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CORPORATE MALAYSIA: ESSAYS ON CORPORATE GOVERNANCE, VOTING POWER, JOINT VENTURE COMPANIES AND ETHNIC BUMIPUTRA CORPORATE ACHIEVEMENT

by

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CORPORATE MALAYSIA: ESSAYS ON CORPORATE GOVERNANCE, VOTING POWER, JOINT VENTURE COMPANIES AND ETHNIC BUMIPUTRA CORPORATE ACHIEVEMENT

Abstract Summary

This dissertation is on corporate Malaysia – a subject that spans both corporate governance and political economy. It deals with such issues as corporate ownership and control in the context of ethnicity.

The first essay draws on the unique Malaysian experience to describe the possible unsuitability of the UK-US model of corporate governance for emerging economies. Examples from previous studies are used to highlight the unique relationship between ethnic Bumiputra economic interest and corporate governance. This essay also provides new statistics on the level of corporate control and highlights three areas of corporate governance as warranting further studies - technology, shareholders participation and application of voting power concept.

The second essay introduces the basic concept of voting power as an alternative way of analysing corporate Malaysia. Data emanating from the Centre of Public Policy Studies 2006 (CPPS 2006) is analysed to illustrate this concept. A possible mismatch between the level of corporate ownership and the level of corporate control is illustrated.

The third essay is on ethnic Chinese-Bumiputra joint venture companies as an equitable form of corporate ownership, as proposed by the CPPS (2006). Data from CPPS (2006) is analysed and a new framework of analysis is offered. Two stories emerge from our analysis. The study by the CPPS may have over-estimated the emergence of inter-ethnic joint ventures in Malaysia. The CPPS report also underestimates the difficulty of forming coalitions when shareholding within ethnic groups is dispersed. It remains to be seen if equitable control is also in the process of being achieved, since only a small percentage of companies listed in the stock exchange can be considered as inter-ethnic in the actual sense. Enriched information to highlight not just inter-ethnic but intra-ethnic distribution of equity is needed to shed light on potential coalitions across the ethnic divide.

The fourth essay calls for greater application of the voting power concept in corporate governance studies. Special attention is placed on the Straffin index in view of its recent attention. This chapter concludes the Penrose-Banzhaf index as applicable with greater confidence despite general issues confronting this concept.

The last essay is on ethnic Bumiputra's corporate achievement. The first part focuses on corporate equity ownership by offering lawmakers as the basis for allocating shares in government-linked companies, hence an alternative equity ownership estimate. In the second part, the focus shifts to corporate control. Two observations are made: the intra-ethnic mismatch between equity and control and the inter-ethnic corporate control gap. In the latter observation, this gap reduces upon further analysis. Coalition with government entity increases ethnic Bumiputra's corporate control while small shareholders inactivity has an adverse influences on that of the ethnic Chinese group. The combined influences are corporate control increases for ethnic Bumiputra group but for ethnic Chinese group, reduction hence narrowing the gap. The influence of government coalition is expected. The influence of small shareholders inactivity to corporate control is however less expected.

Key words: corporate governance, emerging markets, power index, Penrose-Banzhaf index, Shapley-Shubik index, Straffin index, Bumiputra, corporate equity ownership, corporate control, joint venture, Malaysia, government-linked companies

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Essay 1

Corporate Governance in the Emerging Markets: Ethnic Bumiputra Economic Interest in Malaysia

Abstract[1]

This study supports views that the UK-US model of corporate governance may not be suitable for emerging economies by drawing on the unique Malaysian experience. In particular, the Malaysian constitution and a series of economic policies protect ethnic Bumiputra's economic interest. The implications of this privilege have since been incorporated into many areas of corporate governance studies. In the area of law, the suggestion is made that ethnicity influences the level of enforcement. In auditing, the suggestion is made that ethnically connected companies get favourable treatment and hence cope better in times of economic difficulties. In corporate social responsibility, the quality is better when ethnic Bumiputra community dominates the board of directors. The perspective of corporate governance in Malaysia is arguably wider and unique than generally associated with the UK and US systems due to the protection of the ethnic Bumiputra economic interest. This study also provides recent statistics on ethnic Bumiputra corporate control and concludes three areas of corporate governance as deserving further studies - technology, shareholders participation and the application of the voting power concept.

Key Words: Corporate Governance, Emerging Markets, Bumiputra, Malaysia

1.   Introduction

In his article *"corporate governance in emerging economies"*, Allen (2005) argues that the shareholders objective may not be the appropriate company's objective in the emerging market. That is unlike the UK and US, emerging markets are imperfect and incomplete rendering executive compensation and market for corporate control an ineffective corporate governance mechanism (Allen, 2005). Allen also argues that in the emerging market internal finance is the major source of capital, consequently less protection is required for outside sources of finance such as shareholders. Additionally unlike reputations and trusts, the effectiveness of law is temporary. Singh and Zammit (2006) are more critical of the UK and US model. They argue that

the UK-US model is not suitable because share prices can be manipulated. They accept that the manipulation can be greater in Asian countries and that the 1997 financial crisis attributed in part to such manipulation. Both set of authors agree on one point, that the UK and the US model are not necessarily suitable for emerging markets.

In contrast, Mueller (2006) while admitting that standards of corporate governance are ignored by foreign investors due to promising returns from young and rising Asian markets, as opposed to the mature economy of developed countries, are supportive of the UK-US corporate governance model. He argued that nothing is lost by adopting this model. In fact, this model, where the emphasis is on equity market, can be a good supplement for other sources of finance. He is also confident that equity market, which he admits may encounter uncertainties, should be satisfactorily dealt with by state interventions.

This study supports the unsuitability of the UK-US model for emerging markets, particularly due to ethnicity issues. While ethnicity and corporate governance may be seen as trivial in the UK and the US, in some countries this is an important and at times controversial subject. In post apartheid South Africa for example, due to native African progress in the political and corporate field, suitability of the UK-US model of corporate governance is now questioned (West, 2006). In particular, the African cultures emphasis on the collective community spirit known as the *ubuntu* is incompatible with the western values of private individual interest that underlies shareholders interest in the UK-US model of corporate governance.

Clearly, there is reason to doubt the suitability of UK-US model of corporate governance for the emerging markets. This study will provide further reason from Malaysia's perspective. While the South Africa reason is due to cultural differences, in Malaysia it is due to political and economic reasons, precisely in Malaysia the ethnic Bumiputra community's economic interest is protected by the constitution hence rendering some corporate governance mechanisms of the UK-US model such as emphasis on the market for corporate takeover and share option compensation plan unsuitable. This study provides literature evidence to illustrate this claim, hence its first theme. The other themes of this study are to provide statistics on ethnic

Bumiputra level of corporate control and identify potential areas of future research.

2. Corporate Governance Background

A review of corporate governance in general and Malaysia in particular provides the basis for a one-size does not fit all argument. In brief, corporate governance is a wider term that encompasses among others corporate transparency, shareholders protection, and investors' protection. It was discussed as early as 1932 by Berle and Means in his quest to understand agency problems facing corporate shareholders in America. More than half a century later the problem remains. Corporate mismanagement and fraud happen on a regular basis. Thus far, the success is still uncertain. Unequivocal consensus nevertheless is a necessity of the continuing corporate governance reform agenda.

Complicating this reform effort is the variation in social and economic systems. In Malaysia, for example this variation is observed in its economic policy. Enshrined in the 1957 constitution[2] and further strengthened in an affirmative economic policy known as the New Economic Policy[3] (NEP) is the provision of economic privilege to ethnic Bumiputra community. The interest of ethnic Bumiputra community or this 'other stakeholder' is an important background to understanding corporate governance in Malaysia. Consequently, a wider corporate governance role is expected as opposed to the narrower agency perspective as in the UK-US system.

The following definition perhaps best represents corporate governance in Malaysia. It clearly recognises both direct and non-direct shareholders rights in corporate governance system.

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[2] Article 89 of the constitution empowers the government to declare Malay reservations over common land. Article 153 specifies reservations for the Malays, called the Bumiputra, in public service appointments and educational institutions, but all pre-existing property rights for all ethnic groups are honoured without discrimination.

[3] An affirmative economic plan popularly known as the New Economic Policy (NEP) formulated in 1971 provides more specific action plan to increase ethnic Bumiputra interest in the economy. Most notably is the requirement to allocate 30 percent of companies share to ethnic Bumiputra community at the initial listing in *Bursa Malaysia* (Malaysian Bourse). This percentage however does not have to be maintained once it is traded.

"Corporate governance is the system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs." (OECD, 1999)

The following review provides further evidence on the relevancy of understanding the ethnicity issue, hence the relevance of stakeholder's perspective as a basis for corporate governance studies Malaysia.

2.1   The Role of Law and Regulation

Since a company is a nexus of contracts between managers, shareholders, labourers and various other parties, it is natural that the role of law and regulation have been the focus of many studies. The general idea is that better law shall improve the state of corporate governance. In fact, La Porta et al (1996) argue that understanding laws instead of financial system is a better way to understand the state of corporate governance. Various laws have since been investigated; judicial and legal system, laws on accounting standards, laws on corruption (e.g. La Porta et. al., 1997), laws on insider trading and judicial efficiency (e.g. Hope, 2002; Reese and Weisbach, 2001).

Consistent attention has been paid to a country legal system as explanation of the state of corporate governance in each country. In particular, differences between Common Law and Civil Law countries are observed. Countries with Common Law legal systems, such as the UK and the US provide better protection to investors as compared to countries with Civil Law legal systems particularly the French Civil Law system[4] as such both the UK and the US have a larger capital market than the French (La Porta et. al., 1997). Companies from Common Law countries have a further advantage; they are likely to have better access to a larger US equity market[5] (Reese and Weisbach, 2001). In contrast, each system has its effectiveness, as an example the

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[4] As measured by the strength of equity and capital markets.
[5] As measured by their subsequent listing.

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German system is better at protecting creditors than the US system (Schleifer and Vishny, 1997). Apparently, it is difficult to determine which legal system is better at promoting corporate governance as each system has its strength.

Malaysia is also a Common Law country, much like its colonial master the UK. In general, investor's protections score for Malaysia is above the country average (La Porta et. al., 1997). In particular, Malaysia scores well on shareholders right, creditor's right and adherence to one-share one-vote rules among the 48 countries analysed. Malaysia however, scores below average on law and order tradition. Malaysia's score is 67.8 percent while that of the UK is 85.7 percent and the country average is 68.5 percent (La Porta et. al., 1997).

