained and are less likely to gain external financing. Park and Wu (2009) found that debt financing becomes more difficult after the announcement of financial restatements, John *et al.* (2015) stated that restating companies are less willing or less able to access the capital market.

Barniv and Cao (2009), Frieder and Shanthikumar (2008), and Palmrose *et al.* (2004) found that information risk/uncertainty increase subsequent to the announcement of financial restatements. Restated companies also have a higher cost of equity capital (Bardos & Mishra, 2014; Firth *et al.*, 2011; Graham *et al.*, 2008; Hribar & Jenkins, 2004; Kravet & Shevlin, 2010). Other restatement consequences associated with auditing and management compensation are documented in the literature. For instance, Feldmann *et al.* (2009) concluded that restated companies face higher audit fees than non-restated companies. Liu, Raghunandan, and Rama (2009) concluded that stockholders have a tendency to vote against auditor ratification after the declaration of financial restatement. Cheng and Farber (2008) and Collins, Reitenga, and Sanchez (2008) found that the percentage of CEOs' compensation decreases significantly in the period following financial restatement. Ma, Li, and Dong (2017) concluded that accounting-based pay-performance sensitivity decreases in restating companies following the announcement of financial restatement. In the same way, management turnover in restating companies is higher than in non-restated companies (Arthaud-Day *et al.*, 2006; Burks, 2010; Dao *et al.*, 2014; Desai *et al.*, 2006; Xu & Zhao, 2016).

2.6.5 The Malaysian Context

In Malaysia, financial restatements are an important issue and have received much consideration from the regulators, because many cases of financial restatements have been discovered (e.g. CSM Corporation Bhd, Oil Corp Bhd, Aktif Lifestyle Bhd, Goh Ban Huat Bhd, and Transmile Group) (Abdul Wahab *et al.*, 2014; Abdullah *et al.*, 2010; Hasnan & Hussain, 2015; Shafie & Zainal, 2016). For example, as the consequences of a restatement announcement, Transmile Group's shareholders suffered a loss of their investment from the massive drop in the company's share price from RM14.40 in January 2007 to RM4.64 on 3 July 2007 and a further drop below RM0.50 after March 2010 (Oh, 2010). On 24 May 2011, the company was delisted from the Bursa Malaysia (Abdul Hamid, Shafie, Othman, Wan-Hussin, & Fadzil, 2013).

One of the reasons for restatements is discovery of errors in the financial statements. According to MFRS 108 Para 41, *"errors can arise in respect of the recognition, measurement, presentation or disclosure of elements of financial statements. Financial statements do not comply with MFRS if they contain either material errors or immaterial errors made intentionally to achieve a particular presentation of an entity's financial position, financial performance or cash flows"* (Malaysian Accounting Standards Board, 2015, p. 584). In addition, the MFRS requires potential current period errors discovered in that period to be corrected before the financial statements are authorized for issue. Based on the Corporate Disclosure Guide 2012, when listed companies discover fraud or financial irregularity in their financial statements, they should immediately assess the materiality of the fraud/financial irregularity and make an immediate announcement if the fraud/financial

irregularity is material (Bursa Malaysia, 2012). However, material errors are sometimes not discovered until a later period, and are corrected in the comparative information presented in the financial statements for that period (Malaysian Accounting Standards Board, 2015).

The following sub-section reviews the literature regarding financial restatements in the Malaysian context.

2.6.5.1 Financial Restatements: Malaysian Studies

According to Abdul Wahab *et al.* (2014), very few studies examine the incidence of restatement in Malaysia. Abdullah *et al.* (2010) were the first to examine the impact of the Malaysian Code on Corporate Governance (MCCG) on the nature of financial restatements and whether the characteristics of corporate governance are related to the restatements in Malaysian PLCs. The study selected 31 restated companies and 31 non-restated companies, using data from annual reports to match the restated and non-restated companies by industry, size, financial year, and exchange board for the period 2002 to 2005. The results indicated that inflating the earnings is the main reason for misstating financial statements. For the restated companies, the nomination committee was found to be less independent with greater managerial ownership. The results also showed that financial restatements are not related to managerial ownership, CEO duality or board independence, and that companies with higher levels of debt are more subject to financial misstatement.

Ku Ismail and Abd Rahman (2011) examined the relationship between audit committee characteristics (activities, expertise and independence) and amendments to the quarterly financial reports of Malaysian PLCs. The study sample consisted of 63 companies that had amended their quarterly reports in 2005, linked to a control group of companies that had not made any amendments. They found that companies with two or more financial experts on their audit committee are less likely to amend their quarterly reports, and that oversight, and mathematical and typographical errors are the most common reasons for the amendments.

Ishak and Yusof (2013) examined the incidence of financial restatements in 78 CEO turnover companies for the period 2008 to 2010. They found that the CEO's age, company size, growth, and Big 4 have a positive relationship with restatements. In particular, the older CEOs, larger companies and those audited by the Big 4 have a higher probability of restating financial statements, while leverage and CEOs' forced turnover was less likely to be involved with financial restatements.

In the same vein, Abdul Wahab *et al.* (2014) examined the association between non-audited services and financial restatements. Based on 953 companies listed on the Bursa Malaysia during the period 2007 to 2009, their results indicated a significant and negative relationship between non-audited services and financial restatements. The study also showed that politically connected companies have more financial restatements than non-politically connected ones, and that audit committee independence decreases the probability of financial restatements in the politically connected companies.

Hasnan and Hussain (2015) studied how weak governance, motive and rationalization might lead to financial restatements. Based on 85 restated and 85 non-restated listed companies during the period 2005 to 2011, the founders on the board are significantly and negatively related to financial restatements, while RPTs are significantly and positively related. Furthermore, the chance for restatement, proxied by audit quality (measured by audit fees), is significantly and negatively related to financial restatement, suggesting that restatement can be reduced if companies strengthen their monitoring and internal control mechanisms.

Shafie and Zainal (2016) studied the effect of audit committee characteristics (i.e. audit committee independence, accounting background of the audit committee chairman and financial expertise of audit committee members) on financial restatements. The study sample consisted of 68 companies (34 restated and 34 non-restated) for the fiscal year 2014. The authors found that the independence of the audit committee is negatively and significantly related to financial restatements, but there was no significant association between other characteristics and financial restatements.

Chin *et al.* (2017) examined whether financial restatements dampen companies' performance under two corporate governance situations: CEO duality and family-controlled companies, in companies listed on Bursa Malaysia for the financial year 2008. They found that financial restatements dampen companies' performance and was totally alleviated in family-controlled companies. They also found that the dampening influences

are more pronounced in non-family-controlled companies than in family-controlled companies in non-CEO duality companies.

Wan Mohammad *et al.* (2018) examined the influence of audit committee characteristics on the financial restatements of Malaysian companies. The study selected 350 restated companies and 350 non-restated companies for the period 2008 to 2009. They found audit committee characteristics such as its independence, size, expertise and activity to be statistically significant in explaining the probability of financial restatements.

In conclusion, as discussed in the previous sections, it appears that financial restatement is an important issue which serves as an indicator of the quality of financial reporting and also its impact on the restating companies. However, most of these studies were carried out in developed countries (Abdullah *et al.*, 2010; Sellers, 2014), with only a very few examining the consequences of financial restatements in Malaysia, making this study timely. Shafie and Zainal (2016) stated that the issue of financial restatements should be addressed as it affects investors' confidence in Malaysian companies. Jiang, Habib, and Zhou (2015) stated that studies on the determinants and consequences of financial restatements in emerging markets are scarce, even though these countries are more vulnerable to manipulation by financial reporting and subsequent financial restatements. Therefore, this study examines the influence of the financial restatement on sell-side analysts' stock recommendations on companies listed on Bursa Malaysia.

2.6.6 Financial Restatements and Stock Recommendations

Efficient capital markets reward high-quality financial reporting, which facilitates the efficient raising and allocation of corporate capital and thus creates benefits for investors (Wang & Wu, 2011). Furthermore, participants in the financial markets, such as creditors, investors and financial analysts, make their decisions based on the information disclosed by companies to the financial markets (Irani & Oesch, 2016; Rezaee, 2005). As mentioned earlier, financial restatements prompt questions about the reliability of a company's future financial reports, because of its earlier declaration of low-quality financial information (Jiang *et al.*, 2015; Ye & Yu, 2017b). Like many participants in the capital markets, financial analysts have demonstrated concern about the consequences of financial restatements, claiming that they damage the quality of financial reports (Wilson, 2008). Brown *et al.* (2016) asked analysts about financial misrepresentation and one replied that it, "*could mean we won't buy the stock because we don't know what the numbers really are*" (p. 152).

Regulators, the financial media and investors seem to agree that sell-side analysts provide valuable advice and information to their clients (Brown *et al.*, 2011; Hamrouni *et al.*, 2017; Schantl, 2016; Yezegel, 2015). Moreover, several studies have shown that sell-side analysts' stock recommendations have predictive power (Barber, Lehavy, & Trueman, 2010; Green, 2006; Kecskes, Michaely, & Womack, 2010). The results of the survey of CEOs conducted by Graham *et al.* (2005) indicated that managers recognize financial analysts as one of the most significant groups influencing their companies' share price.

However, Martin, Wang, and Xin (2014) claimed that there are limited studies examining the role of financial analysts in identifying corporate fraud and in limiting earnings management, although previous studies have provided evidence that financial analysts play a governance role in constraining earnings management (Chen Tao *et al.*, 2015; Irani & Oesch, 2016; Yu, 2008). Dyck, Morse, and Zingales (2010) documented the role of financial analysts as whistle blowers, as they are often the first to detect corporate fraud. Irani and Oesch (2013) concluded that a decline in financial analysts' coverage causes a deterioration in the quality of financial reporting. Subsequently, the natural question to ask is whether the weakness in the quality of corporate financial reporting as indicated by financial restatements may influence sell-side analysts' stock recommendations.

Ramnath, Rock and Shane (2008) reviewed the literature relating to financial analysts' stock recommendations and earnings forecasts. They found that from 1992, roughly 250 papers associated with financial analysts had been published in eleven main research journals; however, none was associated with financial restatements and stock recommendations. Even though this taxonomy of papers covers many topics, investigation of the impact of financial restatements on stock recommendations is still scarce. Similarly, Bradshaw (2011) commented that the overwhelming majority of research seems to focus only on analysts' earnings forecasts, with less attention to sell-side analysts' stock recommendations. He suggested that in order to understand what sell-side analysts do, a study about their outputs with respect to stock recommendations should be conducted.

Sellers (2014) reviewed the literature related to financial restatements and attempted to light up in this area, with financial restatements as an independent variable, as the dependent variable, and other aspects of financial restatements. For the period 2000 to 2013, around 95 articles published in 12 research journals associated with financial restatements were reviewed. Sellers found that the majority of this work, around 87%, is archival, while around 94% of the researchers' attention is focused on the US markets. For this set of articles, there is no research related to financial restatements and sell-side analysts' stock recommendations. According to Griffin (2003), the attention of academic researchers on the behaviour of financial analysts around irregular events such as financial restatements is limited. Therefore, the current study bridges this gap by examining the influence of financial restatements on sell-side analysts' stock recommendations.

According to the limited evidence concerning the reaction of sell-side analysts' stock recommendations to financial restatements, earlier research related to less severe earnings forecasts is reviewed. Ettredge, Shane, and Smith (1995) examined whether the accounting earnings overstatements have an impact on sell-side analysts' forecasts revisions. The study sample consisted of 34 US companies with 74 quarterly observations matched to 74 quarterly earnings reports for 41 control companies for the period 1980 to 1989. They found that sell-side analysts make significantly more diverse conclusions concerning earnings forecasts, including overstatement errors (as identified by their eventual restatement) than the conclusions from more accurate reported earnings. This means that sell-side analysts on average identify only some of the overstatement errors.

Griffin (2003) investigated the response of sell-side analysts to company financial restatements and corrective disclosure, and compared this with the response of three other informed investor groups: short sellers, institutions and insiders. The sample was 847 companies that had been used in federal securities actions during the period 1994 to 2001, with their company data and requisite stock prices. He concluded that the number of sell-side analysts covering the company declined significantly in the months following financial restatements. He also found that sell-side analysts revised their earnings forecasts down in the month to six-month period following disclosure of financial restatements.

Palmrose *et al.* (2004) investigated the financial market reaction to the announcement of financial restatements. Using data from 403 US companies that announced financial restatement during the period 1 January 1995 to 31 December 1999, they found that negative returns are correlated with the announcement of financial restatements. They also provided evidence that financial analysts revise their earnings forecasts downward in the period after the announcement of financial restatements, and that there is a relationship between negative revisions of earnings forecasts and more negative returns.

Using financial restatements as a proxy for information uncertainty, Barniv and Cao (2009) examined investors' reactions to analysts' earnings forecast revisions. Based on 477 US companies that declared financial restatement through the period 1 January 1995 to 31 December 2003, they found that investors had a tendency to depend more on the information that financial analysts' characteristics convey about earnings forecast accuracy in restated companies than in non-restated companies. They also concluded that the

concentration of financial restatements and the length of the reaction window affected investors' dependence on these characteristics.

Using financial restatements as a proxy for earnings management, Givoly, Hayn, and Yoder (2011) examined whether financial analysts expected earnings management and includes this component in their forecasts, or were surprised by this component. They also investigated whether analysts' stock recommendations and earnings forecasts for the future period were influenced by the earnings management in the current period. Using a sample of 583 restated companies during the period 1997 to 2009, they found that financial analysts expected earnings management and including it in their earnings forecasts. The analysts also reacted positively to cases of upward earnings management by issuing more positive stock recommendations and more optimistic earnings forecasts, meaning that they failed to detect earnings management or reflect this component in their stock recommendations and earnings forecasts.

Young and Peng (2013) studied the possibility and timing of financial analysts' recommendations, revisions and coverage decisions related to fraudulent companies versus companies without accounting fraud. The sample contained 126 companies that had committed fraud from 1995 to 2009, according to data obtained from the US SEC Accounting and Auditing Enforcement Releases (AAER). They found that financial analysts were more likely to take severe action by dropping coverage, rather than only revising their stock recommendations downwards for companies with any kind of

accounting fraud. Generally, they found that financial analysts' actions were suitable in determining the incidence of accounting fraud before the fraud announcement to the public.

Kryzanowski and Zhang (2013) investigated the impact of financial restatements announcements on financial analysts' earnings forecasts, based on 62 restated companies with earnings forecasts revision listed on the Canadian stock market during the period 1997 to 2006. They found that financial analysts revised their earnings forecasts downward after the announcement of financial restatement, suggesting that restatement announcements have a material unanticipated component in the perspective of financial analysts.

Martin *et al.* (2014) studied the effect of restatements on sell-side analysts, based on 1,599 cases obtained from two reports issued by the GAO in 2003 and 2007, which contain a list of restated companies through the period 1 January 1997 to 30 June 2006. They found that after the financial restatement announcement, the irregularity-affiliated analysts, were more likely to be disbarred from the profession than their peers, and less likely to move up to more respected houses. They also found that market response to the revision of earnings forecasts declined significantly after the announcement of financial restatements. In addition, the decrease was more significant for financial analysts related to more severe financial restatements, for more optimistic financial analysts, and for those whose brokerage companies had an earlier investment banking relationship with the irregularity company.

Ye and Yu (2017b) examined how changes in the credibility of financial reporting as proxied by financial restatements might affect financial analysts' behaviour. Using a sample of restatement companies suffering a substantial change in credibility over the period 1997 to 2006, they found that financial restatements have a long-lived consequence on financial analysts' behaviour. In particular, restated companies reduced analyst coverage and forecast accuracy and increased forecast dispersion in the post-restatement period. The current study different from Ye and Yu (2017b) as it focuses on the influence of financial restatements on the sell-side analysts' stock recommendations.

In summary, the results from previous studies show that financial restatements have an influence on sell-side analysts' activities. The analysts are more likely to revise their earnings forecasts downward and cease their coverage following financial restatement announcements. On the other hand, some studies showed that analysts issued positive stock recommendations for the companies with upward earnings management as proxied by restatements. However, most of these studies were conducted in developed countries. Therefore, this study attempts to fill this gap in the literature. Table 2.4 summarizes the previous literature.

Table 2.4
Summary of Literature on the Relationship between Financial Restatements and Stock Recommendations

Authors	Country	Sample & Period	Findings
Griffin (2003)	US	847 companies for the period 1994 to 2001.	Analysts declined coverage and revised their earnings forecasts down in the period following disclosure of restatements.

Table 2.4 (Continued)

Authors	Country	Sample & Period	Findings
Palmrose <i>et al.</i> (2004)	US	403 US companies for the period 1995 to 1999.	Analysts revised their earnings forecast downward in the period after the restatement announcement.
Barniv and Cao (2009)	US	477 US restated companies during the period 1995 to 2003.	Investors depended more on the information that financial analysts' characteristics convey about earnings forecast accuracy in restated companies than non-restated companies.
Givoly <i>et al.</i> (2011)	US	583 restated companies for the period of 1997 to 2009.	Analysts reacted positively to cases of upward earnings management by issuing more positive stock recommendations.
Young and Peng (2013)	US	126-fraud companies for the period of 1995 to 2009.	Analysts take severe action by dropping coverage rather than only to revise their stock recommendations downwards for companies with any kind of accounting fraud.
Kryzanowski and Zhang (2013)	Canada	62 restated companies for the period 1997-2006.	Analysts revised their earnings forecasts downward after the announcements of financial restatements.
Martin <i>et al.</i> (2014)	US	1,599 cases for the period 2003 and 2007.	The irregularity-affiliated analysts were more likely to be disbarred from the profession than their peers and less likely to move up to more respected house.
Ye and Yu (2017b)	US	2,485 restatements cases for the period 1997-2006.	Restated companies reduced analyst coverage and forecast accuracy in the post-restatement period.

2.7 Theories Underpinning this Study

This study applies four underpinning theories, Stakeholder, Legitimacy, Agency and Signalling Theory, to describe the relationship between the CSR, institutional investors' ownership, financial restatements, and sell-side analysts' stock recommendations. A brief discussion of each theory and their relevance to the current study follow.

2.7.1 Stakeholder Theory

According to stakeholder theory, companies are responsible not only to their stockholders, but must also take into account the needs of other parties. Freeman (1984) was the first to introduce stakeholder principles. He defined stakeholders as *“any group or individual who can affect, or is affected by the achievement of an organization's objectives”* (p. 46). He identified seven groups of stakeholders: shareholders, government, competitors, customers, employees, civil society and suppliers. Fassin (2009) expanded this group to include funds and shareholders, non-stakeholders, government, civil society, media, unions, employees, consumers, NGOs, consumer organizations, business, communities, competitors and others.

In the literature, stakeholder theory attracts the attention of management researchers (Laplume, Sonpar, & Litz, 2008; Ryan & Schneider, 2003). It is significant in business ethics and serves as one of the most used frameworks for understanding and conceptualizing issues associated with CSR (Egels-Zandén & Sandberg, 2010; Gibson, 2000; Gray, Kouhy, & Lavers, 1995; Lopez-De-Pedro & Rimbau-Gilabert, 2012; Orts &

Strudler, 2002). Several studies have adopted the stakeholder model for business strategy and social research (e.g. Boatright, 1994; Clarkson, 1995; Goodpaster, 1991; Jones, 1995).

According to Freeman, Harrison, Wicks, Parmar, and de Colle (2010), stakeholder theory emphasizes how critical it is for managers to assimilate in their decision making the expectations and interest of different sets of stakeholders, instead of focusing exclusively on their company's shareholders. CSR is commonly regarded as a set of strategies implemented by companies to meet the prospects and demands of various stakeholders, one of the main stakeholders and social players in financial markets being the sell-side financial analysts (Ioannou & Serafeim, 2015). Stakeholder theory also claims that CSR may lead to better performance through enhancement and protection of companies' reputation (Fombrun, 2005; Fombrun & Shanley, 1990; Ioannou & Serafeim, 2015). Donaldson and Preston (1995) commented that stakeholder management leads to successful economic performance, which seems to imply that when companies effectively manage their relationships with a wide range of interested stakeholders, their financial performance improves.

As discussed earlier, financial restatements call into question the reliability of a company's future financial reports, because of its earlier declaration of low-quality financial information (Jiang *et al.*, 2015). Financial restatements can damage a company's reputation, having a negative effect on cash flow and accordingly lower company valuation (Graham *et al.*, 2008). In this regard, Chakravarthy *et al.* (2014) classified the impact of financial restatements on a company's stakeholder into explicit and implicit commitments.

A serious financial restatement creates a violation of a company's explicit commitment to the capital providers for providing materially accurate financial statements. For other stakeholder groups, the direct impacts of restatements are less and take one of three forms. First, because a serious financial restatement can be an indicator of bankruptcy, it can negatively influence a company's ability to satisfy its current commitments. Second, even if the probability of bankruptcy is remote, the value to stakeholders is decreased according to the financial instability and incremental risk caused by financial restatements that can increase the ex-post incentive of the management to renege on its commitments. Finally, a stakeholder may assess the opportunistic misrepresentation as an indicator of the company's readiness to act opportunistically.

Given Ioannou and Serafeim's (2015) belief that sell-side analysts can be regarded as one of the main stakeholders and social players in financial markets, in this study, the sell-side analysts are seen as stakeholders that affect the company from both sides. On the affect side, they rely on the company's financial reports for data with which to conduct their analysis process and the issuance of stock recommendations for the covered company. Therefore, the quality of the data they collect definitely influences their stock recommendations (Chen Xia *et al.*, 2010).

In contrast, companies covered by sell-side analysts are affected by the output from these analysts: their stock recommendations published to the public. Consequently, these stock recommendations may affect the companies' values and stock price. However, based on stakeholder theory, this study expects that sell-side analysts will be optimistic when issuing

stock recommendations for non-restated companies showing good CSR disclosure. In contrast, sell-side analysts will be pessimistic when issuing stock recommendations for companies that restate their financial statements and show poor CSR disclosure.

2.7.2 Legitimacy Theory

Despite the fact that there is no commonly accepted theory to explain CSR disclosure, legitimacy theory is one of the most quoted in the social and environmental accounting area (Campbell, Craven, & Shrives, 2003; Gray *et al.*, 1995; Momin & Parker, 2013; Tilling, 2004). Suchman (1995) defines legitimacy as “*a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions*” (p. 574). Legitimacy theory depends on the assumption that managers will implement many strategies to demonstrate that the company is trying to comply with the expectations of society (Chan, Watson, & Woodliff, 2014). This theory provides a powerful mechanism to understand the social and environmental disclosures of companies (Tilling, 2004). Hybels (1995) stated that useful models in legitimacy theory must involve a comprehensive assessment of the relevant stakeholders, while Milne and Patten (2002) claimed that companies seek to maintain their legitimacy with the aim of achieving their strategic objectives or for mitigating the institutional pressure on them.

According to Preda (2005), sell-side analysts are considered to act as a ‘status group’ responsible for legitimacy in making claims in the financial market; sell-side analysts emphasize honour, reputation and good social behaviour as stabilizers of collective action,

as a means of social control and as indicators of legitimacy. Tilling (2004) recognized four critical groups of stakeholders, each controlling a number of resources: (1) the state, (2) public, (3) financial community, and (4) media. The focus of this study is on the third group of stakeholders, the financial community. Therefore, it predicts a positive relationship between CSR disclosure and sell-side analysts' stock recommendations.

2.7.3 Agency Theory

According to Eisenhardt (1989), agency theory is directed by the ubiquitous agency relationship, in which one party (principal) delegates their work to another (agent), who achieves that work. Jensen and Meckling (1976) defined the agency relationship as “*a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent*” (p. 308). Agency theory is concerned with resolving the two problems that may happen in an agency relationship: conflicts of interest between the objectives of principal and agent; and difficulties faced by the principal to verify what the agent actually does (Eisenhardt, 1989).

Researchers have used agency theory widely in accounting (Demski & Feltham, 1978), finance (Fama, 1980), economics (Spence & Zeckhauser, 1971), marketing (Basu, Lal, Srinivasan, & Staelin, 1985), organizational behaviour (Eisenhardt, 1985, 1988; Kosnik, 1987) and political science (Mitnick, 1992). In addition, the theory provides a conceptual foundation for the vast majority of research in corporate governance (Dalton, Daily, Certo, & Roengpitya, 2003; Shleifer & Vishny, 1997). Based on agency theory, it is presumed

that self-interest will motivate the agent to deviate completely from achieving the contractual obligation toward the principal (Ryan & Schneider, 2003). Researchers have highlighted many internal and external mechanisms to minimize these deviations and to make sure that executive acts are in accordance with the shareholders' interests (Bathal, Moon, & Rao, 1994; Connelly *et al.*, 2010). Internal mechanisms include executive compensation (Carpenter & Sanders, 2002), ownership structure (Dalton *et al.*, 2003) and boards of directors (Daily, Dalton, & Cannella, 2003; Dalton, Hitt, Certo, & Dalton, 2007), and external monitoring mechanisms stock markets and the takeover market (Fama & Jensen, 1983).

The literature recognizes the role of institutional investors in monitoring the stock market (Bathal *et al.*, 1994; Tee *et al.*, 2017). Large ownership by institutional investors is urged by shareholders activists, academics and others, to play a significant role in monitoring and enforcing governance standards and influencing companies to reduce agency costs and protect shareholder wealth (Agrawal & Mandelker, 1990; Cornett *et al.*, 2007; El-Diftar *et al.*, 2017; Ingley & van der Walt, 2004; Shleifer & Vishny, 1986). Institutional investors are more likely than non-institutional ones to engage and vote in corporate management decisions, according to their significant ownership of equity in the companies (Brickley, Lease, & Smith, 1988). They will also attempt to influence top management towards the long-term interests of shareholders (Holderness & Sheehan, 1988).

According to Connelly *et al.* (2010), large stockholder groups may motivate executives to engage in behaviour that benefits some stockholders at the expense of others, claiming that

principals have heterogeneous interests and different abilities in influencing executives to comply with these interests. Institutional investors' heterogeneity suggests that they will arrive at different terms and conditions in their agency contracts with the companies' managers (Ryan & Schneider, 2003). Different institutional investors may engage in different forms of governance, be affected by company characteristics in different ways, and have different effects on company outcomes (Edmans, 2014). Previous studies suggest two main channels through which institutional investors can affect corporate governance decisions: voice and exit (the "Wall Street walk") (Schmidt & Fahlenbrach, 2017). Institutional investors with a short-term investment horizon "transient" usually monitor the company via "exit," i.e. "voting with their feet" (Switzer & Wang, 2017). These institutions monitor by exit via their trading activities, and without trying to intervene will create a more transparent information environment and also lower companies' cost of equity (Chang *et al.*, 2012; Edmans, 2009).

In contrast, institutional investors with a long-term investment horizon "dedicated" monitor their companies by voice, or direct intervention (Edmans, 2009). Attig, Cleary, El Ghouli, and Guedhami (2012) found that dedicated institutions play a major governance role as monitors in reducing agency costs and improving information quality. The large shareholdings and long-term investment horizons of dedicated institutional investors provide them private information and incentive to monitor and mitigate the agency problem (Zheng, 2010).

On the other hand, Jensen and Meckling (1976) indicated the role of financial analysts in monitoring company activities and reducing agency cost. Security analysts have been found to act as an external monitoring mechanism for reducing agency cost and increasing shareholder wealth (Chen Tao *et al.*, 2017; Doukas *et al.*, 2005; Jung, Sun, & Yang, 2012). According to Chen Tao *et al.* (2015), sell-side analysts work as an external governance mechanism over a minimum of two channels. First, they conduct direct monitoring by tracking companies' financial reports consistently and interfacing directly with management by raising questions in earnings release conference calls. Second, they conduct indirect monitoring by issuing public and private information to an extensive number of institutional and individual investors via analysts' research reports and media channels.

From the discussion above, it can be concluded that large ownership by institutional investors is more effective in monitoring company activities, leading to mitigating information asymmetry, reducing agency cost, and improving information quality which may reflected in sell-side analysts stock recommendations. Therefore, this study uses agency theory as a basis to predict the relationship between institutional investors' ownership and sell-side analysts' stock recommendations. In accordance with agency theory, this study expects that sell-side analysts will issue more favourable stock recommendations for the companies with higher ownership level by transient and dedicated institutional investors.

2.7.4 Signalling Theory

People signal by the way they interact, speak and carry themselves, while companies signal through recruitment, advertisement and annual reports (Karasek & Bryant, 2012). Signalling theory provides a framework to understand how two parties (i.e. an agent and a principal) address information asymmetries in a contractual exchange or relationship (Spence, 1973). According to Connelly, Certo, Ireland, and Reutzel (2011), signalling theory is suitable to describe the behaviour of two parties (organizations or individuals) when they are able to access to different information. Strategic signalling refers to the actions conducted by the companies or individuals and which influence the behaviour of different types of stakeholder, such as suppliers, competitors, investment analysts, customers, employees, investors and partners (Zmud, Shaft, Zheng, & Croes, 2010).

The main concept of signalling theory is that it contains an analysis of different types of signal and the conditions in which they are used (Mavlanova, Benbunan-Fich, & Koufaris, 2012; Spence, 2002). Signalling theory has been described in the management, finance, information systems, marketing, and accounting literature (Boulding & Kirmani, 1993; Certo, 2003; Connelly *et al.*, 2011). Most researchers have used it to examine the characteristics of executive in signalling company quality to the financial markets (Cohen & Dean, 2005; Higgins & Gulati, 2006; Zhang & Wiersema, 2009).

Kryzanowski and Zhang (2013) stated that financial restatement affects the market quality for the restating companies, which send two signals to participants in the financial markets. The first signal deals with the companies' future earnings prospects and the second deals

with the quality of the companies' management team and information systems. In the same vein, Gomulya and Boeker (2014) used signalling theory to examine how financial restatements may push a company to replace its CEO with highly qualified successor, and how the main external constituencies react to this change. They classified three main components of signalling theory: the role of signaller, signal and receiver. They argued that a restated company represent the characteristics of signaller, the CEO's successor the signal itself, and the reaction from external parties such as financial analysts the role of receiver. Financial restatements reflect the form of a company's misconduct or misrepresentation, which can result from both managerial incompetence and intentional acts to deceive. These two effects damage the company's reputation by failing to provide stakeholders with accurate and credible financial information.

As mentioned earlier, financial restatements are considered as one of the main reasons for adverse economic consequences on the restating companies. Accordingly, based on signalling theory, this study demonstrates the significance of financial restatements as a signal and examines the reaction of sell-side analysts to financial restatements as a receiver. In accordance with signalling theory, this study expects that sell-side analysts will be pessimistic when issuing stock recommendations for companies that have restated financial statements. In contrast, sell-side analysts will be optimistic in their stock recommendations for non-restated companies.

2.8 Summary of the Chapter

This chapter provides an overview of the literature related to stock recommendations, CSR, institutional investors' ownership, and financial restatements. It is divided into six main sections. The first discusses the Malaysian stock market including the history of Bursa Malaysia and the foundation of CBRS and its framework. The second section discusses the sell-side analysts' stock recommendations, the types of financial analyst, the role of sell-side analysts, and analyst reports. The third section discusses the background, definition and consequences of CSR, and the relationship between CSR and sell-side analysts' stock recommendations. The fourth section discusses literature related to institutional investors, including their background and types. It considers institutional investors in the Malaysian context, and the relationship between institutional investors and stock recommendations. The fifth section discusses the background, definition, reasons and consequences of financial restatements, and the relationship between financial restatements and stock recommendations. The last section presents the theories underpinning this study. In aiming to fill the gaps in the literature identified in this chapter, a conceptual framework will be developed in the following chapter, and an explanation of the research methodology employed to achieve the objectives of this study will be offered.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Chapter Overview

This chapter explains the research methodology employed to achieve the objectives of this study. It discusses the conceptual framework, hypothesis development, research design, variables' operational definitions and measurements, population and sample, data collection procedures, techniques of data analysis and finally summarizes the chapter.

3.2 Conceptual Framework

This study tests one dependent variable and three independent variables. The dependent variable is sell-side analysts' stock recommendations. The independent variables are (1) CSR, (2) institutional investors' ownership, including the two types (transient and dedicated), and (3) financial restatements. This conceptual framework focuses on the influence of CSR, institutional investors' ownership and financial restatements on the sell-side analysts' stock recommendations.

Figure 3.1 shows the conceptual framework for this study.

