IFRS Mandatory disclosures in Malaysia: the influence of family control and the value (ir)relevance of compliance levels

ABSTRACT

We examine the effect of family control on IFRS mandatory disclosure levels, and the valuation implications of these disclosure levels, for Malaysian companies. We find that family control is related negatively to disclosure and that compliance levels are not value relevant. These findings suggest that agency theory predictions and theories linking common law legal systems to high quality financial reporting require refining in certain national contexts. Where Type 2 agency problems dominate, institutional arrangements intended to enhance financial reporting quality aimed at mitigating Type 1 problems in developed markets may have limited effect in less developed jurisdictions.

Keywords: Compliance, Corporate governance, Culture, Family control, IFRS, Malaysia, Mandatory disclosures.

Classification codes: M41, G32.

1. Introduction

This paper is motivated by a lack of research on mandatory financial reporting disclosures and by calls for research on the valuation implications of such disclosures (cf. Hassan et al., 2009; Leuz & Wysocki, 2008; Schipper, 2007). It examines the effect of family control on International Financial Reporting Standards (IFRS) mandated disclosures, which has not previously been examined, and the value relevance of disclosure levels, in the unique Malaysian institutional and cultural environment. In Malaysia the unusual combination of politics dominated by Malays and business dominated by Chinese results in a unique research setting which differs from other Asian countries (Hasnan et al., 2013; see also Lim et al., 2014). While the Malaysian setting has been explored in some earlier studies on corporate reporting practices (see below), compliance with mandatory IFRS disclosure requirements has not previously been examined. Thus, by contributing a specific country case study, we 'recognise and discuss the country specific context rather than set it to one side or assume it does not exist' (Weetman, 2006, p. 364). This permits us to control for institutional and political factors which affect corporate reporting and investor behaviour (Ruland et al., 2007). It also permits us to test assumptions and explanation potentials of disclosure and valuation theories in a distinctive context, and alert researchers to their limitations. Our study is however also relevant beyond the Malaysian setting, and our discussion and conclusions will also be relevant for other settings where macro-economic political measures interact with cultural factors and affect or override market mechanisms.

Malaysia has fully converged its national accounting standards with IFRS and has a large proportion of family controlled firms. We measure compliance with the mandatory disclosure requirements of 12 accounting standards, which are identical to IFRS, for a sample of 221 companies listed on the Bursa Malaysia as at 31 December 2008. Controlling for corporate governance and other firm characteristics, we (i) test whether mandatory disclosure levels are

determined by family control and (ii) examine the relationship between compliance with mandatory disclosure requirements and firm value across family and non-family firms.

We find that compliance with disclosure requirements is incomplete. This supports findings of prior literature suggesting poor quality financial reporting, lack of transparency and an ineffective regulatory system in Malaysia (e.g. Ball et al., 2003). Problems of compliance are particularly evident in the case of IFRS disclosures involving high proprietary costs. There is robust evidence of a significant and negative relationship between family control and IFRS disclosure levels. This is to be expected where, as in a Malaysian context, family firms dominate, and predominantly Type 2 agency problems arise (see section 3.2). We also find statistically significant evidence linking better compliance to higher quality corporate governance. The corporate governance characteristics which appear significant vary between family and non-family firms.

We find no evidence that disclosure levels are related significantly to firm value. This supports Ball et al. (2003), who suggest that the dominance of family ownership in East Asia reduces demand for public reporting; information asymmetry is instead resolved by private communication channels. Therefore compliance with disclosure requirements does not affect market values. This suggests a lack of support for efficiency based theories which argue that high quality financial reporting acts as a mechanism to compensate for weak investor protection and insider trading in emerging capital markets (cf. Leventis and Weetman, 2004). Instead, we find a significant and negative relationship between firms with family controlled boards and firm value. Our findings can also be interpreted in the context of culture theory. Differences in how collectivism is enacted within the two largest ethnic groups - Bumiputera (Malays) and Chinese - provide explanations for differences in disclosure levels between family and non-family firms, since the former are dominated by ethnic Chinese.

Our study is relevant to regulators, standard setters and investors concerned with the implications of (non-)compliance with disclosure requirements (Schipper, 2007; IASB, 2013). Strong institutional arrangements, including high quality accounting standards and corporate governance guidelines, contribute to higher quality financial reporting. Their effectiveness, however, is subject to economic environments, (business) culture, market structure and corporate control. In developing economies such as Malaysia, where Type 2 Agency problems dominate, solutions created to mitigate the Type 1 problems faced by more developed markets, may only have limited effect.

The remainder of the paper is organised as follows. Section 2 describes the financial reporting environment in Malaysia. Section 3 discusses the theoretical framework of the study and the research hypotheses. Section 4 describes the data employed and the research design. Section 5 discusses the empirical findings and section 6 provides concluding remarks.

2. The Financial Reporting Environment in Malaysia

We now briefly introduce Malaysia's financial reporting environment. Other features of the Malaysian context, such as ownership structures, will be discussed below, within the hypothesis development and research design sections.

Malaysia's institutional structure, including the common law legal system, the taxation and accounting systems and company law have been introduced or influenced by British colonisation (Roubi & Richardson, 1998). However, the reporting environment also shares features with code law countries: the importance of banks as capital providers (Ball et al., 2003; Suto, 2003; Zhuang et al., 2000), high ownership concentration, insider governance,[1] weak investor protection and enforcement, and strong government intervention in the

[1]Insider governance systems are those where firms are predominantly owned and controlled by inside shareholders (often family members). They are characterised by limited separation of ownership and control and thus have only limited Type 1 agency problems (see e.g. Solomon, 2010, p. 194-196).

economy (Hasnan et al., 2013; Suto, 2003; Tam & Tan, 2007; Zhuang et al., 2000) (see also note 6). Malaysian financial reporting has therefore been criticised as being of low quality. Audit quality may also be compromised, since there are fewer incentives for auditors to maintain independence (Ball et al., 2003; Fevere-Marchesi, 2000). Also, Hasnan et al. (2013) suggest that Malaysian auditors seem to be unable to effectively screen clients for earnings management.

Public listed companies are required to comply with accounting standards, the Companies Act, the Securities Commission guidelines, Bursa listing requirement and the Income Tax Act (Tan, 2000). Accounting standards are issued by the Malaysian Accounting Standards Board (MASB), whose activities and operations are overseen by the Financial Reporting Foundation (FRF). Both the FRF and the MASB were established in 1997.[2]

Malaysia followed a distinct approach in reaction to the Asian financial crisis (1997-8). It was the only country which, rather than relying on improved transparency through accounting and audit reforms, introduced radical macro-economic reorganisation, including temporary capital controls (Arnold, 2012). Corporate governance was reformed through government initiatives (Liew, 2007) and state ownership of companies was expanded (Nik Ahmad, 2008). This reflects the strong involvement of the government in the economy, and may explain why accounting reforms, including IFRS implementation, were not prioritized (as in other institutional settings), and why their effective enforcement does not appear to be a priority.

Convergence with IFRS was implemented in several phases. In January 2005, the MASB standards were renamed Financial Reporting Standards (FRS) and their numbering changed to correspond to that of IFRS (Malaysian Institute of Accountants (MIA), 2005). The FRSs then comprised 21 new and 17 revised standards, which became effective on 1 January 2006.

[2]Source: www.masb.org.my (12/12/2008).

Their content largely matched that of the corresponding IFRS; for 12 standards, it was identical. This caused changes in recognition, measurement and disclosures, and required effort at the implementation stage (Deloitte, 2006). Malaysia aimed for full convergence of its remaining standards with IFRS by 1 January 2012. The Malaysian FRSs (MFRS) since issued by the MASB are identical to IFRS in all respects other than nomenclature.

Two bodies monitor financial reporting quality: the Financial Reporting and Corporate Surveillance Department (a department of the Securities Commission (SC)) and the Financial Statement Review Committee of MIA. However, research suggests that enforcement is weak (e.g. Ball et al., 2003; Liew, 2007; Tam & Tan, 2007; Zhuang et al., 2000). The Surveillance Department's effect is limited: between 2002 and 2009 only five companies were reprimanded for a breach of accounting regulation (SC, 2010[3]); however 76 companies (against some 1,000 listed firms) were investigated for fraud between 1996 and 2007 (Hasnan et al., 2013).

The MIA's Review Committee only reviews a small number of cases (approximately 30 per year). In spite of this, a significant number of cases of non-compliance with accounting requirements are identified.[4] This also indicates that non-compliance is a problem. Finally, while in principle possible media attention can incentivise companies to disclose corporate information (Adams, 2002), this appears not to have affected IFRS implementation in Malaysia. This may be the case because such media coverage has been limited (Lopez, 2010).

In summary, in spite of the common law legal framework and British colonial influence on accounting, the Malaysian environment leads us to expect incomplete compliance with disclosure requirements. This, and the prevalence of family ownership, motivate our exploration of the role of family control on mandatory disclosure levels, and of the effect of

[3] SC Enforcement Press Releases, available at http://www.sc.com.my

[4] For example, 2012: 4 cases; 2011: 3 cases; 2010: 6 cases; 2009, 2 cases (http://www.mia.org.my/new/surveillance). However, the MIA does not identify the companies, directors or auditors in question.

disclosure levels on firm valuation across family and non-family controlled companies. The theoretical underpinnings of these explorations are presented in the next section.

3. Theory and Hypotheses Development

3.1 Mandatory vs. voluntary disclosures

Corporate disclosure aids decision making (Beaver, 1978). Voluntary disclosure is 'any disclosure by companies not mandated by law and/or self-regulatory bodies' (Owusu-Ansah, 1998, p. 154). Mandatory disclosure is the minimum information which promulgated regulation requires from a reporting entity. The level and quality of voluntary disclosures is the result of the rational decisions of managers, based on perceived costs and benefits (Gray et al., 1990). These arise from the preparation and dissemination of (positive or negative) information. This leaves considerable room for discretion. For mandatory disclosures, however, the existence of a standardised framework of promulgated regulation should result in comparable information across companies. It also suggests that failure to publish mandatory information can be easily identified. Mandatory disclosures increase transparency by providing insight into accounting policies and underlying assumptions (cf. Pownall & Schipper, 1999). This may reduce economic uncertainty (Anctil et al. 2004; Hope, 2003). Unlike voluntary disclosures, mandatory disclosures *force* companies to 'talk about current cash flows, profits, net assets and ownership claims rather than firms' aspirations for future success' (Leuz & Wysocki, 2008, p. 68). Thus, they compel companies to make public both proprietary and non-proprietary information (Leuz & Wysocki, 2008) and both 'good' and 'bad' news (Verrecchia, 2001).