Over a decade later, this below average score on law and order tradition might still be appropriate. Malaysia like many other emerging countries faces a common problem – weak enforcement of the law (McKinsey, 2001). At best, the provision of law in Malaysia can be descsribed as appropriate, it is the enforcement that is lacking. Malaysia, according to Khoo Eng Choo the PricewaterhouseCoopers' Asia Pacific deputy chairman has "[i] more than adequate laws and regulations, which are recognized by the international community to advocate good governance, but effective enforcement that is transparent, consistent and speedy is still lacking" (PricewaterhouseCoopers, 2000:8). The President of the Malaysian Institute of Corporate Governance, Megat Najumuddin Megat Khas, has also questioned this enforcement issue:

> "We have many corporate misdoings but how many are being
>
> charged under the Penal Code?" (Chia, 2002:5).

Perhaps controversially the question has also been raised on the safety of foreign investment in Malaysia:

> "Can non-Bumiputra and foreign investors be sure that the
>
> government will not expropriate their investments in Malaysia when
>
> enforcing affirmative action?" (CPPS, 2006:19).

Leaving political and excessiveness of the statements aside, genuine concern on the state of law enforcement in Malaysia is now broadly accepted.

2.2 Accounting and Auditing System: "flagging up accounting irregularities?"

An area of law that is also popular in corporate governance is accounting and auditing systems. The broad idea is a nexus of contracts between managers, shareholders and stakeholders needs supporting documents as proof for any irregularity to be flagged up by an audit firm. The relationship between audit firms and better corporate governance has therefore been the focus of many studies. In general, studies over the years found bigger firms are better auditors than smaller firms e.g. Singhvi and Desai (1971) and Wang and Wilkins (2007). Nevertheless, it is perplexing when a series of recent scandals defy this general finding. Auditors are charged with sacrificing independence for profit particularly from the provision of non-audit services. Watts and Zimmerman (1981:1) who maintained that auditor are naturally independent agrees that this charge is the result of non-auditing services,

> "[i] recent charges that auditors are not independent are found to be
>
> the consequence of assuming an expanded role for the auditor".

The concern is that economic bonding between auditors and their clients through non-audit services can impair auditor's independence when auditing their own work. Studies however fail to provide unequivocal evidence to support the existence of this bond. As for examples, no relationship is observed between a non-audit service and the propensity to issue a going concern report (DeFond, et al 2002), auditors qualifying their opinion (Crasswell, 1999) and total audit fees (Holland and Lane 2009). Another long thought to impair independence is audit tenure. Proponents to limit audit tenure argue that long auditor-client relationships can damage independence and objectivity (e.g. Catanach and Walker, 1999). Among the general charges are emotional attachments and over comfortable relationships impair independence, while over familiarisation leads to over confidence and an oversight of company systems and procedures. A few findings however challenge the needs to limit audit tenure. For examples, long audit tenure is likely to improve audit quality[6] (Cameran et. al., 2008) and is associated with a higher likelihood of making conservative rather than over optimistic accounting estimates (Jenkins and Velury

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[6] As measured by earnings management, based on studies in Italy.

2008). Despite mixed findings, the practice of non-audit services and long tenures have since been restricted[7].

Restricting their service to a traditional role however may not necessarily improve the quality of the audit service. Even without a non-audit service the quality of an auditor's professional judgement, defended by auditing profession as integral part of the profession, is still questionable. In one judgement involving a reputable audit firm and their fraudulent client, three of the four senior partners consulted made a gross error in their professional judgement [8](Gwilliam, 2009). Similar cases involving other companies are unlikely to ease doubts on the perception of an auditor's professional ability[9].

Disregarding the current image of the profession, in their traditional role auditor are responsible to certify that proper reflection of company's performance is represented in financial and annual reports. In this respect, the role of accounting standards is important. Presently, there are various bodies that are responsible for developing accounting standards e.g. Financial Accounting Standard Boards in the UK, and Malaysia Accounting Standard Boards. Widely accepted standards are those developed by the International Financial Reporting Standards[10] (IFRS). Two of the reasons for this acceptance are support from domestic accounting bodies and the stock exchanges requirement for a company to use international accounting standards (Tarca, 2004).

Another development is the setting up of an audit committee as proposed by the Cadbury Committee (1992). The intention is that extending the power of an internal audit department to a specialised committee improves monitoring of management's conduct. The majority of studies are in agreement with this recommendation. For example, an audit committee is likely to object to the removal of current auditors if

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[7] In the US, the Sarbanes-Oxley Act 2002 prohibits non-audit service and prescribes the tenure for each auditor. In the UK non-audit service are permissible but companies are required to make disclosures in the annual report, as per the Cadbury Report, 2002.
[8] In the case of the Independent Insurance Co. which was once the UK's 9th largest insurance company three of the four partners of KPMG approve this company scheme as at arm's-length transaction and their financial statement as clean baffling the independent actuary. The company later went into administration.
[9] e.g. are scandals involving companies such as World Com., Enron and Barings Bank.
[10] formerly International Accounting Standards (IAS)

the management is practicing 'opinion shopping[11]' (Lennox, 2002). Among other benefit is improvement in the company's risk management strategy, especially when the committee have a greater proportion of members with university qualification (Dionne and Triki, 2005). Consistent with this need for higher degree qualification is when greater internal control weakness among companies without audit committee member with financial qualification is observed (Zhang et. al., 2007). In fact, the US market reacts favourably to a newly appointed audit committee member who is an expert in financial accounting (Defond et. al., 2005).

In Malaysia, accounting and auditing also have an important relationship with corporate governance. In the area of disclosure, a positive relationship between quality and the level of foreign investment is observed (Haniffa and Cooke, 2000). With respect to the standards of accounting developed by local accounting boards, in particular Malaysian Accounting Boards, it is generally equivalent in the material respect to those developed by IFRS. In some cases, IFRS standards are acceptable before they are made mandatory by local accounting bodies e.g. accounting standards on derivatives financial instruments (Hafiz Bajuri, 2003). With regard to external auditing, the presence of international firms are beneficial to corporate confidence since they tend to play bigger corporate governance role than their smaller local rivals (Tan and Wong, 2002). While the presence of an international firm is beneficial, the risk of non-auditing roles persists. At the moment a non-auditing role is permissible with full disclosures while there is no explicit rule on auditor's tenure and rotation[12]. A recent study confirms that there is a negative perception on non-auditing roles played by an external auditor (Zulkarnain Sori and Yusof Karbhari, 2006). With regard to company's internal control, the setting-up of an audit committee is mandatory[13] and is supported by many studies e.g. audit committee provides confidence to the business community (Zulkarnain Sori and Yusof Karbhari, 2006a) and has a positive effect on performance (Eow et al., 2003).

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[11] It is a term which refers to unhealthy practice of searching for auditors that agree with management's practice.
[12] Appendix 9C of Malaysian Bourse requires full disclosures of non-audit service requires. There is however no explicit rules on auditor rotations.
[13] In particular by Chapter 3.15 of Malaysian Bourse listing requirement

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While the findings are consistent with the findings in the UK and the US there are exceptions. Malaysia's accounting system is categorised as that is based on statutory control and secretive disclosures (Gray, 1988). In comparison, the UK-US accounting systems are based on professionalism and transparent disclosures. Although this is only a general comparison, it may not be totally out of place in view of other uniqueness in Malaysia. Specifically some companies, especially those owned by ethnic Bumiputra individuals, benefit from political connection, which by nature are not easily transparent (see Jomo, 2004). This political benefit nevertheless is realised by auditors, as a result is incorporated into their audit work accordingly (Gul, 2006). In particular, the likelihood of financial misstatement and subsequent audit works are less for politically connected company due to the financial support they received from the government.

Without doubt, recurring frauds and scandals have tarnished the role of accounting and auditing (e.g. Weiss and Berney, 2004) but the consensus is that accounting and auditing roles in corporate governance are still relevant. In the case of Malaysia, this also entails understanding ethnic Bumiputra's economic interest, and political connection may have a consequence on a company's performance hence the necessary audit work.

2.3   Threat of Take-over?

The general idea is that a badly managed company is an attractive target for a takeover[14] and in a successful takeover, the present management risk being made redundant by the new owner. It is hoped that fear of sacking improves management's performance. In this respect, good performance is generally reflected in an improvement in share price hence making a company more expensive and a less attractive target. The rise in share price not only saves management jobs but importantly provides good returns to shareholders. Not surprisingly, in the UK share price is widely used as a basis for assessing and rewarding a company's management (Conyon et. al., 2001). Alternatively, shareholders of the acquired company can generally expect good returns on the news of a takeover attempt (see Bruner 2001).

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[14] In this study takeover, mergers and consolidation practice are used interchangeably as essentially post exercise of such practices is a single entity company.

Nevertheless, takeover possibility is not necessarily a successful threat to poorly performing managers. Various methods can nullify this threat (see Kruse, 2007). Typical methods include poison pill[15] - a term for the method that makes a take-over uninteresting, or in the event that the takeover materialise through excessive severance agreement, popularly known as golden-parachute. In addition, even if takeover does materialise still no clear improvement in post takeover exercise is evident except in general to the shareholders of the acquired companies instead of the acquirer (see Bruner, 2001). If there is any gain to the acquirer, it is negligible and only in the short term as in the long term the gain is negative (Tuch and Sullivan, 2007). This loss to the acquirer is especially apparent when the acquirer is overly aggressive (Kaplan, 2006).

Despite lack of evidence, mergers and takeover activities continue to rise. Among the motivations cited are managers being over optimistic about their ability and managers self interest (see Bouthers et. al., 1998). Other reasons are credit expansion and stock market explosion, coupled with managers self interest especially towards the end of each wave of mergers (Martynova and Renneboog, 2005). Another motivation suggested is the so-called 'too big to fail' doctrine (see Gardner and Molyneux 1997). This doctrine believes that generally, by being too big, the government will not let the company fail[16], as this will have a domino effect to the banks retail customers and eventually to the whole economy. Necessary government rescue packages ensure all deposits are safe, although this will be at the expense of taxpayer's money. Recent evidence involving several large banks in the UK provide further credential to this doctrine[17].