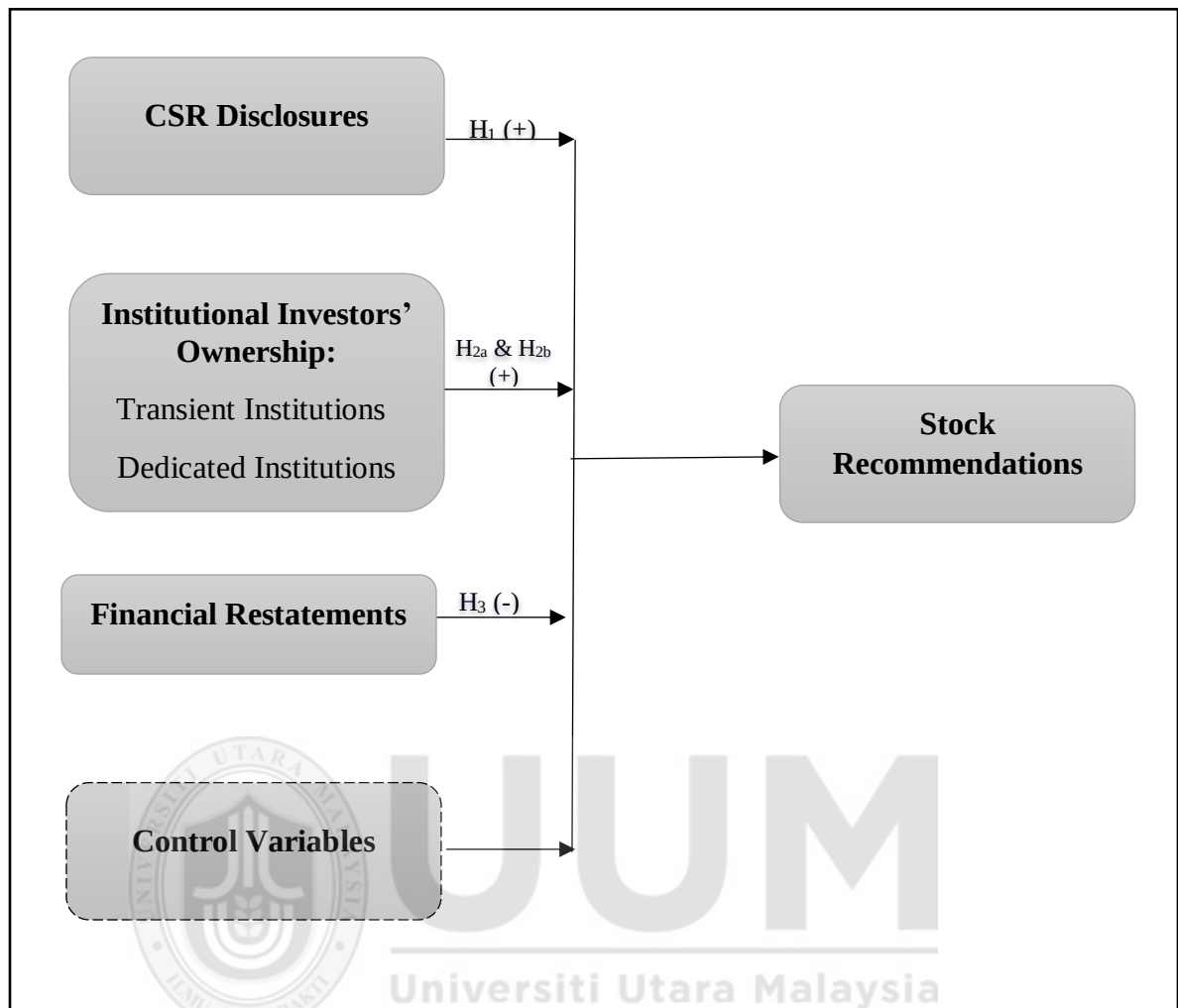


Figure 3.1
Conceptual Framework

3.3 Hypotheses Development

3.3.1 CSR Reporting and Sell-Side Analysts' Stock Recommendations

Stakeholder theory emphasizes that effective management of stakeholder relationships may result in better financial performance (Berman, Wicks, Kotha, & Jones, 1999; Berrone, Surroca, & Tribó, 2007; Choi & Wang, 2009; Godfrey, 2005; Hillman & Keim, 2001). From the perspective of stakeholder theory, previous studies argued that CSR can mitigate negative regulatory, legislative or fiscal action (Berman *et al.*, 1999; Freeman, 1984; Hillman & Keim, 2001), enhance access to finance (Cheng *et al.*, 2014), attract

socially aware customers (Hillman & Keim, 2001), and attract financial resources from socially responsive investors (Kapstein, 2001; Luo *et al.*, 2015). The theory also argues that CSR may lead to better financial performance through protection and enhancement of a company's reputation (Berrone *et al.*, 2007; Fombrun, 2005; Fombrun & Shanley, 1990). Further, legitimacy theory posits that companies implement their strategies in line with the expectations of society (Chan *et al.*, 2014; Milne & Patten, 2002; Suchman, 1995).

The implementation and adoption of CSR activities has generated growing interest in many parties in the financial markets, especially financial analysts (Eccles *et al.*, 2011; Fieseler, 2011). Luo *et al.* (2015) asserted that via their stock recommendations, sell-side analysts are more likely to act as a pathway linking shareholders' investment returns and companies' social activities. Ioannou and Serafeim (2015) emphasized that stock recommendation is a prospective avenue through which corporate social behaviour is integrated into the market valuation of any given company. They found that sell-side analysts issue more favourable stock recommendations for companies with higher CSR rating. Similarly, Dhaliwal *et al.* (2011) concludes that companies with higher CSR performance attract dedicated institutional investors and analyst coverage, while previous studies found that companies with higher CSR performance have more earnings forecast accuracy (Dhaliwal *et al.*, 2012; Garrido-Miralles *et al.*, 2016; Harjoto & Jo, 2015; Muslu *et al.*, 2016).

In Malaysia, all Malaysian PLCs are required to disclose any information related to CSR activities in their financial statements. Therefore, this study expects that CSR disclosure

will influence sell-side analysts to issue optimistic stock recommendations. Thus, based on the literature review and the underpinning theories it is hypothesized that:

H₁: Sell-side analysts will issue more favourable stock recommendations for companies with higher CSR disclosure.

3.3.2 Institutional Investors' Ownership and Sell-Side Analysts' Stock Recommendations

According to agency theory, the separation between ownership and control leads to a different interest between the companies' shareholders (the principal) and managers (the agent) (Jensen & Meckling, 1976). Based on this theory, it is presumed that self-interest motivates the agent to completely deviate from achieving the contractual obligation toward the principal (Ryan & Schneider, 2003). However, previous studies have indicated the significant role of institutional investors to mitigate agency cost and protect shareholder wealth (Agrawal & Mandelker, 1990; Cornett *et al.*, 2007; El-Diftar *et al.*, 2017; Ingley & van der Walt, 2004; Shleifer & Vishny, 1986). They can also improve the companies' disclosure policies through their monitoring role (Arand *et al.*, 2013; Attig *et al.*, 2012).

In addition, institutional investors have more incentive to monitor management by virtue of their large ownership stake in the company (Chen Xia *et al.*, 2007; Hartzell & Starks, 2003; Ramalingegowda & Yu, 2012). Aggarwal *et al.* (2011) stated that institutional investors possibly influence companies to implement better corporate governance practices. This can be done either directly, by influencing the management and using their voting rights "voice", or indirectly, by their decisions to buy or threaten to sell their shares

“voting with their feet”. In this regard, Chang *et al.* (2012) stated that it is important to differentiate between the monitoring roles of short-term and long-term institutional investors.

Transient institutions monitor companies’ activities via “exit”, that is through informed selling, without actually trying to intervene (Edmans, 2009). Such monitoring creates a more transparent information environment and also lowers the companies’ cost of equity (Chang *et al.*, 2012). In contrast, dedicated institutions are more likely to monitor companies by direct intervention, or “voice” (Edmans, 2009). The monitoring role and timely intervention in corporate policies are especially important for this type of institution since they are less inclined to exit (Chang *et al.*, 2012). Thus, they are more likely to press for greater transparency and more effective monitoring, which will improve the company’s information environment (Switzer & Wang, 2017).

3.3.2.1 Transient Institutional Investors and Sell-side Analysts’ Stock Recommendations

While institutional investors are considered as sophisticated investors, they are a heterogeneous group because of their variety of investment strategies (Abarbanell, Bushee, & Raedy, 2003; Bushee, 2001; Bushee & Goodman, 2007; El-Diftar *et al.*, 2017; Garel, 2017; Lang & McNichols, 1997). Institutional investors’ heterogeneity suggests that they will arrive at different terms and conditions in their agency contracts with managers (Ryan & Schneider, 2003). In this regard, Chan Kam *et al.* (2013) stated that different types of institutional investor have different levels of access to insider information and their trading

behaviour differs accordingly. Consequently, some institutions rely more on private information than others, according to their investment strategies (Wong, 2016).

Wong (2016) claimed that information demands of institutional investors may differ according to their investment strategies. Sell-side analysts might issue earnings forecasts with different properties based on the companies' exposure to different types of institution. Transient institutional investors, who have fragment ownership and frequent trading, are more likely to behave as "traders" rather than "owners" (Zheng, 2010). These types of institution require private information to make informed investment decisions and are more likely to request this information from financial analysts (Bushee & Goodman, 2007; Wong, 2016). Chang *et al.* (2012) claimed that by requiring better support from sell-side analysts, transient institutions can improve the quality of sell-side reports, earnings forecasts and stock recommendations on the company.

Chan Kam *et al.* (2013) found that change in the number of transient investors has a greater impact on financial analysts' coverage. In this regard, Gu *et al.* (2013) found that sell-side analysts are more optimistic in their stock recommendations where the fund companies have taken a significant position. Firth *et al.* (2013) also found that the optimism of sell-side analysts' stock recommendations increased if the companies' stocks were held by mutual fund clients. Mintchik *et al.* (2014) found a negative relationship between sell-side analysts' earnings forecast error and a higher percentage of transient institutions' ownership.

In contrast, a few previous studies have contended that transient institutional investors are behaving myopically, to the detriment of the company. Myopic behaviour in companies with a higher level of transient institutional investors' ownership forces managers to implement adverse short-term strategies which may impair long-term prospects (Switzer & Wang, 2017). Chen Yue *et al.* (2015) remarked that transient investors will pressurize managers into a short-term focus, which may distort investment decisions. Matsumoto (2002) found that companies with higher ownership by transient investors seek to meet or beat financial analysts' expectations. This type of institution is likely to encourage opportunistic practices by management (Njah & Jarboui, 2013). In this regard, previous studies found a positive association between the existence of transient ownership and motivation for earnings management (Burns *et al.*, 2010; Cheng & Reitenga, 2009; Koh, 2007; Lin & Manowan, 2012).

From the above discussion, it can be concluded that transient institutional investors are more likely to improve the trading information by requesting better sell-side research and monitoring via exit. Therefore, this study predicts that the higher level of ownership by transient institutional investors will influence sell-side analysts to issue more favourable stock recommendations through their monitoring via exit and trading activities. Thus, based on the literature review and underpinning theory, it is hypothesized that:

H_{2a}: Sell-side analysts will issue more favourable stock recommendations for companies with a higher level of transient institutional investors' ownership.

3.3.2.2 Dedicated Institutional Investors and Sell-Side Analysts' Stock Recommendations

The long-term investment horizon and large shareholdings provide dedicated institutional investors with incentives to act as owners and play a significant role in mitigating agency problems. Switzer and Wang (2017) claimed that even though transient institutional investors might prefer to monitor companies via exit, dedicated institutions could be expected to monitor them via voice or direct intervention¹². These types of institution are knowledgeable and have greater information processing capabilities. They are also highly motivated to incur the cost of openly keeping relations with managers to obtain private pre-disclosure information (Ali *et al.*, 2008; Bushee & Goodman, 2007; Chan Kam *et al.*, 2013; Ramalingegowda, 2014).

The major governance role played by dedicated institutional investors leads to enhanced company performance and improved information quality (Attig *et al.*, 2012; Switzer & Wang, 2017). How *et al.* (2014) examined the heterogeneity of institutional investors in Malaysia and found that EPF, as the largest institutional investor in Malaysia, is a significant determinant of analyst following. Moreover, companies with more long-term institutional investor ownership, receive less biased earnings forecasts from financial analysts (Bilinski, Cumming, Hass, Stathopoulos, & Walker, 2016).

¹² Direct intervention would include “the exercise of voting powers, the dissemination of open letters to undermine the credibility of management or the board, the request for special disclosures from the board, holding public meetings, and engaging in private negotiations with management” (Switzer & Wang, 2017, p. 59).

On the other hand, some previous studies claimed that because dedicated institutional investors have their own information advantage, they are less likely to push managers to make more disclosures or require analysts to make more accurate forecasts. In this regard, Mintchik *et al.* (2014) found that a higher percentage of dedicated institutional investor ownership contributes to higher forecast errors by financial analysts. Chan Kam *et al.* (2013) found that change in the number of dedicated institutional investors has a lower impact on financial analysts' coverage.

Based on the above discussion, it seems that dedicated institutional investors have a significant governance role, which lead to mitigate information asymmetry, improved information quality, and enhanced company performance. Therefore, this study expects that the higher level of ownership by dedicated institutional investors will influence sell-side analysts to issue more favourable stock recommendations through their monitoring role. Thus, it is hypothesized that:

H_{2b}: Sell-side analysts will issue more favourable stock recommendations for companies with a higher level of dedicated institutional investors' ownership.

3.3.3 Financial Restatements and Sell-Side Analysts' Stock Recommendations

Signalling theory is appropriate to describe the behaviour of two parties (organizations or individuals) when they are able to access different information (Connelly *et al.*, 2011). In particular, this theory emphasizes how some actions of companies may influence the behaviour of a different type of stakeholder, such as financial analysts (Zmud *et al.*, 2010).

Mohammadi, Basir, and Beyhaghi (2015) stated that companies with higher-quality signals are attractive to investors and more likely to receive better evaluations. Financial restatements send bad signal about the credibility of companies' financial reporting and cause negative industry valuation effects (Gomulya & Boeker, 2014; Akhigbe & Madura, 2008). On the other hand, stakeholder theory posits that companies are not responsible only to their shareholders, but must take into account the needs of other parties. According to Freeman *et al.* (2010), stakeholder theory emphasizes the importance of managers assimilating the expectations and interest of different sets of stakeholders in their decision-making processes, instead of focusing solely on the companies' shareholders.

The literature documents the significant role of financial analysts as well-informed information intermediaries in the financial market (Bradshaw, 2004; Brown *et al.*, 2015; Cowen & Marcel, 2011; Healy & Palepu, 2001; Ioannou & Serafeim, 2015; Rees *et al.*, 2017). They are typically hired by brokerage companies to evaluate the performance of companies by collecting and processing information about them from the published financial reports (Wiersema & Zhang, 2011). In particular, sell-side analysts' stock recommendations have a substantial effect on a company's stock price, stock liquidity and trading volume, as discussed in the literature review. Financial analysts' skill in understanding public information and their ability to gather private information are two important determinants of the value of their activities in financial markets (Kim & Song, 2015; Livnat & Zhang, 2012). Consequently, the quality of information on corporate disclosure is very important for the analysts' ability to issue informative reports (Chen Xia *et al.*, 2010).

However, financial restatements reflect companies' misconduct and misrepresentation, damaging their reputation by failing to provide stakeholders with accurate and credible financial information (Gomulya & Boeker, 2014). As mentioned earlier, financial restatements are considered as one of the main reasons for the adverse economic consequences for restating companies, such as negative market reaction, negative stock price, increase in the cost of equity capital and higher management turnover. Financial analysts, as informed information intermediaries in financial markets, have claimed that the loss of credibility in the reported financial information is an ongoing result of financial restatement (Wilson, 2008).

Dyck *et al.* (2010) indicated the role of financial analysts as whistle blowers, as they are often the first to detect corporate fraud. Ettredge *et al.* (1995) found that sell-side analysts draw more significant and diverse conclusions from earnings management, including overstatement errors, than the conclusions from more accurately reported earnings. Griffin (2003) concluded that the number of sell-side analysts covering a company declines significantly in the months following financial restatements, and that sell-side analysts revise their earnings forecasts downwards for a month to six months following disclosure of financial restatements. Palmrose *et al.* (2004) and Kryzanowski and Zhang (2013) supported this findings. Young and Peng (2013) concluded that financial analysts are more likely to take severe action and drop coverage than simply to revise their stock recommendations downwards for companies with any kind of accounting fraud. Ye and Yu (2017b) found that restatements influence financial analysts' behaviour in making decisions regarding restated companies' earnings announcements.

Based on the above discussion, sell-side analysts are expected to react differently to the companies with restated financial statements. Therefore, this study predicts that sell-side analysts will be pessimistic and issue adverse stock recommendations (sell) for companies that issue restated financial statements. Thus, the following hypothesis is stated:

H₃: Sell-side analysts will issue adverse stock recommendations for restated companies.

3.4 Research Design

Zikmund, Babin, Carr, and Griffin (2013) defined research design as a master plan which states the methods and procedures to collect and analyse the required information. In other words, research design provides a general plan of how the researcher will conduct his study in order to answer the research questions (Saunders, Lewis, & Thornhill, 2011). However, it is recognized that the best research method that can be used in a study depends basically on the research purpose and related objectives (Yin, 2009). Leedy and Ormrod (2005) stated that the quantitative research method is appropriate for learning about the relationships between measurable variables. In addition, the quantitative approach is useful in analysing and proving theories, in discovering variables for future studies and relating variables raised by hypotheses and questions (Creswell, 2009). Essentially, this approach uses standard tests for validity and reliability and employing statistical procedures (Creswell, 2009).

Therefore, this study uses secondary data to examine the influence of CSR, institutional investors' ownership, and financial restatements on sell-side analysts' stock

recommendations. The data for this study was obtained from three sources: the CBRS website, the Bursa Malaysia website and the DataStream database. The stock recommendations were obtained from the analysts' reports downloaded from the CBRS website. Data on the CSR, institutional investors' ownership, financial restatements, and corporate governance variables was obtained from the companies' annual reports downloaded from the Bursa Malaysia website. Other data related to control variables was obtained from the DataStream database.

3.5 Operational Definition and Measurement of Variables

According to Zikmund *et al.* (2013), operational definitions or operationalization is the process of recognizing the scales that correspond to differences in a concept to be involved in the process of the study; they can also indicate the measurement of variables. The following sub-sections will provide operational definitions and measurements for the dependent and independent variables.

3.5.1 Dependent Variable: Stock Recommendations

For the purpose of this study, analysts' stock recommendations can be operationalized as the recommendations issued by CBRS research analysts. Three types of stock recommendation are issued: buy, hold or sell.

I/B/E/S, First Call and Zacks are the widely-used databases for providing financial analysts' data. To measure analysts' stock recommendations, most of the previous studies use the I/B/E/S five-point scale, in which 1 represents a "strong buy" and 5 a "strong sell"

recommendation (Ioannou & Serafeim, 2015; Ljungqvist *et al.*, 2007; Loh & Stulz, 2011; Luo *et al.*, 2015; Lustgarten & Tang, 2008; Malmendier & Shanthikumar, 2014; Moshirian *et al.*, 2009). Some studies also use the First Call five-point which ranges from 1 as a strong buy to 5 as a strong sell (Barber, Lehavy, McNichols, & Trueman, 2006; Bradshaw, Richardson, & Sloan, 2006). If analysts use different scales, the First Call version is converted (Barber *et al.*, 2003; Barber *et al.*, 2006). In addition, the Zacks database rates stock recommendations as 1 = strong buy, 3 = hold and 5 = strong sell (Barber *et al.*, 2010; Jegadeesh *et al.*, 2004).

Researchers measure the data using the method that best meets the objectives of their studies, and most invert the I/B/E/S or First Call five-point scales so that more favourable recommendations are given a higher value: 5 = strong buy and 1 = strong sell (Aggarwal *et al.*, 2017; Bradshaw *et al.*, 2006; Cowen *et al.*, 2006; Gu *et al.*, 2013; Guan, Lu, & Wong, 2011; Huang *et al.*, 2014; Ioannou & Serafeim, 2015; Ljungqvist *et al.*, 2007; Loh & Stulz, 2011; Lu, Hou, Oppenheimer, & Zhang, 2016; Luo *et al.*, 2015; Malmendier & Shanthikumar, 2014). Barber *et al.* (2010) and Jegadeesh *et al.* (2004) used the Zacks scale, again inverted to 5 = strong buy, 3 = hold and 1 = strong sell. However, NASD 2711 requires brokerage companies to categorize analysts' stock recommendations as either sell, hold or buy. Barber *et al.* (2006) used the term "sell" to reflect either sell or strong sell, and "buy" to reflect either buy or strong buy. Arand and Kerl (2015) also used a three-point scale where 1 = sell, 2 = hold and 3 = buy.

This study uses stock recommendations issued by CBRS research analysts. Under the CBRS scheme, three types of stock recommendation are issued: buy, hold or sell. Further, this study follows Arand and Kerl (2015) and Barber *et al.* (2006) and measures stock recommendations by three ordered scales: 3 = buy, 2 = hold, and 1 = sell, where a higher score indicates more favourable (less pessimistic) recommendations.

3.5.2 Independent Variables

This study has three main independent variables: CSR, institutional investors' ownership and financial restatements. In the following sub-sections, their operational definitions and measurements are discussed.

3.5.2.1 CSR

In general, CSR can be defined as the commitment of a company towards its stockholders and the community to behave and operate in a socially, environmentally, and economically manner. CSR reporting disclosure highlights these three important aspects. For the purpose of this study, the disclosure of CSR activities by CBRS companies is identified from their annual reports.

According to Huang and Watson (2015), various methods and datasets have been used by researchers to measure CSR. The KLD Social Ratings Database is the most widely by academic researchers, in particular for empirical studies conducted in the US (Ioannou & Serafeim, 2012, 2015; Kotchen & Moon, 2012; Luo *et al.*, 2015; Waddock & Graves, 1997). Other datasets such as the MSCI, Thomson Reuters ESG, Innovates "Top 100

Leaders in Sustainability”, FTSE, the FTSE4Good Index, Calvert Social Index and the Dow Jones Sustainability Indices (global or by geographic region) are used by researchers in other accounting literature (Huang & Watson, 2015).

Another stream of research uses content analysis techniques to capture CSR reporting from companies’ annual reports (Abd. Rahman & Ku Ismail, 2016; Al-Tuwaijri, Christensen, & Hughes, 2004; Alazzani *et al.*, 2017; Amran & Devi, 2008; Chan *et al.*, 2014; Janggu, Joseph, & Madi, 2007; Katmon *et al.*, 2017; Milne & Adler, 1999; Ntim & Soobaroyen, 2013; Sadou *et al.*, 2017; Said *et al.*, 2009; Saleh, Zulkifli, & Muhamad, 2010, 2011; Sundarassen *et al.*, 2016; Yekini, Adelopo, Andrikopoulos, & Yekini, 2015), and in intellectual capital reporting studies (Guthrie, Petty, Yongvanich, & Ricceri, 2004; Schneider & Samkin, 2008; Steenkamp & Northcott, 2007; Whiting & Miller, 2008). According to Krippendorff (2004), content analysis is a research technique which aims to make replicable and valid references from data to their contexts. The process usually includes “*codifying qualitative information in anecdotal and literary form into categories in order to derive quantitative scales of varying levels of complexity*” (Abbot & Monsen, 1979, p. 504).

According to Hooks and van Staden (2011), content analysis methods vary, but normally are extent-based or quality-based. The three extent-based methods measure the extent of CSR reporting: measurement in terms of words (Deegan & Rankin, 1996; Neu, Warsame, & Pedwell, 1998; Zéghal & Ahmed, 1990), sentences (Hackston & Milne, 1996; Hooks & van Staden, 2011; Ingram & Frazier, 1980; Milne & Adler, 1999; Tsang, 1998), and

number of pages or proportions of a page (Cowen, Ferreri, & Parker, 1987; Patten, 1991; Unerman, 2000).

The quality-based technique is used to assess narrative disclosure, which includes the use of a disclosure index, and compares and explains differences in the quantity (extent) and quality of information disclosed in corporate reports (Hooks & van Staden, 2011). The disclosures indices are regarded as a more practical and valid research tool (Botosan, 1997; Cheng, 1992), because of considerable debate on the use of number of pages, words and sentences (Amran & Devi, 2008; Azim, Ahmed, & Islam, 2009; Milne & Adler, 1999; Unerman, 2000). However, usage of the index varies, as some researchers use a dichotomous variable where 1 indicates disclosure and 0 indicates non-disclosure (Abdul Razak & Mustapha, 2013; Alazzani *et al.*, 2017; Haniffa & Cooke, 2005; Mohd Ghazali, 2007; Said *et al.*, 2009; Sundarasan *et al.*, 2016). Others use a more detailed index with a scale from 0 to 3, where 3 is given for quantitative disclosure, 2 for qualitative disclosure with specific explanations, 1 for general qualitative disclosure, and 0 for non-disclosure (Anas, Abdul Rashid, & Annuar, 2015; Katmon *et al.*, 2017; Saleh *et al.*, 2010, 2011).

For the purpose of this study, CSR reporting is measured by a quality index with a scale of 0 to 3, as described above (Anas *et al.*, 2015; Katmon *et al.*, 2017; Saleh *et al.*, 2010, 2011; Zainal *et al.*, 2013a,b). According to Al-Tuwaijri *et al.* (2004), the process of CSR scoring may be achieved by using quantitative disclosure measures with denoted weights for different disclosure types, based on the perceived importance of each item to various user

categories. Following Saleh *et al.* (2011) and Katmon *et al.* (2017), the scoring process is assigned into three classes as follows:

(1) Quantitative disclosure classification: this indicates the greatest weight with an assigned value of 3. The CSR disclosure will contain financial information. For instance, the CSR practices disclosed in the company' annual report are as follow: Community Theme (Education)

*“The Group had given out cash awards totalling **RM400,000** to 1,300 students who had excelled in their studies and to 2,000 teachers from the Chinese Independent schools in recognition of their efforts and commitment in promoting education excellence”* (Annual report of Multi-Purpose Holdings Berhad (2012, p. 19).

(2) Qualitative specific disclosure classification: this classification indicates to the next highest weight which is the non-quantitative disclosure with particular CSR information and it has assigned the value of 2. It classifies as non-financial disclosure. For instance, the CSR practices disclosed in the company' annual report are as follow: Workplace (Employee Training and Education)

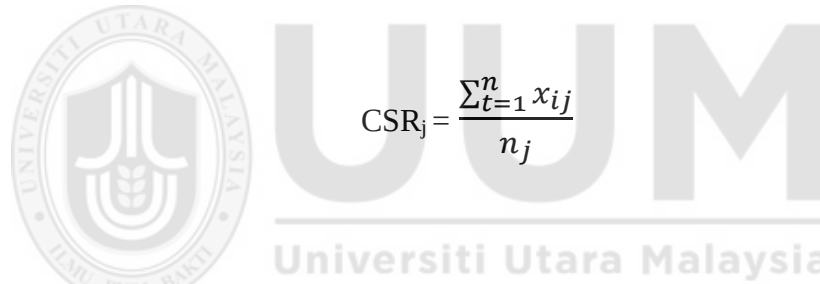
*“Trainings in 2012 focused and targeted towards developing competencies, skills and knowledge of Mah Sing's employees. Technical and soft skill training programs were **introduced and conducted** in-house and externally. Some of the new training programs introduced in 2012 were customized towards specific departmental needs”* (Annual report of Mah Sing Group Berhad (2012, p. 52)

(3) Qualitative specific disclosure classification: this classification indicates to the lowest weighted value due to its qualitative disclosing in which the description is in general, thus it is assigned the quantitative value of 1. It classifies as non-financial disclosures. For example, the CSR practices disclosed in the company' annual report are as follow: Environment (Emission, Waste Management and Energy Conservation)

“It is our policy to comply with environmental laws governing plant operations, maintenance and improvement in areas relating to environmental standards, emission standards, energy conservation, housekeeping and storage methods, noise level management and treatment of plant effluents and waste water” (Annual report of Globaltec Formation Berhad (2013, p. 34).

Companies that do not disclose any kind of CSR information for particular items in the CSR disclosure index is given a score 0.

Following previous studies (Saleh *et al.*, 2010, 2011) the CSR quality index is derived by computing the ratio of actual scores awarded to the total number of items, using the formula:



$$CSR_j = \frac{\sum_{i=1}^n x_{ij}}{n_j}$$

Where

CSR_j = quality of CSR for the j^{th} company ranging from 0 to 3.

n_j = total number of items estimated for j^{th} company (28 items).

x_{ij} = the score of 3 for the i^{th} item if quantitative data is disclosed, the score of 2 for the i^{th} item if qualitative data with specific explanation is disclosed, the score of 1 for the i^{th} item if general qualitative data is disclosed and the score of 0 for the i^{th} item if there is no disclosure.

The content analysis of CSR reporting in this study is based on the Bursa Malaysia CSR Framework for Malaysian PLCs. According to this framework, the disclosure of CSR activities in all Malaysian PLCs' annual reports is compulsory and should be made in

accordance with four main themes: the environment, community, marketplace, and workplace (Bursa Malaysia, 2006). Yam (2013) claimed that, while the Malaysian PLCs are required to disclose CSR activities in their annual reports, however, there is no specific requirement of the content. Luo *et al.* (2015) found that analysts discuss many types of CSR information such as environment, community, products and employee relations in their reports.

However, the current study divided each of the four themes (i.e. environment, community, marketplace and workplace) into several dimensions, as utilized in previous Malaysian CSR studies (Bursa Malaysia, 2008; Janggu *et al.*, 2007; Saleh *et al.*, 2010, 2011; Sadou *et al.*, 2017; Katmon *et al.*, 2017; Anas *et al.*, 2015; Sujana, 2015; Yam, 2013; Zainal *et al.*, 2013a, b). The CSR index comprises 28 items overall, which are used for scoring CSR reporting in this study, as shown in Appendix A; these items were determined by adopting the dimensions of CSR disclosures from a review of previous Malaysian studies. The studies that are closest to the current study in terms of CSR items used are Sundarassen *et al.* (2016) and Zainal *et al.* (2013b).

Nevertheless, it is recognized that the application of the disclosure index as a proxy for CSR disclosure does suffer from subjectivity issues (Hassan & Marston, 2010). Therefore, to assess the validity and reliability of CSR scoring, and following previous work (Alazzani *et al.*, 2017; Anas *et al.*, 2015; Sadou *et al.*, 2017), this study selected 20% from the study sample's earlier scoring and rescored it eight months later. The scores were found to be

reliable and valid because the correlation between the first and subsequent scores is more than 90%.

3.5.2.2 Institutional Investors' Ownership

Naturally, institutional investors refer to specific organizations, rather than to natural persons, who invest substantial pools of money in securities in the financial markets (Lang & McNichols, 1997; Luo *et al.*, 2014). They include insurance companies, investment companies, unit trusts and mutual funds, pension and superannuation funds, and financial institutions (including finance companies, banks, credit cooperatives, and building societies), that make investments for others (Hsu & Koh, 2005; Koh, 2003; Velury & Jenkins, 2006).

For the purpose of this study, institutional investors are classified according to their investment horizons, following previous studies, as long-term (dedicated institutions) and short-term (transient institutions) (Abd-Mutalib *et al.*, 2015; Bamahros & Wan-Hussin, 2015; Bushee, 1998, 2001; Chang *et al.*, 2012; Cox & Wicks, 2011; Ke & Petroni, 2004; Switzer & Wang, 2017). Transient institutions are those who have active trading strategy with higher turnover and different portfolios; they are short-term focused and their interest in company stocks depends on the possibility of short-term trading earnings (Bushee, 1998; Chan Kam *et al.*, 2013; Hribar *et al.*, 2009; Ke & Petroni, 2004; Koh, 2007). On the other hand, dedicated institutions have large investments in a portfolio of companies with lower turnover and long-term investment horizons, with stable ownership (Chan Kam *et al.*,

2013; D'Souza *et al.*, 2010; Eaton *et al.*, 2014; Hribar *et al.*, 2009; Ke & Petroni, 2004; Luo *et al.*, 2014).

In line with these definitions, this study classifies Malaysian institutional investors as transient or dedicated. However, as mentioned in the literature review, it is clear that ownership by pension funds, unit trusts and mutual funds, pilgrimage funds, banks and insurance companies, dominate the market of institutional investors among Malaysian companies. Like earlier studies, this study classifies pension funds in the long-term investment horizon (dedicated), and unit trusts and mutual funds, banks and insurance companies in the short-term investment horizon (transient) (Cox *et al.*, 2004; Cox & Wicks, 2011; Johnson & Greening, 1999; Kunzel *et al.*, 2011; Oh *et al.*, 2011; Ryan & Schneider, 2002, 2003; Sethi, 2005; Zahra, 1996).