However, if enforcement is inefficient, the levels of mandatory disclosures provided are, like voluntary disclosures, heavily dependent on managers' decisions. Thus, cost considerations arising from the preparation and dissemination of positive or negative

information that influence the provision of voluntary disclosures can also apply, to some extent, to mandatory disclosures. Nevertheless, there is an additional element of cost/benefit that managers assess when determining the level of mandatory disclosures they provide: that of 'regulatory risk' (which consists of, *inter alia*, financial risk, litigation risk, risk of regulatory engagement and reputation risk (Adams, 1994, p. 279). Researchers therefore not only measure actual compliance with disclosure requirements, but also examine attitudes towards compliance, i.e. companies' 'compliance culture' (Jenkinson, 1996).

The board of directors is the central internal control mechanism for monitoring managers (Fama, 1980). It has ultimate responsibility for the preparation of financial statements that comply with regulation and 'present fairly the financial position, financial performance and cash flows of an entity' (IAS 1.15; FRS 101.15). Its ability to act as an effective control mechanism depends on its independence from management (Beasley, 1996), on board composition and on incentives. We control for these corporate governance and other firm characteristics in our examination of compliance with mandatory disclosure requirements, its determinants and the potential valuation implications of mandatory disclosures. We investigate these issues by testing two hypotheses developed below.

3.2 Family control: Influence on mandatory disclosures

The extant literature commonly articulates the effect of ownership concentration on (voluntary) disclosure (see e.g. Ali et al., 2007; Jaggi et al., 2009) and firm value (see e.g. Berle & Means, 1932; Jensen & Meckling, 1976) in terms of Type 1 or Type 2 agency problems. Type 1 problems are concerned with conflict between managers and shareholders and may be described as 'manager opportunism' or the 'misalignment effect' (Wan-Hussin, 2009). In firms with widely dispersed ownership, information asymmetry favours management rather than external shareholders. Management can withhold information or use

the firms' resources in its own, rather than the shareholders' (principals') interest (moral hazard). This problem is reduced in family firms, because the separation between ownership and control is reduced or non-existent. Major shareholders (families) are able to directly monitor managers (e.g. Ali et al. 2007; Demsetz & Lehn, 1985).

However, high concentration of ownership in the hands of family members can lead to Type 2 agency problems, also known as 'owner opportunism' or the 'entrenchment effect'. In such firms, boards of directors tend to be dominated by family members. This may result in less independent directors (Ali et al., 2007 with reference to Anderson & Reeb, 2003; 2004). Family control may allow for the 'transfer of assets and profits out of firms for the benefit of those who control them' (i.e., 'tunnelling'; Johnson et al., 2000, p. 22), for example, through related party transactions (Ali et al., 2007)). This is because 'family owners often have significant businesses outside the firm, which provide them with a means to divert the firm's resources' (Lim et al., 2014, p. 34, with reference to Atanasov et al., 2008). This problem can increase with the proportion of family members on boards (Bertrand & Schoar, 2006; Miller et al., 2007). Thus, family firms may be beneficial for the controlling families, at the expense of minority shareholders. Family firms also have incentives to conceal unfavourable information and to manipulate earnings. Thus, family owners 'can tilt firms' disclosure toward their preferences' (Chen et al., 2008, p. 501).

These theoretical foundations are particularly relevant for our study. Family companies are dominant in Malaysia (Tam & Tan, 2007). For example, 67.2% of Malaysian firms in 1996 were family controlled and 85% of these were managed by owner managers or managers related to the controlling family (Claessens et al., 1999). Claessens et al. (1999) add that 39.3% and 14.9% of firms were characterised by pyramid and cross ownership structures respectively and that a quarter of the corporate sector in Malaysia is controlled by the ten largest families. Minority shareholders tend not to engage in decision making (Lopez, 2010),

probably because of weak participation mechanisms and a lack of incentives (Zhuang et al., 2000; see also Fry, 2009). In contrast with other common law countries, investors' legal rights are not effectively enforced (Zhuang et al., 2000). These features suggest that the greater the number of family members on companies' boards, the higher the family's ability to extract benefits at the expense of minority shareholders (cf. Bertrand & Schoar, 2006; Miller et al., 2007).

Theory also suggests a link between culture and disclosure levels. In Malaysia, the two largest ethnic groups are the majority indigenous Bumiputera (Malays) and Malaysian Chinese. Many family firms in Malaysia are owned and controlled by Malaysian Chinese, reflecting the significance of family in traditional Chinese culture (Ball et al., 2003). Malaysian Chinese maintain their Chinese culture and are less acculturated than Chinese in neighbouring countries (Freedman, 2001). Although Malays and Malaysian Chinese have some similar cultural attributes, there are also fundamental differences that require separate classification (Lim, 1998). While both are high in Power Distance, in Malay society, authority rests with political power (e.g. the territorial chief or the Sultan), whereas in Chinese society, it rests with the family patriarch, owner and manager of the family business. Both cultures are high in Collectivism, but while Collectivism in Malay society is strongly influenced by Islamic values and reflected, *inter alia*, in a strong sense of responsibility towards society (Baydoun & Willet, 2000), collectivism in Malaysian Chinese culture is manifest in *guanxi* or social networking, associations and guilds linked with the business community (Lim, 1998). *Guanxi* prescribes implicit mutual obligation, assurance, trust and understanding among the members of a group, and failure to meet *guanxi* responsibilities results in damaged prestige, loss of face and loss of trust (Hwang et al., 2009). The Malaysian Chinese can also be more individualistic at national level. Haniffa (1999) suggests that this is because they are non-indigenous people and because the Malaysian state discriminates in

favour of indigenous Malay. As a result, Malaysian Chinese are likely to feel less loyalty towards the country.[5] This means that Collectivism for Malaysian Chinese is restricted to the Chinese society, family or *guanxi* network. Thus, Ball et al. (2003) find that the prevalence of family controlled businesses and *guanxi* networks in East Asia (including Malaysia) reduces the demand for public disclosure. In Malaysia, however, the unusual combination of politics dominated by Malays and business dominated by Chinese results in a unique research setting which differs from other Asian countries (Hasnan et al., 2013; see also Lim et al., 2014).

For the purposes of our study, the combination of the above characteristics can lead to family control having considerable influence on the levels of mandatory disclosure. In general, the preparation of the financial statements is delegated to lower levels of management, the board will review and influence decisions on reporting and disclosure levels.[6] The board will assess the risks involved in providing or withholding specific proprietary or non-proprietary information through mandatory disclosures (see above). As argued above, family members in management positions and with board seats can lead to ineffective monitoring and poor governance, which is associated with low quality financial reporting. This also applies in Malaysia (see e.g. Hasnan et al., 2013; also Lim et al., 2014). On the other hand, family members may wish to protect family reputation for the benefit of future generations, which may reduce incentives for earnings management (ibid., with reference to Wang, 2006; also Lim et al., 2014). However, if the family lacks board representation, family firms (in Asian countries in particular) will face agency-problems

[5]Because of their influence in economic affairs, the Malaysian Chinese had been perceived as a political threat to Malays (Freedman, 2001). Following racial riots in 1969, the government implemented a 'New Economic Policy' (NEP) in 1971 (Ismail, 2000). This was intended to eradicate poverty and eliminate racial identification from economic functions (Ismail, 2000). In effect, the government pursued economic policies in favour of Bumiputeras (Gomez, 1999), aiming to increase Bumiputera equity ownership (Norhashim & Aziz, 2005); when this proved difficult, it used state enterprises to accumulate assets for the benefit of Bumiputera (Jesudason, 1990). It also established state owned banks to provide loans to Bumiputera entrepreneurs (Jesudason, 1990).

[6] This is supported by the findings of Holland (2006) in a UK context.

similar to other companies with large block holders (Andres, 2008). Board representation is therefore indicative of family control and pertinent to our study.

Based on the above discussion, we argue that Type 2 agency problems affect compliance with disclosure requirements (as a feature of poor financial reporting quality). Prior literature in the Malaysian setting has so far only examined the effect of ownership and other governance characteristics on voluntary disclosure (e.g. Haniffa & Cooke (2002) and Mohd Ghazali & Weetman (2006)) which, as argued above, differs from mandatory disclosure with regard to content, format, extent and motivation. Among other recent studies with family ownership or control as explanatory variables in a Malaysian setting, Hasnan et al. (2013) explore motivations and opportunities for fraudulent financial reporting and Lim et al. (2014) the timeliness of earnings. Wan-Hussin (2009) studies the impact of family control on the *voluntary* early implementation of a standard introducing mandatory segmental disclosures but does not examine actual compliance levels with the standard's disclosures requirements. There is, thus, no prior study on the role of family control in compliance with mandatory disclosure requirements in Malaysia. We therefore contribute to the relevant disclosure and corporate governance literature by formulating and testing the following directional hypothesis:

H1: There is a significant and negative relationship between mandatory disclosure levels and family control in Malaysia.

3.3 Disclosure levels and firm value

Theory suggests that disclosure reduces information asymmetry and thus adverse selection costs (Verrecchia 2001). Increased disclosure therefore improves stock market liquidity (Baiman & Verrecchia 1996; Diamond & Verrecchia 1991; Kim & Verrecchia 1994). Securities for which less information is available, on the other hand, carry a higher risk because of greater uncertainty relating to their return distribution (Barry & Brown 1984;

Brown 1979; Clarkson et al. 1996; Coles et al. 1995). Therefore, higher disclosure levels may reduce estimation risk and, assuming market efficiency, firms' cost of capital.

A firm's financial statements should portray information relevant to the assessment of its economic position (see e.g. Barth & Schipper, 2007). Notes to the accounts form an integral part of the financial statements, including 'a summary of significant accounting policies and other explanatory information' (IAS1.10). However, existing research on the value relevance of accounting information focuses primarily on items recognised in the financial statements. The relevance of the supporting disclosures for financial statement users therefore remains under-researched (Hassan et al., 2009; Leuz & Wysocki, 2008; Schipper, 2007; Tsalavoutas & Dionysiou, 2014).

Mandatory disclosures concerning accounting policies permit financial statement users to infer information about underlying accounting practices (Dye, 1985), and thus about firms' private ('proprietary') information. For example, Hope (2003) finds that accounting policy disclosures are important to analysts, are more useful than other annual report disclosures, and can reduce uncertainty about forecasted earnings. Mandatory IFRS disclosures which provide potentially value relevant information to investors relate, *inter alia*, to risks affecting business and geographical segments, to assumptions and predictions regarding impairment testing, to share options, business combinations, actuarial assumptions and assumptions regarding credit risk exposure (Tsalavoutas & Dionysiou, 2014).