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[15] A common feature of the 'pill' is that it triggers 'poison' once control of the company is affected. This is possible by inserting this 'poison' in the company's constitution. Examples are constitution which allows automatic issuance of shares to the existing shareholders, thus effectively diluting shares of a new shareholder, and rules which permit delays in the appointment of a new board of directors which effectively delays control of the company by a new owner.

[16] According to Gardner and Molyneux (1997) the US central bank de-emphasizing of this policy in comparison to their European counterparts are attributable in parts to lack of academic evidence of this domino effect.

[17] E.g. HBOS and Royal Bank of Scotland.
http://www.bbc.co.uk/blogs/thereporters/robertpeston 2009 08 what_was_hbos_doing.html
http:/ www.bbc.co.uk blogs thereporters/robertpeston/2009 02 rbs_big_losses_big_bailout.html 13 May 2009

Nevertheless, overall, despite overwhelming past evidence of mergers and takeover failures, especially on the part of the acquirer, such practice continues. The blame is on the existence of an easier and preferred exit strategy i.e. by selling their shares instead of voicing their dissatisfaction (see Forbes and Watson, 1993). Voicing dissatisfaction in the AGM to oppose this takeover attempt requires an informed decision, which is not only costly but is also free ride by other users. In addition, today's complex operating environment with a variety of products and intricate financial transactions further widens information asymmetry between management and investors making informed decisions a daunting exercise (e.g. Kang, 2006).

Notwithstanding the effectiveness of the market for corporate takeover activity in the UK and the US, in Asian countries takeover activity is a less thriving activity. In particular, the Asian equity market lacks active corporate players (Allen, 2005). The reason is the highly concentrated nature of Asian companies, which makes the market for corporate control imperfect (Allen, 2005). This situation results in fewer blocks of shareholders hence fewer potential partners available for the raiding company (see Kruse, 2007). The simple existence of strong corporate players ready to raid any weaker company however may not necessarily encourage takeover activities, since this may require substantial partners, which are not easily available. The use of share price as corporate governance control consequently is less practical since despite low share price potential bidders are in the first instance hindered by lack of potential partners. In addition, similar to the UK and the US, Asian countries also face the issue of 'too big to fail', although helping these 'too big' companies is not necessarily a futile practice as evidenced among Korean companies since this allows a company to continue as a going concern, especially when bad mangers are properly punished (Chang, 2000).

In Malaysia, there is reason to believe that lack of active corporate players *inter alia* with ethnic Bumiptura economic interest renders takeover activity as a corporate governance mechanism even less effective. In particular, takeover activity is hindered by the lack of a corporate takeover market for ethnic Bumiputra companies. The following discussion explains this situation. In Malaysia, protection of ethnic Bumiputra economic interests is a widely debated, highly controversial and sensitive issue (see e.g. Jomo, 2004; Heng, 1997 and White, 2004). Being the majority of the

population, ethnic Bumiputra economic interests have big social and political implications. Defending this economic interest is therefore an important and sensitive issue. For over four decades, ethnic Bumiputra's dominated government have formulated various economic policies under the banner of NEP to improve this community's economics standing. Fittingly, selling Bumiputra companies, even when these companies are at the brink of bankruptcy, gives the impression of undoing all the hard work and failure of the party and leadership. A case for illustration is the event following the Asian financial crisis in 1997 where heavy subsidises and bails out (Perkins and Woo 2000) and capital controls were imposed in order to save these companies[18] (Johnson and Mitton 2001).

Closely related to the ethnic Bumiputra economic interest is the government-controlled issue. Recently, suggestions have been made that government controlled companies are essentially controlled by the Bumiputra since the Malaysian government, despite being multi-ethnic is dominated by this community (CPPS, 2006). Large ethnic Bumiputra representation in the company's management is used to strengthen this claim. If indeed this is true, this essentially means that ethnic Bumiputra's economic interest is represented both in companies controlled directly by them and indirectly by the government. Lack of takeover market activity therefore might affect both ethnic Bumiptra-controlled companies and government-controlled companies. Regardless of this imperfection of the corporate takeover market, consistent to the UK and US findings no real evidence of improved post takeover performance have been observed (Marimuthu 2008).

Takeover activity, despite concern about post takeover performance, might still be an effective corporate governance mechanism in widely held companies. In Asia, the highly concentrated nature of corporate ownership leads to imperfection of the market for corporate control (Allen, 2005). In Malaysia, this study illustrates ethnic Bumiputra economic interest as another reason that can potentially compound this lack of takeover activity.

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[18] According to Johnson and Mitton (2001) this is especially true to those companies strongly aligned to former Prime Minister, Mahathir Mohammed, and this policy is just a screen to help these companies. It is not necessarily all bad with this policy. According to Kaplan and Rodrik (2001) this policy in comparison to the IMF rescue package resulted in better economic improvements and a resurgence in the stock market.

2.4 Chief Executive Officer and Board of Directors: Overpaid and Political Appointees?

The person having ultimate responsibility for stewardship of the company is normally the chief executive officer (CEO). A company's success or failure on facing challenges, such as threat of takeover arguably lies in the CEO's hands hence is another popular area of corporate governance studies. The underlying general question in these studies is why some CEOs are successful while others fail. CEO entrenchment is one of the reasons; that is a CEO remains in his/her position even though the company is under performing. The Cadbury Report 1992 made a few recommendations on this entrenchment issue. One is to divide the role of CEO and Chairman. This separation of duties is to avoid the CEO from condoning his own acts. Studies however reveal confusing findings. Separation of CEO's and Chairman's roles is likely to reduce entrenchment[19] (Dedman, 2000), yet no relationship between CEO duality and firm performance is observed (Shuk, 1999). The issue of CEO entrenchment is more complicated than it appears.

An important consideration in understanding CEO entrenchment is the relationship between his on-the-job pay and severance package (Inderst and Mueller, 2005). In particular, on-the-job pay that is too high is likely to encourage entrenchment. On the other hand, if the severance package is too high, a CEO is likely to welcome his/her removal. Expensive severance packages can, not only lead to slack management but also a very costly sacking compensation exercise. It is getting the right balance between on-the-job pay and severance packages that complicates the issue of CEO entrenchment (Inderst and Mueller, 2005).

CEO interlocking is another possible reason for poor CEO performance. That is the CEO of company 'A' is a director of company 'B' while the CEO of company 'B' is a director of company 'A'. Instances of such interlocking are not many but where there is interlocking it is likely to be associated with an attempt to increase private benefits[20] (Fich and White, 2003). Nevertheless, when performance based

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[19] Duality is measured by its probability while eentrenchment is measured by age tenure and ownership.

[20] as measured by CEO tenures

compensation plans such as share options, are employed the likelihood of CEO interlocking is reduced (Fich and White, 2003).

Naturally, the follow-up to understanding factors influencing a CEO's performance is motivation attempt. Popular motivation is through compensation contracts. The thinking is that a good compensation contract should be a motivation for a CEO and stops them from appropriating private benefits. One of the important compensation contracts is the share option. However, the benefit of the share option in improving a company's long-term performance is questionable. Evidence suggests earnings management is practiced after such option is granted[21] (Minhat, 2008). Evidence albeit limited is also observed among technology[22] companies to suggest that the timing of such option may be manipulated to maximise management return (Hodgkinson et. al 2009). In particular, options are backdated at a time when share prices are low, thus making the exercise price easier to achieve. There is also another issue when shares are used as basis of performance measurement; it discourages entrepreneurial spirit: income is prematurely recognised, expense is delayed and long-term business opportunities ignored (e.g. Coffee, 2005). As a result, a company's performance is good only in the short term, as evidenced in the recent corporate scandals in America (Coffee, 2005).

Regardless, good compensation contracts with a CEO by itself are insufficient. A CEO needs regular monitoring and advice from a board of directors (BODs) hence is another popular area of study. In practice BODs are not involved with a company's day-to-day operation but major decisions such as investment, financing and strategic direction normally require board approval. The question is what makes a board of directors perform this function to their best capacity. One suggestion is to have independent directors in the board as a check and balance in the company. There is supports for this suggestion. Companies with a higher proportion of independent directors are better at monitoring the management (Helland and Syukata, 2005). Another idea thought to be good[23] for corporate governance is having a representative from institutional investor on the board (Navissi and Naiker, 2006). Not all findings

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[21] In particular downward earnings management before stock option is granted and upward earnings management during the exercise periods, among companies with few outside directors.
[22] Limited evidence are also presence among oil and gas, utility and health care industry.
[23] as measured by company value.

however agree on the benefits of independent directors. No clear relationship between number of independent directors and company's performance is observed (Stapledon and Lawrence 1997). Similarly, the benefit of independent directors is questioned when a positive relationship between board size and CEO's compensation is observed, suggesting that the board is not efficient in monitoring the management (Ozkan, 2007). The benefit of independent director is also questioned when BOD are still dependent on management. In particular, the agenda and the information distributed in the meeting are still determined by the management (Useem and Zelleke 2006).

Nevertheless, supposing these 'expert' directors are not performing, is removing them a simple exercise? It has to be acknowledged that a CEO can be very influential in the appointment of directors. There is evidence of CEO's reappointing non-performing BODs in order to extend tenure as a CEO (e.g. Lasfer, 2006). Equally important is to realise that shareholders lack of participation in a company's AGM is partly to be blamed for the reappointment of these non-performing BODs. Only 58 percent of shareholders exercised their voting right in 2005, albeit a rising trend (Mallin 2006). In any event, even if all shareholders exercise their voting right, achieving the desired outcome is not without difficulty. Success in the AGM requires cohesion among shareholders and this is problematical due to the lack of information on other shareholders voting behaviour (Chakravarty and Hodgkinson, 2001). Shareholders may end up voting against each other instead of the management.

In Malaysia however to date there is no information or studies on shareholders rate of participation in the AGM. There are nevertheless studies on other areas related to CEO and BOD where findings are generally mixed. The rise of CEO compensation corresponds to a decreasing shareholders fund[24] (Santhapparaj and Tong 2004) indicating possible private benefits, while no significant relationship between separation of CEO and chairman and good corporate governance is observed (Norita and Shamsul Nahar,[25] 2004). On the contrary, this relationship is observed in Haniffa

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[24] i.e. negatively correlated to directors' compensation. Although could also be attributed to general economic recession.
[25] Studies based on distressed companies in the then Kuala Lumpur Stock Exchange (now Malaysia Bourse).

and Cooke[26] (2000). With respect to audit committee, management views financial knowledge positively (Mohd Saad et. al., 2006) but on BOD independence the benefits to corporate governance are still doubtful[27] (Norita and Shamsul Nahar 2004).