Unit trusts and mutual funds have a unique position in Malaysia, as they can be divided into privately managed mutual funds and government-managed unit trust funds (Abd-Mutalib, 2014). Like previous studies (Abd-Mutalib *et al.*, 2015; Cox *et al.*, 2004; Cox & Wicks, 2011; Serafeim, 2015), this study classifies privately managed unit trusts and mutual funds in the short-term investment horizon (transient). On the other hand, government-managed unit trust funds are categorized as long-term investment horizon (dedicated). Furthermore, PNB, the main unit trust fund in Malaysia, is classified as a dedicated institution, in line with their central objective (Abd-Mutalib *et al.*, 2015; Serafeim, 2015). Pilgrimage funds are also classified as dedicated institutions based on their objective as a social obligation, and following previous studies (Abd-Mutalib *et al.*,

2015; Bamahros & Wan-Hussin, 2015). Other GLICs such as KHAZANAH, MOF (Inc.), Valuecap, SOCSO, FELDA and PETRONAS are classified as dedicated institutions (Bamahros & Wan-Hussin, 2015, 2016).

In this study, the institutional investors' ownership is measured as the proportion of institutional investors' shareholding (the total shares owned by institutional investors divided by the total shares outstanding), widely used in previous studies (Chan Kam *et al.*, 2013; Chen Yue *et al.*, 2015; Graves & Waddock, 1994; How *et al.*, 2014; Koh, 2003; Li & Lu, 2015; Saleh *et al.*, 2010; Wahba, 2008; Zheng, 2010). The data is extracted from the list of the 30 largest shareholders reported in the annual reports for the period 2008 to 2013.

The transient institutional investors (IO_TRNST) measured as the proportion of shareholding by banks, privately managed unit trusts and mutual funds and insurance companies, and the dedicated institutional investors (IO_DEDI) measured as the proportion of shareholding by government-managed unit trust funds, government-managed pension funds, government-managed pilgrimage funds, government-managed sovereign wealth fund (KHAZANAH), and other GLICs such as MOF (Inc.), Valuecap, SOCSO, FELDA and PETRONAS.

A few studies examined the simultaneous effect of transient and dedicated institutional investor ownership (Chan Kam *et al.*, 2013; Koh, 2007; Yan & Zhang, 2009). Chan Kam *et al.* (2013) investigated the relationship between different types of institutional investor holdings and analyst coverage. They found that a change in the number of transient

institutions has a higher impact on change in analyst coverage than those for change in the number of dedicated institutions. Koh (2007) examined the association between institutional investor type and companies' earnings management. They found that dedicated institutions mitigate earnings management, while transient institutions are evident in companies that manage earnings to meet/beat their earnings benchmarks. Yan and Zhang (2009) examined the association between institutional investor ownership types and future stock returns. They found that transient institutions trading was positively related to future earnings surprises. In contrast, dedicated institutions' trading does not forecast future returns.

3.5.2.3 Financial Restatements

This study includes financial restatements occurring as a result of financial fraud, accounting rule application failures, irregularities, errors that come from mathematical mistakes and misrepresentations. Restatements attributable to changes in accounting policies have been excluded (Abdul Wahab *et al.*, 2014; Chin *et al.*, 2017; Paterson & Valencia, 2011; Wang & Wu, 2011).

Earlier studies measured financial restatements as a dummy variable taking the value 1 if the company issues financial restatements, and 0 otherwise (Abbott *et al.*, 2004; Abdul Wahab *et al.*, 2014; Du, 2017; Gomulya & Boeker, 2014; Harris & Bromiley, 2007; Hribar *et al.*, 2014; Palmrose *et al.*, 2004; Paterson & Valencia, 2011). This study applies the same measurement. Following previous Malaysian studies (Abdul Wahab *et al.*, 2014; Abdullah *et al.*, 2010; Chin *et al.*, 2017; Hasnan & Hussain, 2015; Shafie & Zainal, 2016), the data

for financial restatements was obtained from annual reports for the study period 2008 to 2013.

3.5.3 Control Variables

Based on previous studies, several control variables are included in the model as explained below.

3.5.3.1 Corporate Governance Variables

Previous studies documented the positive economic consequences and future performance of having solid corporate governance, which include superior subsequent operating performance and higher market valuation (Conheady, McIlkenny, Opong, & Pignatel, 2015; Durnev & Kim, 2005; Haniffa & Hudaib, 2006; Klapper & Love, 2004). According to Bhat, Hope, and Kang (2006), there are two reasons for the importance of corporate governance to financial analysts. The first is related to the credibility of financial disclosure, and the second to the role of corporate governance disclosure to reduce uncertainty surrounding future performance. Byard, Li, and Weintrop (2006) also found that the quality of financial analysts' information increases with the quality of corporate governance, and other studies that good corporate governance is related to good stock recommendations, higher analyst following and greater accuracy of analysts' earnings forecasts (Autore, Kovacs, & Sharma, 2009; Byard *et al.*, 2006; Lang *et al.*, 2004; Yu, 2010, 2011).

For the purpose of this study, four corporate governance variables have been utilized board size, board independence, duality and managerial ownership.

3.5.3.1.1 Board Size

One of the main elements of the corporate governance mechanism is the board of directors. The board oversees that the company's business has been correctly managed by its agents (Said *et al.*, 2009). However, the influence of board size is ambiguous (Abdul Wahab, Pitchay, & Ali, 2015). Some studies argued that small board size is viewed to be more effective as the members can make sound decisions in less time than the bigger boards (Jensen, 1993; Yermack, 1996). In contrast, Haniffa and Hudaib (2006) argued that large board size seemed to provide companies with the diversity of contacts, experience and expertise needed to improve performance. However, Byard *et al.* (2006) found a negative relationship between board size and the accuracy of analysts' earnings forecasts. Accordingly, this study predicts the non-directional effect of board size on sell-side analysts' stock recommendations. Board size is measured as the total number of the directors on the board of the company (Abdul Razak & Mustapha, 2013; Abdullah, Ku Ismail, & Nachum, 2016; Al-Dhamari & Ku Ismail, 2014; Alazzani *et al.*, 2017; Byard *et al.*, 2006; Haniffa & Hudaib, 2006; Shukeri, Wan-Hussin, & Aripin, 2015; Wan-Hussin, 2009; Yatim, Kent, & Clarkson, 2006).

3.5.3.1.2 Board Independence

The presence of independent directors mitigates the agency problem by exercising proper monitoring of management behaviour (Abdul Wahab *et al.*, 2015; Cornett, Marcus, &

Tehrani, 2008). Byard *et al.* (2006) found a significant and positive relationship between the proportion of independent directors and the accuracy of analysts' earnings forecasts. As such, this study expects a positive relationship between board independence and analysts' stock recommendations. Following previous studies, this study measures board independence as the proportion of independent directors of the total board (Abdul Wahab *et al.*, 2015; Al-Dhamari & Ku Ismail, 2013, 2014; Al-Rassas & Kamardin, 2015; Byard *et al.*, 2006; How *et al.*, 2014; Katmon *et al.*, 2017; Sadou *et al.*, 2017; Zi, Hassan, & Embong, 2014).

3.5.3.1.3 Duality

Duality indicates the situation where one person serves as both CEO and chairman of the board in a particular company (Adams, Almeida, & Ferreira, 2005; Davidson, Jiraporn, Kim, & Nemec, 2004; Haniffa & Hudaib, 2006; Jiraporn, Liu, & Kim, 2014; Said *et al.*, 2009). Previous studies argued that the existence of CEO duality is an indicator of poor corporate governance (Jensen, 1993; Yermack, 1996). Byard *et al.* (2006) found a negative relationship between CEO duality and the accuracy of financial analysts' earnings forecasts. In contrast, a company with CEO duality signals to stakeholders that it is under an efficient and powerful leader and has an unambiguous sense of direction (Finkelstein & D'aveni, 1994; Rhoades, Rechner, & Sudramurthy, 2001), and previous studies have found a positive relationship between CEO duality and company performance and the amount of capital raised (Badru, Ahmad-Zaluki, & Wan-Hussin, 2017; Ben Hassoun & Aloui, 2017). Therefore, this study proposes that companies with CEO duality will receive favourable stock recommendations. Duality is measured by a dummy variable, where 1 indicates that

the positions of Chairman and CEO are held by the same person, and 0 otherwise (Abdul Wahab *et al.*, 2015; Haniffa & Hudaib, 2006; Ishak, Ku Ismail, & Abdullah, 2012; Johari, Mohd Saleh, Jaffar, & Hassan, 2009; Zi *et al.*, 2014).

3.5.3.1.4 Managerial Ownership

This study also controls for managerial ownership, as managers' activities can influence the company information environment in different ways. However, earlier studies on the association between managerial ownership and analysts' activities provided mixed results. Some authors argued that managerial ownership is negatively related to the accuracy of analysts' earnings forecasts and analyst following (Baik, Kang, & Morton, 2007; How *et al.*, 2014), as the greater insider ownership can lead to managerial entrenchment (Shleifer & Vishny, 1989). Haniffa and Hudaib (2006) found a significant negative relationship between managerial ownership and performance.

In contrast, managerial ownership can act as a governance mechanism in mitigating agency conflicts by aligning the interests of managers and shareholders and, then mitigating information asymmetry (Jensen & Meckling, 1976; How *et al.*, 2014; Liu, 2016). In line with this, other studies found a positive relationship between sell-side analysts' earnings forecasts, stock recommendations and managerial ownership (Han, Jin, Kang, & Lobo, 2014; Liu, 2016, 2017). This study therefore predicts the non-directional effect of managerial ownership on sell-side analysts' stock recommendations. Managerial ownership is measured here by the direct percentage of shares held by the CEO and executive directors (Abdul Wahab *et al.*, 2015; How *et al.*, 2014).

3.5.3.2 Company Size

Ioannou and Serafeim (2015) claimed that financial analysts may issue optimistic recommendations for larger companies because trading in them generates more commission and investment banking business. In addition, it is argued that larger companies are subject to closer inspection by financial analysts (Richardson *et al.*, 2003). How *et al.* (2014) stated that larger companies have a richer information environment, attracting analyst following. Therefore, this study uses the log of market capitalization as a proxy for company size for the dependent variable, as used in previous studies (Arand & Kerl, 2015; Arand *et al.*, 2013; Chan Kam *et al.*, 2013; Dhaliwal *et al.*, 2011; Gu *et al.*, 2013; Guan *et al.*, 2011; How *et al.*, 2014; Ioannou & Serafeim, 2015; Jegadeesh *et al.*, 2004).

3.5.3.3 Leverage

Sell-side analysts may derive information about a company's future performance based on its past performance or its characteristics (Gu *et al.*, 2013). This study follows Gu *et al.* (2013) and Young and Peng (2013), who include leverage related to institutional investors, accounting fraud and stock recommendations. Palmrose *et al.* (2004) also controlled for leverage in examining the relationship between restatements and analysts' earnings forecasts. Following previous studies, this study measures leverage as the ratio of total debt to total assets (Al-Dhamari, Al-Gamrh, Ku Ismail, & Haji Ismail, 2017; Al-Qadasi & Abidin, 2018; Alazzani *et al.*, 2017; Dhaliwal *et al.*, 2011; Ishak, Haron, Nik Mohamad, & Abdul Rashid, 2011; Palmrose *et al.*, 2004; Thomas, 2002).

3.5.3.4 Book-to-Market Ratio (BTM)

Previous studies have shown that companies with higher BTM perform better, have higher earnings, higher returns and a larger analyst following (Da & Schaumburg, 2011; Ertimur, Muslu, & Zhang, 2011; Fama & French, 1992). Crawford, Gray, Johnson, and Price (2012), Lin, Chen, and Chen (2011) and Mokoaleli-Mokoteli, Taffler, and Agarwal (2009) found that analysts have a preference for issuing optimistic earnings forecasts and stock recommendations for companies with higher BTM. Following previous studies, including Gu *et al.* (2013), Ioannou and Serafeim (2015) and Jegadeesh *et al.* (2004), this study uses BTM as a control variable for the dependent variable. It expects that, all things being equal, sell-side analysts will issue more favourable recommendations for companies with higher BTM (Ioannou & Serafeim, 2015; Jegadeesh *et al.*, 2004). BTM is calculated as the book value of equity divided by the market value of equity (Luo *et al.*, 2014; Yezegel, 2015).

3.5.3.5 Earnings-to-Price Ratio (EP)

As already mentioned, before issuing stock recommendations sell-side analysts obtain information about a company's past performance and characteristics. Ioannou and Serafeim (2015) and Jegadeesh *et al.* (2004) found that they issue more favourable stock recommendations for companies with higher EP. Therefore, this study uses EP as a control variable. Following previous studies, it is calculated as earnings per share divided by stock price (Gu *et al.*, 2013; Ioannou & Serafeim, 2015; Jegadeesh *et al.*, 2004).

3.5.3.6 Company Profitability

Return on assets (ROA) is a general measure of a firm's profitability and has been used as a control variable in previous studies related to CSR and stock recommendations (Ioannou & Serafeim, 2015). Ioannou and Serafeim (2015) argued that companies with high profitability are expected to receive favourable stock recommendations. Following previous studies, this study uses ROA as a proxy for company profitability (Ioannou & Serafeim, 2015; Pencle & Mălăescu, 2016; Young & Peng, 2013).

3.5.3.7 Market Return (RETURN)

Previous studies found that companies with higher and better-performing stocks receive more positive stock recommendations, reflecting financial analysts' tendency to chase stock returns (Ioannou & Serafeim, 2015; Jegadeesh *et al.*, 2004). This study therefore measures RETURN as the stock price at the fiscal year end of the current year minus the stock price of the fiscal year end of the previous year divided by the stock price of the fiscal year end of the previous year (Ishak & Abdul Latif, 2012; Saleh *et al.*, 2011). Table 3.1 summarizes the measurements of the variables.

Table 3.1
Measurements of Variables

Variable	Notation	Definition	Support
Stock Recommendations	REC	CBRS sell-side analysts' recommendations for company is measured as, 3 = Buy, 2 = Hold, or 1 = Sell.	(Arand & Kerl, 2015; Barber <i>et al.</i> , 2006).
CSR Reporting	CSR	Computation of CSR index: $CSR_j = \frac{\sum_{i=1}^n x_{ij}}{n_j}$	See Appendix (A)

Table 3.1 (Continued)

Variable	Notation	Definition	Support
Institutional Investors' Ownership			
Transient Institutional Investors	IO_TRNST	Ratio of shares held by transient institutions (banks, private-managed mutual funds, and insurance companies).	(Cox <i>et al.</i> , 2004; Cox & Wicks, 2011; Johnson & Greening, 1999; Oh <i>et al.</i> , 2011; Zahra, 1996; Abd-Mutalib <i>et al.</i> , 2015; Serafeim, 2015).
Dedicated Institutional Investors	IO_DEDI	Ratio of shares held by dedicated institutions (the government-managed pension funds, government-managed unit trust funds, government-managed pilgrimage funds, government-managed sovereign wealth fund (Khazanah), other GLICs such as MOF (Inc.), ValueCAP, SOCSO, FELDA, and PETRONAS).	(Cox <i>et al.</i> , 2004; Cox & Wicks, 2011; Johnson & Greening, 1999; Oh <i>et al.</i> , 2011; Zahra, 1996; Abd-Mutalib <i>et al.</i> , 2015; Serafeim, 2015; Bamahros and Wan-Hussin, 2015, 2016)
Financial Restatements	RESTATE	A dummy variable which takes the value of 1 if the company issues financial restatements, and 0 otherwise.	(Abbott <i>et al.</i> , 2004; Abdul Wahab <i>et al.</i> , 2014; Du, 2017; Gomulya & Boeker, 2014; Harris & Bromiley, 2007; Hribar <i>et al.</i> , 2014; Palmrose <i>et al.</i> , 2004; Paterson & Valencia, 2011)
Board Size	BSIZE	The total number of the directors on the board of the company.	(Abdul Razak & Mustapha, 2013; Abdullah <i>et al.</i> , 2016; Al-Dhamari & Ku Ismail, 2014; Alazzani <i>et al.</i> , 2017; Byard <i>et al.</i> , 2006; Haniffa & Hudaib, 2006; Shukeri <i>et al.</i> , 2015; Wan-Hussin, 2009; Yatim <i>et al.</i> , 2006).

Table 3.1 (Continued)

Variable	Notation	Definition	Support
Board Independence	BINDP	The percentage of independent directors over the total board.	(Abdul Wahab <i>et al.</i> , 2015; Al-Dhamari & Ku Ismail, 2013, 2014; Al-Rassas & Kamardin, 2015; Byard <i>et al.</i> , 2006; How <i>et al.</i> , 2014; Katmon <i>et al.</i> , 2017; Sadou <i>et al.</i> , 2017; Zi <i>et al.</i> , 2014).
Duality	DUAL	A dummy variable where 1 indicates that the position of Chairman and CEO are held by the same person, and 0 otherwise.	(Abdul Wahab <i>et al.</i> , 2015; Haniffa & Hudaib, 2006; Ishak <i>et al.</i> , 2012; Johari <i>et al.</i> , 2009; Zi <i>et al.</i> , 2014)
Managerial Ownership	MOWN	The percentage of direct shares held by CEO and executive directors.	(Abdul Wahab <i>et al.</i> , 2015; How <i>et al.</i> , 2014)
Company Size	SIZE	Log of market capitalization for company.	(Arand & Kerl, 2015; Arand <i>et al.</i> , 2013; Chan Kam <i>et al.</i> , 2013; Dhaliwal <i>et al.</i> , 2011; Gu <i>et al.</i> , 2013; Guan <i>et al.</i> , 2011; How <i>et al.</i> , 2014; Ioannou & Serafeim, 2015; Jegadeesh <i>et al.</i> , 2004)
Leverage	LEVGE	Ratio of total debt to total assets for company.	(Al-Dhamari <i>et al.</i> , 2017; Alazzani <i>et al.</i> , 2017; Dhaliwal <i>et al.</i> , 2011; Ishak <i>et al.</i> , 2011; Luo <i>et al.</i> , 2015; Palmrose <i>et al.</i> , 2004; Thomas, 2002)
Book-to-Market Ratio	BTM	Book value of equity divided by the market value of equity for company.	(Luo <i>et al.</i> , 2014; Yezegel, 2015)
Earnings-to-Price Ratio	EP	Earnings per share divided by stock price for the company.	(Gu <i>et al.</i> , 2013; Ioannou & Serafeim, 2015; Jegadeesh <i>et al.</i> , 2004)
Profitability	ROA	The return on assets for company.	(Ioannou & Serafeim, 2015; Pencle & Mălăescu, 2016; Young & Peng, 2013)
Market Return	RETURN	The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$	(Ishak & Abdul Latif, 2012; Saleh <i>et al.</i> , 2011)

3.6 Population and Sample

The population for this study is the CBRS companies listed on Bursa Malaysia from 2008 to 2013. This period was chosen because it coincides with the period following the mandatory disclosures of CSR in 2007. The study capitalizes on the public availability of analysts' reports on Bursa Malaysia. As mentioned earlier, Bursa Malaysia launched the CBRS reports in 2005, with the main aim of generating research coverage for the Malaysian PLCs and providing investors with more information to help them in the process of decision making. A total of 304 companies participated in Scheme 1 completed in June 2007; 436 companies in Scheme 2, completed in October 2010; and 208 companies are participating in Scheme 3 which is still in progress (Qasem *et al.*, 2015). The CBRS analysts are more independent because the cost of coverage is supported by the CMDF and Bursa Malaysia. Therefore, this study expects their recommendations to be more accurate and less biased.

This study selects the sample based on the following criteria:

- 1- Companies listed on CBRS during the study period.
- 2- Companies that have at least one analyst's recommendation between one to six months after the issuance of the company's annual reports. In case of a company with more than one recommendations, the first analyst's report a month after publication of the annual report has been selected. Table 3.2 shows the sample selection process.

Table 3.2
Sample Selection Criteria

Explanation	Number of Companies						
Companies listed on CBRS research coverage during study period (2008-2013)	319						
Less: companies without recommendations between one month to six months after the issuance of annual report	(27)						
Companies with required data	292						
Less: companies with missing data	(3)						
Less: companies with extreme data values	(4) ¹³						
Companies available for analysis	285						
Company-Year Observations Distribution							
	2008	2009	2010	2011	2012	2013	Total
Total company-year observations for 2008 to 2013	204	155	97	97	116	68	737

Ioannou and Serafeim (2015) chose analysts' stock recommendations in the month following the announcement of CSR scores. They claimed that one month was sufficient for the analysts to review these scores. This study selects the analysts' stock recommendations between one to six months after the issuance of the companies' annual reports, as it expects that the CSR information in the companies' annual reports becomes more meaningful during this period and will be reflected in analysts' recommendations. Griffin (2003) also found that financial analysts are more likely to revise their earnings forecasts downward in the period of one to six months following financial restatements. Where a company has more than one recommendation, the first has been selected, because

¹³ Example of the company with missing data is Malaysian Airline System Berhad, and example of the company with extreme data value is Pavilion Real Estate Investment Trust.

the earliest report reflects analysts' immediate response to the arrival of new information (Lu *et al.*, 2016).

The final sample for this study, after applying the sample selection criteria, eliminated companies with missing data and cases of multivariate outliers (as discussed in Section 4.5.1.2). Consequently, a final sample of 285 companies (737 company-year observations) is available for analysis. This study uses the unbalanced panel data methodology to examine the influence of the independent variables on sell-side analysts' stock recommendations, as panel data regression models control for the heterogeneity effect in panel data.

3.7 Data Collection Procedures

After the sample was selected, the data was collected for the six-year period 2008 to 2013 from the annual reports retrieved from the Bursa Malaysia website. The data related to stock recommendations, CSR, institutional investors' ownership, financial restatements, and other control variables collected from various sources such as CBRS reports, annual reports and DataStream (see Table 3.4 for more detail).

The dataset of this study was categorized into eleven sectors (finance, industrial products, consumer products, infrastructure project companies (IPC), construction, trading services, real estate investment trusts (REITS), technology, hotels, properties, and plantations) based on the Bursa Malaysia classification. Table 3.3 shows the distribution of the sampled companies by sector.

Table 3.3
Sector Classifications

Sector	Number of Companies
1. Trading/Services	76
2. Industrial Products	70
3. Consumer Products	42
4. Technology	24
5. Construction	20
6. Properties	19
7. Finance	14
8. Plantation	14
9. REITS	4
10. Hotels	1
11. IPC	1
Total	285

According to Hasnan and Hussain (2015), no list of the restated companies is available from Bursa Malaysia. MFRS 108, Para 42 (a) requires companies to “*correct material prior period errors retrospectively in the first set of financial statements authorized for issue after their discovery by restating the comparative amounts for the prior period(s) presented in which the error occurred*” (Malaysian Accounting Standards Board, 2015). Restated companies are identified in this study by searching on the keywords “restatement”, “restate”, “restated” or “prior year adjustments” for each company’s annual report during the period from 2008 to 2013. Companies that restated their financial statement during this period given 1, and 0 if not restated. This procedure is similar to the procedure followed by previous Malaysian studies (Abdul Wahab *et al.*, 2014; Abdullah *et al.*, 2010; Chin *et al.*, 2017; Hasnan & Hussain, 2015; Shafie & Zainal, 2016; Wan Mohammad *et al.*, 2018).

The following procedures apply for data collection:

- 1- The selected companies are listed under CBRS research coverage during the study period.
- 2- The annual reports of the selected companies are retrieved from the Bursa Malaysia website.
- 3- Sell-side analysts' reports are retrieved from CBRS (only those published between one to six months after the issuance of the selected companies' annual reports).
- 4- The stock recommendations (buy, hold or sell) are obtained from these reports.
- 5- The CSR data is collected from the companies' annual reports.
- 6- The institutional investors' ownership data is collected from the companies' annual reports.
- 7- The financial restatements data is obtained from the selected companies' annual reports.
- 8- Other data related to control variables is obtained from various sources including DataStream, annual reports, and the Bursa Malaysia website. Table 3.4 presents the sources of data.

Table 3.4
Sources for Data Collection

Variables	Sources of Data
<u>Dependent Variable:</u>	
Stock Recommendations	CBRS sell-side analysts' reports posted in Bursa Malaysia website (www.bursamalaysia.com).
<u>Independent Variables:</u>	
CSR	Annual reports

Table 3.4 (Continued)

Variables	Sources of Data
Institutional Investors' Ownership	Annual reports
Financial Restatements	Annual reports
<u>Control Variables:</u>	
BSIZE	Annual reports
BINDP	Annual reports
DUAL	Annual reports
MOWN	Annual reports
SIZE	DataStream
LEVGE	DataStream
BTM	DataStream
EP	DataStream
ROA	DataStream
RETURN	DataStream

3.8 Techniques of Data Analysis

This study uses panel data to examine the influence of the independent variables on sell-side analysts' stock recommendations. Panel data analysis is widely used in accounting and finance studies, including Abdul Wahab *et al.* (2015), Kadan, Madureira, Wang, and Zach (2009), Ljungqvist *et al.* (2007) and Muniandy *et al.* (2016) to name a few. Data in this study is analysed using STATA statistical software version 14, which is appropriate for panel data regression.

Panel data, also known as cross-sectional time series data or longitudinal data, typically refers to data from a number of individuals observed over a period of time (Rabe-Hesketh

& Skrondal, 2012). The observations therefore usually include a minimum of two aspects: a time series dimension (for example years, quarters, months) represented by T ; and a cross-sectional dimension (for example countries, households, firms, individuals) represented by N (Asteriou & Hall, 2011; Hsiao, 2003). Greene (2012) claimed that researchers can use cross-sectional and time-series data to investigate issues that could not be examined by time series or cross-sectional dimensions alone. CSR disclosures are one of the issues recommended to be studied over a longer period of time, using panel data analysis (Ahmad, Hassan, & Mohammad, 2003). Therefore, this study examines around 285 companies over a six-year period.

3.8.1 Panel Data Analysis

In panel data regression, each observation is considered as heterogeneous, while single regression (also known as pooled regression) deals with each examined observation as homogeneous and does not consider heterogeneity. Pooled regression ignores the fact that units are repeatedly observed over time (Andreß, Schmidt, & Golsch, 2013). Using simple regression for panel data may lead to different results with incorrect inference (Jager, 2008). Baddeley and Barrowclough (2009) and Wooldridge (2010) explained the importance of considering the individual unique factors of panel data observations which remain constant over time and cannot be presumed as independently distributed across time.

Consequently, pooled regression applied in pure time series or cross-sectional analysis, which presume homogeneity, if examined by panel data analysis may lead to misleading

implications (Baddeley & Barrowclough, 2009). In simple pooling of panel data no modification is made for company-specific factors, which results in autocorrelation because for every year under observation the company's unique factor was left in the residual. Furthermore, pooled regressions also result in heterogeneity bias in terms of omitted variables because the company's unique characteristics are not included in the deterministic part of the model (Baddeley & Barrowclough, 2009). However, panel data regression models control for heterogeneity by using either random-effects or fixed-effects models. The key difference between these two methods is whether the unobserved effects (the error term) are linked with examined independent variables (Wooldridge, 2010).

3.8.1.1 Fixed-Effects Model

Each entity has its own characteristics, constant across time, which may influence the dependent variables. Fixed-effects models examine the association between the independent and dependent variables within an entity and so control for unobserved characteristics (the time-invariant factor) within the entity that may bias or affect the dependent variables (Allison, 2005). Underlying the use of a fixed-effects model is the assumption that the error term is linked with the independent variables; this method eliminates the influence of unobserved time-invariant features on the independent variables, with the net result that the independent variables are measurable. Thus, the fixed-effects model is unbiased as it controls for unobserved time-invariant factors, although it can be inefficient if the association that it assumes is really zero (Allison, 2005; Torres-Reyna, 2007).

3.8.1.2 Random-Effects Model

In the random effects model, the variations across companies are assumed randomly and not related to the independent variables in the model (Torres-Reyna, 2007). The main advantage of this model is its ability to examine time-constant independent variables which are dropped in the fixed-effects model. This is based on the assumption that the unobserved consequence is not associated with the independent variables regardless of variation over time (Schmidheiny & Basel, 2016). The random-effects model is also useful to explore and explain average tendencies as well as individual differences by allowing subject-specific associations to vary randomly around average relationships (Rabe-Hesketh & Skrondal, 2012).

The Hausman specification test is the generally accepted way of determining whether the appropriate model for the data is a fixed- or random-effects model. This test compares the fixed effects against the random effects under the null hypothesis that the individual impacts are uncorrelated with the other regressors in the model. However, Greene and Hensher (2010) claimed that the Hausman test was inappropriate in the ordinal regressions, as the fixed-effects maximum likelihood estimator is not consistent under both null and alternative hypotheses.

3.8.2 Advantages of Panel Data

Panel data analysis has several advantages over pure time-series and pure cross-sectional analysis, as discussed in Andreß *et al.* (2013), Baltagi (2011) and Hsiao (2003), and summarized as follows:

1. Panel data usually provides researchers with many data points, reducing collinearity amongst explanatory variables and increasing the degrees of freedom, improving the effectiveness of econometric estimation.
2. Panel data analysis allows the researcher to analyse several significant economic questions that cannot be addressed using cross-sectional or time-series datasets.
3. Panel data has the ability to control for individual heterogeneity: cross-sectional and time-series analysis do not control for heterogeneity which may result in biased estimates. It also resolves the issue of omitted variables due to no mismeasurement or observed items.
4. Less multicollinearity: time-series data is usually criticized for multicollinearity, which is less in panel data as the cross-sectional dimension usually increases the variability and adds more information to the examined variables. The variation in panel data is actually decomposed between the time-series and cross-sectional dimensions. The cross-sectional variation is usually larger, providing more information that can produce reliable estimates of parameters.
5. Panel data has the ability to construct and test more complicated behavioural models than time-series or cross-sectional data. Panel data can also examine the dynamics of adjustment.

3.8.3 Multivariate Regression Analysis

Multivariate regression analysis is the most suitable statistical method for this type of research. According to Hair, Blak, Babin and Anderson (2010), multiple regression is suitable for predicting change in a dependent variable by using the information on one or more independent variables. In addition, multiple regression provides a relative

contribution for each variable and displays which among the sets of variables is the best predictor of the outcome. In the current study, the investigations of the influence of financial restatements, institutional investors' ownership, and CSR on sell-side analysts' stock recommendations is regressed.

The dependent variable for this study is stock recommendations (buy, hold or sell) ordered as 3, 2 or 1. Therefore, this study follows previous studies in using ordinal regression analysis (i.e. ordered probit regression) to analyse sell-side analysts' stock recommendations (Arand & Kerl, 2015; Cowen *et al.*, 2006; Gu *et al.*, 2013; Ljungqvist *et al.*, 2007; Loh & Stulz, 2011). According to Kolasinski and Kothari (2008), stock recommendations are discrete and ordinal, so ordinal regression analysis is suitable here, allowing consideration of all three levels of stock recommendations (buy, hold, sell).

The ordered probit model has been widely used by researchers (Broto & Molina, 2016). This model in its modern regression form was proposed by McKelvey and Zavoina (1975) to describe the data-generating process for a random outcome that takes one of a set of discrete, categorical and ordered outcomes (Greene & Hensher, 2010). However, Afonso, Gomes and Rother (2009), in their assessment of the best estimation procedures appropriate for panel data, found the random-effects ordered probit model to be the most suitable for panel data regression models. Parrado-Martínez, Partal-Ureña and Fernández-Aguado (2016) found that the random-effects ordered probit model has a better fit than the standard ordered probit model. Kanellopoulos and Koutroulis (2016) argued that the choice of the ordered regression model is determined by the nature of the dependent variable, and the

choice of the random-effects model from the fact that in probit regressions, fixed-effects models are problematic, and the maximum likelihood estimator is not consistent due to the incidental parameter problem. Greene and Hensher (2010) claimed that the fixed-effects estimator for ordinal regression models is inconsistent even when it is the suitable estimator, because of the incidental parameters problem.