Prior research suggests a positive relationship between disclosure levels and firm value; its focus, however, with the exception of Hassan et al. (2009) and Tsalavoutas & Dionysiou (2014), is either on voluntary disclosures (e.g., Al-Akra & Ali, 2012) or governance related disclosures (e.g., Goncharov et al., 2006; Ntim et al., 2012). Given the paucity of evidence on the potential relationship between firm value and *mandatory* disclosures, the expected sign of the relationship is unclear (Bushee & Leuz, 2005). It is also unclear because mandatory

disclosure requirements demand the disclosure of good and bad news. High levels of compliance, therefore, may have a positive effect on some firms' value but a negative effect on the value of others.

Malaysia's capital market is immature; it is classified as an advanced emerging market (FTSE, 2012) with low liquidity and thin trading (Tam & Tan, 2007; Zhuang et al., 2000). Leventis & Weetman (2004, with reference to Owusu-Ansah (2000)) state that, in emerging markets, informative and timely financial reporting may mitigate against weak investor protection and insider trading. One would expect, therefore, that financial statements and mandatory disclosures should provide value relevant information to market participants in Malaysia. However, Ball et al. (2003) argue that high ownership concentration, insider governance and close relationships between firms and banks in Malaysia result in a reduction in the demand for public financial reporting, since information asymmetry is resolved through private communication channels. These contrasting perspectives and Malaysia's move towards a reporting regime with more rigorous mandatory disclosure requirements indicate a need to explore the value relevance of mandatory disclosures in Malaysia. We formulate the following non-directional hypothesis.

H2: There is a significant relationship between companies' levels of compliance with IFRS mandatory disclosure requirements and firm value in Malaysia.

4. Methods and sample selection

4.1 Data

The Malaysian government announced convergence with IFRS in 2005. The first converged standards were enacted in 2006. To avoid noise from first time-implementation problems, we test our hypotheses for firms' financial years ending within the 2008 calendar year.

As at 31 December 2008, 977 companies were listed on the Bursa Malaysia with total market capitalisation of RM 664 billion[7] (634 companies were listed on the Main Board, 221 listed on the Second Board and 122 on the (then) Mesdaq Market (EPU, 2009)). We chose sample firms only from the Main Board because they are more established and more exposed to the public eye than firms on the secondary markets. We excluded 41 financial companies because they are subject to different regulation and under close supervision from the Central Bank. A further 142 firms were excluded because they had not published annual reports at the time our data was collected. The remaining 451 companies were divided into three categories according to size (based on total assets). Then 50% of companies were selected randomly from each strata (category). This provided a sufficiently large, and more representative population than would have resulted from an exclusive concentration on large companies. From our sample of 225 companies we excluded a further four with negative book value of equity. For our sample companies, we acquired all data (the 2008 financial statements and accompanying notes, financial and market related raw data) from the Bursa Malaysia. Table 1 summarises the steps followed during the sample selection process.

TABLE 1 – ABOUT HERE

4.2 Identification and definition of family control

To identify the ownership holding and family relationship of directors, we collected data from the 'top 30 largest shareholders' section of annual reports. The Bursa Listing Requirements (paragraph 9.19 (25) and 9.25) require disclosure of the identity of shareholders holding e five per cent of equity shares and of any family relationships[8] among directors and between directors and major shareholders.

[7]Equals to £132.8 billion (Exchange rate as at 31 December 2008: £1=RM4.9989).

[8] The Companies Act 1965 (section 122A) defines family members of directors as the spouse, parent, child, brother, sister and spouse of such child, brother or sister. We identify family members from disclosures made in annual reports or by tracing family names (Chinese surnames or Muslim patronymics) in the *Analysis of substantial shareholders* in the annual report.

To test H1 we follow prior studies which have examined the effect of the board, and in particular family representation on the board, on disclosure. We choose the percentage of family related board members as the most appropriate measure of family control (e.g., Haniffa & Cooke, 2002; Mohd-Ghazali & Weetman, 2006; Wan-Hussin, 2009). We use this measure as a continuous variable.

Subsequently, we partition our sample across firms with and without 'family controlled boards' (Jaggi et al. 2009: 287). The former are firms with two or more members of the same family on the board of directors. We refer to the former as family firms and the latter as non-family firms. Partitioning the sample in this way allows us to conduct additional exploratory tests to identify any differences in the determinants of mandatory disclosures where a family clearly has a strong presence on the board and can therefore exercise significant influence, and where this is not the case.

When testing the relationship between mandatory disclosure levels and firm value (i.e., to test H2), we introduce a dummy variable (*FamContF*), where 1 represents family firms and 0 non-family firms as an additional control variable in our empirical model.

4.3 Measuring compliance with disclosure requirements

To measure compliance with mandatory disclosure requirements, a disclosure checklist was created. This was derived from the disclosure requirements of 12 accounting standards, which were chosen on the basis of the following criteria: 1) They were enacted in 2006 and were identical to IFRS; 2) eight of these standards[9] caused a major impact on recognition, measurement and disclosures, thus requiring considerable effort at the implementation stage

[9] FRS2 Share Based Payment, FRS3 Business Combinations, FRS 5 Non-current Assets held for Sale and Discontinued Operations, FRS 117 Leases, FRS 132 Financial Instruments: Disclosure and Presentation, FRS 136 Impairment of Assets, FRS 138 Intangible Assets and FRS 140 Investment Property.

(Deloitte, 2006); and 3) non-compliance with the remaining four standards[10] had previously been noted as a particular problem by the Financial Statements Review Committee (MIA, 2007).

To ensure the content validity[11] of the research instrument, our disclosure checklist was reviewed by an independent IFRS expert.[12] The final disclosure checklist consisted of 295 index items. To ensure the reliability of the research instrument,[13] the authors and the independent expert scored 12 randomly selected companies. Items were scored as 1 if disclosed, as 0 if undisclosed, and as 'not applicable', if they were not relevant to the circumstances of a company (Cooke, 1992). On comparing the researchers' findings, differences in compliance scores across investigators were found to be not significant.

All sample companies were then scored against the disclosure checklist. We employed two disclosure index methods, the 'partial compliance (PC) unweighted method' (hereafter, the PC Method) and the 'unweighted disclosure index method' (hereafter, Cooke's Method). The PC Method is based on the assumption that each *standard* is of equal importance and should have equal weight, i.e.:

$$PC_j = \frac{\sum_{i=1} X_i}{R_j} \qquad \text{(Eq. 1)}$$

In the case of each company, a compliance score (disclosure index) is calculated for each standard separately (X_i). The scores for all standards are then added and divided by the total

[10] FRS 101 Presentation of Financial Statements, FRS 114 Segmental Reporting, FRS 116 Property, Plant and Equipment and FRS 119 Employee Benefits.

[11] Content validity refers to whether the research instrument 'adequately measures the concept of interest' (Vlachos, 2001, p. 184 with reference to Sekaran, 1992); that is, in our case, whether it adequately measures compliance with mandatory disclosure requirements. Content validity is established by subject experts, who evaluate the items which are supposed to measure the concept (Kidder & Judd, 1986).

[12] This independent researcher is a senior financial accounting and reporting analyst, with more than 13 years experience in the field at the time the analysis took place. Prior to this, he was employed in the banking industry for more than 20 years.

[13] Reliability is concerned with how well the concept under investigation is being measured, i.e. the degree of precision, stability (i.e. irrespective of time and conditions) and consistency of measurement (see for example Vlachos, 2001).

number of applicable standards for the company *j* i.e. R_j, resulting in the total compliance score for each company, PC_j. This can range between 0 and 1.

We also applied Cooke's Method.[14] Here the index C_j is calculated as the ratio of the total number (T) of items disclosed (d_i) by company *j* to the maximum possible number of disclosure items (M) for that company:

$$C_j = \frac{T = \sum_{i=1}^{n} d_i}{M = \sum_{i=1}^{m} d_i} \qquad \text{(Eq. 2)}$$

Compliance scores computed under the PC and Cooke's methods tend to be statistically different and significantly associated with different independent variables (corporate characteristics) (Street & Gray, 2001; Tsalavoutas et al., 2010; Tsalavoutas, 2011). We therefore consider findings as valid only where the determinants of (non-) compliance are significant under both methods. This allows us to conclude that mandatory disclosure levels are adequately captured.

4.4 The models employed

To test H1, we employ Ordinary Least Squares (OLS), where the dependent variable is the compliance/disclosure score. The independent variable *Family* is our proxy for family control. We also employ various control variables which, according to the prior empirical research referred to below, have a statistically significant impact on mandatory disclosures.[15] The following model is employed:

[14]Because Cooke's method gives equal weight to each item, a standard that has more disclosure items may appear to be more important than a standard with fewer disclosure items. Given that the PC method gives each standard equal weighting it 'avoids the problem of unintentionally giving more weight to a standard with a large number of items in the index' (Al-Shiab, 2003, p.223).

[15] Some of these variables have also been identified as significant determinants of voluntary disclosures (e.g., Botosan, 1997; Lang & Lundholm, 1993).

$$CS_j = a_0 + a_1 Family_j + a_2 Ind\_dir_j + a_3 BS_j + a_4 ACEx_j + a_5 ACS_j + a_6 ACM_j + a_7 BEx_j + a_8 BM_j + a_9 Ind\_dir\_AC_j + a_{10} Dual_j + a_{11} Industry_j + a_{12} Aud_j + a_{13} ROE_j + a_{14} Liq_j + a_{15} Size_j + a_{16} Lev_j + \varepsilon_j \quad \text{(Eq. 3)}$$

where CS_j is the compliance score (measured by the PC method or Cooke's method); $Family_j$ is the percentage of family members on the board; Ind_dir_j is the percentage of independent directors on the board (e.g., Al-Akra et al., 2010);[16] BS_j is the number of individuals on the board (e.g., Al-Akra et al., 2010); $ACEx_j$ denotes the percentage of board members with an accounting background on the audit committee (e.g., Kent & Stewart, 2008) (i.e. who have a degree in accounting and/or in finance or a professional accounting qualification); ACS_j is the number of individuals on the audit committee (e.g., Mangena & Pike, 2005); ACM_j is the number of meetings the audit committee held during the year (e.g., Kent & Stewart, 2008); BEx_j denotes the percentage of board members with an accounting background (captured as indicated above); BM_j is the number of board meetings held during the year (e.g., Kent & Stewart, 2008); $Ind\_dir\_AC_j$ is the percentage of independent directors on the audit committee (e.g., Kent & Stewart, 2008); $DUAL_j$ is a dummy variable with 1 indicating a CEO serving also as Chairman (e.g., Haniffa & Cooke, 2002) and 0 a segregation of these duties; $Industry_j$ is a dummy variable where 1 represents manufacturing companies and 0 other companies (e.g., Tsalavoutas, 2011); Aud_j is a dummy variable where 1 represents companies with a 'Big 4' auditor and 0 otherwise (e.g., Tsalavoutas, 2011); ROE_j is the ratio of net income to total shareholders' equity (e.g., Hassan et al., 2006); Liq_j is the ratio of current assets to current liabilities (e.g., Wallace & Naser, 1995); $Size_j$ is the natural logarithm of total sales (e.g., Hassan et al., 2006); Lev_j is the ratio of total liabilities to total shareholders' equity (e.g., Patton & Zelenka, 1997); and μ_j is the mean zero disturbance term.