An equally important issue in Malaysia is cross directorship (Thillianathan, 1999). That is a director from company 'A' plays independent role in company 'B' while director 'B' plays an independent role in company 'A'. The problem is that cross directorship impedes independence. In particular, independence is compromised when directors are not providing an honest professional opinion that contradicts the CEO's opinion for fear of not being reappointed as directors of the company in the future. Cross directorship can also impede the director's focus. Directors now have less time devoted to each company. Nevertheless, perhaps an interesting feature in the Malaysia corporate scene is the appointment of directors particularly on political appointment. The general idea of this appointment is to improve a company's performance. There are two contradictory findings. First, politically connected companies are expected to cope well in times of economic difficulties – a situation recognised by auditors hence is accordingly reflected in their audit work (Gul, 2006). On the other hand, a suggestion is made that a political appointment may not benefit the company. Appointment of such directors does not affect performance (Haniffa and Hudaib 2006). In Malaysia, regardless of these contradictory findings, political appointment is an issue that requires consideration in corporate governance studies.

2.5   Ownership Structure

So far, this study has reviewed amongst others the threat of takeover and CEO compensation plan as the corporate governance mechanisms. Their effectiveness in large part is influenced by the ownership structure of a company. In particular, they are effective in resolving an agency issue that is common in widely held companies. The general idea is that an agent, i.e. the CEO, faces sacking by the new owner if a takeover is successful. The expectation is fearful of being sacked improves the CEO's

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[26] As measured by voluntary accounting disclosures.
[27] Studies based on distressed companies in the then Kuala Lumpur Stock Exchange found no association with voluntary disclosures.

performance. One important measure of performance, accordingly, is share price since this determines the cost of the take over exercise. Hence as a motivation the CEO is offered a percentage of company's share at a discount when the share price reaches a certain target. The intention is for all parties to benefit from rises in the share price; takeover becomes expensive, shareholders wealth increases, threat of sacking reduces and the CEO obtains shares at a discounted price. At least this is the theory of how to tackle corporate governance issues in widely held companies. It can however be less effective amongst others due to earnings management, lack of participation in the AGM, the negative effect to long term entrepreneurial spirit, the existence of schemes to make a takeover attempt unattractive and manipulation in the share option backdating exercise, as discussed in previous sections.

In highly concentrated companies, the issue is protection of minority interest from majority shareholder's private benefits of control (see Becht and Roell, 1999; and Nenova, 2005). As a result, a CEO in a highly concentrated company may respond poorly to the share option and threat of take-over since he/she is either the majority shareholder or is affiliated to the majority shareholder of the company. Rewards for CEOs in highly concentrated companies come from private benefit of control. Some common examples are through excessive salaries and rewards, having an easy and quite life and 'pet' projects that are not making money (e.g. Pagano and Roell, 1998). Surely, in the AGM minority shareholders can voice their dissatisfaction and request sacking of the current management team. In practice, however this can be a futile and difficult exercise (see Becht and Roell, 1999). In the first instance being minority shareholders in highly concentrated companies they are normally defeated by the majority shareholders in a voting exercise. Secondly, ability in getting all the minority shareholders to work in concert and possibly form the largest block still does not guarantee them success in a voting exercise. Minority shareholders may face further hurdles. Existence of schemes designed to strengthen majority shareholders grip on the company beyond their cash flow right can stifle the minority shareholders voice. Examples are assigning dual class shares with less voting rights to certain groups of shareholders, instituting a voting restriction on some class of shares, empowering sole rights to nominate directors thus prohibiting representatives from minority shareholders, making a takeover attempt unattractive by inserting long waiting period

to change the structures of the company. These are typical problems facing minority shareholders in continental Europe (Becht and Roell, 1999).

Despite these problems, in some large economies where shareholdings are not as widely held such as in Germany evidence of private benefit of control is low (Franks and Mayer 2001). Good law enforcement[28] is the possible reason (Dyck and Zingales, 2004). Other possible reasons is that in countries like Germany and Japan. banks play a more dominant role than in the UK-US systems of corporate governance (see Sang, 2004, Aoki, 1990 and Becht and Bohmer, 2001). In Germany, smaller shareholders typically designate banks as proxy voters hence banks are able to control significant blocks of votes. This practice not only improves control but also avoids resorting to high ownership concentration thus allowing some trading liquidity of company shares (Becht and Bohmer 2001). In Japan, one possible source of its economic strength is the close relationship between companies and their main bank, also their substantial shareholder (Aoki, 1990). In particular, the main bank acts as the administrator of the credit consortium and minder to the companies when companies are still at the early stage of substandard performance – acts that is made possible by the financial information they have on these companies by virtue of being their main source of finance. For bigger companies, Japanese banks are part of an alliance known as *kieretsu* where cross-shareholdings among the participating companies permit cross-oversight and cross-organisation of decisions (e.g. Sang, 2004). In contrast, Malaysian banks, similar to the UK-US system, are not known to act as proxy voters or own substantial shares in the companies to control this company. Consequently, the only lesson is to learn from a country like Germany where good law enforcement reduces evidence of private benefits of control (Dyck and Zingales, 2004).

Unlike the UK, Malaysian companies are highly concentrated. The median size of the largest block is nearly[29] 29 percent (Fazilah, 2002) and the mean is around 30 percent (Suto 2001). The similar corresponding median in the UK[30] is 9.9 percent (Goergen and Renneboog, 2001). On the identity of the shareholders, a noticeable feature of

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[28] As measured by i) formal right of minority shareholders, ii) the degree of accounting disclosures iii) quality of legal enforcement (proxy: International Country Risk)
[29] Figures as calculated on companies listed in Malaysian Bourse (formerly known as Kuala Lumpur Stock Exchange or KLSE).
[30] Figures as calculated on companies listed on London Stock Exchange.

corporate Malaysia is significant government involvement in big companies. In the the CPPS (2006) review of the ten largest companies, only three are majority owned by a family group, the rest are majority owned by the state or government. Leaving the identity of the owners aside, high ownership concentration is a feature of Malaysian companies. Being highly concentrated companies the issue subsequently is minority interest protection from the majority owner who is also the CEO. Weak corporate governance in Asia is precisely due to this issue (Lemmons and Lins, 2001).

Promoting more disperse shareholdings however may not be the solution (Berglof and Claessens, 2004). They cautioned the need for ownership that is widely dispersed in the present environment of weak law enforcement. The investors' preference is securing control of the company instead of letting fate be determined by weak enforcement of laws. In fact, according to them concentrated ownership may be the most important corporate governance mechanism in developing countries.

"[i] wholesale transfer of governance standards from developed market economies may discourage investors from taking controlling positions and thus undermine perhaps the most potent corporate governance mechanism in less developed economies"

Berglof and Claessens (2004:13)

Regardless, in Malaysia another problem is complex cross ownership of companies (Thilianathan, 1999). The complication comes in two forms. First when reciprocal ownership complicates identification of control. A simplified example is when company 'A' owns 50 percent shares in company 'B', while company 'B' also owns '50' percent shares in company A, as illustrated in the following *figure 1*. With cross ownership, like in the following figure, it is difficult to determine the ultimate holding company.
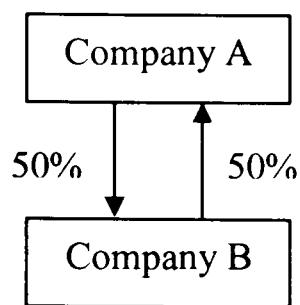
Figure 1

Another form of cross ownership is pyramiding, as illustrated in *figure 2*. That is a company is held by a holding company that in turn is owned by another holding company. A simplified example is when Company 'F' is 35 percent owned by Company 'C' and 60 percent by Company 'B' and the rest is by Company 'D'. Company 'B' on the other hand is 50 percent owned by Company 'A'. The ultimate owner of company 'F' is therefore Company 'A' through its 60 percent ownership in Company 'B'.
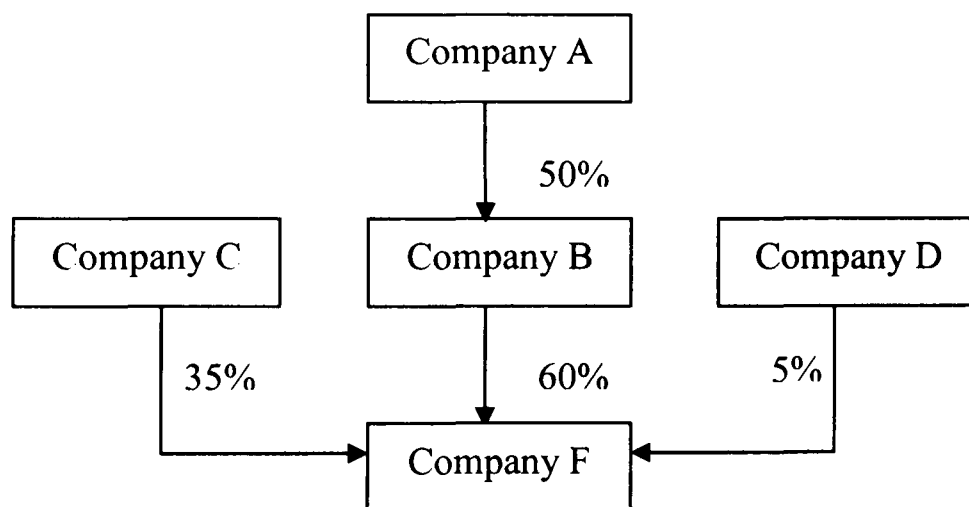
Figure 2

The issue with ownership by Company 'A' is that it results in a mismatch between control and risk. Company 'A's' cash flow right and risk is only 30 percent (60 percent x 50 percent), although it has 100 percent operational control of the company. The formation of a further holding company such as Company 'A' has deluded the risk initially held by company 'B' at 60 percent to 30 percent without losing control of Company 'F'. While the risk shared by Company 'B' has been deluded the risks shared by Company 'C' and 'D' remain. In fact, Company 'C' now has a larger risk than Company 'A' with its 35 percent ownership despite not controlling Company 'F'.