Therefore, to achieve the objectives of this study the random-effects ordered probit model (xtoprobit) is performed by applying the *xtoprobit* user command built in to STATA version 14. The following regression was proposed to examine the influence of CSR, institutional investors' ownership (transient and dedicated), and financial restatements on the dependent variable (sell-side analysts' stock recommendations).

$$\begin{aligned}
 REC_{it} = & \beta_0 + \beta_1 CSR_{it} + \beta_2 IO_TRNST_{it} + \beta_3 IO_DEDI_{it} + \beta_4 RESTATE_{it} + \\
 & \beta_5 BSIZE_{it} + \beta_6 BINDP_{it} + \beta_7 DUAL_{it} + \beta_8 MOWN_{it} + \beta_9 SIZE_{it} + \\
 & \beta_{10} LEVGE_{it} + \beta_{11} BTM_{it} + \beta_{12} ROA_{it} + \beta_{13} EP_{it} + \beta_{14} RETURN_{it} + Year \\
 & dummies + Sector dummies + \varepsilon_{it}
 \end{aligned}$$

Where:

REC = CBRS sell-side analysts' recommendations, CSR = Quality of CSR reporting, IO_TRNST = Transient institutional ownership, % of shares held by transient institutions, IO_DEDI = Dedicated institutional ownership, % of shares held by dedicated institutions, RESTATE = Financial restatements which take the value 1 if company *i* issues financial restatements, and 0 otherwise, BSIZE = Board size, number of board members, BINDP = Board independence, % of independent directors over total board members, DUAL = Duality, 1 for companies where the position of chairman and CEO are held by the same person, 0 otherwise, MOWN = Managerial ownership, % shares by CEO and executive directors, SIZE = Log of market capitalization, LEVGE = Ratio of total debt to total assets, BTM = Book to market ratio, EP = Earnings to price ratio, ROA = Company profitability, the return on assets, RETURN = The stock price at the fiscal year end for company *i* period *t* minus stock price at the fiscal year end for company *i* period *t-1*, Year dummies = Dummy variables of years, Sector Dummies = Dummy variables sectors.

3.9 Summary of the Chapter

This chapter begins with a discussion of this study's conceptual framework in section 3.2, and hypothesis development in section 3.3. Section 3.4 discusses the research design and section 3.5 covers operational definition and measurement of variables. Section 3.6 explains the population and sample selection procedures. Section 3.7 discusses data collection procedures and data sources; the sources include the CBRS website, Bursa Malaysia website, annual reports, and DataStream database. A panel dataset is used for the sample of CBRS participating companies for the period 2008 to 2013. Section 3.8 explains the data analysis techniques used to test the hypotheses. Chapter Four presents the results and discussion.



CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Chapter Overview

This chapter presents the descriptive statistical summaries of the dependent variable (sell-side analysts' stock recommendations) and other variables used in the empirical model. It also presents the findings and discussion of estimated multivariate regression. Specifically, it has the following structure. Section 4.2 presents the sample description, Section 4.3 focuses on the descriptive statistics, and Section 4.4 presents the correlation analyses. Section 4.5 describes the multivariate regression, which includes the diagnostic tests of the random-effects ordered probit model and the results of the influence of CSR, institutional investors' ownership, and financial restatements on the sell-side analysts' stock recommendations. Section 4.6 discusses the robustness and sensitivity of the models, while Section 4.7 summarizes the chapter.

4.2 Sample Description

This study employs a panel dataset from a sample of publicly traded CBRS companies listed on Bursa Malaysia, spanning the period from 2008 to 2013. The process of selecting the CBRS companies to be included in the final sample was highlighted in Chapter three. The CBRS companies chosen must have received stock recommendations between one to six months after the release of the annual reports. Consequently, a final sample of 285 companies (737 company-year observations) is available for analysis.

Table 4.1 indicates the sample companies' distribution by year and sector. There are companies from 11 sectors, but the majority are from three sectors: trading and services (26%), industrial products (24%), and consumer products (17%).

Table 4.1
Sample Distribution by Years and Sectors (n = 737)

Sector	2008	2009	2010	2011	2012	2013	Total	Percent
Trading/Services	47	32	25	25	42	18	189	25.64
Industrial Products	57	45	21	22	19	16	180	24.42
Consumer Products	32	30	19	16	16	11	124	16.82
Technology	18	9	7	10	7	4	55	7.46
Construction	16	11	7	6	9	5	54	7.33
Properties	14	9	8	8	8	4	51	6.92
Plantation	10	10	5	4	6	6	41	5.56
Finance	8	7	5	5	6	2	33	4.48
REITS	0	1	0	1	3	2	7	0.95
Hotels	1	1	0	0	0	0	2	0.27
IPC	1	0	0	0	0	0	1	0.14
Total	204	155	97	97	116	68	737	100

4.3 Descriptive Statistics

4.3.1 Stock Recommendations (REC)

Table 4.2 reports the frequency of the types of sell-side analysts' stock recommendations. Ninety five observations are sell (13%), while 297 (40%) are hold, and 345 (47% of total observations) are buy recommendations. It seems that financial analysts are more likely to issue favourable stock recommendations because the rate of sell recommendations is considerably lower than hold and buy recommendations. These results are consistent with

the study of Lai and Teo (2008), who found that in an emerging market such as Malaysia local analysts are more optimistic and issue more favourable stock recommendations.

Table 4.2
Frequency of Stock Recommendations (n = 737)

Types of Stock Recommendations (REC)	Frequency	Percent	Cumulative Percent.
Sell = 1	95	12.89	12.89
Hold = 2	297	40.30	53.19
Buy = 3	345	46.81	100
Total	737	100.00	

Table 4.3 and Figure 4.1 present the distribution of types of stock recommendations by year. The highest proportion of sell recommendations was recorded in 2008 (24% of all recommendations for that year). The year 2008 also records the lowest proportion of buy recommendations (36%). Similarly of all 95 sell recommendations observed during the sample period 2008-2013, more than half occurred in 2008. One possible reason for the highest rate of sell recommendations in 2008 is the consequences of the global economic crisis, when the Malaysian economy faced financial disturbance. In contrast, the lowest proportion of sell recommendations in a given year was recorded in 2010 (2% of all recommendations in that year), as was the highest number of buy recommendations (69%). Overall, there are more stock recommendations in the early sample period than in the later sample period. For example, in year 2008, there was a total of 204 analyst reports (28%), compared to only 68 (9%) in 2013.

Table 4.3
Types of Stock Recommendations by Year (n = 737)

REC		2008	2009	2010	2011	2012	2013	Total
Sell (1)	N	48	15	2	8	18	4	95
	% of all Sells	50.53	15.79	2.11	8.42	18.95	4.21	100
	% Yearly	23.53	9.68	2.06	8.25	15.52	5.88	12.89
Hold (2)	N	83	71	28	37	40	38	297
	% of all Holds	27.95	23.91	9.43	12.46	13.47	12.79	100
	% Yearly	40.69	45.81	28.87	38.14	34.48	55.88	40.3
Buy (3)	N	73	69	67	52	58	26	345
	% of all Buys	21.16	20	19.42	15.07	16.81	7.54	100
	% Yearly	35.78	44.52	69.07	53.61	50	38.24	46.81
Total	N	204	155	97	97	116	68	737
	% of all REC	27.68	21.03	13.16	13.16	15.74	9.23	100

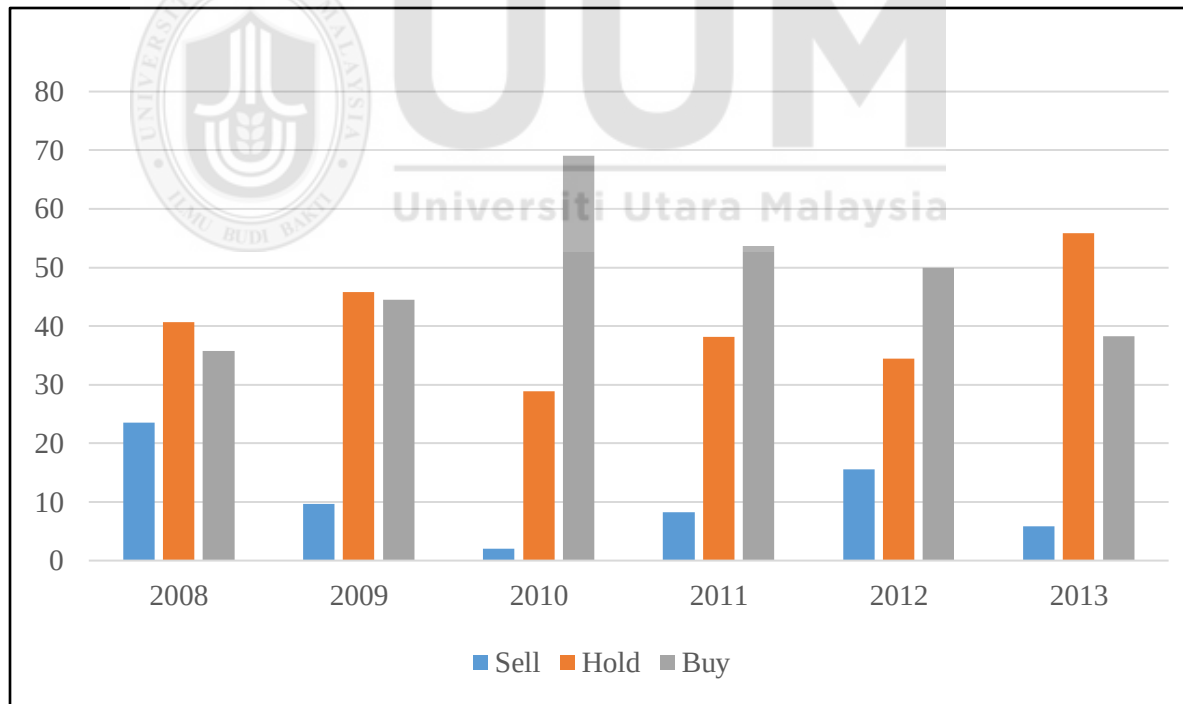


Figure 4.1
Types of Stock Recommendations by Year

4.3.2 Corporate Social Responsibility (CSR)

Table 4.4 and Figure 4.2 report the mean score of the CSR reporting quality measurement, categorized into four themes: community (COMTY), workplace (WRPLC), environment (ENVMT), and marketplace (MTPLC). Panel A displays the score descriptive statistics for each of these themes, and Panel B shows the distribution of the yearly scores by theme. From the table, the results reveal that the mean overall CSR score in the current study is 0.672. This low CSR score is generally consistent with previous Malaysian studies, such as that by Katmon *et al.* (2017) with a mean of 0.2196 (out of maximum possible score of 1), and Sadou *et al.* (2017) with a mean of 0.887 (out of maximum possible score of 3).

Of the four main themes, Malaysian listed companies tend to engage more in CSR activities related to the community. The community theme has the highest average score (0.893), followed by the workplace theme (0.738). These results are consistent with previous Malaysian studies, where companies emphasized these two human-related themes (Anas *et al.*, 2015; Bursa Malaysia, 2008; Hasnah *et al.*, 2006; Janggu *et al.*, 2007; Nik Ahmad *et al.*, 2003; Saleh *et al.*, 2010; Sundarasan *et al.*, 2016).

In addition, the results in Table 4.4 Panel B and Figure 4.2 show that the level of CSR disclosure increased over the years; the mean score in 2013 (0.797) is higher than that for 2008 (0.592). This increase implies that Malaysian companies are more aware of the importance of disclosing their CSR practices (Abdul Razak & Mustapha, 2013; Sadou *et al.*, 2017; Zainal *et al.*, 2013a).

Table 4.4
Descriptive Statistics for CSR Score (n=737)

Panel A: CSR Themes	Mean	Std. Dev.	Min	Max
Community (COMTY)	0.893	0.585	0.000	2.667
Workplace (WRPLC)	0.738	0.538	0.000	2.500
Environment (ENVMT)	0.701	0.641	0.000	2.714
Marketplace (MTPLC)	0.378	0.492	0.000	2.429
CSR	0.672	0.439	0.000	2.286

Panel B: Distribution of Score for Each CSR Theme by Year	2008	2009	2010	2011	2012	2013	Total
COMTY	0.801	0.856	0.859	0.828	1.159	0.941	0.893
WRPLC	0.661	0.709	0.674	0.669	0.915	0.928	0.738
ENVMT	0.610	0.742	0.605	0.622	0.873	0.832	0.701
MTPLC	0.317	0.333	0.334	0.327	0.559	0.489	0.378
CSR	0.592	0.655	0.612	0.606	0.868	0.797	0.672

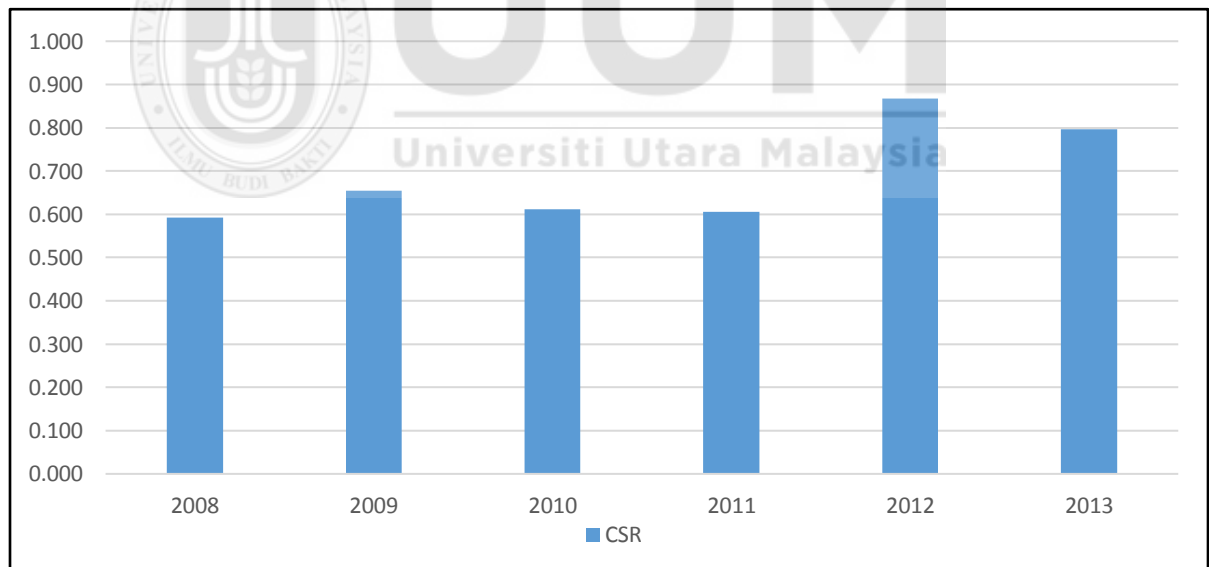


Figure 4.2
Distribution CSR Mean Score by Year

Table 4.5 presents the mean scores for the detailed CSR activities (28 items in the four themes) used to calculate the CSR quality index. The content analysis of CSR reporting is based on the Bursa Malaysia CSR Framework. In general, two community engagement

items, donation programmes and training, education and scholarship, achieved the highest scores, 1.607 and 1.387 respectively. The third highest score is for a workplace item, with employee training and education scoring 1.347. Possible reasons for the highest score from the two community engagement items, (1) donation programmes and (2) training, education and scholarship, could be that most companies want to have a positive image, such as by contributing towards schools and donating to charities for the underprivileged, elderly, poor and orphans (Sadou *et al.*, 2017).

The high score recorded for employee training and education may be explained by the importance attached to employee training by the Malaysian government (Mohd Ghazali, 2007). These results are consistent with previous Malaysian studies which found that donation programmes and training are the most common CSR practices employed by Malaysian companies (Mohd Ghazali, 2007; Sadou *et al.*, 2017). The two CSR items with the lowest score, both below 0.1, are community awards (0.037) and employee profile (0.099). The finding suggests that there is a lack of recognition of awards given to Malaysian companies that participate in community projects. One possible reason for company reluctance to disclose information on employee profiles could be to avoid revealing information that is beneficial to competitors.

Table 4.5
Mean for CSR Index (n=737)

	2008	2009	2010	2011	2012	2013	Total
Community							
Donation Programs	1.510	1.516	1.619	1.598	1.845	1.691	1.607
Training, Education and Scholarship	1.270	1.348	1.361	1.206	1.716	1.559	1.387
Community Health and Safety	0.926	1.013	0.938	0.959	1.310	1.074	1.024
Sports and Culture	0.784	0.832	0.794	0.794	1.224	0.882	0.875
Public Project	0.275	0.406	0.443	0.381	0.784	0.397	0.430
Community Awards	0.044	0.019	0.000	0.031	0.078	0.044	0.037
Overall Mean for Community	0.801	0.856	0.859	0.828	1.159	0.941	0.893
Workplace							
Employee Training and Education	1.250	1.335	1.330	1.216	1.552	1.529	1.347
Employee Health and Safety	1.093	1.116	1.082	0.979	1.241	1.441	1.137
Employee Benefit and Welfare	0.990	1.039	1.103	1.206	1.241	1.471	1.128
Employee Development	0.765	0.858	0.959	0.907	1.198	1.250	0.942
Share Option for Employee	0.578	0.535	0.546	0.567	0.733	0.632	0.593
Workplace Awards	0.294	0.477	0.155	0.247	0.698	0.485	0.389
Employee Diversity	0.240	0.232	0.165	0.186	0.448	0.441	0.273
Employee Profile	0.078	0.077	0.052	0.041	0.207	0.176	0.099
Overall Mean for Workplace	0.661	0.709	0.674	0.669	0.915	0.928	0.738
Environment							
Environmental Conservation	0.770	0.948	0.856	0.887	1.069	1.118	0.913
Waste Management	0.809	0.884	0.742	0.649	0.922	1.015	0.832
Effective usage of Energy and Resources	0.534	0.806	0.629	0.742	0.879	0.882	0.718
Reusing and Recycling	0.642	0.710	0.639	0.629	0.879	0.853	0.711
Pollution Control	0.544	0.658	0.567	0.639	0.853	0.779	0.654
Environmental Awards	0.500	0.600	0.309	0.464	0.828	0.662	0.558
Prevention and Reparation Program	0.471	0.587	0.495	0.340	0.681	0.515	0.518
Overall Mean for Environment	0.610	0.742	0.605	0.622	0.873	0.832	0.701
Marketplace							
Marketplace Awards	0.956	0.948	0.804	0.742	1.190	0.956	0.943
Customer Services	0.353	0.413	0.433	0.495	0.681	0.559	0.465
Product Quality	0.284	0.277	0.371	0.381	0.612	0.529	0.381
Stakeholder Engagement	0.186	0.232	0.258	0.258	0.509	0.500	0.294
Supplier Relation	0.152	0.213	0.165	0.155	0.319	0.338	0.210
Product Development	0.157	0.129	0.196	0.155	0.310	0.382	0.201
Product Safety	0.127	0.116	0.113	0.103	0.293	0.162	0.149
Overall Mean for Marketplace	0.317	0.333	0.334	0.327	0.559	0.489	0.378
Overall Mean for CSR	0.592	0.655	0.612	0.606	0.868	0.797	0.672

Table 4.6 reports the CSR disclosures among different sectors. Based on this study sample, the results reveal that the highest CSR disclosure is for the hotels sector with a mean score of 1.393 (Shangri-La Hotels (Malaysia) Berhad), followed finance sector with a mean of 0.883, then trading and services (0.825), plantations (0.742) and consumer products (0.687). The sectors with below-average scores are construction (0.655), properties (0.579), industrial products (0.557), REITS (0.495), technology (0.413), and IPC (0.393). From the Table, it shows that there are differences in the CSR disclosure levels among the different sectors. The finding that the finance sector has one of the highest levels of CSR disclosure is consistent with other studies (Abd-Mutalib *et al.*, 2014b; Abdul Rashid & Ibrahim, 2002; Hamid, 2004; Hasnah *et al.*, 2006) which show that companies in this sector may be more positive towards CSR reporting. However, the results may not represent the CSR practices for the population due to small sample representations in certain industries such as hotels, REITS and IPC.

Table 4.6
CSR Disclosures by Sector

Sector	N	Mean	Median	Min	Max
Hotels	2	1.393	1.393	1.286	1.500
Finance	33	0.883	0.893	0.143	2.214
Trading/Services	189	0.825	0.714	0.000	2.286
Plantation	41	0.742	0.679	0.286	1.750
Consumer Product	124	0.687	0.643	0.000	1.929
Construction	54	0.655	0.589	0.000	1.679
Properties	51	0.579	0.464	0.071	2.036
Industrial Product	180	0.557	0.536	0.000	1.679
REITs	7	0.495	0.357	0.214	1.429
Technology	55	0.413	0.286	0.000	1.179
IPC	1	0.393	0.393	0.393	0.393
Total	737	0.672	0.607	0.000	2.286

Table 4.7 presents the cross-tabulation of stock recommendations and the CSR scores. It shows that companies with adverse sell recommendations have lower scores than those with favourable stock recommendations (either hold or buy). The average CSR score for companies with sell recommendations is 0.542, which is lower than the average CSR scores for companies with hold or buy (0.687 and 0.695, respectively). The Anova test of mean differences in CSR score between the three stock recommendations groups gives F-stat = 4.876 which is highly significant. The results are consistent with the study's prediction that companies with more CSR disclosures are more likely to gain favourable stock recommendations.

Table 4.7
Comparison of CSR Disclosures by Type of Stock Recommendations (n = 737)

Type of Stock Recommendations (REC)	Mean CSR Score	Std. Dev.	Frequency	F-Test
Sell = 1	0.542	0.402	95	4.876 (p = 0.008)
Hold = 2	0.687	0.450	297	
Buy = 3	0.695	0.434	345	
Overall	0.672	0.439	737	

4.3.3 Types of Institutional Investors

Table 4.8 and Figure 4.3 report the share ownerships held by transient and dedicated institutional investors. The transient institutional investors (IO_TRNST) are further subdivided into privately managed mutual funds (PRMF), banks (BANK) and insurance companies (INS), whereas dedicated institutional investors (IO_DEDI) into government-managed pension funds (GPF), government-managed unit trusts (GUT), government

pilgrimage funds (GPL) and other GLICs such as the sovereign fund KHAZANAH, Minister of Finance Inc., Petronas, Felda, Valuecap and SOCSO. Overall, the average share ownership held by dedicated institutional investors is 9.3%, and that by transient institutional investors slightly lower at 7.4%. These results are consistent with previous Malaysian studies that found that the level of dedicated ownership is higher than the level of transient ownership (Abd-Mutalib *et al.*, 2015; Bamahros & Wan-Hussin, 2015).

Among the different types of institutional investor, banks have the highest percentage of share ownership in the sample companies with a mean of 3.6%, followed by government-managed pension funds with a mean of 3.4%. Privately managed mutual funds and government-managed unit trusts have average share ownerships of 2.6% and 2.2% respectively. Government-managed pilgrimage funds and insurance companies have 1.6% and 1.3% ownership respectively. The other GLICs not categorized under the government-managed pension funds, government-managed pilgrimage funds and government-managed unit trusts collectively have an average of 2.1% share ownership. However, 120 observations in the study sample (16%) do not have institutional investors ownership based on the information provided in the top 30 shareholdings in the annual reports. The company with the highest ownership held by dedicated institutional investors in our sample firm is Petronas Gas Berhad (87%); the major dedicated institutional investors are Petronas (60%), GPF (18%) and GUT (8%), and the company with the highest ownership held by transient institutional investors is Allianz Malaysia Berhad (83%); the major transient institutional investors are insurance companies (75%) and private mutual funds (8%).

Table 4.8

Institutional Investors' Types and Shareholdings (n=737)

Panel A: By Types of Institutional Investors

Institutional Ownership Types	Mean Ownership (%)	Description	Mean Ownership (%)
Transient (IO_TRNST)	7.424	Banks (BANK)	3.587
		Private-Managed Mutual Fund (PRMF)	2.561
		Insurance Companies (INS)	1.276
Dedicated (IO_DEDI)	9.307	Government-Managed Pension Fund (GPF)	3.369
		Government-Managed Unit Trust (GUT)	2.232
		Other Government-Linked Investment Companies (GLICs)	2.127
		Government-Managed Pilgrimage Fund (GPL)	1.579

Panel B: By Year

	2008	2009	2010	2011	2012	2013	Total
IO_TRNST	6.941	7.530	6.525	6.720	8.753	8.652	7.424
IO_DEDI	9.586	10.169	6.377	5.400	14.747	6.981	9.307

Year	IO_TRNST (%)	IO_DEDI (%)
2008	6.941	9.586
2009	7.530	10.169
2010	6.525	6.377
2011	6.720	5.400
2012	8.753	14.747
2013	8.652	6.981

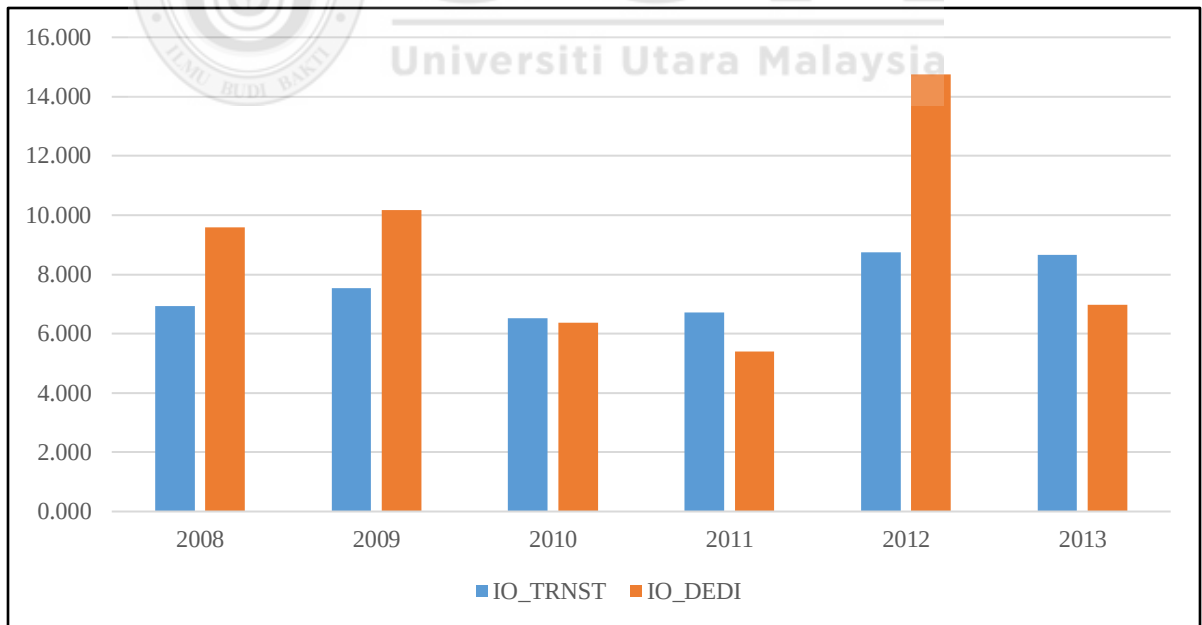


Figure 4.3

Distribution of Average Share Ownership (%) by Types of Institutional Investor and Year

The results presented in Table 4.8 Panel B and Figure 4.3 illustrate the yearly mean of IO_TRNST and IO_DEDI over the study period. The table shows slight fluctuations in IO_TRNST over the years with highest ownership in 2012 (8.753%) and lowest in 2010 (6.525%). Regarding IO_DEDI, the shareholdings fluctuate more widely with the highest ownership in 2012 (14.747%) and the lowest in 2011 (5.4%). The highest ownership by dedicated institutional investors in 2012, may be due to the growing importance placed upon them to participate in the ownership and monitoring of Malaysian PLCs, as advocated in the CG Blueprint (2011, p. 13) *“institutional investors are in a unique position to exercise influence over companies and to hold them accountable for good governance. Given the typically significant stake they hold, they have the ability to demand meetings with the senior management of companies, challenge them on issues of concern, discuss strategies for achieving the companies’ goals and objectives and be the leading voice of shareholders in demanding corrective action when wrongdoing occurs”*.

Table 4.9 displays the distribution of stock recommendations by types of institutional investor. Focusing on transient institutional investors, the results reveal that favourable recommendations increase with the level of ownership by transient investors, i.e. companies with buy recommendations have higher ownership by transient institutional investors (8.6%) than companies with sell recommendations (5.2%). Similar pattern is observed for dedicated institutional investors. Companies receiving hold and buy recommendations have a higher level of ownership by dedicated institutional investors (10.9%, 8.3%) than companies with sell recommendations (7.7%).

Table 4.9

Comparison of % Ownership of Institutional Investors by Stock Recommendation (n=737)

REC	Mean Ownership (%)		Std. Dev. (%)		Frequency
	Transient	Dedicated	Transient	Dedicated	
Sell	5.188	7.783	7.964	17.983	95
Hold	6.765	10.946	9.343	20.546	297
Buy	8.607	8.316	11.678	14.761	345
Total	7.424	9.307	10.413	17.741	737

4.3.4 Financial Restatements

Table 4.10 and Figure 4.4 present financial restatements during the study period. The total is 169 (22.93% of total observations) restatements, with more occurring in the earlier sample period than the later period. For example, there were 61 restatements (36.09%) in 2008, as compared to 12 (7.1%) in 2013. One possible reason for the sharp increment in restatements in the earlier period is the side effect of the 2008-2009 global economic crisis. Even though the crisis badly hit the US and several developed countries, the Malaysian economy also experienced the financial turmoil (Qasem, Aripin, & Wan-Hussin, 2017).

Table 4.10

Distribution of Financial Restatements by Year (n=737)

Financial Restatements (Restate)		2008	2009	2010	2011	2012	2013	Total
Restatements	<i>N</i>	61	31	22	21	22	12	169
	<i>% of all Restate</i>	36.09	18.34	13.02	12.43	13.02	7.10	100
	<i>% Yearly</i>	29.90	20	22.68	21.65	18.97	17.65	22.93
Non-Restatements	<i>N</i>	143	124	75	76	94	56	568
	<i>% of N-Restate</i>	25.18	21.83	13.2	13.38	16.55	9.86	100
	<i>% Yearly</i>	70.10	80	77.32	78.35	81.03	82.35	77.07
Total	<i>N</i>	204	155	97	97	116	68	737
	<i>% of all Sample</i>	27.68	21.03	13.16	13.16	15.74	9.23	100

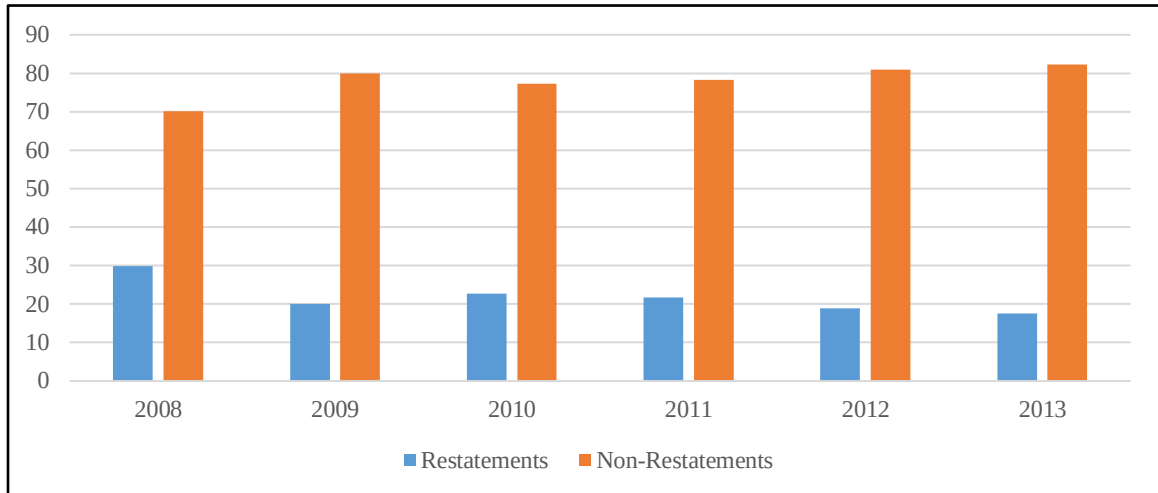


Figure 4.4
Distribution of Financial Restatements by Year

Table 4.11 shows the distribution of reasons for financial restatements based on a review of annual reports. Following previous studies such as those of Abdul Wahab *et al.* (2014) and Paterson and Valencia (2011), financial restatements are categorized as accounting rule application failures (Restate_AR), accounting irregularities (Restate_I) or misrepresentation (Restate_Mis). As shown in Table 4.11, financial restatements occurring from Restate_AR, represent 32.54% (55) of total financial restatements across the sample period, while those from Restate_I account for 13.02% (22) and those due to Restate_Mis for 54.44% (92). The results show that the largest group of restatements occurred due to misrepresentations and in the earlier period 2008 and 2009; these results are consistent with the results of previous Malaysian studies (Abdul Wahab *et al.*, 2014; Wan Mohammad *et al.*, 2018). Examples of the three types of restatement are provided in Appendix B.

Table 4.11

Distribution the Reasons of Financial Restatements (2008–2013, n = 169).