[16] The Bursa Malaysia describes an independent director as a 'director who is independent of management and free from any business or other relationship which could interfere with the exercise of independent judgement, where he/she is not an executive director or major shareholder of the company or someone related to any executive director, officer or major shareholder of the company' (Bursa Listing Requirements, Practice Note 13, paragraph 1.1.). This is self-declared by companies and this is what we have captured.

Two potential problems may arise as a result of using the actual disclosure score as a dependent variable in a regression model. First, because the dependent variable lies between 0 and 1 (i.e. 'bounded', Cooke, 1998), the model may produce predictions of probabilities greater than 1 (Al-Shiab, 2003). Second, the classical OLS regression assumes that the dependent variable is normally distributed; because the compliance score may not be normally distributed this assumption is violated. To limit these problems, as an alternative to using the actual disclosure score as the dependent variable, we also use the log of the odds ratio, following Cooke's (1998) recommendations (e.g., Al-Shammari et al., 2008). This is computed as follows:

$$Y = \log\left(\frac{p}{1-p}\right) \qquad \text{(Eq. 4)}$$

where Y = the transformed level of compliance and p = the ratio of companies' compliance computed by the disclosure methods described above. This is applied to both PC and Cooke's methods.

In developing H1 above, we discuss also the unique features of the Malaysian environment with regard to the prevalence of specific ethnic groups and their effects on family control and corporate disclosure levels. To permit us to reflect on this and enrich the discussion of our findings below, we also collect information about board members' ownership share, culture and whether they are family members as defined in notes 8 and 22. We construct the following variables: *Malay* (the percentage of board members of Malay ethnic origin); *CEO_Fam* (a dummy variable with 1 indicating that the CEO is a family member); *Chair_Chin* (a dummy variable with 1 indicating that the Chairman is of Chinese ethnic origin; *CEO_Chin* (a dummy variable with 1 indicating that the CEO is of Chinese ethnic origin); *ChinOwn* (a dummy variable with 1 indicating that the ultimate owner is of Chinese ethnic origin); *BumiOwn* is a dummy variable with 1 indicating that the ultimate owner is of Bumiputera ethnic origin).

To determine ultimate ownership in our sample firms, we also follow Jaggi et al. (2009: 288) and use a threshold of 20 per cent of equity shares owned (directly or indirectly) by one shareholder. If two or more shareholders met this criterion, ultimate ownership status was assigned to the shareholder with the largest equity holding. Where the ultimate owners were nominee or private companies, we sourced information from newspapers, business magazines, journals, Bursa publications and the internet to identify the ultimate owners of these nominee or private companies. Based on this process, we construct the following dummy variables: *FamOwn* where 1 indicates that the ultimate owner is a family, *StatOwn* where 1 indicates that the ultimate owner is the state and *OthOwn* where 1 indicates that the ultimate owner is either a foreign investor or that the firm is widely held. To identify family owned companies (*FamOwn*), we added the portions of shares owned by all family members of the respective company.[17] We report descriptive statistics with regard to these variables in Tables 2 and 4.

To test H2, we also apply OLS regressions and we employ the following regression model. The dependent variable is the Tobin's Q ratio, as defined by Lins (2003). As an alternative proxy for market value, we also use the Market-to-Book ratio as a dependent variable (c.f., Hassan et al., 2009; Lins, 2003). Independent variables include the compliance levels with disclosure requirements and other variables identified in the prior empirical research cited below as being related to market value. This leads to the following:

$$Tobin'sQ_j = a_0 + a_1 CS_j + a_2 Industry_j + a_3 ROE_j + a_4 Liq_j + a_5 Size_j + a_6 Lev_j +$$
$$+ a_7 Growth_j + a_8 FamContF_j + a_9 OthOwn_j + \varepsilon_j \qquad \text{(Eq. 5)}$$

where $Tobin'sQ_j$ equals market value of equity four months after the company's year-end date plus total assets minus book value of equity, all divided by total assets; CS_j is the

[17] See footnotes 8 and 22 on how we identify members of the same family.

compliance score, measured either by the PC method or Cooke's method; $Industry_j$ is a dummy variable where 1 represents manufacturing companies and 0 otherwise (e.g., Hassan et al., 2009); ROE_j is the ratio of net income to total shareholders' equity; Liq_j is the ratio of current assets to current liabilities (e.g., Al-Akra & Ali, 2012); $Size_j$ is the natural logarithm of total sales (e.g., Mishra et al., 2001); Lev_j is the ratio of total liabilities to total shareholders' equity; *Growth* is the percentage change of sales between 2008 and 2007 (e.g., Ntim et al., 2012); *FamContF* is a dummy variable where 1 represents firms with 'family controlled boards' i.e., family firms and 0 otherwise (see discussion in section 4.2 above); *OthOwn* is a dummy variable where 1 indicates that the ultimate owner is either a foreign investor or the firm is widely held (e.g., Tam & Tan, 2007); and μ_j is the mean zero disturbance term.

In all the multivariate analyses, we test for multicollinearity with a variance inflation factor of (VIF)>10 as a threshold (Gujarati, 2003, p. 262) and report the VIF values for each regression in Tables 6-10.[18] We also control for heteroskedasticity by employing White's (1980) corrected coefficients. Heteroskedasticity may also result from the presence of outliers (Gujarati, 2003, p. 390). We define and exclude outliers by using Cook's Distance.

5. Results and discussion

5.1 Descriptive statistics

Table 2 reports the descriptive statistics for all corporate governance characteristics (continuous variables) used in the paper. Panel A refers to the full sample and Panels B and C refer to the two sub-samples of firms with two or more family members on the board (family firms) and non-family firms.

[18]A Pearson correlation matrix (not tabulated) also indicates that there is no collinearity between the independent variables employed in these analyses. No association higher than 0.5 exists.

The mean (median) family control for our sample firms is 20% (14%). We identify 100 companies with equal to two or more family members on the board (family firms), for which mean (median) family control is 38% (38%). For the sub-sample of the remaining 121 non-family firms the mean (median) family control is 4% (0%). Both values are significantly lower at the 1% level for the sub-sample of non-family firms (see Panel D). This suggests that partitioning our sample based on the cut-off point of two or more family members on the board captures appropriately the significance of the influence of family members on board decisions.

The size of the board of directors ranges between four and 14 people (median: eight), and that of the audit committee between three and nine (median: three). These wide ranges reflect a lack of binding rules. The size of audit committees is significantly larger for non-family firms than for family firms (at the 1% level). The number of board (audit committee) meetings ranges between two and 16 (none and 17) for the full sample. Non-family firms exhibit greater variability than family firms on those measures. The number of board meetings of family firms, however, is significantly lower (at the 1% level) than that of non-family firms. About 37% of the audit committee and 25% of the board members have an accounting background (as a measure of expertise). Both the mean and median of this measure are significantly lower for family firms (at the 1% level).

Compliance with corporate governance codes is based on a 'comply or explain' basis. In practice, this appears ineffective (see Liew, 2007; Tam & Tan, 2007). For example, a 2006 survey by Credit Lyonnais Securities Asia (cited in Hasnan et al., 2013, p. 3) found that 'Malaysia scored nine on a scale of ten for having the most rules and regulations for corporate governance, but scored only 3.5 in enforcement'. This is further confirmed by our findings: the minimum proportion of independent directors (*Ind_Dir*) in our sample is 20%. The Bursa Listing rules suggest that the proportion should be at least one third. Twenty

family firms did not comply with this Bursa recommendation.[19] This explains why both the mean (41%) and median (40%) of this measure are significantly lower for the sub-sample of family firms (at the 5% and 10% level respectively).

Overall, these results indicate variation in the quality of corporate governance over the sample companies with several areas indicating lower quality for family firms (board size, audit committee size and number of meetings, number of board meetings and accounting expertise of board members).

TABLE 2 – ABOUT HERE

Table 3 shows that the mean (median) level of compliance with disclosure requirements for our sample firms is 84% (85%) for the PC method, and 88% (89%) for Cooke's method. Compliance levels range from 53% to 98% under the PC method, and from 65% to 98% under Cooke's method.[20] Across the sub-samples of family and non-family firms, the latter seem to have higher disclosure scores. However, only when the compliance levels are measured with the PC method do these levels differ significantly (mean at the 10% level and median at the 5% level). However, regardless of the method used for measuring compliance, higher compliance scores are observed in non-family firms. We observe substantial differences between the minimum compliance scores across the two sub-samples, although the sign of these differences changes across the sub-samples depending on the method used for measuring compliance. These descriptive statistics indicate that family firms tend to have lower disclosure levels than non-family firms. Overall, the wide range of scores, and the very low minimum levels of compliance identified, confirm prior findings which suggest relatively weak enforcement and concerns about the quality of Malaysian IFRS reporting.

[19] None of these firms explains the reasons for not following this guidance.
[20] Although not tabulated, the average and median disclosure levels differ significantly when calculated with the PC and Cooke's method - the PC method produces significantly lower scores. This is in line with Tsalavoutas et al.'s (2010) and Tsalavoutas' (2011) findings in a Greek context.

Finally, non-family firms appear to be significantly larger (at the 1% level)[21] and exhibit significantly higher Tobin's Q (at the 5% level) and Market-to-Book ratios (mean at the 10% level and median at the 1% level). The latter is consistent with the earlier Malaysian evidence of Tam & Tan (2007) who find that family firms perform less well than non-family firms, in terms of Tobin's Q.