In addition to dilution of risk, non-controlling shareholders, such as Company 'C' and 'D' also face the risk of self-dealing between Company 'F', 'B' and 'A'. The benefits are only shared between these companies, leaving out the minority shareholders. Some examples are selling products or services to holding companies at a low price but buying from them at an inflated price, providing them with loans at favourable terms and paying a low dividend in order keep the assets within the company (see Nenova, 2005). Although in general these practices are prevented by regulation requiring all related parties transactions to be disclosed, they are still hindered by complex ownership structure as discussed in previous sections (see Nenova, 2005). Without clear identities on the beneficiaries of these transactions, disclosures can become a meaningless exercise.

In Malaysia, complex cross ownership is an issue but possibly a bigger issue is non-competitive tenders and improper payments to related parties, which are often difficult to prove.

> "Business dealings based on non-competitive tenders are detrimental to company profits, and enrich related parties, such as company directors, senior management and their family members. However, improper payments could be even harder to substantiate, given that these payments do not require separate disclosure like related party transactions."
>
> RHB Research (2008:2)

In a related aspect due to the perceived corruption "codes of conduct on ethics, bribery and corruption" are common in a country like Malaysia (Wellford 2005: 45). Regardless, it is the protection of a minority interest such as Company 'C' and 'D' in highly concentrated companies from majority owner from self-dealing and improper payments that is the concern in a country like Malaysia and less so from the management representing widely held companies.

2.6 Corporate Social Responsibility

Another relevant area of study in corporate governance is a company's social responsibility or corporate social responsibility (CSR). CSR is also known by other terms such as corporate citizenship, corporate ethics e.g. Carroll (1998). This is not a new area of study. It was the subject of study as early as the 1920s with the emergence of corporation during that period (Hoffman, 2007). Review of literature reveals that the issue plaguing CSR is lack of clear definition (Silberhorn and Warren, 2007; Wan Jan, 2006). Without clear definition, it complicates the CSR strategising process. In particular, whose strategy should be the focus of CSR – shareholders or other stakeholders? At present, there is no clear answer, although signs of convergence between management who represent shareholders and other stakeholders are emerging (Silberhon and Warren, 2007). Management realises that although social responsibility is voluntary in nature, society demands that company fills this act. Complicating this issue of identifying other stakeholders are various CSR dimensions. For example, in the narrower stakeholder dimensions the focus, hence the stakeholders, includes employees, suppliers, customers and communities. In the wider stakeholder dimension, particularly the economic dimension, the focus includes contribution to economic development while the environmental dimension includes cleaner environment and in the social dimension the focus includes contribution to society (Dahlsrud, 2006). At present a narrow stakeholder and social dimension are widely applied in CSR studies (Dahlsrud, 2006).

Determination of CSR dimension in a developing country can be equally difficult. Blowfield and Frynas (2005) describe the reasons. First, identification and communication with other stakeholders in a developing country is a complicated exercise. An example illustrated in Blowfield and Frynas is that CSR practice does not benefit home workers in the garment industry. They are often ignored in the CSR process despite being an important part of the industry. Secondly, in order for the CSR to benefit a developing country it requires a collective effort among the companies and various agencies. An example made by Blowfield and Frynas is lack of collective action in combating HIV hinders CSR success in developing countries.

In Malaysia, the CSR continue despite this lack of clear focus. Following a global trend, in 2000 Malaysian Code on Corporate Governance (MCCG) was launched. Consequently, CSR among Malaysian listed companies and their studies among academics are expectedly growing. Findings include the fact that CSR practice is more evidence in multinational than local companies (Chapple and Moon, 2005) and owner-managed companies have poor CSR disclosure (Nazli Ghazali, 2007). Unique although not surprising is when the relationship between the CSR and ethnicity is also investigated. In particular the CSR[31] are better when board are dominated by the Malays (a main sub-ethnic group of Bumiputra) (Haniffa and Cooke, 2005).

2.7 The era of information technology

While all the corporate governance areas discussed above have been around for quite some time, a recent field is its relationship with information technology. There are two focuses in this area of study. First is the threat of information technology, such as internet, to corporate governance. In particular is the concern on security and safety issues followings widespread dissemination of information. In this respect, a suggestion is made that the ultimate responsibility lies with company directors, which unfortunately many are still unaware of and/or have little relevant technical knowledge (e.g. Smith, 2005; Posthumusa and von Solms, 2005). As a result of this concern, the formation of a committee on information technology oversight is proposed to alleviate the board of director's responsibility (e.g. Posthumusa and von Solms, 2005)

On the other hand, information technology can also be beneficial to corporate governance, so it is another focus of studies. The link stems from the general idea that technology benefits the economy e.g. Karl Marx (in Smith and Marx, 1994). In the case of information technology, the main benefit is generally regarded to be that better dissemination of information reduces information asymmetry between managers and external shareholders. Examples of information technology in use include computer-assisted auditing techniques assisted with an intelligent agent (e.g. Junaid Shaikh, 2006) and web-forum (e.g. Unerman and Bennet, 2004). Today,

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[31] As measured by disclosures in the annual report.

application of information technology has been identified as a way forward in improving corporate governance (OECD, 2001).

A reviews of literature revealed that studies on information technology are relatively new in corporate governance. Among the findings is the fact that quality of online information provided in corporate websites is ever-present but poor. In the UK, only 58 percent of information provided is credible and only 70 percent of this is usable[32] (Abdel Salem and Street, 2007). There are various possible reasons. One is the lack of directives on information that needs disclosure (Burns, 2001). Another possible reason is lack of managerial attention on the integrity of the information reported (Smith, 2005). Even with serious managerial attention, issues are likely to remain due to several difficulties. In particular, regulators need to balance between standardisation of information that has better integrity but is often outdated against customisation, which provides real time information tailored to specific users but is lacking in integrity (Jones and Xio, 2004). Standardised information however can still be misleading when changes on the online audited information is made without the auditor's knowledge (Debreceny and Gray, 1999) or hyper linking between audited information and non-audited information confusing the users (Jones and Xio, 2004).

Other areas of information technology and corporate governance are also studied. Interactivity and dialogue between management and other stakeholders are still lacking (Cooper[33], 2003; Capriotti and Moreno[34], 2007). Another area where information technology helps corporate governance reform is the promotion of shareholders democracy by making it more efficient particularly through electronic voting. Thus far, the progress with electronic voting is encouraging (Myners, 2005). Electronic voting technology no longer compels shareholders to vote in person but online. Minutes of the meeting are accessible through the internet. All these will be of tremendous help when shareholders have difficulty in attending meetings e.g. due to geographical or health reasons. Already, in 2004, around 56 percent of the Financial

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[32] Study on largest 25 percent company in the LSE and as measured by disclosure checklist.
[33] Studies based on UK electricity companies.
[34] Studies based on companies listed on Spanish Stock Exchange.

Times Stock Exchange 250 companies provide electronic voting facilities[35] (ICSA, 2004).

In Asia, a popular area of study on information technology is internet reporting. In general, the commercialisation of the internet is considered beneficial. In particular, it improves market performance of securities listed on emerging market equity exchanges by increasing the volume of transactions (Hunter and Smith, 2007). In Malaysia, reporting through internet is also common among public listed companies. The use of internet reporting however does not mean an improvement in the quality of information (Iqbal Khadaroo, 2005). Internet reporting provides no additional information apart from what is already available in a normal annual report. With regard to electronic voting, the system is also proposed for Asian countries, where the present state is described as "antiquated" and "parlous" (ACGA[36] 2006: 9). Agendas are replaced at the last minute or after the voting process, without sufficient disclosures of information and in many companies voting is still done by show of hands. Although the use of electronic voting among Asian companies is expected to alleviate this problem, little else is known. There is still a lot to be explored in this area.

2.8   Voting Power

Similar to information technology, voting power is another area of corporate governance studies that has not been widely explored. Presently, cash flow right concept is the default to which many ownership analyses are based. There are two underlying assumptions of this concept; first it focuses on the right i.e. on cash or anything that can be converted to cash e.g. assets. Secondly, this right is proportionate: that is a 51 percent share is for 51 percent cash and assets of the company. Nevertheless, this default has also been extended to voting analysis. For example, a scheme such as dual class of shares and applying restrictions on voting are often considered unfair because it deviates from this proportionate distribution. This

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[35] As measured by the application of CrestCo. proxy electronic facilities. This is a company which operates Central Securities Depository for UK and Irish stocks. It also provides electronic voting facilities. https://www.euroclear.com/site/publishedFile?DocumentName=voting-update-1_tcm87-119823.pdf
[36] Inaugural Report on Asian Proxy Voting Survey.

however can be misleading since in voting this fairness is not proportionately distributed. The following section discusses this concept.

A better method of analysing ownership structure and voting is through a concept introduced by Penrose (1946) known as voting power. The idea for this concept is drawn from probability technique. Specifically the concept defines voting power as probability of a shareholder winning a voting election. Suppose a company has two shareholders, each owns 51 percent and 49 percent shares respectively and a simple majority is required to win a voting election. A shareholder with 51 percent share will win a voting election on the other hand the second shareholder with 49 percent share will loose a voting election hence their voting power is 'one' and 'nil' respectively. In contrast, these shareholders, under the cash flow right concept, is implied to have 51 percent and 49 percent power respectively even though, as illustrated, their probability of winning a voting election is 'one' and 'nil' respectively. It is for this reason that the concept of voting power is now widely accepted and applied in political studies. This however cannot be said with regard to corporate governance studies, except very few e.g. Chakravarty and Hodgkinson (2001) who illustrate that shareholders activism might not lead to desired policy outcome since voting success is complicated by unknown voting practices of other shareholders. Another study is by Leech (2002) who concludes that a 20 percent share is sufficient guidelines for identifying a controlling block in UK companies. Worse, in Malaysia, analysis from the voting power perspective is almost non-existent.

3.   Ethnic Bumiputra and Government Controlled companies: The Statistics

This study has so far highlighted the relevance of ethnic Bumiputra economic interest in many areas of corporate governance studies in Malaysia. For example, past evidence indicates that in times of economic difficulties ethnic Bumiputras companies are heavily subsidised by the government (e.g. Perkins and Woo 2000) hence hampering an active corporate takeover market. However, there is lack of statistics on the companies that are controlled by the Bumiputras. Previous studies are mostly based on equity ownership (e.g. CPPS 2006: Fazilah 2002), which as discussed in the previous section entails different meanings.