Types of Restatements		2008	2009	2010	2011	2012	2013	Total
Accounting rule	<i>N</i>	25	9	6	7	4	4	55
application failures	<i>% Yearly</i>	45.45	16.36	10.91	12.73	7.27	7.27	100
(Restate_AR)	<i>% Reasons</i>	40.98	29.03	27.27	33.33	18.18	33.33	32.54
Irregularities	<i>N</i>	4	4	4	3	4	3	22
(Restate_I)	<i>% Yearly</i>	18.18	18.18	18.18	13.64	18.18	13.64	100
	<i>% Reasons</i>	6.56	12.9	18.18	14.29	18.18	25	13.02
Misrepresentation	<i>N</i>	32	18	12	11	14	5	92
(Restate_Mis)	<i>% Yearly</i>	34.78	19.57	13.04	11.96	15.22	5.43	100
	<i>% Reasons</i>	52.46	58.06	54.55	52.38	63.64	41.67	54.44
Total	<i>N</i>	61	31	22	21	22	12	169
	<i>% Total</i>	36.09	18.34	13.02	12.43	13.02	7.1	100

Table 4.12 displays the distribution of sell-side analysts' stock recommendations and financial restatements. Most of the restated companies have buy and hold recommendations, 50% and almost 38% respectively. Only 19 out of the 169 restated companies (11%) have sell recommendations. The preliminary results are inconsistent with the prediction that restated companies will gain adverse stock recommendations, sell.

Table 4.12

Restated Companies and Stock Recommendations (n=169)

REC	Financial Restatements	
	Frequency	Percentage
Sell = 1	19	11.24
Hold = 2	65	38.46
Buy = 3	85	50.30
Total	169	100.00

Table 4.13 reports the descriptive statistics for all the variables in this study and Table 4.14 shows the mean of each variable by year. These variables are the dependent variable, sell-side analysts' stock recommendations; three independent variables (CSR, types of institutional investor and financial restatements); and control variables (board size, board independence, duality, managerial ownership, company size, leverage, book to market ratio, earnings to price ratio, ROA, and return). The statistical results show that the mean of stock recommendations (REC) is 2.339, ranging between 1 and 3. The yearly mean of REC shows stable distribution over the study period with the highest mean score in 2010 (2.670) as depicted in Table 4.14. The trend indicates that most of the companies are given favourable recommendations by sell-side analysts, i.e. either hold or buy recommendations (as discussed in Section 4.3.1).

In terms of CSR disclosure, the maximum disclosure level is 2.286 and the mean 0.672. There are 11 company-year observations with no CSR disclosures in this study sample. As shown in Table 4.14, there are more CSR disclosures in the later sample period than in the earlier period. As explained earlier in section 4.3.2, this increase implies that Malaysian companies are more aware of the importance of disclosing their CSR practices (Abdul Razak & Mustapha, 2013; Sadou *et al.*, 2017; Zainal *et al.*, 2013a). The average shareholdings by IO_TRNST and IO_DEDI are 7.424% and 9.307% respectively. This result is consistent with the findings of previous Malaysian studies which report a mean score of GLICs between 8% and 9.70% (Abdul Jalil & Abdul Rahman, 2010; Abdul Wahab *et al.*, 2007; Ismail & Rahman, 2011; Tee *et al.*, 2017).

Table 4.13
Descriptive Statistics for all Variables (n = 737)

Variables	Mean	Median	Std. Dev.	Min	Max
REC	2.339	2.000	0.695	1.000	3.000
CSR	0.672	0.607	0.439	0.000	2.286
IO_TRNST (%)	7.424	4.170	10.413	0.000	83.390
IO_DEDI (%)	9.307	1.080	17.741	0.000	87.380
RESTATE	0.229	0.000	0.421	0.000	1.000
BSIZE	7.878	8.000	1.888	4.000	14.000
BINDP	0.449	0.429	0.120	0.250	1.000
DUAL	0.164	0.000	0.371	0.000	1.000
MOWN (%)	9.425	2.620	14.691	0.000	71.150
SIZE (RM 000)	2,183,394	284,281	7,119,392	8,690	77,600,000
LEVGE (%)	19.156	17.500	15.397	0.000	64.420
BTM	1.235	1.030	0.844	0.035	7.373
EP	0.100	0.097	0.162	-2.320	1.212
ROA (%)	7.086	6.710	7.113	-30.280	38.630
RETURN	0.075	0.000	0.557	-0.937	4.900

REC = CBRS sell-side analysts' recommendations; CSR = Quality of CSR reporting; IO_TRNST = Percentage ownership of transient institutional investors; IO_DEDI = Percentage ownership of dedicated institutional investors; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

Statistics on financial restatements (RESTATE) indicate that the average is 0.229 on a scale from 0 to 1, reflecting that around 169 out of 737 observations had restated their annual reports during the six years of the study (as discussed in section 4.3.4). With regards to the control variables, Table 4.13 shows that all sample companies have boards of directors with their size (BSIZE) ranging from 4 to 14 directors. This result is similar to previous Malaysian studies that found the board size range was from 3 to 16 (Abdul Razak & Mustapha, 2013; Alazzani *et al.*, 2017; Yatim *et al.*, 2006). The average board size of the sample companies is 7.878, slightly higher than in the studies of Abdul Razak and

Mustapha (2013), Wan-Hussin (2009) and Yatim *et al.* (2006) with the mean of 7.5. The mean score of board independence (BINDP) is 44% with a maximum percentage of nearly 100% and the minimum 25%. This result is consistent with previous Malaysian studies which found the mean score of BINDP to be around 45% (Al-Dhamari & Ku Ismail, 2013, 2014; Al-Rassas & Kamardin, 2015; Katmon *et al.*, 2017; Sadou *et al.*, 2017).

Table 4.14
Means for all Variables (n=737)

Variables	2008	2009	2010	2011	2012	2013	Average
REC	2.123	2.348	2.670	2.454	2.345	2.324	2.339
CSR	0.592	0.655	0.612	0.606	0.868	0.797	0.672
IO_TRNST (%)	6.941	7.530	6.525	6.720	8.753	8.652	7.424
IO_DEDI (%)	9.586	10.169	6.377	5.400	14.747	6.981	9.307
RESTATE	0.299	0.200	0.227	0.216	0.190	0.176	0.229
BSIZE	7.873	7.929	7.722	7.629	8.078	8.015	7.878
BINDP	0.446	0.440	0.445	0.447	0.468	0.452	0.449
DUAL	0.137	0.129	0.216	0.206	0.164	0.191	0.164
MOWN (%)	10.135	8.194	11.071	9.460	7.845	10.395	9.425
SIZE (RM 000)	1013096	1405522	1640110	1100955	6304324	2756600	2183394
LEVGE (%)	20.710	20.303	17.116	17.023	18.415	19.098	19.156
BTM	1.438	1.243	1.133	1.273	1.036	1.036	1.235
EP	0.102	0.083	0.111	0.119	0.098	0.095	0.100
ROA (%)	6.743	6.306	8.304	7.205	7.309	7.608	7.086
RETURN	-0.233	0.292	0.299	0.034	0.048	0.293	0.075

The mean score for duality (DUAL) is 0.164, meaning that around 120 out of the 737 observations have board duality with the CEO and Chairman functions are held by the same person. This average is similar to previous Malaysian studies such as Abd-Mutalib *et al.* (2015), Abdul Razak and Mustapha (2013) and Zi *et al.* (2014), between 17% and 18%.

The average of direct managerial ownership (MOWN) is 9.425% with a maximum of 71.150% and minimum 0. This result is similar to those of previous Malaysian studies such as Abdul Razak and Mustapha (2013), who found a mean score of 9%.

Regarding company size, which is proxied by market capitalization (SIZE), there is considerable variation, ranging from RM8.7 million to RM77.6 billion with a mean of RM2.2 billion. This mean is consistent with the result of How *et al.* (2014), RM2.4 billion. In addition, the sample companies have an average of debt to assets ratio of 19%, similar to other Malaysian studies such as Al-Dhamari *et al.* (2017), Alazzani *et al.* (2017) and Al-Qadasi and Abidin (2018) which found that the mean of LEVGE was between 19% and 21%. The book to market ratio (BTM) mean is 1.235, ranging from 0.035 to 7.373, and the earnings to price ratio (EP) mean is 0.100, ranging from -2.320 to 1.212. The results also show that the sample companies are profitable with an average ROA of 7.086%. Finally, the mean of market return is 0.075 ranging from -0.937 to 4.900.

4.4 Bivariate Correlations

This study uses Pearson correlation to test for significant relationships between CSR, transient and dedicated institutional investors, financial restatements, control variables, and sell-side analysts' stock recommendations; the results are reported in Table 4.15. They document a positive and significant correlation between REC and CSR, which implies that sell-side analysts are likely to issue more favourable stock recommendations for companies with high CSR disclosures. There is also a positive and significant correlation between REC and levels of shareholding by institutional investors IO_TRNST and IO_DEDI,

suggesting that higher ownership levels by IO_TRNST and IO_DEDI gain more favourable stock recommendations.

However, the study finds no relationship between REC and RESTATE. With regards to control variables, there is a positive and significant correlation between REC and DUAL, and between REC and SIZE, indicating that analysts issue optimistic recommendations for companies with board duality and large size. There is a negative and significant relationship between REC and LEVGE, which means that analysts issue less favourable stock recommendations for the companies with high leverage. There are positive and significant correlations between REC and EP, suggesting that companies with higher earnings to price ratio gain more favourable stock recommendations; between REC and ROA, suggesting that ROA influences analysts' stock recommendations; and between REC and RETURN, suggesting that higher return companies receive more optimistic stock recommendations.

There is a significant correlation between CSR and levels of shareholdings by institutional investors, although the correlation between CSR and IO_DEDI (0.328) is higher than that between CSR and IO_TRNST (0.254). These results are consistent with previous Malaysian studies which found a positive and significant relationship between CSR disclosure and institutional investors (Saleh *et al.*, 2010). The results also show a positive and significant relationship between CSR and SIZE, again consistent with the evidence of previous studies, that large companies tend to disclose more CSR information than small companies (Ahmed Haji, 2013; Ioannou & Serafeim, 2015; Sadou *et al.*, 2017). However,

it should be pointed out that a correlation analysis does not consider the joint effect of all variables on REC. Therefore, regression analysis is a better method to identify the determinants of REC, controlling for other company-related variables. This is covered in the following section on multivariate regression analysis.



Table 4.15
Pearson Correlations Matrix (n=737)

	REC	CSR	IO_TRNST	IO_DEDI	RESTATE	BSIZE	BINDP	DUAL	MOWN	SIZE	LEVGE	BTM	EP	ROA	RETURN
REC	1.000														
CSR	0.090***	1.000													
IO_TRNST	0.142***	0.254***	1.000												
IO_DEDI	0.066**	0.328***	0.326**	1.000											
RESTATE	0.040	0.015	0.031	0.006	1.000										
BSIZE	0.002	0.257***	0.140***	0.177***	0.080**	1.000									
BINDP	-0.002	0.106***	0.035	0.084**	-0.018	-0.312***	1.000								
DUAL	0.079**	-0.093***	-0.071**	-0.164***	0.020	-0.148***	-0.019	1.000							
MOWN	0.010	-0.188***	-0.210***	-0.213***	-0.008	-0.051*	-0.152***	0.105***	1.000						
SIZE	0.088***	0.549***	0.561***	0.598***	-0.009	0.259***	0.094***	-0.168***	-0.324***	1.000					
LEVGE	-0.064**	0.063***	0.089***	0.112***	0.020	0.088***	-0.044	-0.075**	-0.031	.127***	1.000				
BTM	-0.029	-0.225***	-0.286***	-0.262***	-0.031	-0.090***	0.016	0.089***	-0.007	-.454***	0.123***	1.000			
EP	0.245***	0.021	0.011	-0.039	0.032	-0.007	-0.012	-0.006	-0.010	-0.022	-0.089***	0.182***	1.000		
ROA	0.249***	0.058*	0.102***	0.029	-0.001	0.000	-0.085**	-0.001	-0.001	.108***	-0.248***	-0.223***	0.524***	1.000	
RETURN	0.191***	0.037	0.071**	-0.026	-0.032	0.032	-0.054*	0.034	-0.003	.172***	-0.034	-0.276***	0.052*	0.194***	1.000

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' recommendations; CSR = Quality of CSR reporting; IO_TRNST = Percentage ownership of transient institutional investors with ln transformation; IO_DEDI = Percentage ownership of dedicated institutional investors with ln transformation; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

4.5 Random-Effects Ordered Probit Regression

This study uses the unbalanced panel data methodology to examine the influence of the independent variables on sell-side analysts' stock recommendations, as panel data regression models control for the heterogeneity effect in panel data by using either random-effects or fixed-effects models. However, Bell and Jones (2015) claimed that random effects provide everything that fixed effects promise and more; they also argued that fixed-effects models show more problems in terms of unbalanced panel data. This study uses the random-effects ordered probit regression to test the study's main hypotheses, for the following reasons.

First, the Hausman test is commonly used to decide whether the fixed- or random-effects method is suitable to test the data. In ordinal regression, however, this test is unavailable because the fixed effects maximum likelihood estimator is not consistent under either alternative or null hypotheses (Greene & Hensher, 2010). Second, due to incidental parameters problems, the fixed-effects estimator for ordered response models would result in biased and inconsistent estimates (Baghai, Servaes, & Tamayo, 2014; Bassett, Lee, & Spiller, 2015; Bierer & Schmidt, 2017; Chen, Li, Shapiro, & Zhang, 2014; Greene, 2004; Greene & Hensher, 2010; Kanellopoulos & Koutroulis, 2016). Third, previous studies have found that in panel data analysis, random-effects ordered probit regressions provide more appropriate estimation and have better fit over the normal ordered probit regressions (Afonso *et al.*, 2009; Afonso, Gomes, & Rother, 2011; Parrado-Martínez *et al.*, 2016). Fourth, as the aim of this study is to identify the implications for a larger population, random-effects models are more suitable to achieve this objective (Beck, 2001; Jager, 2008). Fifth, this study uses an industry dummy variable to control for industry type, which

is a time-invariant variable and cannot be estimated with a fixed-effects model. He and Sommer (2010) stated that “*When one or several independent variables are time invariant or rarely change over time, standard fixed-effects models are inappropriate*” (p. 277).

Consequently, after considering all these factors, this study adopts the random-effects ordered probit regression model, which is available in STATA software version 14. However, to control for the time dimension of the panel data, a year dummy is included in the main regression, as employed in previous studies (Alsakka & Ap Gwilym, 2010; Broto & Molina, 2016; Kanellopoulos & Koutroulis, 2016; Liu & Sun, 2016; Parrado-Martínez *et al.*, 2016), each year was given a value of 1 if it belongs to that year, and 0 otherwise. This study also control for sector, because sell-side analysts consider the sector perspective when they evaluate companies and provide stock recommendations (Boni & Womack, 2006; Jegadeesh *et al.*, 2004; Moyer, Chatfield, & Sisneros, 1989). Sector is measured as a dummy variable, where each sector was given a value of 1 if it belongs to its sector, and 0 otherwise.

4.5.1 Diagnostic Tests

Regression diagnostic tests must be performed to avoid misleading results and to verify the data's compatibility for the multiple regression analysis before the model is accepted. This section explains several procedures to assess the compatibility of the data, starting with the diagnostic tests on data distribution: normality, extreme outliers and multicollinearity. Then, diagnostic tests related to panel data and ordered probit regression are presented: heteroscedasticity, autocorrelation, large sample and parallel regression.

4.5.1.1 Normality

Normality is an essential assumption in multivariate analysis, indicating the shape of data distribution for an individual quantitative data variable and its normal distribution (Hair *et al.*, 2010). Multivariate normality enhances the power of the model and ensures accurate statistical results (Greene, 2012; Tabachnick & Fidell, 2007). There are several methods to check the normality of a set of data, graphical and statistical. The graphical method uses histograms, boxplots or normal probability plot, although statistical methods may provide more objective results by using measures for skewness and kurtosis (Coakes, 2005; Field, 2009).

For the purpose of this study, skewness and kurtosis values have been checked for each variable. Skewness indicates the balance of the data distribution compared to the normal distribution, while kurtosis indicates the peakness or flatness of the data distribution compared to the normal distribution (Hair *et al.*, 2010). Kline (2011) suggested that univariate normality skewness values should not exceed ± 3.00 and kurtosis should be less than ± 10.00 . However, to deal with non-normal data, several transformation methods have been suggested to improve the data normality distribution, such as such as log, square root, arcsine, inverse, and Box-Cox transformations (Field, 2009; Hair *et al.*, 2010; Kline, 2011; Osborne, 2002, 2010).

In this study, the variables IO_TRNST, IO_DEDI, EP, ROA and RETURN are not normally distributed where the skewness and kurtosis more than ± 3.00 or ± 10.00 . Thus, to find the best transformation methods, the ladder and gladder command in STATA was

executed. The variables IO_TRNST and IO_DEDI are transformed using natural logarithm transformation, as this significantly narrows the range of the data and is widely used in previous studies (Barber *et al.*, 2006; Haniffa & Hudaib, 2006; Liu & Natarajan, 2012; Wooldridge, 2016; Young & Peng, 2013). The results of the ladder and gladder command suggest keeping EP, ROA and RETURN without transformation as their current distribution cannot be improved. For variables IO_TRNST and IO_DEDI, this study uses $\log 1 +$ corresponding variable to account for zero values, as proposed by previous studies (Bilinski *et al.*, 2013; Chaganti & Damanpour, 1991; Cready & Hurtt, 2002; Field, 2009; Kang, Lee, & Huh, 2010).

4.5.1.2 Outliers

Outliers are observations that have a significant difference from the main trend of the data (Field, 2009; Hair *et al.*, 2010). Leverage is the most common measure applied to different of regression models for eliminating influential outliers, particularly for large sample sizes such as DFFITS (Harrell, 2015; Montgomery, Peck, & Vining, 2012). DFFITS is a measurement of the influential cases. It is the difference between original predicted values and the adjusted predicted value for a particular case (Field, 2009). In the current study, outliers are checked using DFFITS, introduced by Belsley, Kuh, and Welsch (2004). DFFITS is obtained by using *dffits* syntax in STATA (Baum, 2006). In this regard, 25 observations were detected as extreme outliers and accordingly have been removed from the multivariate testing. Upon deletion of the outliers, the final sample of this study is 285 companies (737 company-year observations) for the study period.

4.5.1.3 Multicollinearity

Multicollinearity exists when one or more regressors are highly correlated with each other, which can badly influence the regression results (Hair *et al.*, 2010). According to Hair *et al.* (2010) and Tabachnick and Fidell (2007), the problem of multicollinearity happens if the correlation between the explanatory variables exceeds 0.9. Pearson and Spearman Correlations are the most common ways to check for multicollinearity. Table 4.14 displays the Pearson correlation matrix where the highest correlation between variables is between IO_DEDI and SIZE at 0.598. The next highest value is the correlation between IO_TRNST and SIZE at 0.561. Table 4.14 shows no evidence of multicollinearity in this study because the highest values for correlation coefficients are less than 0.9.

However, Hamilton (2012) claimed that the correlation matrix has limited value in detecting multicollinearity. He suggested conducting the variance inflation factor (VIF) test to make sure of no collinearity between explanatory variables. VIF is an indicator of the influence that other independent variables may have on the standard error of a regression coefficient (Hair *et al.*, 2010). VIF higher than 10 suggests collinearity problems (Kline, 2011). The results presented in Table 4.16 do not show any collinearity problems between variables of the study, as the VIF scores for all independent and control variables are lower than 5, and far below the cut-off value of 10, as suggested by Hair *et al.* (2010) and Kline (2011).

Table 4.16
Results of the VIF Test

Variable	VIF	1/VIF
SIZE	3.58	0.279
ROA	1.88	0.531
BTM	1.86	0.539
IO_DEDI	1.72	0.583
EP	1.65	0.607
IO_TRNST	1.61	0.622
CSR	1.57	0.637
RETURN	1.35	0.743
BSIZE	1.33	0.752
LEVGE	1.31	0.765
BINDP	1.26	0.796
MOWN	1.22	0.819
DUAL	1.10	0.905
RESTATE	1.05	0.953
Mean VIF	1.606	

4.5.1.4 Heteroscedasticity

According to Hair *et al.* (2010), data are heteroscedastic if the error terms have increasing or modulating variance. In panel data, even if the variance of errors is constant between cross-sectional observations, the variance may differ within observations through time, which raises the issue of group-wise heteroscedasticity (Baum, 2001). Baltagi (2011) stated that ignoring the existence of heteroscedasticity may lead to inefficient coefficient estimations and biased standard errors. This study uses the Breusch-Pagan/Cook-Weisberg Test for heteroscedasticity, which is widely used in previous studies (Oh, Cha, & Chang, 2015; Roy & Sarkar, 2016; Wahba, 2008).

Table 4.17 shows the result of the Breusch-Pagan/Cook-Weisberg Test, confirming the existence of heteroscedasticity since the p-value is less than the 5% significance level and needs to be corrected. Consequently, to control for heteroscedasticity that may violate regression assumptions, all regressions performed in this study use Huber and White robust standard error, which is widely used in previous studies (Brown, Fazzari, & Petersen, 2009; Ioannou & Serafeim, 2015; Kolasinski & Kothari, 2008).

Table 4.17
Breusch-Pagan/Cook-Weisberg Test for Heteroscedasticity

	Test Results
$\text{Chi}^2(29) =$	50.39
Prob > Chi2 =	0.0082

4.5.1.5 Autocorrelation

The autocorrelation problem (first-order correlation) makes panel data models' results biased and less efficient, and researchers should check their models to ensure accurate results and appropriate conclusions. Several tests for autocorrelation in panel data have been suggested by econometricians. For this study, the Wooldridge test is applied to test for the presence of first-order correlation in the panel data, as used in previous studies (Andres, 2008; Bloom, Canning, Mansfield, & Moore, 2007; Roy & Sarkar, 2016). The results in Table 4.18 show no significant autocorrelation exists since the F-statistics results are 0.337 (p-value = 0.563).

Table 4.18
Wooldridge Test for Autocorrelation in Panel Data

	Test Results
F (1, 82) =	0.337
Prob > F =	0.563

4.5.1.6 Large Samples

In ordered probit regressions, a large sample size is required, particularly when the estimated model has a large number of explanatory variables (Long & Freese, 2006). Long (1997) suggested that at least 500 observations are required for these types of regression, and a minimum of 10 observations for each explanatory variable is recommended. In this study, this assumption of a large sample size has been met as the number of observations in the study's main model is 737.

4.5.1.7 Parallel Regression

The parallel regression assumption, also called the proportional odds assumption, is an important concept in ordinal regressions. It focuses on the cumulative consequence of all the independent variables on the outcome variable. According to this assumption, the movements from one set of outcome categories to the next are the same and are not influenced by changes in the slopes of the independent variables (Long, 1997; Quddus, Wang, & Ison, 2010). Intrinsically, the coefficients for the explanatory variables are the same and change only in the intercept. The outcome categories may start at different intercepts but they all show the same slope and are therefore parallel (Reddy & Alemayehu, 2015).

Long and Freese (2014) referred to the *gologit2* test of parallel regression, introduced by Williams (2006). This study uses the user-written command “*gologit2*, syntax” in STATA (Long & Freese, 2014). The result in Table 4.19 shows that the parallel regression assumption is not violated, as the p-value of the test is not significant.

Table 4.19
Test for the Parallel Regression Assumption

	Test Results
LR Chi ² =	39.00
Prob > chi ² =	0.102



4.5.2 The Results of Random-Effects Ordered Probit Regression

Table 4.20 reports the results of the influence of the independent variables (CSR, institutional investors' ownership and financial restatements) on sell-side analysts' stock recommendations. As mentioned in Chapter 3, this study uses ordered probit regression to test the study's main hypotheses. Ordinal regressions are appropriate because they take into account the rank ordering of the dependent variable. The study's dependent variable is ordered (1, 2, 3), representing three different levels of sell-side analysts' stock recommendations from the least to the most favourable (sell, hold, buy).

The panel regression model is estimated by using random-effects ordered probit regression with a Huber and White robust standard error in order to control for heteroscedasticity. The analysis is based on the 285 Malaysian PLCs (737 company-year observations) for the 6-year period, 2008 to 2013. Table 4.20 shows the regression results for the study's main model¹⁴. Overall, the model is significant (p-value < 0.001; Wald Chi-square = 232.80; log Pseudolikelihood = -611.216). The highly significant results indicate that all independent variables have a significant effect on sell-side analysts' stock recommendations. CSR, IO_TRNST and IO_DEDI have a positive and high significant influence on REC. However, RESTATE has a positive and weak influence on REC.

¹⁴ Refer to Appendix C for full results with times and sectors dummies.

$$REC_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 IO_TRNST_{it} + \beta_3 IO_DEDI_{it} + \beta_4 RESTATE_{it} + \beta_5 BSIZE_{it} + \beta_6 BINDP_{it} + \beta_7 DUAL_{it} + \beta_8 MOWN_{it} + \beta_9 SIZE_{it} + \beta_{10} LEVGE_{it} + \beta_{11} BTM_{it} + \beta_{12} ROA_{it} + \beta_{13} EP_{it} + \beta_{14} RETURN_{it} + \text{Year dummies} + \text{Sector dummies} + \varepsilon_{it}$$

Table 4.20
Random-Effects Ordered Probit Regression Results

Independent Variables	Predicted Signs	Coef.	z.	p-value
CSR	+	0.362	2.02	0.044**
IO_TRNST	+	0.191	2.99	0.003***
IO_DEDI	+	0.119	2.16	0.031**
RESTATE	-	0.238	1.89	0.058*
BSIZE	?	-0.050	-1.33	0.182
BINDP	+	0.201	0.35	0.725
DUAL	+	0.349	1.66	0.096*
MOWN	?	0.007	1.53	0.126
SIZE	+	-0.117	-1.80	0.073*
LEVGE	-	-0.001	-0.12	0.905
BTM	+	0.072	0.79	0.431
EP	+	1.436	2.66	0.008***
ROA	+	0.030	2.76	0.006***
RETURN	+	0.377	3.37	0.001***
Time and Sector Dummies			Yes	
Log Pseudolikelihood			-611.216	
Wald Chi ² (28)			232.80	
Prob > Chi ²			0.000	
Number of Companies			285	
Number of Observations			737	
Time Periods			6	

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' stock recommendations; CSR = Quality of CSR reporting; IO_TRNST = Percentage ownership of transient institutional investors with ln transformation; IO_DEDI = Percentage ownership of dedicated institutional investors with ln transformation; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

4.5.2.1 Regression Result – The Influence of CSR on Sell-Side Analysts' Stock Recommendations

The results in Table 4.20 demonstrate that CSR has a positive and significant coefficient ($z = 2.02$, $p\text{-value} = 0.044$). In other words, controlling for company factors, there is a positive and significant relationship between sell-side analysts' stock recommendations and CSR disclosure. This suggests that sell-side analysts issue more favourable stock recommendations (buy or hold) to companies with higher CSR disclosure. Thus, H_1 is supported. The result of this study provides support for the argument of stakeholder theory; CSR protects and enhances a company's reputation, which may lead to better financial performance (Berrone *et al.*, 2007; Fombrun, 2005; Fombrun & Shanley, 1990). The result is also in line with legitimacy theory which posits that companies implement strategies consistent with the expectations of society (Chan *et al.*, 2014; Milne & Patten, 2002; Suchman, 1995); and sell-side analysts assess the reputation and social activities performed by companies as indicators of legitimacy (Preda, 2005).

These findings are in line with those of previous studies, that sell-side analysts pay attention to and use non-financial information such as CSR in assessing companies (Dhaliwal *et al.*, 2012; Dong *et al.*, 2017; Eccles *et al.*, 2011; Fieseler, 2011; Orens & Lybaert, 2010). In interviews by Luo *et al.* (2015) with 28 sell-side analysts, they found that the analysts closely monitor CSR performance in the companies they cover. The current study's results also support findings from previous studies that an increase in the volume of voluntary disclosures by the companies leads to greater analyst following, more accurate earnings forecasts and more favourable stock recommendations (Hamrouni *et al.*, 2017; Laohapolwatana *et al.*, 2005). According to Abhayawansa and Guthrie (2016), sell-side

analysts are considered as experts in financial markets, to identify and analyse the influence of financial and non-financial information and disclose this information in their stock recommendation reports.

The findings from the multivariate regression are consistent with the results of a study by Ioannou and Serafeim (2015), that sell-side analysts issued optimistic stock recommendations (buy) for companies with higher CSR ratings. In the same vein, Luo *et al.* (2015) found that CSP is positively and significantly associated with sell-side analysts' stock recommendations; through these recommendations, analysts form a link between shareholders' investment returns and companies' social activities. The results of this study are also consistent with previous studies which found that companies with higher CSR performance have more analyst coverage and more accurate earnings forecasts (Dhaliwal *et al.*, 2011; Dhaliwal *et al.*, 2012; Garrido-Miralles *et al.*, 2016; Harjoto & Jo, 2015; Jo & Harjoto, 2014; Muslu *et al.*, 2016).

Overall, the positive and significant relationship between sell-side analysts' stock recommendations and CSR practices by CBRS companies can be interpreted as follows. Sell-side analysts may consider CSR practices by CBRS companies when they issue their stock recommendations; some CBRS analysts' reports clearly indicate whether a company implemented or practised CSR activities, as in the Mercury Securities Sdn Bhd analyst's report for Panasonic Manufacturing Malaysia (see Appendix D). The finding that analysts view favourably the CSR disclosures is consistent with other studies that show companies may get benefit from practising CSR activities, such as in the lower cost of equity capital

and lower cost of borrowing (Dhaliwal *et al.*, 2014; Goss & Roberts, 2011; Harjoto & Jo, 2015; Xu *et al.*, 2015) and higher sales rates (Lev *et al.*, 2010).

4.5.2.2 Regression Result – The Influence of Types of Institutional Investors on Sell-Side Analysts’ Stock Recommendations

The results for the relationship between the different types of institutional investor and sell-side analysts’ stock recommendations are discussed in this section.

4.5.2.2.1 Transient Institutional Investors

Consistent with expectations, the results in Table 4.20 indicate that IO_TRNST is positively and significantly associated with sell-side analysts’ stock recommendations ($z = 2.99$, $p\text{-value} = 0.003$). This implies that sell-side analysts issue more favourable stock recommendations for companies with a higher level of IO_TRNST ownership. Therefore, H_{2a} is supported. The results also support the argument that IO_TRNST via their trading activities and monitoring by “exit” improve the transparency of the information environment, thus reducing information asymmetry and enhancing management disclosures which reflect in more accurate analysis from financial analysts (Chang *et al.*, 2012; Kim & Yi, 2015; Mintchik *et al.*, 2014). This is also in line with Chang *et al.* (2012) who claimed that the existence of IO_TRNST leads to improvement in the quality of sell-side analysts’ earnings forecasts and stock recommendations for these companies.

These findings are also consistent with previous studies, that through their trading activities IO_TRNST can influence sell-side analysts to issue more accurate earnings forecasts and optimistic stock recommendations. Wong (2016), for example, found that financial

analysts issue more accurate earnings forecast for companies with higher IO_TRNST ownership. In addition, the result of this study is consistent with Gu *et al.*, (2013) and Firth *et al.* (2013) who found that sell-side analysts issue more optimistic stock recommendations for companies in which mutual funds have large positions.

In summary, the multivariate regression shows a positive and significant association between IO_TRNST and sell-side analysts' stock recommendations, indicating that IO_TRNST is beneficial to companies and their stakeholders. Through their monitoring role and trading activities, IO_TRNST increase price efficiency (Edmans, 2009), increase future stock returns (Yan & Zhang, 2009) and reduce credit spreads (Switzer & Wang, 2017), which may be reflected in sell-side analysts' stock recommendations¹⁵.

4.5.2.2.2 Dedicated Institutional Investors

The results in Table 4.20 show that IO_DEDI is positively and significantly associated with sell-side analysts' stock recommendations ($z = 2.16$, $p\text{-value} = 0.031$), implying that sell-side analysts issue more favourable stock recommendations for companies with a higher level of IO_DEDI ownership. Overall, H_{2b} which states that sell-side analysts will issue more favourable stock recommendations for companies with a higher level of IO_DEDI ownership is supported. The result of this study is consistent with previous studies which argued that large shareholdings and a long-term investment horizon by IO_DEDI lead to enhance the corporate governance practices, reduce agency cost, and protect shareholder wealth which may increase the performance of the companies (Attig *et*

¹⁵ Previous studies found significant and positive association between sell-side analysts' optimistic stock recommendations and companies' profitability, liquidity of stocks.

al., 2012; Cornett *et al.*, 2007; El-Diftar *et al.*, 2017; Ingley & van der Walt, 2004; Switzer & Wang, 2017; Zheng, 2010).