TABLE 3 – ABOUT HERE

TABLE 4 – ABOUT HERE

Table 4 reports the descriptive statistics for the dichotomous variables. Only 11% of the total sample firms have a chairman who is also the CEO. However, 15 of these 25 firms are family firms, indicating that in terms of this measure, family firms exhibit poorer corporate governance (significant at the 10% level). Seventy-two percent of the companies in our sample are audited by a 'Big-4' firm; with a still higher proportion of non-family firms (80%) (significant at the 5% level). For 141 of our sample firms the ultimate owner is a family, for 50 the state, and for the remaining 30 ultimate ownership is classified as 'other' (either the ultimate owner is a foreign investor (21) or the firm is widely held (nine)). The information presented in Table 4 also sheds light on the cultures dominating our sub-samples:[22] for 63% (77%) of family firms the Chairman (CEO) is of Chinese origin. The corresponding figures for the non-family firms are 23% and 33% respectively. This, and the evidence presented in Table 2 above (last column (Malay)) demonstrate that the dominant culture on companies' boards is not Malay (significant at the 1% level). (The mean (median) percentage of board members of Bumiputera origin in our sample is 46% (38%)). Both the mean (32%) and median (29%) percentage of board members of Bumiputera origin are significantly lower for the sub-sample of family firms (at the 1% level)). For ultimate owners (Table 4), Chinese

[21] This is consistent with Bertrand & Schoar (2006), who suggest that where there is more than one (male) heir, inheritance norms may result in a relatively small average size of family businesses.

[22] In Malaysia, ethnicity of an individual can normally be identified by his/her name. Malaysian Chinese names are typically Chinese in origin; Malay names are typically Arabic patronymics.

ethnic origin dominates our sample (52%); this applies to family firms in particular. This is consistent with Ball et al.'s (2003) and Tam & Tan's (2007) findings that Chinese culture continues to dominate family businesses and that the proportion of Bumiputera in the Malaysian business environment continues to be lower than that of Chinese. Finally, for 86% of the sub-sample of family firms, one of the family members is also the CEO; and for 63% one of the family members is also the Chairman.

Table 5 provides descriptive statistics on the compliance scores for each standard individually. Compliance scores across standards are ranked in descending order on the basis of the mean score of the full sample.

TABLE 5 – ABOUT HERE

FRS 101 is the standard with the highest average compliance score (96%) and the lowest standard deviation (3%). An explanation for this high level of compliance is that much of the required information is basic (e.g. name of entity, description of operations, and key items included in the financial statements) and complying therefore does not imply high proprietary costs (Al-Shammari, 2005).

However, standards incorporating measurement and/or recognition requirements that are different or absent from earlier Malaysian GAAP exhibit very low average levels of compliance and significant variability of compliance scores. Low levels of compliance and high variability are also exhibited for standards involving high proprietary costs. Examples include: FRS 140 (78%, sd: 13%); FRS 3 (77%, sd: 18%); FRS 19 (75%, sd: 26%); FRS 17 (74%, sd: 23%); and FRS 36 (72%, sd: 21%). Table 5 also indicates that some companies do not provide any of the information required for some standards (i.e. compliance scores are zero).

Some notable differences become apparent across the two sub-samples: for FRS 5, FRS 138, FRS 3 and FRS 119 the mean scores for non-family firms are much higher and the

standard deviations much smaller. Except for FRS 2, the mean disclosure levels are always higher for non-family firms. However, these differences are not statistically significant.

These descriptive statistics are in line with the aggregate scores presented in Table 3, in that family firms tend to have lower disclosure levels than non-family firms. In general, these results are consistent with prior literature, suggesting that in Malaysia the quality of financial reporting and corporate governance is problematic in terms of practice and enforcement.

5.2 Disclosure levels and family control

This section reports the findings of the multivariate analyses for H1, concerning the negative relationship between family control and the extent of compliance with disclosure requirements. Table 6 shows that all regressions are significant at the 1% level (*F*-statistic) and that VIF values are lower than two.

TABLE 6 – ABOUT HERE

Our results show that the impact of family control on disclosure is negative. Independent of the disclosure method followed, the coefficients of this variable are negative and statistically significant (-0.094, $p < 0.001$; -0.668, $p < 0.001$; -0.033, $p < 0.05$; -0.285, $p < 0.10$), confirming H1. In other words, the higher the level of family control, the lower the levels of mandatory disclosures. This raises questions about the ability or intent of family controlled boards to ensure that the financial statements are reliable and free from material misstatement. In fact, boards may be opportunistic in selecting information to be disclosed. This is because the findings in Table 5 indicate high non-compliance levels with standards involving high proprietary costs. Thus, our findings support those of Holland (2006), i.e. that directors influence disclosures. They also support Chen et al.'s (2008, p. 501) argument that specifically family owners 'can tilt firms' disclosure toward their preference'.

The arguments of Holland (2006) and Chen et al. (2008) were based on findings with regard to voluntary disclosures. We find that they also hold with regard to mandatory disclosures. Overall, our results support the premise that the Malaysian institutional setting does not provide effective mechanisms (sanctions and incentives) to overcome Type 2 agency problems, i.e. to align the interests of dominant family members with those of minority shareholders. Ownership concentration is high and investor protection is weak (Zhuang et al., 2000); auditing does not provide effective sanctions, and minority shareholders are disincentivised from participating in corporate decision-making.

Further, our findings can be interpreted from a cultural perspective. As shown in Tables 2 and 4, family firms tend to be dominated by Chinese culture in which, given the *guanxi* networks, demand for public disclosure is reduced, and information asymmetry is resolved through private communication channels (Ball et al., 2003). Finally, since we focus on mandatory disclosures which compel the disclosure of proprietary and non-proprietary, good and bad news, these results indicate that family firms prefer to accept regulatory risk (cf., Adams, 1994) to the provision of more information. This begs the question regarding the potential benefits, for financial statements users, of moving to a regime which requires greater mandatory disclosure.

Across our whole sample, compliance levels are also explained by certain corporate governance characteristics. Although board expertise is negatively related, the proportion of independent directors on the audit committee and the number of board meetings are positively related to disclosure levels.[23] Table 2 indicates that, in general, audit committees exhibit a very high ratio of independent members. Audit committee independence may ensure the independence of external auditors and increase audit quality (Favere-Marchesi, 2000).

[23]Results differ slightly, depending upon the method followed for measuring disclosure levels (cf. Street & Gray, 2001; Tsalavoutas, 2011). Under Cooke's method only, we find evidence indicating that the size of the audit committee is negatively related to disclosure levels. Under the PC method only, ROE is positively related to disclosure levels. In both cases, the signs of the coefficients are the same under both methods.

Further, independent directors are more responsive to investors, and are thus more likely to enforce compliance with disclosure requirements (Mangena & Pike, 2005). Although Kent & Stewart (2008) did not find any association between audit committee independence and corporate disclosure quality in Australia, our results indicate that listing requirements relating to audit committee independence appear to be effective in Malaysia.

The positive and significant association between board meetings and mandatory disclosure levels suggests that frequent board meetings result in a more effective performance of governance duties by directors. This finding is consistent with Kent & Stewart's (2008) findings for Australia.

The finding that board expertise is significantly and negatively associated with mandatory disclosure levels may appear perverse. One would expect that board members with accounting or financial management expertise should be more familiar with accounting standards' requirements and be able to detect any misstatements or instances of non-compliance, and to advise and monitor management accordingly (Mangena & Pike, 2005). However, board members may also use such expertise opportunistically, by applying their knowledge of legal loopholes which may be used to avoid mandatory disclosure. Abdullah (2011) suggests that board members in Malaysia both possess good knowledge of accounting standards and influence financial statement preparation. Kent & Stewart (2008) also find a negative association between audit committee expertise and the extent of mandatory disclosures.

Although we have not set a specific research hypothesis to establish whether disclosure levels are determined by the same factors across family and non-family controlled firms, we conduct the same tests, splitting our sample across family and non-family firms. The results are presented in Table 7.

TABLE 7 – ABOUT HERE

The finding that the number of board meetings is positively related with disclosure levels holds true across both sub-samples. However, the proportion of independent directors on the audit committee is positively related with disclosure levels only in the case of family firms (where it is likely that the independent directors mitigate the influence of the family members). Thus, where Type 2 agency problems dominate and family control impacts negatively on disclosure, the greater the number of independent directors on the audit committees the higher the positive impact on disclosure.

The finding that board expertise is negatively related to disclosure levels holds true only for non-family firms. As noted above, accounting expertise of board members is significantly higher in non-family firms (see Table 2). It therefore appears that in firms where Type 1 agency problems dominate, the accounting expertise of board members may impact negatively on disclosure levels.

For family firms, audit committee size is negatively related to disclosure. Larger audit committees may exhibit more expertise, thus resulting in greater authority in decision making. However, in cases where Type 2 agency problems dominate (i.e., family firms), this may result in a reduction in mandatory disclosure. Kent & Stewart (2008) also find a significant negative association between audit committee size and the extent of mandatory disclosure in Australia.

In summary, the extent of compliance with mandatory disclosure requirements by Malaysian companies is determined by a company's (non-) family status but is also related significantly to certain corporate governance characteristics. While the impact of family control on mandatory disclosure is negative, this is mitigated by (some) good corporate governance practices, which are, however, weaker in family firms.

5.3 Disclosure levels and firm value

H2 posited a significant relationship between firm value and mandatory disclosure levels. Table 8 reports the findings of the relevant multivariate analyses. Panel A report the findings when the dependent variable is Tobin's Q and panel B the corresponding tests when the dependent variable is Market-to-Book ratio. All regressions are significant at the 1% level (*F*-statistic) and all VIF values are lower than 2.

TABLE 8 – ABOUT HERE

The results do not reveal any support for H2. This holds independent of the method used for calculating compliance levels and how firm value is defined. Mandatory disclosure levels are not related significantly with market values. This contrasts with Tsalavoutas & Dionysiou (2014), who find a positive relationship for Greece, and Hassan et al. (2009), who find a negative relationship for Egypt.

This may be explained as follows: First, while levels of mandatory disclosure may affect market values in specific stock-markets (e.g. Greece, Egypt) differently, they are not significant to investors in environments such as Malaysia, characterised by such a unique financial reporting, institutional and cultural environment. Family firms in particular, would not benefit from more efficient contracting with a view to mitigating agency problems, since the market understands the influence of family members on disclosures. The latter therefore do not serve valuation purposes. These arguments may also hold for the companies whose ultimate owner is the state (which make up large proportion of our non-family firms). Hence, our finding is supported by the arguments of Ball et al. (2003), i.e. that information asymmetry is resolved by private communication channels. This means that compliance with disclosure requirements does not impact on market values since the market is already informed. This, in turn, means that there is no support for efficiency based theories which suggest that high quality financial reporting effectively mitigates against weak investor

protection and insider trading in emerging capital markets such as in Malaysia (cf. Leventis & Weetman, 2004).