A survey of shareholdings distribution obtained from annual reports of 203 randomly selected Malaysian listed companies for the year ended 2005 was conducted. Shareholders were classified according to ethnicity, government and foreigners. Control was measured by majority ownership for the purpose of operational control[37].

Analysis reveals that ethnic Bumiputra community and the government controlled 7.4 percent and 5.4 percent of the companies listed in the stock exchange by virtue of having more than 50 percents shares of the companies, respectively. If we consider that government controlled companies as receiving economic protection, in the corporate takeover market, 12.8 percent of the companies can therefore be categorised as susceptible to the imperfection due to economic and political interest.

Detailed of the methodology is as per appendix I, II and III. Detailed analyses are as per appendix XII.

4. Conclusion on the Review

Is the UK-US system of corporate governance a remedy for country like Malaysia? Over the course of this writing, it has been described that the UK-US system which emphasis on takeover activity and share price, as corporate governance mechanism is suitable in widely held companies. This is not to say that equity market is not important in an emerging market like Malaysia, but because companies are highly concentrated it becomes less effective. Even the emphasis on share prices, as in the UK and the US, is subjected to criticism such as earnings management and when the governance mechanism is active corporate takeover market by the schemes to nullify such threat. To a certain extent, however these mechanisms are still perhaps best at addressing agency issues.

In Malaysia, the issue is less on reducing agency cost but protecting minority interest resulting from high ownership concentration. The better solution may be to learn from other countries with similar trends of corporate ownership e.g. through better

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[37] In this study the concern is on full control i.e. who has full control a particular company for operational objective. In this respect the use of either cash flow right or voting power concept will produce similar results, although in situation where no parties has full control the used of voting power concept is more suitable since it permits identification of parties that shared this control.

enforcement of laws as evidenced in Germany (Dyck and Zingales, 1999). Another factor, which compounds the complexity of corporate governance studies in Malaysia, is ethnic Bumiputra's economic interest that is protected by the country's economic policy and constitution. This community may view selling troubled ethnic Bumiputra companies as failure on the part of party and leadership. In the aftermath of 1997 heavy subsidise and bail out are practiced by the government (Perkins and Woo 2000). The threat of takeover consequently becomes a less effective corporate governance mechanism. This influence of ethnicity also extends to other areas of corporate governance studies, bar technology. In the area of law, the suggestion is made that ethnicity will influence the level of enforcement, particularly in that some question authority fairness in dealing with possible disputes between foreign investors and ethnic Bumiputra companies (CPPS, 2006.). In auditing, politically connected companies get favourable treatment in facing economic difficulties hence less auditing issues result from financial problems (Gul, 2006). As for the CSR, better quality is observed when boards are dominated by the ethnic Malays (a major ethnic Bumiputra group) (Haniffa and Cooke, 2005).

The perspective of corporate governance in Malaysia is arguably wider and more unique than generally associated with the UK-US system, albeit with the rise of social emphasis in the latter system. The perspective is a combination of minority interest protection with a strong stakeholder approach and the current political economy issue, namely ethnic Bumiputra economic interest. In view of such evidence, users and corporate governance studies on the emerging market, particularly in Malaysia, may need to inspect properly the suitability of agency theory as the foundation of studies and be cautious concerning the UK-US centric corporate governance ratings produced by western-based agencies[38].

On other themes, this study provides recent statistics on ethnic Bumiputra controlled companies in Malaysia and concludes three areas of corporate governance as deserving further study; technology and the application of voting power concept and in an emerging country like Malaysia, this includes issues on shareholders activism.

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[38] As per corporate governance network website, there are varieties of providers, producing varying rankings due to differences in corporate governance criteria. Some examples of these providers are Standard & Poor's, Moody's Investors Service, RiskMetric Group and GovernanceMetrics International. http://www.corpgov.net/links/links.html

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Essay 2

Corporate Malaysia: A Voting Power Perspective

ABSTRACT[1]

Independence from the British in 1957 led to a serious economic imbalance in Malaysia. Particularly between the ethnic Bumiputra community who are the majority, and the Chinese. The climax of this imbalance was the 1969 racial riot. An affirmative economic action plan that bequeathed economic privileges only to the Bumiputra was later drafted to alleviate this community from poverty. The target is for the Bumiputra to hold 30 percent corporate equity, a target which the government maintains has not been achieved until today. However, in 2006 the Centre for Public Policy Studies estimated that this corporate ownership target has been surpassed, hence the call to end the Bumiputra economic privileges. Debates and controversies followed. This study further extends these debates. The concept of voting power is illustrated and offered as an alternative framework for analysing corporate Malaysia.

Key Words: Corporate Equity Distribution, Malaysia, Bumiputra, Chinese, Voting Power.

1. Introduction

Over the past one hundred years immigrants who came during British rule have dominated the thriving sectors of commerce and industry developed around coastal urban areas. This opened up an inter-ethnic disparity in economic opportunities, an outcome between the ethnic groups called the Bumiputra regarded as the earlier inhabitants, and the more recent arrivals mostly from the western parts of China. This inter-ethnic disparity was an issue that had to be addressed after independence from British rule, and economic policies for over three decades placed a sharp focus on this aspect of wealth and income inequality.

One of the policies to alleviate this inequality is an affirmative economic action plan that provides economic privileges to ethnic Bumiputra popularly known as the New Economic Policy (NEP) and later continued under the New Development Policy (NDP). The target is for Bumiputra to own 30 percent corporate equity in Malaysia. Recently a report by the Centre for Public Policy Studies (2006) (CPPS, 2006) argues

that this target of ownership having been successfully achieved, thus calls for the ending of NEP in contrary to the government's official estimates. As expected the government maintained that its figures as accurate. The prime minister himself condemned the CPPS report as baseless much to the dismay of sections of ethnic Chinese community who still view NEP as an unfair form of economic discrimination, unjustly imposed against them[2]. That is the general view on the ongoing and sensitive issue in Malaysia. In this study, the purpose is not to create further controversies by arguing the accuracy of each estimate or the merit of each ethnic community position, but to introduce the concept of voting power. I hope that a new perspective, which emerges following the application of this concept, can help improve our understanding on the whole issue of corporate equity ownership in Malaysia.

2.   Background to Malaysia Corporate Achievement Disparity

To understand the importance of corporate equity distribution one has to look at the history of Malaysia. Of particular interest in this study is the economic and social background of Malaysian population. Malaysia comprises three main ethnic groups: Bumiputra, Chinese and Indians and each of these ethnic groups is generally accepted as having a very distinctive and dissimilar[3] culture (Juo, 2002).

The story begins when the ethnic Chinese and Indians communities were persuaded by the British to migrate to the then Malaya in the early 19th and 20th century to work in the tin mines and in the plantations areas. Today, the name has changed to Malaysia and it also constitutes part of Borneo, namely the state of Sabah and Sarawak and the 27 million population[4] comprises of around 65 percent Bumiputra, 26 percent Chinese and eight percent Indians. The tension between ethnic Bumiputra

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[2] Prime Minister Abdullah Badawi comments as published in
http://sun2surf.com/article.cfm?id=15726 and http://sun2surf.com/article.cfm?id=15753 9 Oktober 2006 and comment by Roonie Liu's a central committee member of Democratic Action Party a main opposition party from the ethnic Chinese. http://www.malaysiakini.com/letters/58050 11 Oktober 2006
[3] They are still identified by their own language and religion. Although Malays is the official language each ethnic has its own language which is taught in school and is widely used in the community. The widely spoken Chinese dialect in Malaysia is Mandarin and Hokkein while ethnic Indians speak Tamil. The Malays are mostly Muslims while other Bumiputras could be of any religion. The Chinese and Indians are mostly Buddhist and Hindus respectively but could also be Christians.
[4] Percentage is as per Census 2000 and population is as estimated in early 2007.
http://www.statistics.gov.my/english frameset_census.php?file=pressdemo and
http://www.statistics.gov.my/ download 11 January 2007

and ethnic Chinese community started after independence which saw the British reduce its business engagement in the then Malaya. This slowing down in business participation by the British represents new business opportunity to the local population, mostly to the Chinese who resided predominantly in coastal urban towns. Consequently, they were much richer than other ethnics groups were. The Malays, who formed the majority of the Bumiputra community, meanwhile continued to live mostly as poor farmers in rural villages while ethnic Indians community remained largely in the plantations areas. The rising wealth gap and lack of geographical integration created tensions among the ethnic groups. The peak culminated[5] into racial clashes between the Malays and the Chinese in 1969, popularly known as May the 13th.

The government, led by United Malays National Organisation (UMNO) – an ethnic Bumiputra party, later drafted a series of economic policies to reduce this wealth gap and restore national unity. 1971 saw the formulation of New Economic Policy (NEP). Ethnic Bumiputra were accorded with special privileges[6] in areas like enrolment in universities, employment in government sectors, discount on house prices and ownership in the economy. After twenty years, the main discord of this policy i.e. privilege to the Bumiputra continues with the New Development Policy (NDP) also known as Vision 2020.

Malaysia's handling of this matter could now be considered as a success (McKay 2006). The NDP was also better received compared to NEP (Heng, 1997). It is not always peace and harmony, social tension and racial politics persist (Brown, 2005; Haskell 2005) and many still see this affirmative policy as a form of discrimination contrary to its objective to achieve national unity (Jomo, 2004). Recently, following a CPPS report in 2006, this social tension has resurfaced.