This result is consistent with that of Bilinski *et al.* (2016), who found that financial analysts issue less biased earnings forecasts for companies with a higher level of long-term institutional investor ownership; and Elyasiani and Jia (2010), who remarked that long-term horizon institutional investors help management to increase the Wall Street coverage for the company. In Malaysia, How *et al.* (2014) found a positive relationship between EPF as the largest institutional investor in Malaysia, and analyst following, which indicates the superior role of GLICs in the Malaysian market.

Overall, the positive and significant relationship between IO_DEDI and sell-side analysts' stock recommendations implies that higher ownership by IO_DEDI increases companies' stock liquidity, reducing financing cost (Elyasiani & Jia, 2010; Chang *et al.*, 2012), which may be reflected in sell-side analysts' stock recommendations. In Malaysia, previous studies found that higher ownership by GLICs increased companies' stock return and performance (Ameer & Rahman, 2009), leading to enhanced corporate governance practices (Abdul Wahab *et al.*, 2007), and increasing corporate transparency which helps to attract financial analysts to companies (How *et al.*, 2014).

4.5.2.3 Regression Result – The Influence of Financial Restatements on the Sell-Side Analysts' Stock Recommendations

The results in Table 4.20 indicate that the financial restatements are positive, with a weak significance level of 10% with z- value ($z = 1.89$, $p = 0.058$). This result reveals that there

is a positive relationship between financial restatements and sell-side analysts' stock recommendations. This is in contrast to the proposed hypothesis that expects an adverse relationship between these variables. Therefore, H_3 is rejected. This finding is also inconsistent with previous studies, which concluded that sell-side analysts are more likely to revise their stock recommendations and earnings forecast downwards, and reduce their coverage of companies in the period after financial restatements (Griffin, 2003; Kryzanowski & Zhang, 2013; Palmrose *et al.*, 2004; Ye & Yu, 2017b; Young & Peng, 2013).

The possible explanation of this result is that CBRS analysts may believe that these restatements do not come from the management's intention to manipulate their financial statements. As shown in section 4.3.4, the majority of restatements in the sample company come from misrepresentation rather than accounting irregularities or accounting application failures.

On the other hand, this finding agrees with Peixinho and Taffler (2012), who examined whether analysts recognize companies' going-concern problems and report appropriately to investors. They found that analysts do not distinguish between companies with and without going-concern problems and issue buy recommendations for both groups. They concluded that analysts are unwilling to issue pessimistic stock recommendations (underperform or sell), even following extreme bad news. Piras, Denti, and Cervellati (2012) found that analysts are reluctant to incorporate negative information in their reports. In a similar vein, Bierey and Schmidt (2017) conducted content analysis on rating reports

for misstated companies, and found that in 59 out of 107 misstated cases, rating analysts did not mention the misstatement or explicitly stated that they were not concerned. Lee and Lo (2016) claimed that many financial analysts do not try to identify frauds and reveal them publicly. In this regard, Brown *et al.* (2015) surveyed 365 financial analysts and interviewed 18 of them, finding that they did not provide a strong line of defence against irregularities in financial reporting. They also concluded that the analysts were less likely to be worried about various common signs of financial statement misrepresentation, and that uncovering intentional financial misrepresentation was not their priority¹⁶.

Consistent with this result, Griffin (2003) offered many reasons why analysts may behave less efficiently regarding bad news. First, they may be unwilling to disclose bad news because they fear that they will lose their access company management. Second, other interests (e.g. investment banking and brokerage) of the institutions which employ sell-side analysts may conflict with the need for unbiased analysis, which can lead to an optimistic bias. Finally, bad news may need a higher benefit threshold to make analysis worthwhile (costly information). Even though CBRS analysts are independent and assigned by Bursa Malaysia to rate the companies, this study shows that they do not necessarily revise their stock recommendations downward for restated companies. This is consistent with previous studies, which found that earnings forecasts by independent analysts are less accurate and more optimistically biased than, or at most no different from, those of non-independent

¹⁶ They stated that “*In our interviews, analysts made it clear that attempting to uncover intentional financial misrepresentation is not cost-beneficial for them, suggesting that they are unlikely to discover financial reporting irregularities*” (Brown *et al.*, 2015, p. 42).

analysts (Barber, Lehavy, & Trueman, 2007; Cowen *et al.*, 2006; Gu & Xue, 2008; Jacob, Rock, & Weber, 2008).

This result implies that restated companies are perhaps more informative than they are opportunistic, hence attracting sell-side analysts. This result is in line with signalling theory, that the information reported in financial reports sends signals about the companies' financial situation. Callen *et al.* (2006) claimed that financial restatements are not necessarily related to significant negative market reactions. This result also consistent with Givoly *et al.* (2011) that analysts significantly upgrade their stock recommendations following occurrences of earnings management, and Abarbanell and Lehavy (2003) who found a positive relationship between analysts' stock recommendations and earnings management. However, previous Malaysian studies found that companies with a high level of earnings management showed low information asymmetry (Rahman, Hassan, Mohd Saleh, & Abdul Shukor, 2013), increased the value relevance of accounting information (Hassan, Mohd Saleh, Rahman, & Abdul Shukor, 2016), and have greater stock market liquidity (Al-Jaifi, 2017).

4.5.2.4 Regression Result - Control Variables

Table 4.20 indicates that the three financial indicators namely; earnings per share (EP), return on assets (ROA) and market return (RETURN) are considered very important in influencing analysts' recommendations. As shown in Table 4.20, EP is positively and significantly associated with the sell-side analysts' stock recommendations ($z = 2.66$, $p\text{-value} = 0.008$), indicating that companies with higher EP gain more favourable stock

recommendations. This is consistent with the findings of previous studies (Gu *et al.*, 2013; Ioannou & Serafeim, 2015; Jegadeesh *et al.*, 2004). In terms of company profitability (ROA), companies with high profitability receive more favourable stock recommendations. ROA has a significant positive relationship with sell-side analysts' stock recommendations ($z = 2.76$, $p\text{-value} = 0.006$), meaning that analysts issue more optimistic recommendations for highly profitable companies. This finding is consistent with a number of empirical studies (Gu *et al.*, 2013; Ioannou & Serafeim, 2015). There is a positive and significant relationship between RETURN and sell-side analysts' stock recommendations ($z = 3.37$, $p\text{-value} = 0.001$), indicating that analysts have a tendency to issue optimistic stock recommendations for the companies with higher RETURN, consistent with the results from previous studies (Ioannou & Serafeim, 2015).

As for corporate governance variables, duality has a positive and weak significant coefficient at 10% ($z = 1.66$, $p\text{-value} = 0.096$), suggesting that sell-side analysts issue more favourable stock recommendations to companies with CEO duality. Previous studies have found that CEO duality increases company legitimacy and survival chances (Brown, 2012), and is significantly associated with the amount of capital raised (Badru *et al.*, 2017). Ben Hassoun and Aloui (2017) found a positive relationship between CEO duality and company performance. Board size (BSIZE), board independence (BINDP) and managerial ownership (MOWN) show no significant relationship between these variables and sell-side analysts' stock recommendations. Subramaniam *et al.* (2016) found no significant relationship between BSIZE and liquidity among Malaysian PLCs, and How *et al.* (2014)

found no significant influence of BINDP or MOWN on the analysts' following in Malaysia.

The results of this study indicate that SIZE is negatively associated with sell-side analysts' stock recommendations, with a weak significant level at 10% ($z = -1.80$, $p\text{-value} = 0.073$). This implies that analysts issue less favourable stock recommendations for large companies. This is consistent with other authors (Gu *et al.*, 2013; Lo, 2017) who found a negative relationship between SIZE and sell-side analysts' stock recommendations. Lo (2017) claimed that analysts issue optimistic stock recommendations for small companies in order to attract investors and earn higher commissions. With regard to the other control variables (LEVGE and BTM) the results show no significant relationship between these variables and sell-side analysts' stock recommendations.

To summarize, the result of this study indicates that sell-side analysts issue more favourable stock recommendations for companies with greater CSR disclosures. This result is consistent with the results of previous studies (Dhaliwal *et al.*, 2011; Dhaliwal *et al.*, 2012; Garrido-Miralles *et al.*, 2016; Harjoto & Jo, 2015; Ioannou & Serafeim, 2015; Jo & Harjoto, 2014; Luo *et al.*, 2015; Muslu *et al.*, 2016) that companies with higher CSR performance have more favourable (optimistic) stock recommendations, more analysts' coverage, and more accurate earnings forecasts. The findings also indicate that the sell-side analysts issue more favourable stock recommendations for companies with higher IO_TRNST and IO_DEDI ownership levels. These findings are consistent with previous studies that sell-side analysts issue more accurate earnings forecasts and more favourable

stock recommendations for companies with higher IO_TRNST ownership (Firth *et al.*, 2013; Gu *et al.*, 2013; Wong, 2016), and are also consistent with previous studies which found a positive relationship between IO_DEDI and financial analyst following and earnings forecast accuracy (Bilinski *et al.*, 2016; How *et al.*, 2014). Finally, and controversially, the results indicate that sell-side analysts issue favourable stock recommendations for restated companies. This result is inconsistent with previous studies, which found that analysts revise their stock recommendations and earnings forecast downwards, and reduce their coverage of companies in the period after financial restatements (Griffin, 2003; Kryzanowski & Zhang, 2013; Palmrose *et al.*, 2004; Ye & Yu, 2017b; Young & Peng, 2013).



4.6 Additional Analysis

Several additional tests have been conducted to confirm the sensitivity and robustness of the main results reported above.

4.6.1 Alternative Measurement of CSR

To confirm the result of the relationship between CSR and sell-side analysts' stock recommendations, this study uses another CSR measurement employed by previous studies (Al-Shaer & Zaman, 2016), which uses a score of 0-4 to indicate the quality of CSR disclosures. The scores are: 0 if the company has no CSR report; 1 if a CSR report exists; 2 if a CSR report exists and the company has a CSR committee; 3 if a CSR report exists and assurance is provided by a non-audit firm; and 4 if a CSR report exists and is assured by one of the Big 4 or another audit firm. To measure the quality of CSR disclosure, this study uses the same scale. There are 284, 440, 7 and 6 observations with CSR quality disclosure scores of 0, 1, 2 and 3 respectively.¹⁷

Overall, the results in Table 4.21 show that the model is significant ($p\text{-value} < 0.001$; Wald Chi-square = 239.91; log Pseudolikelihood = -610.891), similar to the results in the main analysis. Table 4.21 shows a positive and significant relationship ($z = 2.13$, $p\text{-value} = 0.033$) between CSR and sell-side analysts' stock recommendations, indicating that companies with higher-quality CSR reporting have more favourable stock recommendations, reinforcing the finding in the main analysis. Table 4.21 indicates that

¹⁷ The 284 companies with 0 score are those that do not have a separate section on CSR. However, the CSR activities are disclosed in chairman statement, corporate governance statement and additional disclosure section.

the coefficients of all variables are similar to those in Table 4.20 for the study main analysis.

Table 4.21
Results of Random-Effects Ordered Probit Regression (Alternative CSR Measurement)

Independent Variables	Predicted Signs	Coef.	z.	p-value
CSR	+	0.274	2.13	0.033**
IO_TRNST	+	0.190	3.01	0.003***
IO_DEDI	+	0.116	2.14	0.032**
RESTATE	-	0.235	1.88	0.060*
BSIZE	?	-0.045	-1.22	0.222
BINDP	+	0.310	0.55	0.582
DUAL	+	0.371	1.77	0.077*
MOWN	?	0.007	1.64	0.100
SIZE	+	-0.101	-1.66	0.097*
LEVGE	-	-0.001	-0.23	0.821
BTM	+	0.085	0.94	0.346
EP	+	1.444	2.65	0.008***
ROA	+	0.030	2.71	0.007***
RETURN	+	0.376	3.35	0.001***
Time and Sector Dummies			Yes	
Log Pseudolikelihood			-610.891	
Wald Chi2 (28)			239.91	
Prob > Chi2			0.000	
Number of Companies			285	
Number of Observations			737	
Time Periods			6	

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' stock recommendations; CSR = CSR reporting quality on 0-4 scale [0= if the CSR report not exists in the company' annual report; 1= if CSR report exists in the company' annual report; 2= if CSR report exists and the company has a CSR committee; 3= if CSR report exists and assurance is provided by a nonaudit firm; 4= if CSR report exists and are assured by one of the Big 4 or another audit firm]; IO_TRNST = Percentage ownership of transient institutional investors with In transformation; IO_DEDI = Percentage ownership of dedicated institutional investors with In transformation; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

4.6.2 Alternative Measurement of Institutional Investors

In the next analysis, REC is regressed against total institutional investors' ownership (IO_TOTAL), where IO_TOTAL is the sum of all ownership by institutional investors. The results in Table 4.22 show that the model overall is significant (p-value < 0.001; Wald Chi-square = 234.49; log Pseudolikelihood = -612.757), similar to the results in the main analysis. As shown in Table 4.22, there is a positive and high significant relationship ($z = 2.99$, p-value = 0.003) between IO_TOTAL and sell-side analysts' stock recommendations. This result implies that companies with a higher level of institutional investor ownership gain more favourable stock recommendations. This result supports the finding in the main analysis.



Table 4.22

Results of Random-Effects Ordered Probit Regression (Alternative Institutional Investors Measurement)

Independent Variables	Predicted Signs	Coef.	z.	p-value
CSR	+	0.385	2.12	0.034**
IO_TOTAL	+	0.195	2.99	0.003***
RESTATE	-	0.247	1.96	0.050**
BSIZE	?	-0.061	-1.62	0.106
BINDP	+	0.195	0.34	0.732
DUAL	+	0.349	1.65	0.098*
MOWN	?	0.007	1.62	0.105
SIZE	+	-0.099	-1.51	0.130
LEVGE	-	0.000	-0.02	0.981
BTM	+	0.063	0.70	0.486
EP	+	1.404	2.60	0.009***
ROA	+	0.030	2.76	0.006***
RETURN	+	0.375	3.40	0.001***
Time and Sector Dummies			Yes	
Log Pseudolikelihood			-612.757	
Wald Chi2 (27)			234.49	
Prob > Chi2			0.000	
Number of Companies			285	
Number of Observations			737	
Time Periods			6	

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' stock recommendations; CSR = Quality of CSR reporting; IO_TOTAL = Percentage ownership of total institutional investors with ln transformation ; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

4.6.3 Alternative Measurement of Financial Restatements

To confirm the result of the association between financial restatements and sell-side analysts' stock recommendations, this study examines the relationship between different types of financial restatements and analysts' stock recommendations. Following previous studies Abdul Wahab *et al.* (2014) and Paterson and Valencia (2011), financial restatements are categorized as accounting rule application failures (Restate_AR), accounting irregularities (Restate_I) and misrepresentation (Restate_Mis).

As shown in Table 4.23, the model overall is highly significant ($p\text{-value} < 0.001$; Wald Chi-square = 240.32; log Pseudolikelihood = -611.001), similar to the results in the main analysis. The results in the Table 4.23 show that the relationship between restatements and analysts' stock recommendations differ among the different types of financial restatements. From the table, the results show no significant relationship between Restate_AR, Restate_I and analysts' stock recommendations, where the findings indicate to positive and weak significant relationship between Restate_Mis and analysts' stock recommendations ($z = 1.72$, $p = 0.086$). These results imply that sell-side analysts viewed restatements due to misrepresentations as informative rather than they are opportunistic. These results reinforcing the finding in the main analysis. Table 4.23 shows also that the coefficients of all other variables are similar to those in Table 4.20 for the study main analysis.

Table 4.23

Results of Random-Effects Ordered Probit Regression (Alternative Financial Restatements Measurement)

Independent Variables	Predicted Signs	Coef.	z.	p-value
CSR	+	0.370	2.06	0.040**
IO_TRNST	+	0.193	3.01	0.003***
IO_DEDI	+	0.119	2.15	0.032**
Restate_AR	-	0.134	0.66	0.512
Restate_I	-	0.324	1.12	0.263
Restate_Mis	-	0.279	1.72	0.086*
BSIZE	?	-0.051	-1.36	0.175
BINDP	+	0.200	0.35	0.727
DUAL	+	0.354	1.68	0.093*
MOWN	?	0.007	1.49	0.135
SIZE	+	-0.121	-1.85	0.064*
LEVGE	-	0.000	-0.11	0.909
BTM	+	0.068	-0.75	0.456
EP	+	1.421	2.61	0.009***
ROA	+	0.030	2.77	0.006***
RETURN	+	0.377	3.36	0.001***
Time and Sector Dummies			Yes	
Log Pseudolikelihood			-611.001	
Wald Chi2 (28)			240.32	
Prob > Chi2			0.000	
Number of Companies			285	
Number of Observations			737	
Time Periods			6	

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' stock recommendations; CSR = Quality of CSR reporting; IO_TRNST = Percentage ownership of transient institutional investors with ln transformation; IO_DEDI = Percentage ownership of dedicated institutional investors with ln transformation; Restate_AR is restatements due to accounting rules application failure; Restate_I is restatements due to accounting irregularities; Restate_Mis restatements due to misrepresentations; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

4.6.4 Results of Random-Effects Ordered Logit Regression

In order to compare the results, random-effects ordered logit regression with robust standard error was conducted to test the study's main hypotheses on the relationship between CSR, institutional investors' ownership, financial restatements and sell-side analysts' stock recommendations. Overall, the model is highly significant (p-value < 0.001; Wald Chi-square = 198.37; log Pseudolikelihood = -611.848) and the results of the study main analysis are similar and statistically significant to the results presented in Table 4.20, providing further supporting evidence for the results in the main analysis. The results in Table 4.24 indicate that the coefficients of all variables are consistent with those in Table 4.20.



Table 4.24

Results of Random-Effects Ordered Logit Regression

Independent Variables	Predicted Signs	Coef.	z.	p-value
CSR	+	0.641	2.01	0.045**
IO_TRNST	+	0.342	3.01	0.003***
IO_DEDI	+	0.219	2.23	0.026**
RESTATE	-	0.388	1.73	0.084*
BSIZE	?	-0.087	-1.31	0.189
BINDP	+	0.377	0.37	0.708
DUAL	+	0.596	1.57	0.115
MOWN	?	0.012	1.49	0.136
SIZE	+	-0.219	-1.88	0.060*
LEVGE	-	-0.001	-0.09	0.931
BTM	+	0.106	0.67	0.505
EP	+	2.552	2.65	0.008***
ROA	+	0.049	2.60	0.009***
RETURN	+	0.640	3.28	0.001***
Time and Sector Dummies			Yes	
Log Pseudolikelihood			-611.848	
Wald Chi2 (28)			198.37	
Prob > Chi2			0.000	
Number of Companies			285	
Number of Observations			737	
Time Periods			6	

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' stock recommendations; CSR = Quality of CSR reporting; IO_TRNST = Percentage ownership of transient institutional investors with ln transformation; IO_DEDI = Percentage ownership of dedicated institutional investors with ln transformation; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

4.6.5 Examining the Independent Variables Individually

In order to enhance the results on the influence of independent variables (i.e. CSR, IO_TRNST, IO_DEDI, and RESTATE) on sell-side analysts' stock recommendations, the robustness of the results has also been examined through random-effects ordered probit regression of each independent variable with sell-side analysts' stock recommendations, as shown in Table 4.25. These results indicate that the findings generated by the main analysis are similar to the results from analysing each individual variable. Column (1) shows the results of CSR and REC, confirming the positive and significant relationship ($z = 1.88$, $p\text{-value} = 0.060$).

Column (2) reports the results of institutional ownership (IO_TRNST and IO_DEDI), indicating the positive and significant relationships between IO_TRNST and REC ($z = 2.92$, $p\text{-value} = 0.004$) and between IO_DEDI and REC ($z = 2.20$, $p\text{-value} = 0.028$). Columns (3) and (4) present the results when IO_TRNST and IO_DEDI are tested separately. Both IO_TRNST and IO_DEDI remain positively significant. Similar to column (2), based on the $p\text{-value}$, IO_TRNST has a much stronger relationship with stock recommendations than IO_DEDI. These results support the argument that IO_TRNST actively manage their investment portfolios and prefer less information asymmetry (Mintchik *et al.*, 2014; Wong, 2016). Column (5) confirms the positive and significant relationship between RESTATE and REC ($z = 1.94$, $p\text{-value} = 0.052$). The results of this analysis of robustness thus support the main model's inferences and results.

Table 4.25

Results of Random-Effects Ordered Probit Regression for Each Independent Variable Individually

Independent Variables	Predicted Signs	(1) CSR		(2) IO_TRNST & IO_DEDI		(3) IO_TRNST		(4) IO_DEDI		(5) RESTATE	
		z.	p-value	z.	p-value	z.	p-value	z.	p-value	z.	p-value
CSR	+	1.88	0.060*			1.99	0.046**	1.91	0.056*		
IO_TRNST	+			2.92	0.004***	2.90	0.004***				
IO_DEDI	+			2.20	0.028**			2.03	0.043**		
RESTATE	-					1.92	0.055*	1.96	0.050**	1.94	0.052*
BSIZE	?	-1.25	0.213	-0.95	0.342	-1.29	0.198	-1.40	0.161	-1.10	0.272
BINDP	+	0.38	0.706	0.54	0.587	0.40	0.689	0.34	0.734	0.57	0.567
DUAL	+	1.62	0.106	1.69	0.091*	1.52	0.130	1.74	0.082*	1.61	0.108
MOWN	?	1.42	0.156	1.40	0.160	1.53	0.125	1.47	0.142	1.39	0.164
SIZE	+	0.09	0.929	-1.22	0.221	-0.90	0.366	-0.80	0.426	1.01	0.315
LEVGE	-	-0.12	0.907	-0.07	0.941	-0.10	0.918	-0.16	0.873	-0.12	0.902
BTM	+	0.54	0.589	0.71	0.481	0.74	0.458	0.68	0.499	0.64	0.522
EP	+	2.71	0.007***	2.83	0.005***	2.65	0.008***	2.58	0.010***	2.61	0.009***
ROA	+	2.63	0.009***	2.66	0.008***	2.71	0.007***	2.77	0.006***	2.70	0.007***
RETURN	+	3.06	0.002***	3.22	0.001***	3.10	0.002***	3.32	0.001***	2.93	0.003***
Time and Sector Dummies		Yes		Yes		Yes		Yes		Yes	
Log Pseudolikelihood		-619.160		-615.146		-613.445		-615.267		-619.170	
Chi ²		226.10		225.85		227.76		232.84		222.89	
Prob > Chi ²		0.000		0.000		0.000		0.000		0.000	
Number of Companies		285		285		285		285		285	
Number of Observations		737		737		737		737		737	
Time Periods		6		6		6		6		6	

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' stock recommendations; CSR = Quality of CSR reporting; IO_TRNST = Percentage ownership of transient institutional investors with ln transformation; IO_DEDI = Percentage ownership of dedicated institutional investors with ln transformation; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

4.6.6 Results of Ordinary Least Square (OLS)

As a further robustness check, this study re-examined the main hypotheses using random-effects OLS regressions (employed using STAT procedure, *xtreg*), as employed in previous studies (Liu & Sun, 2016). As shown in Table 4.26, the main findings remain unchanged.

Table 4.26
Results of Random-Effects Ordinary Least Square

Independent Variables	Predicted Signs	Coef.	z.	p-value
Constant	?	2.465	6.30	0.000***
CSR	+	0.151	1.97	0.049**
IO_TRNST	+	0.078	2.87	0.004***
IO_DEDI	+	0.051	2.07	0.038**
RESTATE	-	0.104	1.94	0.052*
BSIZE	?	-0.022	-1.39	0.164
BINDP	+	0.079	0.31	0.754
DUAL	+	0.138	1.60	0.109
MOWN	?	0.002	1.27	0.204
SIZE	+	-0.048	-1.62	0.105
LEVGE	-	0.000	-0.07	0.947
BTM	+	0.044	1.13	0.259
EP	+	0.472	3.49	0.000***
ROA	+	0.015	3.74	0.000***
RETURN	+	0.136	3.18	0.001***
Time and Sector Dummies	Yes			
Chi2(28)	560.26			
Prob > Chi2	0.000			
Number of Companies	285			
Number of Observations	737			
Time Periods	6			

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' stock recommendations; CSR = Quality of CSR reporting; IO_TRNST = Percentage ownership of transient institutional investors with In transformation; IO_DEDI = Percentage ownership of dedicated institutional investors with In transformation; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period $t-1$ to stock price at the fiscal year end for company i period $t-1$.

4.7 Chapter Summary

This chapter discusses and presents the findings derived from the analysis of the influence of CSR, institutional investors' ownership and financial restatements on sell-side analysts' stock recommendations for CBRS participating companies, by testing the model developed in Chapter Three. It starts with descriptive statistics, followed by correlation analysis. The assumptions of multivariate analysis are first discussed and tested, followed by the assumptions of panel data analysis. Random-effects ordered probit regression was used to test the three main hypotheses.

H1 is used to examine the influence of CSR disclosures on sell-side analysts' stock recommendations. The results supported H1, as analysts issue more favourable (optimistic) stock recommendations for companies with a high level of CSR disclosure. Hypotheses H2a & H2b examined the influence of types of institutional investors' ownership (transient and dedicated) on sell-side analysts' stock recommendations. Both were supported, as the empirical findings concluded that CBRS analysts issue more favourable (optimistic) stock recommendations for companies with a higher level of transient and dedicated ownership.

H3 examined the influence of financial restatements on sell-side analysts' stock recommendations. However, the empirical results do not support the hypothesis, as the restated companies do gain favourable stock recommendations. Therefore, H3 is rejected. The control variables duality, earnings to price ratio, ROA and market return are positively and significantly associated with sell-side analysts' stock recommendations, while company size is negatively and significantly related to the recommendations. Other control

variables do not indicate any significant relationship. Additional analysis is applied in Section 4.6 to confirm the initial results, and are consistent with the findings of the main model. Table 4.27 summarizes the hypotheses.

Table 4.27
Summary of the Study Findings

Hypothesis	Findings
H1: Sell-side analysts will issue more favourable stock recommendations for companies with higher CSR disclosure.	Supported
H2a: Sell-side analysts will issue more favourable stock recommendations for companies with a higher level of transient institutional investors' ownership.	Supported
H2b: Sell-side analysts will issue more favourable stock recommendations for companies with a higher level of dedicated institutional investors' ownership.	Supported
H3: Sell-side analysts will issue adverse stock recommendations for restated companies.	Not supported

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the main findings of this study as presented and discussed in the previous chapter, and makes some suggestions and recommendations for the appropriate regulatory bodies and interested parties. It consists of five sections, including Section 5.1. Section 5.2 summarizes the findings from the main equation in the study. Section 5.3 discusses the potential implications of the study. Section 5.4 explains the limitations of the study, and Section 5.5 includes suggestions for future research. Section 5.6 concludes the entire thesis.

5.2 Summary of the Study

This study examines the influence of CSR, institutional investors' ownership and financial restatements on the sell-side analysts' stock recommendations for the companies participating in the CBRS Scheme. Given the importance of analysts' stock recommendations and their influence in the capital markets, Bursa Malaysia implemented CBRS with the main objective of enhancing liquidity and generating investors' interest in the stocks of Malaysian PLCs, particularly the low-profile ones. According to Qasem *et al.* (2015), there has been a considerable reduction in the number of participating companies; while 300 and 436 companies participated in Schemes 1 and 2 respectively, more than half discontinued their involvement with CBRS in Scheme 3. This decreasing trend raises the question of the relevance of the CBRS Scheme, and particularly the usefulness of the

analysts' reports produced by the research houses. Therefore, there is a need to investigate the factors that may influence CBRS analysts' stock recommendations.

A considerable body of literature indicates the importance of CSR in determining companies' performance. Nevertheless, most CSR studies have been conducted in developed countries, and Wang *et al.* (2016) claimed that the evolution of CSR in emerging markets is much less understood and deserves scholarly attention. In the same vein, Tan (2014a) called for more studies about the sell-side analysts' work, in particular the ways in which ESG issues are included in their research. Therefore, this study attempts to fill this gap in the literature.

Previous studies showed that institutional investors are better informed and more sophisticated in their investment process than individual investors. The literature review found mixed results on the relationship between institutional investors and sell-side analysts' reports, some authors arguing that a higher level of ownership by institutional investors leads to timely and less biased analysts' reports, and others that because of conflicts of interest, analysts tend to issue biased reports for companies with more institutional investor ownership. Many studies suggest to take into consideration the heterogeneity of institutional investors. Instead of treating institutional investors as a homogeneous group, researchers should consider their different investment horizon, whether short-term (transient) or long-term (dedicated). However, there is still limited knowledge on how the effect of these two types on analysts' recommendations. This is another motivation of this study to bridge this knowledge gap.

Finally, an extensive body of theoretical and empirical literature has confirmed the adverse economic consequences of financial restatements on company performance. Few studies examine the influence of financial restatements on sell-side analysts' stock recommendations, a further gap in the literature which motivates this study. Most of the restatement studies have been conducted in developed countries, in particular, there is a lack of studies that examine the consequences of financial restatements in the Malaysian context (Abdullah *et al.*, 2010; Sellers, 2014).

Sell-side analysts are important information intermediaries, collecting and evaluating information from private and public sources to generate earnings forecasts and make stock recommendations as to whether investors should buy or sell. Thus, they provide valuable information to investors and facilitate optimal capital allocation. As discussed in Chapter 2, analysts' reports have a significant effect on companies' stock price, the liquidity of the stock, and trading volume. Therefore, one way to understand the influence of different aspects of information quality (CSR, institutional investors' ownership and financial restatements) on participants in the capital markets is to examine how such information influences the sell-side analysts' stock recommendations. In particular, this study focuses on how CBRS analysts generate their stock recommendations, by investigating the influence of CSR, institutional investors' ownership and financial restatements for companies that participated in Schemes 2 and 3 of the CBRS.

To achieve the objectives of this study, panel data analysis is employed. Panel regression is estimated by using random-effects ordered probit regression. A total of 285 companies

(737 year-observations) listed on Bursa Malaysia and CBRIS for the study period 2008 to 2013 were selected for analysis. A quantitative method is used to investigate the three main hypotheses that correspond to the study objectives.

In terms of the association between CSR and sell-side analysts' stock recommendations, this study predicted that the analysts will issue favourable recommendations to companies with higher CSR disclosure. From the results of the regression analysis, a positive and significant relationship between the stock recommendations and companies with higher CSR disclosure was found, supporting the arguments of stakeholder and legitimacy theories that CSR may lead to better financial performance through protection and enhancement of companies' reputation (Berrone *et al.*, 2007; Chan *et al.*, 2014; Fombrun, 2005; Fombrun & Shanley, 1990; Milne & Patten, 2002; Suchman, 1995). This result also supports the complementary view that CSR activities attract the interest of many parties in the financial market, especially financial analysts (Eccles *et al.*, 2011; Fieseler, 2011), and is consistent with the results of previous studies (Dhaliwal *et al.*, 2011; Dhaliwal *et al.*, 2012; Garrido-Miralles *et al.*, 2016; Harjoto & Jo, 2015; Ioannou & Serafeim, 2015; Jo & Harjoto, 2014; Luo *et al.*, 2015; Muslu *et al.*, 2016) that companies with higher CSR performance have more favourable (optimistic) stock recommendations, more analysts' coverage, and more accurate earnings forecasts.

Regarding institutional investors' ownership, this study classifies institutional investors based on their investment horizon, i.e. IO_TRNST (i.e. institutions with higher portfolio turnover and a short-term investment horizon) and IO_DEDI (i.e. institutions with lower

portfolio turnover and a long-term investment horizon). A positive and significant relationship is reported between IO_TRNST ownership level and sell-side analysts' stock recommendations. This finding is in line with the argument that via their trading activities and monitoring by "exit", IO_TRNST will influence sell-side analysts to issue more accurate earnings forecasts and optimistic stock recommendations. This finding is consistent with previous studies that sell-side analysts issue more accurate earnings forecasts and more favourable stock recommendations for companies with higher IO_TRNST ownership (Firth *et al.*, 2013; Gu *et al.*, 2013; Wong, 2016), and also with the agency theory prediction that IO_TRNST via their monitoring role are more likely to improve companies' information environment.