Second, information required by mandatory disclosures can be interpreted as bad or as good news. Therefore some disclosure items will have a negative effect on a company's value while others have a positive effect. Hence, the net effect may be negligible. Also, disclosures may have a positive effect on some firms' value but a negative effect on others (Tsalavoutas & Dionysiou, 2014). Also, the interpretation of these findings assumes that investors understand and evaluate the notes to the financial statements. This may not always be the case. Further, selective or incomplete reporting/disclosure may mislead investors. More specifically, the findings in Table 5 indicate high non-compliance levels for standards involving high proprietary costs. This suggests that potentially relevant information is absent. As a result, the information revealed by the remaining standards (i.e., non-proprietary) does not add value. In summary, our findings highlight the need for future research in this area. The valuation implications of mandatory disclosure remain far from clear.

With regard to the remaining variables in the model examined, we find the following: first, we find that the effect of 'family controlled boards' on market value is negative. More specifically, the coefficient of *FamContF* is consistently negative and statistically significant at the 1% or 5% levels. This finding supports our conclusions in respect of H1; it also supports prior literature which suggest the existence of Type 2 agency problems in Malaysia. Given a weak regulatory environment, auditing and investor protection, family members may use their controlling position to extract private benefits at the expense of other, non-family, shareholders not involved in decision making. This may be exacerbated in Malaysia, in particular given the cultural background of family board members (cf., Bertrand & Schoar, 2006). Our findings reflect theories which suggest that culture may account for the (under)performance of some family firms better, than efficiency based theories which suggest

that family firms may act as substitutes for weak formal investor protection. Family firms exhibit lower market value. This finding also sheds more light on the evidence provided by Lim et al. (2014), who find that family firms in Malaysia in particular prefer a more opaque environment (measured by significantly less timeliness in price discovery). Moreover, consistent with the finding of Tam & Tan (2007) that foreign firms exhibit superior market performance, we also find evidence that widely dispersed or ultimate foreign ownership result in a positive impact on market value (coefficient of the variable *OthOwn* is consistently positive and statistically significant at the 1% or 5% levels). This is also consistent with the finding with regard to the effect of 'family controlled boards' on market value: firms less likely to face Type 2 agency problems perform best. Finally, consistent with prior literature (Al-Akra & Ali, 2012), ROE, liquidity and leverage all have positive and significant associations with market value.[24]

5.4 Sensitivity tests[25]

To minimise the possibility that our results are susceptible to choices associated with the research design, we performed a set of additional tests. Foreign sales to total turnover can be a proxy for the international exposure of a firm that could attract additional scrutiny. Thus, we hand-collected this data from the annual reports of our sample firms (105 of which disclosed foreign sales) and incorporated foreign sales/total sales as an additional independent variable within the regressions presented in Tables 6 and 7. Prior evidence also suggests an influence of ownership on disclosure levels (e.g., Al-Akra, 2010). We therefore

[24] We also split our sample across family and non-family firms and explore the determinants of firm value for the two sub-samples separately. These tests indicate that being a manufacturing firm (and ROE) has a significantly negative (positive) relation with firm value for family firms, while size has no significant relation with firm value for these firms. For non-family firms, ROE, size, other ownership and leverage all have positive and significant associations with market value. Tables reporting these results are available on request.
[25] The results of the tests discussed in this sub-section are available on request.

also included *OthOwn* and *StatOwn* as additional control variables in these tests (see section 4.4 and information reported in Table 4 (section 5.1) for more information about these variables). None of these had a significant coefficient. Moreover, as an alternative to using the actual disclosure score as the dependent variable, we replicated all relevant tests in Tables 6 and 7 with the fractional logit model suggested by Papke & Wooldridge (1996). The results of all of these additional tests were almost identical to those presented in the paper. For H2, we also applied Ohlson's (1995) model (see e.g. Tsalavoutas & Dionysiou, 2014). In this framework, book value of equity and net income act as main determinants of market value, and the disclosure levels as 'other information'. With these tests also, mandatory disclosure levels are value irrelevant, irrespective of how mandatory disclosure is scored/measured.

We further re-performed the tests reported in Tables 6, 7, and 8, based on alternative definitions of family firm. Based on our original definition, our sub-sample of 121 non-family firms contains 36 companies in which one board member holds more than 5% of shares (either individually or in combination with his/her relatives) (see above). It may be argued that this board member can also exert significant influence on board decisions, including decisions on mandatory disclosure levels. In fact, Villalonga & Amit (2006; 2010) classify such firms also as family firms. For Tables 6 and 8, we therefore substitute Family (i.e., family representation on the board) with this new dummy variable where one is a Family firm (i.e., one board member holds more than 5% of shares) and zero otherwise. Based on this definition we have 136 family firms and 85 non-family firms. For the other Tables, the sample is partitioned according to this new classification. The results and our main conclusions do not change (Tables 6, 7 and 8). We observe some minor differences in the significance of some determinants of disclosure levels in the corresponding tests for Table 7. However, these do not affect the conclusions with regard to the hypotheses tested. Finally, we also used Jaggi et al.'s (2009: 288) definition of family firms as firms with a family as the

ultimate shareholder (i.e., a family holding more than 20% of the company's shares). This results in 141 firms classified as family-firms and 80 as non-family firms (see Table 4). The results of these additional tests are almost identical to those discussed above. Hence, the main conclusions of the study do not change under either alternative.

6. Conclusions

Since 2005, Malaysia has been converging its national accounting standards with IFRS. IFRS require high levels of disclosures. Regulators and standard setters are concerned about the implications of (non-) compliance with mandatory disclosure requirements (Schipper, 2007). This study contributes to the literature on the effect of ownership structure on mandatory disclosure practices. It also responds to calls for research on the valuation implications of mandatory disclosure (cf. Hassan *et al.*, 2009; Leuz & Wysocki, 2008; Schipper, 2007) by contributing a specific country case study to the limited prior literature in this area.

We measure compliance with IFRS disclosure requirements by Malaysian companies and test two hypotheses linking ownership structure (particularly, family control), compliance with IFRS mandatory disclosure requirements and firm value. As expected (H1), we find a negative relationship between family control and IFRS disclosure levels. We also find that, on balance, higher quality corporate governance is associated with higher disclosure levels. The corporate governance characteristics which appear significant vary between family and non-family firms. Against our expectations (H2), we do not find a significant relationship between disclosure levels and market values. However, our findings support prior literature (e.g. Ball *et al.*, 2003) in suggesting that dominance of family ownership in East Asian settings reduces demand for public reporting.

Our findings suggest that agency theory predictions and theories linking common law legal systems to high quality financial reporting require refining in certain national contexts.

Where Type 2 agency problems dominate, institutional arrangements intended to enhance financial reporting quality aimed at mitigating Type 1 problems in developed markets may have limited effect in less developed jurisdictions. In Malaysia, politics is dominated by ethnic Malays and business by ethnic Chinese, but within business organisations ethnic groups are not evenly represented: family firms are dominated by Chinese culture, while this is not the case for non-family firms. Malaysia has introduced rigorous financial reporting and corporate governance rules, which however do not appear to be fully effective. In particular, family firms are less likely to comply with corporate governance requirements and boards are less able or willing to comply with mandatory disclosure requirements than boards of non-family firms. Since non-compliance is particularly high for standards associated with high proprietary costs, it is likely that boards disclose selectively, to their advantage, and that they consciously and deliberately manage the associated regulatory risk. This applies in particular to family firms, who appear to prefer greater regulatory risk to the provision of more information. Given that family firms are dominated by Chinese culture, the tendency to avoid disclosing information with high proprietary cost but to accept higher regulatory risk may well be influenced by culture.

This suggests that in environments such as Malaysia, with unusual political and cultural settings, culture, local politics and other less-quantifiable socio-political factors interact with micro- and macro-economic forces to affect compliance culture, the management of regulatory risk and market values; particular cultural networks may also substitute for some corporate governance safeguards in certain types of closely held firms. Such factors may modify and enrich insights from 'grand' theories (such as agency theory or disclosure theories) even within the same jurisdiction/nation state. Our findings and the above considerations also lead us to question the potential benefits, for financial statements users, of moving to a regime which requires greater mandatory disclosure, since they suggest a lack of

support for efficiency based theories which argue that high quality financial reporting acts as a mechanism to compensate for weak investor protection and insider trading in emerging capital markets (cf. Leventis & Weetman, 2004).

Our findings have implications for standard setters, regulators and the market. The fact that in Malaysia increased levels of mandatory disclosure appear to be value irrelevant, suggests that investors do not require, or do not trust the information provided in companies' financial statements. A stronger regulatory and enforcement environment may improve value relevance. However, more generally, policy-makers may need to consider carefully the feasibility of policies aimed at improving transparency and market-mechanisms for specific local environments where, as in Malaysia, macro-economic policies may be more effective (cf. Arnold, 2012).

Our findings may also contribute to informing debates on mandatory disclosures in accounting standards, including the IFRS Foundation's current *Disclosure Initiative* project. This identified the attitudes of auditors and regulators, as well as cost consideration, as impediments to compliance with disclosure requirements and calls for behavioral change to combat information overload.[26] The IASB is also discussing disclosures in the ongoing Conceptual Framework project, and considering a specific disclosure framework for IFRS, which would replace a number of current standards that deal predominantly with disclosures. The question of disclosures is also currently occupying the SEC,[27] the FASB, the European Financial Reporting Advisory Group (EFRAG) and the International Auditing and Assurance Standards Board (IAASB), among others.

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[26] See http://www.ifrs.org/Alerts/PressRelease/Documents/2013/Feedback-Statement-Discussion-Forum-Financial-Reporting-Disclosure-May-2013.pdf; http://www.ifrs.org/Alerts/Conference/Pages/Hans-Hoogervorst-Speech-Amsterdam-June-2013.aspx; http://www.ifrs.org/Alerts/PressRelease/Pages/Joint-effort-needed-to-tackle-disclosure-problem.aspx; http://www.ifrs.org/Current-Projects/IASB-Projects/Disclosure-Initiative/Pages/Disclosure-Initiative.aspx.

[27] http://blogs.wsj.com/cfo/2014/01/27/mary-jo-white-wants-sec-to-rethink-corporate-disclosures/

If (mandatory) disclosures are not effective, theories relating to the cost of capital and market liquidity (Botosan 1997; Leuz & Wysocki 2008) may not hold. Further, some of the problems identified by regulators and standard setters, such as poorly drafted or duplicating disclosure requirements or those that focus on immaterial issues, may contribute to non-compliance. Thus the low levels of mandatory disclosures identified for Malaysian firms in the present paper may be due to the weak regulatory environment but also to a lack of clarity in the requirements. Efforts to improve the disclosure framework to encourage more effective communication, with more streamlined and therefore more manageable disclosure requirements, may in particular benefit less developed markets with large proportions of closely held firms.