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[5] Milne (1976) however suggested this clash is more political rather than economic and social. Similarly Kuo Kia Soong (2008) argued that the riot was a conspiracy by UMNO in order to declare a state of emergency and gained control of the government following their loss in the 1969 general election

[6] This is constituted in Article 153 of the Constitution. Website of Malaysian Government

3.   **Centre for Public Policy Studies (2006) Report on Corporate Equity Distribution**

The Centre for Public Policy Studies (CPPS) are a non-governmental organisation that attempts to provide a neutral view on issues related to social and economic issues in Malaysia[7]. In particular, it views the NEP objective of increasing ethnic Bumiputra corporate equity ownership to around 30 percent as a target successfully achieved in contrast to the government's official position. The central reason, according to the CPPS is that a a number of companies are under government control, and since government is predominantly controlled by ethnic Bumiputra community these companies are also technically controlled by this community. As per this basis, the CPPS estimate that ethnic Bumiputra corporate equity ownership is around 45 percent and not 18.7 percent as reported by the government's economic planning unit (EPU). The CPPS supported its views by highlighting the success of various government agencies such as *Bursa Malaysia*, Ministry of International Trade and Industry, Securities Commission and Foreign Investment Committee in ensuring the target is achieved. These agencies control listings of public companies. The most important in particular is the Industrial Coordination Act 1975 requirement for 30 percent equity to be allocated to ethnic Bumiputra when companies are listed in the Malaysian Bourse. Another instrument to increase ethnic Bumiputra equity is the privatisation policy where the recipients are mostly from ethnic Bumiputra community. The report also lists successful ethnic Bumiputra individual businesspersons and companies as evidence. The CPPS also suggested that the aftermath of the 1997 financial crisis has eroded the ethnic Chinese equity more than that of ethnic Bumiputras community. The reason, according to the centre is that a similar period also saw a bank consolidation exercise that witnessed the erosion of banks owned by ethnic Chinese community. The time is now appropriate to rescind the NEP since the original target of 30 percent Bumiputra equity ownership has been achieved. In addition, according to the CPPS the case for rescinding the NEP has added benefit. It encourages foreign and domestic investments. Presently, investors are wary of their investment.

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[7] as per CPPS website: http://www.cpps.org.my/sub_page.aspx?catID=1&ddlID=8

> "Can non-Bumiputra and foreign investors be sure that the government will not expropriate their investments in Malaysia when enforcing affirmative action?" (CPPS, 2006, p19).

It is suggested that the ending of NEP can allay fears that their investments are unsafe. Another reason according to CPPS is that by helping all companies regardless of ethnicity can help entrepreneurship. The report implies that should the ethnic Chinese companies in the manufacturing sector have received similar support from the government they could have grown into a bigger company.

> "These non-Bumiputra firms have not, however, managed to develop brand names or move up technological ladder because they have received inadequate support from this government..." (CPPS 2006:20).

The CPPS (2006) also suggests that creating a level playing field not only encourages entrepreneurial spirit it also sets fair competition among Bumiputra entrepreneurs themselves. The report in short implied that the government has purposely undervalued ethnic Bumiputra's corporate equity by using GLC in order to continue ethnic Bumiputra's economic privilege and, in doing so has hindered economic progress.

This report has stirred ethnic sentiments in Malaysia. Sections of ethnic Bumiputra community are unhappy that a social contract that guarantees its ethnic economic privilege in return for granting citizenship to ethic Chinese community over fifty years ago, is being questioned[8]. Ethnic Chinese community of the younger generation argue they have as much right as ethnic Bumiputra since they were born and bred in this country. This newer generation questions the need for the Bumiputra privileges especially when the CPPS reports indicate that ethnic Bumiputra corporate ownership are bigger than reported by government. To ethnic sections of ethnic Bumiputra community the CPPS intention is alleged as irresponsible and as challenging government authority and having ulterior motive[9]. Unsurprisingly, some leaders of

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[8] d.g. as highlighted by the former prime minister- Dr. Mahathir Mohammad in The Social Contract 3 available on his website http://test.chedet.com/che_det/2008/09/the-social-contract-3.html#more 10 September 2008.

[9] e.g.Prime Minister Datuk Seri Abdullah Badawi and Tan Sri Mohyiddin Yassin a senior leader of UMNO in his condemnation of CPPS report. http://sun2surf.com/article.cfm?id=15726 and http://sun2surf.com/article.cfm?id=15753 9 Oktober 2006

ethnic Chinese and Indians[10]communities condemn the government calculation as baseless. Their argument is that protecting the elite Bumiputra from the wrath of the poor in their community is the real reason for understating the Bumiputra economic achievement[11]. The Bumiputra response as a whole is that of unhappiness and anger leading to some worrying suggestion that certain quarters of ethnic Bumiputra community is threatening ethnic Chinese[12] with another racial riot similar to that of 1969.

This study however does not intend to elaborate the accuracy of government reports versus CPPS reports or the merit of each ethnic groups' argument or the effectiveness of NEP. Not that they are not important; they are left to political scientists and economists. The purpose of this study is to introduce a new extension in the whole debate of corporate equity distribution, namely the voting power concept.

4. Voting Power Concept

This concept has been around for over half a century. The concept is largely attributed to Penrose (1946). Today it is widely used in political studies e.g. Algaba et. al., (2007), Felsenthal et. al., (2003) and Kauppi and Widgren (2006). In general, the concept is simple and can be understood by people seriously interested in understanding new dimension of corporate control. It can however be complicated especially when the number of voters is large.

Presently the CPPS analysis is based on cash flow perspective. It is called cash flow perspective because it is the amount of cash[13] a shareholder will get if the company is sold. Of course, not all companies are sold so it also means a shareholder percentage of a company's present worth. Therefore, if the Bumiputra own 40 percent share in a

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[10] e.g Tan Sri Ramon Navaratnam an ASLI director.
http://nst.com.my/Current_News/nst/Saturday/Columns/20061007083705/Article index_html 7 Oktober 2006
[11] d.g. Prof. Khoo Kay Peng, a prominent historian rebuts EPU methodology as baseless. He is nevertheless less critical on ethnic issue, instead suggesting that the understatement of Bumiputra equity achievement is to avoid explanation to the poor Malays. :
http://www.malaysiakini.com/letters/57791 Website of Malaysiakini 5 Oktober 2006
[12] d.g. Roonie Liu Central Committee Member of Democratic Action Party main opposition party from the ethnic Chinese http://www.malaysiakini.com/letters 58050 11 Oktober 2006
[13] Or anything that of similar value such as share options and warrants.

company it means they own 40 percent of company's worth and if he sells his shares. he should be getting this worth and whatever premium there may be. Similarly, the Chinese shareholder with 60 percent will own 60 percent of the company's worth.

On the other hand, the voting power concept as the name suggests, is based on voting. It is not based on shares of company's worth. A shareholder with 40 percent shares normally gets 40 percent of the votes; however will he win 40 percent of the company's election? It is more complicated than it seems. The relationship between percentage of votes and winning an election is not proportionate. The relationship is based on the concept of probability.

Let us now calculate the probability of this very simple example. Assume that at the annual general meeting (AGM) a simple majority i.e. more than 50 percent votes is required to approve a policy. Now obviously a shareholder with 40 percent votes will loose and a shareholder with 60 percent shares will win this election. The voting power of 'A' is therefore '0' since it looses this election while the voting power of 'B' is 1 since it wins this election. 'A' cash flow right is 40 percent but his voting power is '0' while 'B' cash flow even though it is only 60 percent comes with absolute voting power i.e. '1'. Let us now extend this concept to voting when a super majority of more than 66.7 percent is required to win an election. 'A' will always need 'B' to win an election to get more than the 66.7 percent required. Likewise, 'B' will always need 'A' to win an election. In this situation the powers is 0.5 for each voter. Voting power is not necessary proportionate to cash flow rights and can vary with majority rules requirement. These are summarised in the following table.

Table I: Shareholder's Voting Power

Shareholders	Corporate Equity	Voting Power	
		Simple Majority (50.1%)	Super Majority (66.7%)
Bumiputra	40%	0	0.5
Chinese	60%	1	0.5

<u>Penrose Index</u>

The above example introduces the concept of probability in voting power analysis. In practice, there are variations on the application of this concept of probability. The concept in practice is represented by a few indexes. One of them is the Penrose index[14]. In detail the probability for the Penrose index is measured as the number of times a voter is important (often called pivotal) to form winning partnerships (often called coalition) over the total number of coalitions involving that voter. Determination of pivotal is essential in voting power concept. In a precise definition, it is when withdrawal of support from a voter will result in a winning collation turning into a losing coalition.

A company listed in the CPPS report namely *Lingkaran Trans Kota Holdings* is used as illustration. Assume a simple majority is required to win an election. The following *Table II* lists the percentage of ownership by each shareholder, the winning coalitions and pivotal voters (underlined). There are four winning coalitions altogether. As an example, one of the coalitions is between the Bumiputra (42.93%) and Other Malaysians (47.21%) (*Row two of Table II*). In this coalition, both of them are pivotal since without each other a winning coalition cannot be formed. However, in a winning coalition between Bumiputra, Other Malaysians and Foreigners (Row five of Table II) none of them is pivotal.

Table II:
Lingkaran Trans Holding Berhad: Determination of Pivotal Shareholders

Winning Coalitions, Pivotal Shareholder (Underlined)		
<u>Bumiputra</u>	<u>Other Malaysians</u>	
<u>Bumiputra</u>	<u>Foreigners</u>	
<u>Other Malaysians</u>	<u>Foreigners</u>	
Foreigners	Other Malaysians	Bumiputra

Note: Bumiputra 42.93%; Other Malaysians 47.21%; Foreigners 9.9%. Majority required 50.01

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[14] Apart from the Penrose index, the other two popular indices are the Shapley-Shubik index and the Banzhaf index.

Having determined the winning coalitions and pivotal voters, the Penrose index can now be calculated. From the table it can be counted that each shareholder is pivotal in two coalitions and since the number of coalitions involving a shareholder is four[15], Penrose index for each shareholder is; A= 2/4 or 0.50, B= 2/4 or 0.50 and C= 2/4 or 0.50 as per the following *Table III*.

Table III:
Lingkaran Trans Holding Berhad: Corporate Equity and Voting Power

Shareholder	Corporate Equity %	Voting Power[2]
Bumiputra	42.9	0.50
Other Malaysians	47.2	0.50
Foreigners	9.9	0.50

5. Framework of Analysis: Corporate Equity and Voting Power

The following table describes the equity ownership and voting power of shareholders of 17 companies obtained from the CPPS report. It is not a representative population of Malaysian companies. They are conveniently chosen to highlight how the application of voting power concept can provide useful information on the corporate equity debate. The table lists equity ownership of the Bumiputra, other Malaysians and foreigners for the 17 companies and their corresponding voting power. Voting power for operational control (i.e. simple majority) and voting power for strategic control (i.e. 2/3 majority) are calculated. As an illustration, in company number 7 *(Tap Resources Berhad)* the Bumiputra own 38.89 percent of the equity (Column 3) but it has no operational power and strategic power since its voting power is 0 (Column 4 and 5).

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[15] e.g. for Bumiputra shareholder the coalitions are: Bumiputra alone; Bumiputra and Other Malaysians; Bumiputra and Foreigners; Bumiputra and Other Malaysians and Foreigners.