Regarding IO_DEDI, consistent with agency theory and the arguments from previous researchers, this study suggests that companies with higher IO_DEDI ownership will gain more favourable sell-side analysts' stock recommendations, Where the higher ownership and long-term investment horizon by IO_DEDI lead to mitigating information asymmetry, reducing agency cost and improving information quality (Attig *et al.*, 2012; Zheng, 2010). Based on the regression analysis, this study finds a positive and significant association between companies with a higher level of IO_DEDI ownership and sell-side analysts' stock recommendations. This result is consistent with the argument that large shareholdings and a long-term investment horizon by IO_DEDI improve information quality and the level of monitoring (Attig *et al.*, 2012; Cornett *et al.*, 2007; El-Diftar *et al.*, 2017; Ingley & van der Walt, 2004; Switzer & Wang, 2017; Zheng, 2010). Further, this result is consistent with

the previous studies result which find positive relationship between IO_DEDI and financial analyst following and earnings forecast accuracy (Bilinski *et al.*, 2016; How *et al.*, 2014).

In line with signalling theory, stakeholder theory and previous studies, this study predicted that sell-side analysts will issue adverse stock recommendations (pessimistic) for restated companies. According to Gomulya and Boeker (2014), financial restatements reflect the form of misconduct and misrepresentation of a company, damaging its reputation by failing to provide stakeholders with accurate and credible financial information. However, and inconsistent with the findings of previous studies, the present study finds that financial restatements are positively and significantly associated with sell-side analysts' stock recommendations. This result could be because CBRS analysts may believe that these restatements do not come from any management intention to manipulate their financial statements. Additionally, some previous studies have found that analysts are unwilling to issue pessimistic stock recommendations even in the case of extreme bad news (Peixinho & Taffler, 2012), and that analysts are not worried by various common signs of financial statement misrepresentation and are reluctant to incorporate negative information in their reports (Bierey & Schmidt, 2017; Brown *et al.*, 2015; Lee & Lo, 2016; Piras *et al.*, 2012).

Overall, the result of this study on the positive relationship between CSR and sell-side analysts' stock recommendations, implies that sell-side analysts consider CSR issues when they issue their stock recommendations. This result is consistent with the results of previous studies conducted in developed countries. Further, the results on the positive association between transient and dedicated institutional investors and sell-side analysts'

stock recommendations imply that higher level ownership by institutional investors leads to greater monitoring of the investee companies, which is reflected through favourable sell-side analysts' stock recommendations. These results also consistent with the results of previous studies. In other words, they indicate that CBRS analysts' report are relevant and useful as they consider the quality of corporate disclosure and the monitoring role played by institutional investors. In addition, the findings show that restatements have a positive impact on analysts' stock recommendations, which means that CBRS analysts may not penalize restated companies. However, CBRS analysts' failure may shed light on the usefulness of their reports.

However, the reason for the decreasing trend in the number of CBRS participating companies and research houses in the CBRS scheme is still an open question and needs further investigation by regulatory bodies such as Bursa Malaysia and SC. In this regard, Errol Oh, an executive editor of *Star Online Magazine* argued that *"Whether or not the CBRS will be kept running, now is a good time to rigorously assess its effectiveness and to be transparent about what can be learnt from its 12-year experience. It's important to be open about the CBRS's flaws and limitations"* (Oh, 2017). One possible explanation about the lack of interest in the CBRS Scheme is the trade-off between the costs and benefits, especially to the participating companies. Although the CBRS is partly sponsored by CMDF, the participating companies still need to pay half of the cost, regardless of the type of research report issued (buy, hold or sell recommendation). Another possible reason contributing to the declining interest in the CBRS Scheme is the availability of information through other channels of communication. Investors nowadays have more information

choices, mostly available at no or minimum cost. Thus, the analysts' reports provided by CBRS research houses are no longer the main source of information (Qasem *et al.*, 2015).

5.3 Implications of the Study

Both theoretical and practical implications for this study are discussed in the following sections.

5.3.1 Theoretical Implications

The present study explicitly investigates the influence of CSR, institutional investors' ownership and financial restatements on sell-side analysts' stock recommendations for companies participating in CBRS. In doing so, it contributes to the extant literature and provides conclusive evidence concerning different aspects of companies' information quality in the Malaysian setting. Regarding the influence of CSR disclosure on sell-side analysts' stock recommendations, the current study extends the existing literature by examining this relationship in the context of an emerging market, Malaysia. The findings suggest that sell-side analysts act as information intermediaries by aggregating publicly available information and adding insights through their analyses. The results also add to the understanding of stakeholder and legitimacy theories in terms of emerging markets.

With respect to the relationship between institutional investors' ownership and analysts' stock recommendations, previous studies which examined this relationship in developed countries found inconsistent results. In addition, there are very few studies on the heterogeneity of institutional investors and sell-side analysts' stock recommendations,

particularly in term of emerging markets. In the current study, evidence on the impact of IO_TRNST ownership on sell-side analysts' stock recommendations supports the argument that via their trading activities and monitoring by "exit", IO_TRNST improve the quality of the information environment, which in turn leads the analysts to issue more favourable stock recommendations. Similarly, the findings on the influence of IO_DEDI on sell-side analysts' stock recommendations confirm the superior role of IO_DEDI in enhancing companies' corporate governance practices, price efficiency, stock return and performance, which is reflected in more favourable stock recommendations. In addition, this study adds to the understanding of the agency theory in an emerging market, where companies are controlled by major shareholders and the agency associations are different compared to developed countries.

The current study highlights the influence of financial restatements on sell-side analysts' stock recommendations; in the extant literature, few studies examine the analysts' behaviour around corrective disclosure such as financial restatements. The results of this study add to the understanding of the consequences of financial restatements in emerging markets, and to date very few studies have examined the relationship between financial restatements and sell-side analysts' stock recommendations in emerging markets, or CBRS research coverage. Further, this study adds to the understanding of signalling theory, in particular in term of emerging markets.

5.3.2 Practical Implications

This study adds numerous empirical implications to existing literature. First, it increases the understanding of the important effect of CSR information on sell-side analysts, as few studies examine the association between analysts' stock recommendations and CSR in terms of emerging markets or CBRS research coverage. The study finds that CSR practices by Malaysian listed companies have an impact on sell-side analysts' stock recommendations, suggesting that CBRS sell-side analysts take CSR information into consideration when they issue stock recommendations. As the study sample consists of Malaysian PLCs in many sectors, and spanning a 6-year period, the results are more generalizable than those of previous studies which focused on large-sized companies (Muniandy & Barnes, 2010; Saleh, *et al.*, 2010) and a shorter time period (Alazzani, *et al.*, 2017; Anas *et al.*, 2015; Sundarasan, *et al.*, 2016).

The results of this study should be useful to policymakers, Malaysian PLCs and CBRS analysts. These findings can help policymakers to adopt suitable strategies to encourage communication of CSR activities by Malaysian PLCs. These results also can encourage policymakers to give more attention to those CSR items that are inadequately disclosed by Malaysian companies. In addition, these results are important to Malaysian PLCs in better understanding the preferences of sell-side analysts towards CSR engagement. Further, these results underscore the vital role played by analysts in influencing the companies that they follow to provide more CSR information.

Second, the findings from the current study indicate that higher-level ownership by institutional investors leads to greater monitoring of the investee companies, reflected through favourable sell-side analysts' stock recommendations. In particular, the existence of IO_TRNST attracts the attention of the CBRS analysts and leads them to issue more favourable stock recommendations. The findings on the positive and significant relationship between IO_DEDI and sell-side analysts' stock recommendations also implies an effective role for IO_DEDI to enhance companies' corporate governance practices, increase company performance which attract CBRS analysts to issue more favourable stock recommendations.

Building on the significant role that institutional investors in the Malaysian stock market are expected to play, MSWG and SC (2014) issued the Malaysian Code for Institutional Investors to guide institutional investors in monitoring their investee companies. The results of this study can help regulatory bodies to assess the merits of calls for institutional investors to play a greater monitoring role over the Malaysian PLCs. These findings also have an important implication to regulators as it suggests that through active monitoring, institutional investors enhance companies' corporate governance practices, increase company performance which reflected on analysts' stock recommendations. In addition, the results of the current study have important implication that strong government intervention via GLICs is a salient feature of Malaysian market, which can significantly affect the information environment about the companies.

Third, this study adds to the understanding of the influence of financial restatements on sell-side analysts' stock recommendations. The findings show that restatements have a positive impact on analysts' stock recommendations for companies listed on Bursa Malaysia, suggesting that CBRS analysts may not penalize restated companies, but instead give optimistic stock recommendations. This may raise doubt on the usefulness of their reports. In particular, this result may explain the decrease in the number of companies participating in the CBRS schemes. Lee and Lo (2016) and Martin *et al.* (2014) found that optimistic opinions by financial analysts on misstated companies damage their reputation. The results of this study should be useful to regulators bodies such as Bursa Malaysia and SC in respect of their efforts to prevent and reduce the incidences of financial restatements among Malaysian PLCs.

5.3.3 Implications for Researchers

The results of the current study are useful to academic researchers, providing comprehensive evidence to fill the knowledge gap in sell-side analysts' stock recommendations in Malaysia. It offers new insights for researchers to examine the influence of CSR practices on other outcomes from financial analysts such as earnings forecasts and target prices. It also presents evidence of the different types of institutional investors in the Malaysian stock market, and how the heterogeneity of these institutions is related to sell-side analysts' stock recommendations. Finally, the current study provides a fruitful area for researchers to examine the consequences of financial restatements on capital market outcomes.

5.4 Limitations of the Study

As in any research, this study has limitations that should be mentioned to ensure that the study findings are interpreted fairly. First, the CSR index used in the study may not capture all CSR practices in the annual reports. However, in the literature CSR is a loosely defined concept and there is no consistently accepted technique or scheme for scoring CSR practices. This study uses content analysis, and human involvement in content analysis is a limitation which can introduce error and subjectivity into the data generating process. Second, this study uses only annual reports and stand-alone CSR reports to capture the CSR practices of the selected companies, although some companies may use other media to communicate CSR information. Third, companies do not make an immediate announcement once they realize that prior financial statements have to be restated. Analysts or other users of financial statements are aware of the restatements only when they see the comparative financial statements in the following year. In addition, no list of restated companies is available from Bursa Malaysia. Finally, this study focuses on the Malaysian companies and research houses who participated in the CBRS scheme, ignoring the characteristics and analysts' recommendations for non-CBRS companies and research houses.

In spite of the above limitations, the current study provides a comprehensive understanding of the influence of CSR, institutional investors' ownership and financial restatements on sell-side analysts' stock recommendations in Malaysian companies. Moreover, these limitations draw attention to improvement in future studies.

5.5 Suggestion for Future Research

The results of this study highlight the need for further study. First, future researchers could conduct interviews with CBRS sell-side analysts to provide more views and insights and complement the approach used in this study. Second, they could use many communication tools, such as websites and social media, to provide more evidence about CSR practices. Third, they could use data from other databases such as ASSET4 or Bloomberg which provide data about CSR disclosure. Fourth, they could examine the consequences of financial restatements on other capital market outcomes and consider the different types of restatements. Fifth, they could focus on the listed companies that did not participate in the CBRS scheme but have analyst following, and compare the characteristics of this group to the CBRS companies. Finally, they could compare the CBRS scheme in Malaysia with similar schemes in other countries, such as Singapore.

5.6 Conclusion

The current study investigates the influence of CSR, institutional investors' ownership and financial restatements on sell-side analysts' stock recommendations for companies listed on Bursa Malaysia and participating in the CBRS schemes. It finds that sell-side analysts issue more favourable stock recommendations for companies with greater CSR disclosure, implying that CBRS sell-side analysts consider ESG issues when they issue their stock recommendations. The findings also indicate that the presence of both transient and dedicated institutional investors is viewed positively by sell-side analysts, and in particular that CBRS analysts issue more favourable stock recommendations for companies with higher IO_TRNST and IO_DEDI ownership levels. Finally, and controversially, the study

finds that sell-side analysts do not always react adversely to restated companies, neglecting restatement announcements and issuing favourable stock recommendations.



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APPENDICES

Appendix A: CSR Reporting Quality Measurement

No	Themes and Dimensions	References	3: Quanti 2: Quali 1: Quali 0: No Disc
ENVIRONMENT THEME			
1	Pollution Control	(Anas <i>et al.</i> , 2015; Bursa Malaysia, 2008; Janggu <i>et al.</i> , 2007; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011; Zainal <i>et al.</i> , 2013b)	
2	Waste Management	(Janggu <i>et al.</i> , 2007; Zainal <i>et al.</i> , 2013b)	
3	Environmental Awards	(Ahmed Haji, 2013; Nik Ahmad <i>et al.</i> , 2003; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011; Sadou <i>et al.</i> , 2017; Zainal <i>et al.</i> , 2013b)	
4	Prevention and Reparation Program	(Nik Ahmad <i>et al.</i> , 2003; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011)	
5	Reusing and Recycling	(Nik Ahmad <i>et al.</i> , 2003; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011)	
6	Environmental Conservation	(Bursa Malaysia, 2008; Saleh <i>et al.</i> , 2010, 2011; Katmon <i>et al.</i> 2017; Sadou <i>et al.</i> , 2017; Zainal <i>et al.</i> , 2013b)	
7	Effective usage of Energy and Resources	(Nik Ahmad <i>et al.</i> , 2003; Sadou <i>et al.</i> , 2017; Anas <i>et al.</i> , 2015)	
ENVIRONMENT TOTAL			
COMMUNITY THEME			
1	Donation Programs	(Ahmed Haji, 2013; Amran & Devi, 2007; Saleh <i>et al.</i> , 2010, 2011; Sadou <i>et al.</i> , 2017)	
2	Training, Education and Scholarship	(Ahmed Haji, 2013; Amran & Devi, 2007; Anas <i>et al.</i> , 2015; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011; Sadou <i>et al.</i> , 2017; Zainal <i>et al.</i> , 2013b)	
3	Sports and Culture	(Amran & Devi, 2007; Janggu <i>et al.</i> , 2007; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011; Sadou <i>et al.</i> , 2017; Zainal <i>et al.</i> , 2013b)	
4	Community Awards	(Zainal <i>et al.</i> , 2013b)	

No	Themes and Dimensions	References	3: Quanti 2: Quali 1: Quali 0: No Disc
5	Community Health and Safety	(Ahmed Haji, 2013; Janggu <i>et al.</i> , 2007; Zainal <i>et al.</i> , 2013b)	
6	Public Project	(Amran & Devi, 2007; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011)	
COMMUNITY TOTAL			
MARKETPLACE THEME			
1	Product Development	(Amran & Devi, 2007; Nik Ahmad <i>et al.</i> , 2003; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011; Zainal <i>et al.</i> , 2013b)	
2	Product Safety	(Ahmed Haji, 2013; Amran & Devi, 2007; Janggu <i>et al.</i> , 2007; Katmon <i>et al.</i> 2017; Nik Ahmad <i>et al.</i> , 2003; Saleh <i>et al.</i> , 2010, 2011; Zainal <i>et al.</i> , 2013b)	
3	Product Quality	(Amran & Devi, 2007; Janggu <i>et al.</i> , 2007; Katmon <i>et al.</i> 2017; Nik Ahmad <i>et al.</i> , 2003; Saleh <i>et al.</i> , 2010, 2011; Sadou <i>et al.</i> , 2017; Zainal <i>et al.</i> , 2013b)	
4	Customer Services	(Nik Ahmad <i>et al.</i> , 2003; Katmon <i>et al.</i> 2017; Saleh <i>et al.</i> , 2010, 2011; Sadou <i>et al.</i> , 2017; Zainal <i>et al.</i> , 2013b)	
5	Stakeholder Engagement	(Bursa Malaysia, 2008; Zainal <i>et al.</i> , 2013b)	
6	Marketplace Awards	(Amran & Devi, 2007; Zainal <i>et al.</i> , 2013b)	
7	Supplier Relation	(Zainal <i>et al.</i> , 2013b)	
MARKETPLACE TOTAL			
WORKPLACE THEME			
1	Employee Health and Safety	(Ahmed Haji, 2013; Anas <i>et al.</i> , 2015; Bursa Malaysia, 2008; Katmon <i>et al.</i> 2017; Nik Ahmad <i>et al.</i> , 2003; Saleh <i>et al.</i> , 2010, 2011; Sadou <i>et al.</i> , 2017; Sadou <i>et al.</i> , 2017; Zainal <i>et al.</i> , 2013b)	
2	Employee Training and Education	(Ahmed Haji, 2013; Amran & Devi, 2007; Bursa Malaysia, 2008; Janggu <i>et al.</i> , 2007; Katmon <i>et al.</i> 2017; Nik Ahmad <i>et al.</i> , 2003; Sadou <i>et al.</i> , 2017; Saleh <i>et al.</i> , 2010, 2011)	

No	Themes and Dimensions	References	3: Quanti 2: Quali specific info 1: Quali 0: No Disc
3	Employee Benefit and Welfare	(Amran & Devi, 2007; Bursa Malaysia, 2008; Janggu <i>et al.</i> , 2007; Katmon <i>et al.</i> 2017; Nik Ahmad <i>et al.</i> , 2003; Saleh <i>et al.</i> , 2010, 2011; Sadou <i>et al.</i> , 2017; Zainal <i>et al.</i> , 2013b)	
4	Employee Profile	(Amran & Devi, 2007; Katmon <i>et al.</i> 2017; Nik Ahmad <i>et al.</i> , 2003; Sadou <i>et al.</i> , 2017; Saleh <i>et al.</i> , 2010, 2011)	
5	Employee Development	(Bursa Malaysia, 2008; Janggu <i>et al.</i> , 2007)	
6	Employee Diversity	(Ahmed Haji, 2013; Amran & Devi, 2007; Anas <i>et al.</i> , 2015; Bursa Malaysia, 2008; Nik Ahmad <i>et al.</i> , 2003; Sadou <i>et al.</i> , 2017)	
7	Share Option for Employee	(Amran & Devi, 2007; Janggu <i>et al.</i> , 2007; Katmon <i>et al.</i> 2017; Nik Ahmad <i>et al.</i> , 2003; Saleh <i>et al.</i> , 2010, 2011)	
8	Workplace Awards	(Amran & Devi, 2007; Bursa Malaysia, 2008; Nik Ahmad <i>et al.</i> , 2003; Saleh <i>et al.</i> , 2010, 2011; Zainal <i>et al.</i> , 2013b)	
WORKPLACE TOTAL			
GRAND TOTAL			

Appendix B: Examples of Types of Restatements

Company		Note from the Annual Report	Types of Restatement
Guh Holdings Berhad	2013	The calculation of earnings per share for the previous financial year has been adjusted retrospectively to reflect the changes in the number of shares as a result of the bonus issue during the current financial year.	Accounting rule application failure
Sunway Berhad	2012	Certain comparative amounts have been restated to conform with current year's presentation.	Misrepresentation
Scan Associates Berhad	2008	In relation to the findings of the Investigative Audit (Note 33), the Group has restated its comparative figures accordingly. Retrospectively, the cumulative effect of the correction of error is computed and reported as an adjustment to the beginning retained profits.	Irregularity



Appendix C: Full Results of Random-Effects Ordered Probit Regression

Random-Effects Ordered Probit Regression Results

Independent Variables	Predicted Signs	Coef.	z.	p-value
CSR	+	0.362	2.02	0.044**
IO_TRNST	+	0.191	2.99	0.003***
IO_DEDI	+	0.119	2.16	0.031**
RESTATE	-	0.238	1.89	0.058*
BSIZE	?	-0.050	-1.33	0.182
BINDP	+	0.201	0.35	0.725
DUAL	+	0.349	1.66	0.096*
MOWN	?	0.007	1.53	0.126
SIZE	+	-0.117	-1.80	0.073*
LEVGE	-	-0.001	-0.12	0.905
BTM	+	0.072	0.79	0.431
EP	+	1.436	2.66	0.008***
ROA	+	0.030	2.76	0.006***
RETURN	+	0.377	3.37	0.001***
Year2009	?	0.422	2.850	0.004***
Year2010	?	0.975	5.400	0.000***
Year2011	?	0.594	3.720	0.000***
Year2012	?	0.358	1.950	0.051*
Year2013	?	0.071	0.330	0.741
CONSUM	?	-0.246	-0.970	0.331
FINANCE	?	0.367	0.990	0.324
HOTELS	?	-0.673	-2.290	0.022**
INDPROD	?	-0.519	-2.200	0.028**
IPC	?	-0.418	-1.610	0.108
PLANT	?	-0.682	-2.080	0.037**
PROPERT	?	0.891	2.540	0.011**
REITS	?	0.437	0.650	0.513
TECHNO	?	-0.771	-2.610	0.009***
TRADSERV	?	-0.452	-1.960	0.050**
Time and Sector Dummies			Yes	
Log Pseudolikelihood			-611.216	
Wald Chi ² (28)			232.80	
Prob > Chi ²			0.000	
Number of Companies			285	
Number of Observations			737	
Time Periods			6	

***, **, * indicate statistical significance at the 0.01, 0.05 and 0.10 levels, respectively. REC = CBRS sell-side analysts' stock recommendations; CSR = Quality of CSR reporting; IO_TRNST = Percentage ownership of transient institutional investors with ln transformation; IO_DEDI = Percentage ownership of dedicated institutional investors with ln transformation; RESTATE = Financial restatements; BSIZE = Board size; BINDP = Board independence; DUAL = Duality; MOWN = Managerial ownership; SIZE = Log of Market capitalization; LEVGE = Total debt to total assets ratio; BTM = Book to market ratio; EP = Earnings to price ratio; ROA = Return on assets ratio; RETURN = The stock price at the fiscal year end for company i period t minus stock price at the fiscal year end for company i period t-1 to stock price at the fiscal year end for company i period t-1; Year2009-2013 = Dummy variables of years; CONSUM, FINANCE, HOTELS, INDPROD, IPC, PLANT, PROPERT, REITS, TECHNO and TRADSERV are dummies indicate to Consumer Product, Finance, Hotels, Industrial Product, Infrastructure Project Companies, Plantation, Properties, Real Estate Investment Trusts, Technology, Trading and service sectors respectively.

Appendix D: Sample from CBRS Analysts Report



Mercury Securities Sdn Bhd

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Analysis Reports

RESULTS – 2Q/FY11

30 Nov 2010

For period Jul-Sep 2010

Panasonic Manufacturing Malaysia		Market Price:	RM18.62
		Market Capitalisation:	RM1131.1m
		Board:	Main Board
Stock Code/Name:	3719 / PANAMY	FBM Index:	EMAS Shariah/Small Cap
Recommendation:	BUY	Sector:	Consumer Products

Analyst: Edmund Tham

Key Stock Statistics	2011E
EPS (sen)	136.8
P/E (x)	13.6
Dividend/Share (sen)	130.0
NTA/Share (RM)	10.59
Book Value/Share (RM)	10.59
Issued Capital (mil shares)	60.7
52-weeks share price (RM)	12.10 – 21.17
Major Shareholders:	
Panasonic Management (M) SB	47.5
Aberdeen Assets Mgmt Plc	10.6
Employees' Provident Fund	6.0

2Q/30 Sep	2Q11	2Q10	yoy %	1Q11	qoq%
Rev (RMm)	202.2	172.8	17.0	205.5	(1.6)
EBIT (RMm)	22.2	13.9	59.6	17.1	29.6
NPAT (RMm)	22.0	15.6	41.1	19.3	14.0
EPS (sen)	36.2	25.7	41.1	31.8	14.0

1H/30 Sep	1H11	1H10	yoy %
Rev (RMm)	407.7	328.7	24.0
EBIT (RMm)	39.3	24.8	58.9
NPAT (RMm)	41.3	27.5	50.2
EPS (sen)	68.0	45.3	50.2

PERFORMANCE

Panasonic Manufacturing Malaysia's (PMMA) annualized 1H/FY11 revenue and net profit after tax (NPAT) both came in on the upper-end of our earlier estimates. Nevertheless, we note that PMMA usually performs better in its 1H of its financial year.

"Satisfactory 2Q performance"

PMMA's revenue of RM202.2 million for 2Q/FY11 ended 30th September 2010 was an increase of 17.0% as compared with the revenue of RM172.8 million registered in the corresponding 2Q/FY10. The company's combined profit before tax (PBT) of RM28.2 million for 2Q/FY11 had increased by 45.7% y-o-y. The company's combined 2Q/FY10 also included a derivative gain amounting to RM1.96 million.

PMMA registered revenue of RM407.7 million for its 1H/FY11 ended 30th September 2010, an increase of 24.0% y-o-y. This significant increase was mainly contributed by higher sales to the Middle East region and the transfer of manufacture and sales of some models of food processor and juicer from Japan to Malaysia (the full impact to be seen in FY11). PMMA had achieved a higher combined PBT of RM52.8 million for its 1H/FY11, an increase of 54.0% as compared to the PBT in 1H/FY10.

Per Share Data	2008	2009	2010	2011E
Book Value (RM)	9.96	9.92	10.20	10.59
Earnings (sen)	86.6	81.9	106.8	136.8
Dividend (sen)	120.3	105.0	120.0	130.0
Payout Ratio (%)	103.9	96.1	84.3	71.3
PER (x)	21.5	22.7	17.4	13.6
P/Book Value (x)	1.9	1.9	1.8	1.8
Dividend Yield (%)	6.5	5.6	6.4	7.0
ROE (%)	8.7	8.3	10.5	12.9
Net Gearing (cash) (x)	(0.76)	(0.77)	(0.80)	(0.78)

P&L Analysis (RM mil)	2008	2009	2010	2011E
Year end: Mar 31				
Revenue	562.5	600.9	679.8	776.9
Operating Profit	58.4	51.9	72.5	97.6
Depreciation	(14.2)	(15.2)	(16.3)	(17.3)
Interest Expenses	0.0	0.0	0.0	0.0
Pre-tax Profit	64.9	60.8	79.3	103.4
Effective Tax Rate (%)	18.9	18.2	18.3	19.6
Net Profit	52.6	49.8	64.8	83.1
Operating Margin (%)	10.4	8.6	10.7	12.6
Pre-tax Margin (%)	11.5	10.1	11.7	13.3
Net Margin (%)	9.4	8.3	9.5	10.7

* RM1.00 par value

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PMMA's 2Q/FY11 revenue of RM202.2 million had decreased slightly by 1.6% compared to the revenue recorded in the preceding 1Q/FY11. However, with a derivative gain of RM1.96 million in the quarter, the company achieved a combined PBT of RM28.2 million, an increase of 14.8% compared to the PBT reported in the preceding quarter.

OUTLOOK/CORP. UPDATES

We are still optimistic on PMMA's earnings outlook for its FY11, despite of economic and debt difficulties in some economies around the world. PMMA's business model, cost structure and profitability have remained resilient.

"Still optimistic on outlook"

In its World Economic Outlook (WEO) report, the International Monetary Fund (IMF) viewed that the global recovery remains fragile, due to imbalances in a number of economies. Global economic activity is forecast to expand by 4.8% in 2010 and 4.2% in 2011. IMF projects that the output of "emerging and developing" economies will expand at rates of 7.1% and 6.4%, respectively in 2010 and 2011. In advanced economies, however, growth is projected at only 2.7% and 2.2%, respectively, with some economies slowing noticeably during the second half of 2010 and the first half of 2011, followed thereafter by a reacceleration of economic activity.

"Economic factors to affect consumer sentiment"

Malaysia had reported a reasonable 3Q/2010 GDP growth of +5.3% while Bank Negara Malaysia (BNM) had continued to maintain its overnight policy rate (OPR) at 2.75%. Malaysia's 3Q/2010 unemployment rate has dropped to 3.2% while its CPI for October 2010 has risen slightly to a still comfortable 2.0%. The continued economic recovery would lead to sustained consumer optimism and hence assist to raise domestic consumption, including spending on retail products such as household electrical and electronic products. This augurs well for PMMA's prospects and outlook.

PMMA will continue to strengthen its collaboration activities with its associated sales companies to boost sales of its products in both the domestic and export markets amidst an increasingly competitive market. Besides this, PMMA also routinely organizes various sales, marketing and A&P (advertising and promotion) activities including sales conventions,

road shows and dealers' workshops. PMMA had doubled up its efforts in strengthening frontline capabilities, product competitiveness and customer service infrastructure. PMMA's management also plans to strengthen its competitive edge through continuous productivity and quality improvement initiatives, prudent cash management and cost control measures.

PMMA is committed to improve its earnings growth and manufacturing capabilities under its mid-term plan that focuses on sales expansion of its existing products to the equatorial zone countries and the continued increase of sales derived from the **transfer of some product models to PMMA**, which are currently produced by other manufacturing companies in Japan and China (e.g. food processor and juicer).

"Regional collaborations"

In March 2010, the **Equator Volume Zone project** was launched. This was a collaboration project between Panasonic companies in Asia and Oceania region, the Middle East, Africa and Latin America to spread the horizontal expansion of volume zone products in the equatorial belt zone. PMMA plans to develop and produce regional-based products with emphasis on sales to the Asian/Middle East region.

"Various innovative changes implemented"

PMMA's management has implemented many new innovative changes, including in manufacturing processes, information technology innovations and human resources system. With the application of a flexible manufacturing concept to meet market demand, the company had increased the number of **assembly block cells**, which enable simultaneous production of different product models. This has improved daily production capacity, helped to reduce product model changing time and minimized manpower.

PMMA had implemented a drive to increase the number of suppliers under the **Vendor Managed Inventory programme** whereby the suppliers consigned their goods to PMMA's factory location and shipment consolidation was arranged to designated hubs (across Southeast Asia and East Asia) in order to maximise delivery load per container. This reduced logistic costs and at the same time led to lower inventory levels.

Results Coverage

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PMMA is currently in the process of implementing a new **Enterprise Resource Planning (ERP)** system by Oracle, which will fully integrate its financial, distribution and manufacturing systems under one single platform. This is a major transformational phase for the company, and when the system is fully implemented, it will improve the overall operational efficiency of the company.

Meanwhile, PMMA's associate company, Panasonic Malaysia SB (PMSB) expects to handle more than 80,000 cubic meters of logistics transactions per month with its new **"Eco-Friendly Integrated Logistics Complex"** that will start operating in December 2010. PMSB's Managing Director, Jeff Lee, said the company currently processed about 60,000 cubic metres of transactions per month. The Integrated Logistics Complex, built on an 8-hectare site, comprises a 300,000-square foot warehouse and a 14,000-square foot administrative and operations office.

"Number 1 in Malaysia for 11 products"

Panasonic brand is ranked as the No.1 brand in Malaysia for 11 products by GfK Group (one of the largest global market research companies). These 11 products are namely rice cooker, blender, vacuum cleaner, flat panel TV, fridge, washing machine, air conditioners, microwave oven, iron, men's shaver and hair dryer). This was based on GfK's retail audit data of Malaysia unit sales from January to December 2009. In June 2010, PMMA also received the GfK Award for No. 1 Market Share in Thailand for its home shower products. During the past year, PMMA had launched 2 new products, namely bidet and dish dryer into the domestic market as well as introduced several new vacuum cleaner, home shower, blender and ceiling fan models with new or enhanced features to the domestic and export markets.

The Panasonic group in Malaysia collectively fulfils its corporate social responsibility (CSR) aligned with its late founder's management philosophy of "contributing to society through its business activities". Its CSR efforts include those for the environment (controlling emission levels, exhibition, town clean-up, waste management, marine conservation), human capital (OSH efforts, internships, skills training) and the community (the needy, sports, scholarships, donations for Indonesian earthquake victims). PMMA had won the StarBiz-ICR Malaysia Corporate Responsibility Awards 2009 among the 20 finalists of public listed companies.

VALUATION

After PMMA's strong 1H/FY11 performance, we have tweaked upwards our estimates for PMMA's full-year FY11. We believe this performance would be supported by strong sales both domestically and in export markets. Nevertheless, PMMA will face challenges from the escalating price of some raw materials (such as aluminium sheet, resin, steel roll and copper wire) and also the strengthening of the Ringgit against other major currencies (US Dollar and Yen) of which export sales are denominated in.

"FY11 forecast revised upwards"

For FY10 ended 31st March 2010, a final dividend of 35 sen per share (DPS) and a special dividend of 70 sen per share (both less tax), were paid by PMMA on 13th October 2010. These dividend payouts amounted to a total of RM47.8 million. Meanwhile, PMMA has announced an interim FY11 gross dividend per share of 15 (less tax) to be payable on 25th January 2011. This dividend would be paid out to shareholders with securities transferred into the depositor's securities account before 4pm on 31st December 2010 in respect of transfers and also securities deposited before 12:30pm on 29th December 2010 in respect of securities exempted from mandatory deposit.