On the other hand, international and national standard setters need to take into account two further considerations: First, financial statements are increasingly not the only and arguably not the most important information channel for management and investors to communicate. Our findings support the suggestion that, in particular in family owned firms, their role is limited. Second, as noted by Ball (2006), in spite of the IASB's best efforts, politics and markets will continue to be subject to local influences. We suggest that for Malaysia, the impact of culture on business and politics is among these local influences. Other jurisdictions will have their own unique features. Neither standard setters nor foreign investors can therefore ignore the 'deep-rooted political and economic factors that influence the incentives of financial statement preparers and that inevitably shape actual financial reporting practice' (ibid., p. 6). Thus, while a revised Conceptual Framework and a framework for disclosures may alleviate non-compliance and other problems related to mandatory disclosure requirements, they are unlikely to eliminate them. In particular, our findings suggest that adoption of IFRS and rigorous corporate governance guidelines alone do not result in a *de facto* improvement of the quality of financial reporting. Companies may

continue not to comply with the new standards and guidelines unless more effective enforcement mechanisms are in place.

Our study is subject to a number of limitations. Despite following all usual procedures to ensure the validity and reliability of the research instrument, the use of a disclosure index always entails a degree of subjectivity. This may hinder consistent replication of the research. Finally, the results of the study may be time specific. The variation and the relatively low levels of disclosures identified might be an outcome of preparers' low familiarity with the disclosure requirements of the new standards. Consequently compliance levels may improve in the future. This suggests, as one avenue for future research, an investigation of changes in compliance with disclosure requirements since the period examined in the present paper. Research could also explore other consequences of mandatory disclosure levels, such as the effect on cost of debt and equity capital, or analysts' forecast errors and forecast dispersion. Qualitative behavioural research exploring preparers' motivations for (non-)disclosure or regulators' perspectives would add depth to our understanding regarding management's decision making. Finally, future research could explore the above issues also in other settings.

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TABLE 1: Sample selection process

Step 1: Focusing on companies listed on the Main board	**No. of companies**
Total number of listed companies as at 31 December 2008	977
(-) Companies listed on Second board and Mesdaq market	(343)
Companies listed on the Main board	634
(-) Financial companies	(41)
(-) Companies that had not publish annual reports for the year 2008 on the Bursa Malaysia's website at the time our data was collected	(142)
Total	*451*
Step 2: Dividing companies identified across categories according to their size	
Large (Total assets > = RM 1 billion)	215
Medium (RM 200,000 < Total assets < RM 1 billion	146
Small (Below or equal RM200,000)	90
Total	*451*
Step 3: Choosing, randomly, 50% of the companies from each strata	
Large (Total assets > = RM 1 billion)	50% * 215 = 107
Medium (RM 200,000 < Total assets < RM 1 billion	50% * 146 = 73
Small (Below or equal RM200,000)	50% * 90 = 45
(-) Companies with negative book value of equity	(4)
Total	*221*

TABLE 2: Descriptive statistics - corporate governance characteristics (Continuous variables)

Panel A: Full sample (N=221)										
	Family	*Ind_dir*	*BS*	*ACEx*	*ACS*	*ACM*	*BEx*	*BM*	*Ind_dir_AC*	*Malay*
Mean	0.20	0.43	8.16	0.37	3.52	5.00	0.25	5.76	0.82	0.46
SD	0.20	0.11	2.07	0.17	0.86	1.64	0.13	2.17	0.17	0.30
Median	0.14	0.42	8.00	0.33	3.00	5.00	0.25	5.00	0.75	0.38
Min	0.00	0.20	4.00	0.00	3.00	0.00	0.00	2.00	0.25	0.00
Max	0.83	0.78	14.00	1.00	9.00	17.00	0.80	16.00	1.00	1.00
Panel B: Family firms (i.e., FamContF = 1) (N=100)										
Mean	0.38	0.41	8.00	0.37	3.36	4.82	0.23	5.14	0.84	0.32
SD	0.14	0.10	2.22	0.19	0.61	1.08	0.12	1.30	0.17	0.24
Median	0.38	0.40	8.00	0.33	3.00	5.00	0.20	5.00	0.90	0.29
Min	0.14	0.22	4.00	0.00	3.00	2.00	0.00	2.00	0.25	0.00
Max	0.83	0.67	14.00	1.00	6.00	10.00	0.67	9.00	1.00	1.00
Panel C: Non-family firms (i.e., FamContF = 0) (N=121)										
Mean	0.04	0.44	8.29	0.38	3.65	5.16	0.27	6.27	0.80	0.57
SD	0.06	0.11	1.93	0.16	1.00	1.98	0.13	2.59	0.17	0.29
Median	0.00	0.43	8.00	0.33	3.00	5.00	0.25	6.00	0.75	0.58
Min	0.00	0.20	4.00	0.14	3.00	0.00	0.00	2.00	0.29	0.00
Max	0.17	0.78	13.00	1.00	9.00	17.00	0.80	16.00	1.00	1.00
Panel D: Tests of equality of means and medians between Family and Non-family firms										
Mean	-0.34 (-24.06)***	0.03 (1.98)**	0.29 (1.04)	0.01 (0.28)	0.23 (2.56)**	0.34 (1.52)	0.04 (2.75)***	1.13 (3.98)***	-0.04 (-1.55)	0.25 (6.86)***
Median	-0.38 (-13.15)***	0.03 (1.83)*	0.00 (1.23)	0.00 (0.49)	0.00 (2.43)**	0.00 (1.10)	0.05 (2.60)***	1.00 (3.32)***	-0.15 (-1.37)	0.29 (6.11)***

Family is the percentage of family members on the Board. *Family firms* are firms with two or more family members on the board (Jaggi et al., 2009 – see section for 4.2 for relevant discussion). Definitions for the remaining variables are provided in section 4.4. The means tested with the 'paired-samples *t*-test' and the medians tested with the 'Wilcoxon signed rank test'. Two-tailed *t* and *z*-values are in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively.

TABLE 3: Descriptive statistics - compliance levels and other company characteristics (Continuous variables)

Panel A: Full sample (N=221)									
	PC	*Cookes*	*ROE*	*Growth*	*Liq*	*Size*	*Lev*	*TobinsQ*	*MTB*
Mean	0.84	0.88	0.13	0.18	2.77	13.20	0.95	1.12	1.51
SD	0.07	0.05	0.27	0.36	3.62	1.66	1.14	0.98	2.75
Median	0.85	0.89	0.13	0.14	1.69	13.19	0.62	0.88	0.89
Min	0.53	0.65	-0.92	-0.69	0.11	9.08	0.00	0.05	0.01
Max	0.98	0.98	2.73	3.24	31.51	17.34	9.99	9.27	31.24
Panel B: Family firms (i.e., FamContF = 1) (N=100)									
Mean	0.83	0.88	0.13	0.17	2.93	12.76	0.94	0.97	1.18
SD	0.08	0.05	0.19	0.29	4.08	1.52	1.06	0.75	2.07
Median	0.84	0.88	0.12	0.15	1.79	12.54	0.61	0.82	0.76
Min	0.53	0.72	-0.31	-0.69	0.28	9.43	0.01	0.40	0.13
Max	0.96	0.96	1.42	1.35	31.51	16.50	7.67	6.91	19.37
Panel C: Non-family firms (i.e., FamContF = 0) (N=121)									
Mean	0.85	0.88	0.13	0.19	2.63	13.56	0.97	1.25	1.78
SD	0.07	0.05	0.32	0.40	3.20	1.70	1.20	1.12	3.19
Median	0.86	0.90	0.14	0.13	1.63	13.60	0.63	0.97	1.02
Min	0.59	0.65	-0.92	-0.53	0.11	9.08	0.00	0.05	0.01
Max	0.98	0.98	2.73	3.24	24.43	17.34	9.99	9.27	31.24
Panel D: Tests of equality of means and medians between Family and Non-family firms									
Mean	0.02 (1.82)*	0.00 (0.82)	0.00 (0.19)	0.02 (0.35)	-0.30 (-0.61)	0.80 (3.66)***	0.03 (0.20)	0.27 (2.09)**	0.61 (1.64)*
Median	0.03 (2.10)**	0.02 (1.33)	0.02 (0.84)	-0.02 (-0.43)	-0.15 (-0.83)	1.6 (3.84)***	0.02 (-0.20)	0.15 (2.46)**	0.26 (2.98)***

PC (*Cooke's)* is the compliance score, measured by the *PC (Cooke's)* method. *Family firms* are firms with two or more family members on the board (Jaggi et al., 2009 - – see section for 4.2 for relevant discussion). Definitions for the remaining variables are provided in section 4.4. The means tested with the 'paired-samples *t*-test' and the medians tested with the 'Wilcoxon signed rank test'. Two-tailed *t* and *z*-values are in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively.

TABLE 4: Descriptive statistics (Dichotomous variables)

	Full sample (221)	%	Family firms (100)	%	Non-Family firms (121)	%
DUAL = 1	25	0.11	15	0.15	10	0.08
				(-1.82)*		
Industry = 1	94	0.43	54	0.54	40	0.33
				(-3.23)***		
Aud = 1	159	0.72	63	0.63	96	0.79
				(2.60)**		
FamOwn = 1	141	0.64	94	0.94	47	0.39
				(-8.51)***		
StatOwn= 1	50	0.23	0	0.00	50	0.41
				(7.52)***		
OthOwn = 1	30	0.14	6	0.06	24	0.20
				(2.69)***		
CEO_Fam = 1	112	0.51	86	0.86	26	0.22
				(-9.73)***		
Chair_Chin = 1	91	0.41	63	0.63	28	0.23
				(-6.05)***		
CEO_Chin = 1	117	0.53	77	0.77	40	0.33
				(-6.57)***		
BumiOwn = 1	75	0.34	11	0.11	64	0.53
				(6.76)***		
ChinOwn = 1	115	0.52	84	0.84	31	0.26
				(-8.68)***		

Family firms are firms with two or more family members on the board (Jaggi et al., 2009 - see section for 4.2 for relevant discussion). For all other variable definitions see in sections 4.3 & 4.4. Differences across the two sub-samples have been tested for significance with the pairwise test of proportions. *z*-values are in parentheses. ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively.

TABLE 5: Frequency and distribution of compliance scores for each standard separately.

Standards	NS	NT	Mean	SD	Min	Max	Median
Panel A: Full sample (N=221)							
FRS101	69	221	0.96	0.03	0.87	1.00	0.97
FRS5	12	70	0.94	0.14	0.33	1.00	1.00
FRS116	15	221	0.93	0.11	0.46	1.00	1.00
FRS114	20	178	0.93	0.17	0.00	1.00	1.00
FRS132	34	219	0.89	0.12	0.30	1.00	0.91
FRS2	12	90	0.83	0.17	0.00	1.00	0.88
FRS138	14	87	0.79	0.22	0.29	1.00	0.83
FRS140	20	114	0.78	0.13	0.40	1.00	0.83
FRS3	20	72	0.77	0.18	0.13	1.00	0.80
FRS119	21	221	0.75	0.26	0.00	1.00	0.80
FRS117	19	183	0.74	0.23	0.00	1.00	0.75
FRS136	39	153	0.72	0.21	0.00	1.00	0.79
Panel B: Family firms (i.e., FamContF = 1) (N=100)							
FRS101	69	100	0.95	0.03	0.87	1.00	0.97
FRS5	12	24	0.91	0.18	0.33	1.00	1.00
FRS116	15	100	0.92	0.11	0.46	1.00	1.00
FRS114	20	88	0.93	0.17	0.00	1.00	1.00
FRS132	34	100	0.89	0.11	0.50	1.00	0.90
FRS2	12	45	0.84	0.11	0.67	1.00	0.86
FRS138	14	29	0.76	0.24	0.33	1.00	0.83
FRS140	20	55	0.77	0.12	0.40	0.90	0.80
FRS3	20	32	0.76	0.20	0.13	1.00	0.80
FRS119	21	100	0.73	0.28	0.00	1.00	0.78
FRS117	19	83	0.73	0.20	0.25	1.00	0.75
FRS136	39	72	0.71	0.21	0.00	1.00	0.75
Panel C: Non-family firms (i.e., FamContF = 0) (N=121)							
FRS101	69	121	0.96	0.03	0.88	1.00	0.97
FRS5	12	46	0.96	0.11	0.67	1.00	1.00
FRS116	15	121	0.94	0.10	0.54	1.00	1.00
FRS114	20	90	0.93	0.16	0.00	1.00	1.00
FRS132	34	119	0.90	0.12	0.30	1.00	0.92
FRS2	12	45	0.82	0.21	0.00	1.00	0.88
FRS138	14	58	0.81	0.21	0.29	1.00	0.83
FRS140	20	59	0.78	0.14	0.40	1.00	0.83
FRS3	20	40	0.78	0.17	0.50	1.00	0.80
FRS119	21	121	0.77	0.25	0.00	1.00	0.80
FRS117	19	100	0.75	0.26	0.00	1.00	0.75
FRS136	39	81	0.74	0.21	0.11	1.00	0.80

NS: Number of items per standard (Total: 295); *NT*: Number of times the standard is applicable; FRS101 Presentation of Financial Statements; FRS5 Non-current assets held for sale and Discontinued Operations; FRS116 Property, Plant and Equipment; FRS114 Segmental Reporting; FRS 132 Financial Instruments: Disclosure and Presentation; FRS2 Share Based Payment; FRS 138 Intangible Assets; FRS 140 Investment Property; FRS3 Business Combinations; FRS119 Employee Benefits; FRS117 Leases; and FRS 136 Impairment of Assets. *Family firms* are firms with two or more family members on the board (Jaggi et al., 2009 - see section for 4.2 for relevant discussion). None of the differences between means and medians across the two sub-samples are statistically significant.

TABLE 6: Determinants of IFRS mandatory disclosure levels (Full sample)

Variables	**PC Method**		**Cooke's Method**	
	Actual score	Log of the Odds	Actual Score	Log of the Odds
Intercept	0.902***	2.467***	0.943***	2.495***
Family	**-0.094*** **	**-0.668*** **	**-0.033** **	**-0.285** **
Ind_dir	-0.047	-0.446	-0.011	-0.058
BS	0.001	0.008	**0.001** **	-0.001
ACEx	-0.023	-0.252	0.011	0.130
ACS	-0.009	-0.066	**-0.014*** **	**-0.096** **
ACM	0.000	-0.004	-0.002	-0.023
BEx	**-0.103*** **	**-0.904*** **	**-0.076*** **	**-0.742*** **
BM	**0.005** **	**0.057*** **	**0.004** **	**0.044** **
Ind_dir_AC	**0.086*** **	**0.572** **	**0.044** **	**0.387** **
DUAL	0.001	-0.021	0.002	0.013
Industry	-0.004	-0.038	-0.002	-0.060
Aud	-0.004	0.000	0.010	0.079
ROE	**0.053*** **	**0.381*** **	0.026	0.179
Liq	-0.001	-0.008	0.000	0.000
Size	-0.004	**-0.051** **	-0.003	-0.026
Lev	0.001	0.012	0.002	0.019
Adj. R^2	0.22	0.21	0.15	0.14
F	4.59***	4.33***	3.58***	3.01***
N	208	209	208	209
Max VIF	1.94	1.90	1.93	1.98
Mean VIF	1.42	1.42	1.44	1.44

Definitions for all variables are provided in sections 4.2, 4.3 and 4.4. Reported results are for regressions excluding observations with |Cook's Distance| > (4 divided by the number of sample firms in each regression). ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively.

TABLE 7: Determinants of IFRS mandatory disclosure levels. (Family versus Non-Family firms)

Variables	**Family firms**				**Non-Family firms**			
	PC Method		**Cooke's Method**		**PC Method**		**Cooke's Method**	
	Actual score	Log of the Odds	Actual score	Log of the Odds	Actual score	Log of the Odds	Actual score	Log of the Odds
Intercept	*0.8416***	*1.3635*	*0.9225***	*2.3459*	*0.9008***	*2.3389***	*0.9483*	*2.7057*
Ind_dir	0.0054	0.5147	0.0303	0.1130	-0.0228	-0.3369	0.0137	0.1564
BS	0.0023	0.0368	0.0013	0.0134	-0.0004	-0.0055	-0.0002	0.0059
ACEx	-0.0337	-0.5651*	-0.0189	-0.2310	-0.0324	-0.3840	-0.0011	-0.0480
ACS	**-0.0255****	**-0.2623****	**-0.0234*****	**-0.2516*****	-0.0042	-0.0188	-0.0077	-0.0660
ACM	-0.0025	-0.0421	-0.0069	-0.0717	-0.0012	-0.0080	-0.0023	-0.0216
BEx	-0.0333	-0.2000	-0.0452	-0.4121	**-0.1298*****	**-1.1498*****	**-0.0808****	**-0.7086***
BM	**0.0097***	**0.0974***	**0.0082****	**0.0891****	**0.0053****	**0.0529****	**0.0053*****	**0.0472****
Ind_dir_AC	**0.1178****	**0.8878****	**0.0611***	**0.6907****	0.0178	0.2308	0.0148	0.0551
DUAL	0.0176	0.2454	0.0131	0.1447	-0.0077	-0.0528	-0.0055	-0.0821
Industry	-0.0048	0.0062	0.0013	0.0103	-0.0133	-0.1103	**-0.0169***	**-0.1577***
Aud	0.0044	0.1089	**0.0237****	**0.1884***	-0.0090	-0.0170	-0.0071	-0.0842
ROE	0.0293	0.2021	0.0218	0.1868	**0.0500***	**0.4443***	**0.0444***	**0.3727***
Liq	**-0.0027****	**-0.0238****	0.0003	0.0037	-0.0004	0.0035	0.0001	0.0024
Size	-0.0037	-0.0105	-0.0037	-0.0207	0.0000	-0.0183	-0.0034	-0.0317
Lev	-0.0046	-0.0012	-0.0004	0.0015	0.0015	-0.0030	0.0045	0.0419
Adj. R^2	0.24	0.24	0.29	0.28	0.19	0.23	0.19	0.16
F	2.54***	2.23**	3.12***	3.05***	2.82***	2.86***	1.79**	1.93**
N	92	95	96	97	113	113	113	113
Max VIF	3.04	3.13	2.67	2.77	1.92	1.91	1.92	1.92
Mean VIF	1.81	1.80	1.75	1.75	1.46	1.48	1.47	1.47

Definitions for all variables are provided in sections 4.2, 4.3 and 4.4. *Family firms* are firms with two or more family members on the board (Jaggi et al., 2009 - see section for 4.2 for relevant discussion). Reported results are for regressions excluding observations with |Cook's Distance| > (4 divided by the number of sample firms in each regression). ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively.

TABLE 8: Firm value and IFRS mandatory disclosure levels

Panel A: **Tobin's Q**				
Variables	**PC Method**		**Cooke's Method**	
	Actual score	Log of the Odds	Actual score	Log of the Odds
Intercept	-0.044	0.155	-0.228	0.105
CS	0.303	0.030	0.489	0.046
Industry	0.002	0.001	0.003	0.002
ROE	**2.100*** **	**2.101*** **	**2.109*** **	**2.106*** **
Liq	**0.017*** **	**0.017*** **	**0.017*** **	**0.017*** **
Size	0.031	0.031	0.031	0.031
Lev	**0.145*** **	**0.145*** **	**0.145*** **	**0.145*** **
Growth	-0.115	-0.114	-0.117*	-0.116*
FamContF	**-0.139** **	**-0.140** **	**-0.141** **	**-0.140** **
OthOwn	**0.471*** **	**0.470*** **	**0.475*** **	**0.473*** **
Adj. R^2	0.48	0.48	0.48	0.48
F	8.85***	8.87***	8.87***	9.05***
N	210	210	210	210
Max VIF	1.33	1.33	1.33	1.33
Mean VIF	1.16	1.16	1.16	1.15
Panel B: **MTB**				
Variables	**PC Method**		**Cooke's Method**	
	Actual score	Log of the Odds	Actual score	Log of the Odds
Intercept	0.004	0.068	-1.117	-0.268
CS	-0.049	-0.048	0.683	0.013
Industry	-0.155	-0.158	-0.151	-0.126
ROE	**3.945*** **	**3.962*** **	**3.757*** **	**3.836*** **
Liq	**0.017***	0.017	**0.024** **	**0.018***
Size	0.054	0.053	**0.087** **	**0.065***
Lev	0.151	0.149	**0.186** **	**0.170***
Growth	0.113	0.111	0.209	-0.003
FamContF	**-0.351*** **	**-0.355*** **	**-0.309** **	**-0.298** **
OthOwn	**0.550** **	**0.550** **	**0.595** **	**0.601** **
Adj. R^2	0.37	0.37	0.37	0.40
F	7.21***	7.22***	6.66***	7.25***
N	205	205	208	204
Max VIF	1.37	1.37	1.34	1.38
Mean VIF	1.19	1.19	1.18	1.19

Definitions for all variables are provided in sections 4.2, 4.3 and 4.4. Reported results are for regressions excluding observations with |Cook's Distance| > (4 divided by the number of sample firms in each regression). ***, ** and * indicate statistical significance at the 1, 5 and 10% levels, respectively.