"We anticipate higher FY11 DPS"

On a dividend payout ratio basis, PMMA appears to be allowing the payout ratio to drop gradually y-o-y. Nevertheless, we still expect that the amount paid out in Ringgit would be higher y-o-y. We anticipate that PMMA would pay out an even higher gross DPS for its FY11, given its strong cash position and earnings prospects.

"Valuation still attractive"

Despite retreating from its year high achieved during September 2010, PMMA still substantially outperformed the KLCI this year (+52.4% vs. +17.2% YTD). This was despite of its relatively weak adjusted beta of 0.42 to the KLCI. Based on our revised forecast of PMMA's FY11 EPS and an estimated P/E of 16 times, we derive a FY11-end (March 2011) **target price (TP) of RM21.89**, which is an upside of 17.6% from its current market price. Despite of its market leadership position, PMMA's P/E is still substantially lower than the domestic durable household product sector's average P/E of 43.0 times.

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**"Upgrade to Buy Call"**

We opine that the fall in PMMA's stock price during the past 1-2 months was not justified. This is given that PMMA's earnings performance remains very strong and it has a very strong balance sheet with zero borrowings and ample cash reserves. We note that Panasonic Corporation's (Panasonic group's global HQ in Japan) latest results announced in October 2010 reflected a positive performance as well. Furthermore, with the fall of PMMA's stock price, we view that there is now substantial stock price upside.

PMMA is a suitable stock for fundamental, long-term investors seeking a reputable, resilient, solid dividend yielding, sizeable market-cap stock with relatively steady earnings growth. As PMMA is a dominant market leader in the domestic household electrical durable goods sector, we continue to view its earnings prospects and outlook very favourably. In the future, the strength of the region's economic and consumer demand growth would continue to guide our view on PMMA's prospects.

Panasonic: 6-month Share Price

Source: NextView

Results Coverage

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Appendix E: List of Companies in the Sample

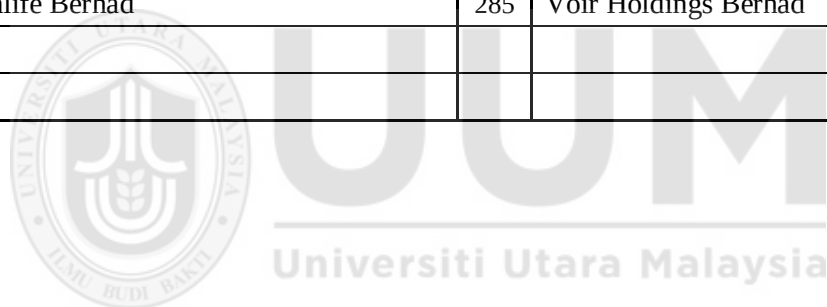
No	Name of the Companies	No	Name of the Companies
	SECTOR: CONSTRUCTION	33	JT International Berhad
1	Ahmad Zaki Resources Berhad	34	Kawan Food Berhad
2	Bina Goodyear Berhad	35	Lion Forest Industries Berhad
3	Bina Puri Holdings Berhad	36	Ltkm Berhad
4	Crest Builder Holdings Berhad	37	Malayan Flour Mills Berhad
5	Eversendai Corporation Berhad	38	Maxwell Int Holdings Berhad
6	Fajarbaru Builder Group Berhad	39	Milux Corporation Berhad
7	Gadang Holdings Berhad	40	Multi Sports Holdings Ltd
8	Hock Seng Lee Berhad	41	Natural Bio Resources Berhad
9	Ijm Corporation Berhad	42	Nestle (Malaysia) Berhad
10	Ireka Corporation Berhad	43	New Hoong Fatt Holdings Berhad
11	Kimlun Corporation Berhad	44	NI Hsin Resources Berhad
12	Lebar Daun Berhad	45	Padiberas Nasional Berhad
13	Malaysian Resources Corporation Berhad	46	Panasonic Manufacturing Malaysia Berhad
14	Mudajaya Group Berhad	47	Pelikan International Corporation Berhad
15	Muhibbah Engineering (M) Berhad	48	Poh Kong Holdings Berhad
16	Sunway Holdings Berhad	49	PPB Group Berhad
17	Trc Synergy Berhad	50	QL Resources Berhad
18	Ubg Berhad	51	Signature International Berhad
19	Wct Engineering Berhad	52	Spritzer Berhad
20	Zecon Berhad	53	Tan Chong Motor Holdings Berhad
	SECTOR: CONSUMER PRODUCTS	54	Tomei Consolidated Berhad
21	Bonia Corporation Berhad	55	Tradewinds (M) Berhad
22	British American Tobacco (Malaysia) Berhad	56	Umw Holdings Berhad
23	C.I Holdings Berhad	57	Widotech (Malaysia) Berhad
24	Carlsberg Brewery Malaysia Berhad	58	Xidelang Holdings Ltd
25	CCK Consolidated Holdings Berhad	59	Xingquan International Sports Holdings Ltd
26	Cocoaland Holdings Berhad	60	Y.S.P. Southeast Asia Holding Berhad
27	Degem Berhad	61	Yikon Corporation Berhad
28	Euro Holdings Berhad	62	Zhulian Corporation Berhad
29	Eurospan Holdings Berhad		SECTOR: FINANCE
30	Guinness Anchor Berhad	63	Affin Holdings Berhad
31	Hing Yiap Knitting Industries Berhad	64	Allianz Malaysia Berhad
32	Hong Leong Industries Berhad	65	Ammb Holdings Berhad

No	Name of the Companies	No	Name of the Companies
66	BIMB Holdings Berhad	98	Hartalega Holdings Berhad
67	Bumiputra-Commerce Holdings Berhad	99	Hiap Teck Venture Berhad
68	Bursa Malaysia Berhad	100	Hpi Resources Berhad
69	Jerneh Asia Berhad	101	Imaspro Corporation Berhad
70	Kurnia Asia Berhad	102	Jadi Imaging Holdings Berhad
71	LPI Capital Berhad	103	Jaya Tiasa Holdings Berhad
72	Malayan Banking Berhad	104	Keck Seng (Malaysia) Berhad
73	Malaysia Building Society Berhad	105	Kian Joo Can Factory Berhad
74	OSK Holdings Berhad	106	Kkb Engineering Berhad
75	RHB Capital Berhad	107	Kossan Rubber Industries Berhad
76	TA Enterprise Berhad	108	Lafarge Malayan Cement Berhad
	SECTOR: HOTELS	109	Leader Universal Holdings Berhad
77	Shangri-La Hotels (Malaysia) Berhad	110	Leweko Resources Berhad
	SECTOR: INDUSTRIAL PRODUCTS	111	Lingui Developments Berhad
78	APL Industries Berhad	112	LNG Resources Berhad
79	APM Automotive Holdings Berhad	113	Lysaght Galvanized Steel Berhad
80	Aturmaju Resources Berhad	114	Malaysia Steel Works (Kl) Berhad
81	AV Ventures Corporation Berhad	115	Melewar Industrial Group Berhad
82	AXIS Incorporation Berhad	116	Metrod (Malaysia) Berhad
83	Boustead Heavy Industries Corporation Berhad	117	Muda Holdings Berhad
84	BP Plastics Holding Berhad	118	Ornasteel Holdings Berhad
85	BSL Corporation Berhad	119	Petronas Chemicals Group Berhad
86	Cahaya Mata Sarawak Berhad	120	Petronas Gas Berhad
87	Can-One Berhad	121	PMB Technology Berhad
88	Chemical Company of Malaysia Berhad	122	Press Metal Berhad
89	Concrete Engineering Products Berhad	123	Quality Concrete Holdings Berhad
90	Delloyd Ventures Berhad	124	Ralco Corporation Berhad
91	Dufu Technology Corp. Berhad	125	Rapid Synergy Berhad
92	EP Manufacturing Berhad	126	Scientex Berhad
93	Evergreen Fibreboard Berhad	127	Seacera Tiles Berhad
94	Fibon Berhad	128	Sealink International Bhd
95	Furniweb Industrial Products Berhad	129	Sindora Berhad
96	Globaltec Formation Berhad	130	Sino Hua-An International Berhad
97	Guh Holdings Berhad	131	SKP Resources Berhad

No	Name of the Companies	No	Name of the Companies
132	SLP Resources Berhad		SECTOR: PROPERTIES
133	Southern steel Berhad	163	A & M Realty Berhad
134	STS Technic Berhad	164	Bertam Alliance Berhad
135	Subur Tiasa Holdings Berhad	165	Crescendo Corporation Berhad
136	Supermax Corporation Berhad	166	Dijaya Corporation Berhad
137	Supportive International Holdings Berhad	167	Eastern & Oriental Berhad
138	Three-A Resources Berhad	168	GW Plastics Holding Berhad
139	Titan Chemicals Corporation Berhad	169	HUA Yang Berhad
140	Toyo Ink Group Berhad	170	Hunza Properties Berhad
141	UCHI Technologies Berhad	171	Johor Land Berhad
142	United U-Li Corporation Berhad	172	Krisassets Holdings Berhad
143	V.S. Industry Berhad	173	KSL Holdings Berhad
144	Weida (M) Berhad	174	Magna Prima Berhad
145	Wellcall Holdings Berhad	175	Mah Sing Group Berhad
146	Wtk Holdings Berhad	176	Malton Berhad
147	Yung Kong Galvanising Industries Berhad	177	Naim Cendera Holdings Berhad
	SECTOR: IPC	178	Selangor Properties Berhad
148	Lingkarans Trans Kota Holdings Berhad	179	Sentoria Group Berhad
	SECTOR: PLANTATION	180	Sunway Berhad
149	Asiatic Development Berhad	181	United Malayan Land Berhad
150	Boustead Holdings Berhad		SECTOR: REITS
151	Felda Global Ventures Holdings Berhad	182	Axis Real Estate Investment Trust
152	Ijm Plantations Berhad	183	Hektar Real Estate Investment Trust
153	Kim Loong Resources Berhad	184	IGB Real Estate Inv Trust
154	Kulim (Malaysia) Berhad	185	Sunway Real Estate Investment Trust
155	Kurnia Setia Berhad		SECTOR: TECHNOLOGY
156	Kwantas Corporation Berhad	186	CBS Technology Berhad
157	NPC Resources Berhad	187	Cuscapi Berhad
158	Sarawak Oil Palms Berhad	188	Dataprep Holdings Berhad
159	Sarawak Plantation Berhad	189	ECS Ict Berhad
160	TH Plantations Berhad	190	ETI Tech Corporation Berhad
161	TSH Resources Berhad	191	Genetec Technology Berhad
162	United Malacca Berhad	192	Grand-Flo Solution Berhad

No	Name of the Companies	No	Name of the Companies
193	Green Packet Berhad	225	Faber Group Berhad
194	H-displays (Msc) Berhad	226	Freight Management Holdings Berhad
195	Iris Corporation Berhad	227	GD Express Carrier Berhad
196	JF Technology Berhad	228	Genting Berhad
197	K-One Technology Berhad	229	Handal Resources Berhad
198	Measat Global Berhad	230	Help International Corporation Berhad
199	Msian Genomics Res Centre Berhad	231	IHH Healthcare Berhad
200	Mtouce Technology Berhad	232	KFC Holdings (Malaysia) Berhad
201	N2N Connect Berhad	233	KPJ Healthcare Berhad
202	Nextnation Communication Berhad	234	LCL Corporation Berhad
203	Notion Vtec Berhad	235	Malaysia Airports Holdings Berhad
204	Rexit Berhad	236	Malaysia Marine and Heavy Engineering Holdings Berhad
205	Scan Associates Berhad	237	Masterskill Education Group Berhad
206	Smr Technologies Berhad	238	Maxis Berhad
207	Unisem (M) Berhad	239	MBM Resources Berhad
208	Visdynamics Holdings Berhad	240	Media Chinese International Limited
209	YGL Convergence Berhad	241	Media Prima Berhad
	SECTOR: TRADING/SERVICES	242	Minetech Resources Berhad
210	Aeon Co.(M) Berhad	243	Misc Berhad
211	Airasia Berhad	244	MMC Corporation Berhad
212	Alam Maritim Resources Berhad	245	MTD Capital Berhad
213	Amway (Malaysia) Holdings Berhad	246	Multi-Purpose Holdings Berhad
214	Asia Media Group Berhad	247	MY E.G. Services Berhad
215	Astro All Asia Networks Plc	248	Nagamas International Berhad
216	Astro Malaysia Holdings Berhad	249	Ogawa World Berhad
217	AWC Facility Solutions Berhad	250	Pantech Group Holdings Berhad
218	Berjaya Corporation Berhad	251	PBA Holdings Berhad
219	Berjaya Land Berhad	252	Perisai Petroleum Teknologi Berhad
220	Bintulu Port Holdings Berhad	253	Petra Energy Berhad
221	Bumi Armada Berhad	254	Petronas Dagangan Berhad
222	Century Logistics Holdings Berhad	255	Pharmaniaga Berhad
223	Deleum Berhad	256	Plus Expressways Berhad
224	DFZ Capital Berhad	257	POS Malaysia Berhad

No	Name of the Companies	No	Name of the Companies
258	QSR Brands Berhad	272	Taliworks Corporation Berhad
259	Ramunia Holdings Berhad	273	Tamadam Bonded Warehouse Berhad
260	Redtone International Berhad	274	Tanjong Public Limited Company
261	Reliance Pacific Berhad	275	Tanjung Offshore Berhad
262	Resorts World Berhad	276	Telekom Malaysia Berhad
263	Saag Consolidated (M) Berhad	277	Tenaga Nasional Berhad
264	Salcon Berhad	278	Texchem Resources Berhad
265	Sapuracrest Petroleum Berhad	279	The Nomad Group Berhad
266	Sapurakencana Petroleum Berhad	280	TM International Berhad
267	Sarawak Energy Berhad	281	TMC Life Sciences Berhad
268	Scicom (Msc) Berhad	282	Triumphal Associates Berhad
269	See Hup Consolidated Berhad	283	TSM Global Berhad
270	Star Publications (Malaysia) Berhad	284	Unimech Group Berhad
271	Stemlife Berhad	285	Voir Holdings Berhad



Appendix F: List of Institutional Investors

DEDICATED INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
	GOVERNMENT MANAGED PENSION FUNDS	7	Amanah Saham Kedah
1	Employees Provident Fund Board (Kumpulan Wang Simpanan Pekerja)	8	Amanah Saham Mara
2	Retirement Funds Incorporated (Kumpulan Wang Persaraan (Diperbadankan))	9	Amanah Saham Pahang
3	Armed Forces Fund Board (Lembaga Tabung Angkatan Tentera)	10	Amanah Saham Sarawak
	GOVERNMENT- MANAGED PILGRIMAGE FUNDS	11	Sabah Amanah Saham
4	Lembaga Tabung Haji		OTHER GLICS
	GOVERNMENT- MANAGED UNIT TRUST FUNDS	12	Khazanah Nasional Berhad
5	Permodalan Nasional Berhad	13	Minister of Finance (Incorporated)
	Amanah Saham Malaysia	14	Valuecap
	Amanah Saham Wawasan 2020	15	Pertubuhan Keselamatan Sosial
	Amanah Saham Nasional	16	Lembaga Kemajuan Tanah Persekutuan (Felda)
	Amanah Saham Nasional2	17	Petroliaam Nasional Berhad
	Amanah Saham Kesihatan		
	Amanah Saham Pendidikan		
	Amanah Saham 1 Malaysia		
	Amanah Saham Bumiputera		
	Amanah Saham Didik		
6	Amanah Saham Darul Iman		

TRANSIENT INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
	BANKS: FOREIGN BANKS	48	Oversea-Chinese Banking
18	Bank of New York Mellon	49	Pictet & Cie Bank
19	Banque Cantonale Vaudois	50	PNB Bank
20	Banque Privee Edmond De Rothschild	51	Pohjola Bank
21	Barclays Bank	52	RBS Coutts Bank Ltd
22	BNP Paribas	53	Royal Bank of Canada
23	BSI Bank	54	Skandinaviska Enskilda Banken
24	Caceis Bank	55	SNS Bank
25	Citibank	56	Societe Generale Bank & Trust
26	Credit Agricole Bank	57	Standard Chartered Bank
27	Credit Suisse	58	State Street Bank
28	Danske Bank	59	Svenska Handelsbanken
29	DBS Bank	60	The Bank of Nova Scotia
30	Deutsche Bank	61	The Bank of Tokyo-Mitsubishi
31	Dexia Bank	62	UBS AG
32	East Asia Bank	63	United Overseas Bank
33	EFG Bank		LOCAL BANKS
34	ERSTE Bank	64	Ambank
35	Goldman Sachs International	65	Bank SME
36	Hambros Bank	66	Bank Rakyat
37	Hongkong And Shanghai Bank Corporation	67	CIMB Bank
38	HSBC Bank	68	Hong Leong Bank
39	Ishares Bank	69	Hwang DBS Investment Bank Berhad
40	Jpmorgan Chase Bank	70	Maybank
41	Julius Baer	71	OCBC Bank
42	KAS Bank	72	OSK Investment Bank Berhad
43	Landesbank	73	RHB Bank
44	Liechtensteinische Landesbank Aktiengesellschaft	74	Sabah Development Bank
45	Macquarie Bank		INSURANCE COMPNIES
46	Merrill Lynch		FOREIGN INSURANCE COMPNIES
47	Morgan Stanley	75	Allianz Insurance

TRANSIENT INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
76	American International Assurance Berhad	106	Takaful Ikhlas
77	Berjaya Sompo Insurance	107	Uni.Asia General Insurance Berhad
78	Great Eastern Life Assurance	MUTUAL FUNDS	
79	Manulife Insurance (Malaysia) Berhad		FOREIGN MUTUAL FUNDS
80	Miller Insurance Group	108	ABB Capital Fund
81	Nipponkoa Insurance Company	109	Aberdeen Asset Management
82	Prudential Assurance Malaysia Berhad		Asia Pacific Fund
83	Tokio Marine Life Insurance		Asia Ex-Japan Equity Fund
	LOCAL INSURANCE COMPANIES	110	Asian Smaller Companies Investment Trust
84	AFFIN General Insurance Berhad		Emerging Markets Equity Fund
85	AMG Insurance Berhad		Emerging Markets Fund
86	Amlife Insurance Berhad		Emerging Markets Institutional Fund
87	AXA AFFIN General Insurance Berhad		Global Income Fund
88	BH insurance		Institutional Commingled Fund
89	CIMB Aviva Assurance BHD	111	ABN Amro Multi-Manager Funds
90	Etiqa Insurance	112	Acacia Fund
91	Etiqa Takaful	113	Acadian Emerging Markets Portfolio
92	Hong Leong Assurance	114	AGF Emerging Markets Fund
93	ING Insurance Berhad	115	Aim Asia Pacific Growth Fund
94	Kurnia Insurans	116	Aims Absolute Asia Fund Ltd
95	Labuan Reinsurance	117	Albizia Asean Opportunities Fund
96	Malaysian Assurance Alliance Berhad	118	Alcor Fund
97	Malaysian Reinsurance Berhad	119	Allianz Pan Asian Reits Fund Segregated Portfolio
98	Mayban Life Assurance	120	Allianz Global Investors Fund
99	Mcis Zurich Insurance	121	Apollo Asia Fund
100	Mui Continental Insurance Berhad	122	Arisaig Asia Fund Limited
101	Multi-Purpose Insurance	123	Arohi Emerging Asia Master Fund
102	Oriental Capital Assurance Berhad	124	Artisan International Fund
103	Pacific & Orient Insurance Co Berhad	125	Asia Oceania Dividend Yield Stock Mother Fund
104	Panglobal Insurance Berhad	126	Asia Pacific Value Smart Select (Monega Kag Mbh)
105	Syarikat Takaful Malaysia Berhad	127	Asian Equity Fund

TRANSIENT INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
128	Atlantis Asian Recovery Fund	145	Deutsche Asset Management
129	Asian Tiger Fund		DWS Emerging Markets Type O
			DWS Global Thematic Fund
130	Baillie Gifford Pacific Fund	146	South-East Asia Fund
131	Baring Pacimc Fund	147	Eclectica Fund
132	Black River Asia Fund	148	Eaton Vance Investment Managers
133	Blackhorse Emerging Enterprises Master Fund		Tax-Managed Emerging Markets Fund
134	Blackrock Mutual Funds	149	EK Asia Fund
	Blackrock Global Allocation Fund	150	Ashmore Investment
135	Corston-Smith Asset Management		Emerging Markets Global Small Capitalization Fund
	Corston-Smith Asean Corporate Governance Fund	151	Emerging Markets Value Trust
136	Caravel Management	152	Evenstar Master Fund
	Caravel Fund	153	Federated International Small-Mid Company Fund
137	Cim Global Property Fund	154	First State Investments
138	Comgest Growth		First State Asia Pacific Leaders Fund
139	CG Nouvelle Asie		First State Global Emerging Markets Leaders Fund
	Comgest Growth Emerging Markets		First State Singapore And Malaysia Growth Fund
	Comgest Growth Gem Promising Companies	155	Firth Investment Management
140	Commonfund Emerging Markets Investors Company		Jf Malaysia Fund
141	Concordia Asia-Pacific Multi-Strategy Master Fund	156	FMM- Fonds
142	Daiwa Emerging Asean Mid-Small Cap Equity Fund	157	FPA Hawkeye Fund
143	Daiwa Rising Asean Equity Fund	158	Frasers Centrepont Trust
144	Dimensional Fund	159	Templeton Emerging Markets Fund
	DFA Emerging Markets Fund	160	Fullerton Fund Management
	DFA Emerging Markets Small Cap Series		Fullerton Alpha
	DFA Fund		Fullerton Lux Funds
	DFA Investment Dimensions Group	161	Danske Invest
			Global Emerging Markets Small Cap

TRANSIENT INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
162	Genesis Investment Management	181	Lazard Asset Management
	Genesis Asean Opportunities		Lazard Emerging Markets Fund
	Genesis Emerging Markets Investment Company	182	Legg Mason Global Asset Management
	Genesis Smaller Companies	183	Lincoln Far East Trust
163	Global High Yield Emerging Equities Fund	184	Lion Global Fund
164	GMO Emerging Markets Fund	185	Litman Gregory Masters International Fund
165	Gravity Equity Fund	186	Long Term Investment Fund
166	Greatlink Asean Growth Fund	187	Longleaf Partners International Fund
167	GSI Asian Capital Growth Fund	188	LSV Asset Management
168	Harbor International Fund		LSV Emerging Markets Equity Fund
169	Harding Loevner Fund		LSV Emerging Markets Small Cap Equity Fund, Lp
170	Henderson Tr Pacific Investment Trust	189	M&G Asian Fund
171	Hermitage Global Fund	190	Macquarie Asia New Stars Fund
172	Hi-Kabl-Fonds	191	Manulife Fund
173	HMG Globetrotter	192	Marathon New Global Fund
174	Horizon Capital Management	193	Matthews International Capital Management
	Horizon Growth Fund		Matthews Asia Small Companies Fund
175	International Opportunities Fund		Matthews Asian Growth and Income Fund
176	Invesco Ltd		Matthews Pacific Tiger Fund
	Invesco Asean Equity Fund		Matthews Asia Pacific Equity Income Fund
	Invesco Perpetual International Equity Fund		Matthews Strategic Asia Fund
	Invesco Asia Pacific Growth Fund	194	MFS Emerging Markets Equity Fund
	Invesco Funds	195	MGH Investment Fund Limited
177	Isis Pacific Securities Fund	196	Mirae Asset Asia Pacific Infra Sector Equity Investment Trust
178	Janus Contrarian Fund	197	Mondrian Investment Partners
179	Jp Morgan Asset Management		Mondrian Emerging Markets Equity Fund
	Eastern Smaller Companies Fund		Mondrian Emerging Markets Small Cap Equity Fund
	Jf Asean Growth Open Mother Fund	198	Montpelier Global Funds
180	KBC Asset Management	199	Mellon Offshore Funds
	KBC Eco Water Fund		Nikko Bny Mellon Emerging Marketsmid-Small Cap Equity Fund
	KBC Equity Fund		

TRANSIENT INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
200	Ishares Fund	217	Robeco Capital Growth Funds
	MSCI Emerging Markets Index Fund	218	Robotti Global Fund
	MSCI Equity Index Fund B Malaysia	219	Rock Creek Fund
	MSCI Index Common Trust Fund	220	Russell Emerging Markets Equity Fund
201	Navis Capital Group	221	Sam Sustainable Fund
	Navis Asia Navigator Master Fund	222	Sanderson Fund
	Navis Yield Fund	223	Schroder Fund
202	Neon Liberty Wei Ji Master Fund		Schroder Asian Asset Income Fund
203	American Funds - New Economy Fund		Schroder Asian Equity Yield Fund
204	Nissay Fund	224	Sei Institutional Investments Trust Small Mid Cap Equity Fund
205	Ntasian Discovery Master Fund	225	Shenton Fund
206	Old Westbury Global Small & Mid Cap Fund	226	Skagen Kon-Tiki Fund
207	One North Capital	227	Somerset Growth Fund
	One North Capital - Asia Value Master Fund	228	SPDR Fund
208	Orbis Global Equity Fund	229	Standard Life Pacific Basin Trust
209	Fidelity Investment	230	State Street Fund
	Pacific Basin Fund	231	Sumishin Asia Oceania Fund
210	Pangolin Investment Management	232	Sumitomo Fund
	Pangolin Asia Fund	233	Swiss-Asia Fund
211	Perinvest	234	SWISSCANTO Fund
	Perinvest Lux Sicav	235	Taib-Jaic Asian Balanced Private Equity Fund
212	Pheim Sicav-Sif Fund	236	Tail Wind Fund
213	Pictet Global Selection Fund	237	Third Avenue Fund
214	Platinum Asset Management	238	TMA South East Fund
	Platinum Asia Fund	239	UBS Luxembourg
	Platinum Global Dividend Fund Limited	240	UniDynamicFonds Asia
215	Prusik Investment Management	241	USAA Emerging Markets Fund
	Prusik Asian Equity Income Fund	242	Value Partners
	Prusik Asian Smaller Companies Fund		Value Partners "A" Fund
216	Reyl (Lux) Global Funds Emerging Markets Equities		Value Partners High - Dividend Stocks Fund

TRANSIENT INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
243	Vanguard Fund	258	PMP Investment
244	Veritas Asian Fund		Dana Al-Aiman
245	Virtus Fund		Dana Bestari
246	Vittoria Fund	259	Hong Leong Asset Management
247	Vontobel Fund		Hong Leong Strategic Fund
248	Wasatch Emerging Markets Small Cap Fund		Hong Leong Consumer Products Sector Fund
249	Wellington Trust		Hong Leong Growth Fund
250	Wells Fargo		Hong Leong Penny Stock Fund
	Wells Fargo Advantage Asia Pacific Fund	260	HSBC Amanah Life select Equity Fund
	Wells Fund	261	Affin Hwang Capital
251	Wisdomtree Fund		Affin Hwang Aiman Growth Fund
	Wisdomtree Emerging Markets Equity Income Fund		Affin Hwang Select Asia Ex Japan Quantum Fund
	Wisdomtree Emerging Markets Smallcap Dividend Fund		Affin Hwang Asia Pacific (Ex Japan) Reits and Infrastructure Fund
	LOCAL MUTUAL FUNDS		Affin Hwang Select Balanced Fund
252	KAF Fund		Affin Hwang Select Income Fund
253	MIDF Amanah Strategic Fund		Affin Hwang Select Opportunity Fund
254	Amittikal	262	Kenanga Investor
255	Apex Investment		Kenanga Balanced Fund
	Apex Dana Al-Faiz		Kenanga Growth Fund
	Apex Dana Al-Sofi		Kenanga Premier Fund
256	Permodalan BSN Berhad	263	Libra Invest
	BSN Dana Al-Jadid		Libra Amanah Saham Wanita
257	CIMB-Principal Asset Management		Libra Strategic Opportunity Fund
	CIMB Islamic Dali Equity Growth Fund		Libra Tactical Extra Fund
	CIMB Islamic Dali Equity Theme Fund	264	Maakl Mutual
	CIMB-Principal Equity Fund		Maakl - HW Shariah Progress Fund
	CIMB-Principal Equity Aggressive Fund 3		Maakl AL-Fauzan
	CIMB-Principal Small Cap Fund 2		Maakl-HW Flexi Fund
	CIMB Islamic Small Cap Fund		Maakl Al-Faid
	CIMB Islamic Small Cap Fund 2		Maakl Al-Umran

TRANSIENT INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
	Maakl Dividend Fund	269	Prudential Fund
	Maakl Progress Fund		Eastspring Dana Al-Ilham
	Maakl Value Fund		Eastspring Investment Small-Cap Fund
	Maakl-Cm Shariah Flexi Fund		Eastspring Investments Dana Dinamik
	Maakl-HDBS Flexi Fund		Prudential Equity Income Fund
265	MIDF Amanah Asset Management		Prugrowth Fund
266	OSK-UOB Unit Trust Management		Prusmall-Cap Fund
	OSK-UOB Fund Emerging Opportunity Unit Trust	270	Public Mutual
	OSK-UOB Fund Global New Stars Fund		PB Aean Dividend Fund
	OSK-UOB Fund Growth and Income Focus Trust		PB Balanced Fund
	OSK-UOB Fund Kidsave Trust		PB Growth Fund
	OSK-UOB Fund Malaysia Dividend Fund		PB Islamic Asia Equity Fund
	OSK-UOB Fund Resources Fund		Public Aggressive Growth Fund
	OSK-UOB Fund Small Cap Opportunity Unit Trust		Public Asia Ittikal Fund
	OSK-UOB Fund Smart Balanced Fund		Public Balanced Fund
	OSK-UOB Fund Smart Income Fund		Public China Ittikal Fund
	OSK-UOB Fund Smart Treasure Fund		Public Dividend Select Fund
	OSK-UOB Fund Thematic Growth Fund		Public Enhanced Bond Fund
	OSK-UOB Equity Trust		Public Equity Fund
	OSK-UOB Uni Aggressive Fund		Public Far-East Property & Resorts Fund
267	Pacific Mutual		Public Far-East Select Fund
	Pacific Dana Aman		Public Growth Fund
	Pacific Dividend Fund		Public Focus Select Fund
	Pacific Pearl Fund		Public Industry Fund
	Pacific Premier Fund		Public Index Fund
	Pacific Recovery Fund		Public Islamic Alpha-40 Growth Fund
268	Pheim Unit Trusts		Public Islamic Asia Dividend Fund
	Pheim Emerging Companies Balanced Fund		Public Islamic Balanced Fund
	Pheim Asia Ex-Japan Islamic Fund		Public Islamic Dividend Fund

TRANSIENT INSTITUTIONAL INVESTORS			
No	Name of the Institution	No	Name of the Institution
	Public Islamic Equity Fund	271	RHB Asset Management
	Public Islamic Mixed Asset Fund		RHB Bond Fund
	Public Islamic Opportunities Fund		RHB mudharabah fund
	Public Islamic Optimal Growth Fund		RHB-OSK Capital Fund
	Public Islamic Sector Select Fund		RHB-OSK Small Cap Opportunity Unit Trust
	Public Islamic Select Enterprises Fund	272	Singular Asset Management
	Public Islamic Select Treasures Fund		Singular Value Fund
	Public Islamic Treasures Growth Fund	273	TA Investment Management
	Public Ittikal Fund		TA Comet Fund
	Public Regular Savings Fund		TA Dana Fokus
	Public Savings Fund		TA Global Allocator Fund
	Public Sector Select Fund		TA Growth Fund
	Public Smallcap Fund		TA Islamic Fund
	Public South-East Asia Select Fund		TA Small Cap Fund
	Public Strategic Smallcap Fund		

Appendix G: List of Participated Research Houses

N	Research House	Freq.	Percent
1	Standard and Poors	228	30.94
2	Netresearch-Asia Sdn Bhd	78	10.58
3	TA Securities Holding Bhd	77	10.45
4	Mercury Securities Sdn Bhd	58	7.87
5	Alliance Research Sdn Bhd	49	6.65
6	Asia Analytica Sdn Bhd	48	6.51
7	CIMB Securities Sdn Bhd	47	6.38
8	ZJ Advisory Sdn Bhd	41	5.56
9	Wilson & York Global Advisers Sdn Bhd	28	3.8
10	K & N Kenanga Berhad	20	2.71
11	JF Apex Securities Bhd	14	1.9
12	RHB Research Institute Sdn Bhd	13	1.76
13	OSK Research Sdn Bhd	11	1.49
14	SJ Securities Sdn Bhd	10	1.36
15	Affin Securities Sdn Bhd	7	0.95
16	Inter Pacific Securities Sdn Bhd	5	0.68
17	Kim Eng Research Sdn Bhd	3	0.41
	Total	737	100