Table IV: Equity Ownership and Voting Power of 17 Companies

Company *Issued Capital*		Equity Ownership%	Voting Power	
			Operational (Simple Majority)	Strategic (Super Majority)
1. Lingkaran Trans Kota Holdings *RM300,000,000*	Bumiputra	42.93	0.5	0.5
	Other Malaysians	47.21	0.5	0.5
	Foreigners	9.86	0.5	0
2. Kilang Papan Seribu Daya Bhd *RM19,999,000*	Bumiputra	38.08	0	0.5
	Other Malaysians	56.02	1	0.5
	Foreigners	5.9	0	0
3. GrandHoover Bhd *RM30,000,000*	Bumiputra	50.35	1	0.5
	Other Malaysians	48.98	0	0.5
	Foreigners	0.68	0	0
4. Mercury Industries Bhd *RM36,182,000*	Bumiputra	44.36	0.5	0.5
	Other Malaysians	44.01	0.5	0.5
	Foreigners	11.63	0.5	0
5. Perfect Food Industries Bhd *RM19,900,000*	Bumiputra	52.87	1	0.5
	Other Malaysians	44.94	0	0.5
	Foreigners	2.19	0	0
6. Gamuda Bhd *RM289,696,409*	Bumiputra	32.94	0.5	0.25
	Other Malaysians	32.82	0.5	0.25
	Foreigners	34.24	0.5	0.75
7. TAP Resources Bhd *RM39,999,999*	Bumiputra	32.89	0	0
	Other Malaysians	66.83	1	1
	Foreigners	0.28	0	0
8. Road Builder (M) Holdings Bhd *RM129,980,207*	Bumiputra	43.33	0.5	0.75
	Other Malaysians	24.94	0.5	0.25
	Foreigners	31.73	0.5	0.25

(Continued)

Company		Equity Ownership%	Voting Power	
			Simple Majority	Super Majority
9. BTM Resources Bhd	Bumiputra	31.29	0	0.25
	Other Malaysians	65.47	1	0.75
RM19,999,000	Foreigners	3.24	0	0.25
10. MESB Bhd	Bumiputra	50.89	1	0.5
	Other Malaysians	44.90	0	0.5
RM19,999,000	Foreigners	4.21	0	0
11. Nationwide Express Courier Services Bhd	Bumiputra	49.36	0.5	0.5
	Other Malaysians	48.69	0.5	0.5
RM19,082,000	Foreigners	1.95	0.5	0
12. Rohas-Euco Industries Bhd	Bumiputra	49.47	0.5	0.5
	Other Malaysians	47.47	0.5	0.5
RM17,000,000	Foreigners	3.06	0.5	0
13. SP Setia Bhd	Bumiputra	44.42	0.5	0.5
RM140,728,715	Other Malaysians	42.84	0.5	0.5
	Foreigners	12.74	0.5	0
14. Kuala Lumpur City Corp. Bhd	Bumiputra	52.16	1	0.5
	Other Malaysians	43.13	0	0.5
RM84,321,057	Foreigners	4.53	0	0
15. Rumpun Hijau Capital Bhd	Bumiputra	49.89	0.5	0.5
	Other Malaysians	46.71	0.5	0.5
RM62,389,334	Foreigners	3.40	0.5	0
16. Sykt. Binaan Budi Sawmill Bhd	Bumiputra	49.41	0.5	0.5
	Other Malaysians	49.46	0.5	0.5
RM30,000,000	Foreigners	1.13	0.5	0
17. United Chemical Industries Bhd	Bumiputra	44.71	0.5	0.5
	Other Malaysians	49.29	0.5	0.5
RM18,500,000	Foreigners	6.0	0.5	0

Source: Adapted from CPPS (2006)

Table V: Summary of Equity Ownership and Voting Power

	Bumiputra	Other M'sians	Others
Equity Ownership	40.7% or *RM506,836,067*	43.0% or *RM535,954,085*	16.3% or *RM203,863,531*
Control - Operational[1] *(No of companies)*			
Full[2]	23.5% *(4)*	17.6% *(3)*	0% *(0)*
Shared[3]	58.8% *(10)*	58.8% *(10)*	58.8% *(10)*
None[4]	17.6% *(3)*	24.0% *(4)*	41.2% *(7)*
Control - Strategic[1] *(No of companies)*			
Full[2]	0% *(0)*	5.9% *(1)*	0% *(0)*
Shared[3]	94.1% *(16)*	94.1% *(16)*	94.1% *(3)*
None[4]	5.9% *(1)*	0% *(0)*	82.4% *(14)*

1. As measured by voting power.
2. Absolute voting power i.e. 1.
3. Voting power less than 1 but more than 0.
4. Voting power is nil.

Replacing a voting power of '1' as having full control while anything less as having shared control, the overall description of corporate control can be summarised as per *Table V* above. In summary, this table compares corporate equity ownership against two levels of control i.e. full and shared. For example, although the Bumiputra equity ownership is 40.7 percent they only have full control of 23.5 percent of the companies. A mismatch between ownership and control is observed. Despite this mismatch, corporate control by the Bumiputra group is better than other shareholders. As a comparison, although equity ownership by the Bumiputra is less than 'Other Malaysians' at 40.7 percent and 43.0 percent respectively (*row two, Table V*) ethnic Bumiputra corporate control is higher. Around 23.5 percent of the companies are fully under the Bumiputra operational control while similar figures for 'Other Malaysians' is only 17.6 percent (*row 3, Table V*). Based on the concept of voting as applied to this example it can be concluded that ethnic Bumiputra community controls more companies than 'Other Malaysians' even though their community equity ownership is less than 'Other Malaysians'. This is an example of a possible conclusion when the

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voting power concept is employed alongside cash flow right concept in corporate equity analysis.

6.   Conclusion

For a long time, the corporate equity debate in Malaysia has been based on cash flow right concept. In this study, a concept known as voting power is introduced. This concept is illustrated and a framework for analysing corporate operational and strategic control is offered as an alternative avenues for debating the success or otherwise of affirmative economic policy. The last two tables however are only for illustration. They are never intended as proof in this debate, for that requires representative samples.

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Essay 3

Corporate Malaysia: Ethnic Joint Venture Companies as Equitable form of Ownership

ABSTRACT

The discourse on fairness of economic policy in Malaysia has placed focus on inter-ethnic distribution of gains and losses since the introduction of what has come to be known as the New Economic Policy of 1971 which placed emphasis on the need for affirmative action in favour of the Bumiputra community. Thus a recent report emanating from the Centre for Public Policy Studies suggesting that the policy objective of a more equitable distribution of company shares between different ethnic groups entails the promotion inter-ethnic joint venture companies, and the discontinuation of affirmative action for increasing Bumiputra ownership, has attracted attention. This paper critically examines the method adopted by CPPS for analysing the contribution of joint ventures to the above policy objective. We arrive at a less sanguine view about the development of joint ventures of the type that are advocated by CPPS as an answer to the problem for which they are proposed.

Key Words: Chinese-Bumiputra Joint Venture, Corporate Equity Distribution, Malaysia

1.   Introduction

Malaysian politics has been dominated by the question of the priority of claims by different ethnic groups comprising the state to citizenship rights since independence from British rule in 1957. There was an imbalance in wealth and income against the Bumiputras, and the constitution bequeathed by the departing rulers was based on what has come to be known as an "ethnic bargain" over independence. The constitution conferred economic rights on residents with reference to their ethnic identity.[1]

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[1] Article 89 of the constitution empowers the government to declare Malay reservations over common land. Article 153 specifies reservations for the Malays, called the Bumiputras, in public service appointments and educational institutions, but all pre-existing property rights for all ethnic groups are honoured without discrimination. The Malay word Bumiputra, originating from the Sankrit words Bhumi (land/soil) and Putra (son) translates into English as 'son of the soil'.. In return of the acceptance by the non-Bumiputras of the political primacy of the Bumiputras, the Bumiputras recognised full citizenship rights and a voice in the government of the non-Bumiputeras (pp 45-47, Snodgrass 1980).

During the period of British rule in Malaysia, new economic activities began to emerge. Mines were dug and rubber plantations were developed. The dynamics of economic development characterising colonial rule bypassed the rural areas, where the bulk of the Bumiputras lived. Workers came from India and China. The newcomers from India were mostly indentured labourers. The Chinese came of their own accord, attracted by economic prospects. They were more numerous and the descendants of some amongst them amassed large fortunes in the *laissez faire* policies that continued well until the end of the 1960s.

There were special circumstances in Malaysia. These circumstances ensured that the frustrations of the poor were articulated in terms of a demand for a larger share of the national output accruing to the ethnic Malay community, the bulk of whom was poor. The Malays in the peninsula were called the Bumiputras, sons of the soil, in the nationalist rhetoric to emphasise their prior claims to the idea of Malaysia over those who were perceived as having arrived in the wake of colonial rule. Yet the Bumiputras remained largely poor even after a decade following independence.

The special circumstances that led to the concentration of the poor amongst the Bumiputras community were rooted in the nature of migration during the colonial era. Those who came from Western China in the 19th century to take part in new economic opportunities congregated mostly in urban coastal areas where these opportunities were to be found. These areas were becoming the hub of modern industry and commerce attracting immigrants, especially from China, seeking fortune. The indentured labourers from India were also set to work in these areas in mines and plantations. The three main ethnic groups remained largely segregated from each other by occupation and location at the time of independence from British rule in 1957.[2]

The urban dwellers had better opportunity to learn English, the language of new commerce and industry and that of the colonial government. The urban-educated people, mostly Chinese and Indians, were disproportionately dominant in the professions when the British left. The rural population remained poor, and thus

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[2] Also see Jomo (1989, 1991, and 1998) for details.

poverty was more widespread amongst the Malay community. They mostly lived off the land, in the countryside. The Chinese were on the whole richer than other communities.

The poor became increasingly impatient as the government failed to reduce income disparity even after a decade following independence. The impatience culminated into anti-Chinese riots in May 1969 and Malay nationalism began to inform economic policy. A sense of national identity amongst the economically dispossessed could only be forged, according to those who wished to promote Malay nationalism, by increasing the participation of the Malay (the Bumiputra) community in the economic sphere of society through affirmative action. The corollary was to reduce the share of wealth and income accruing to the descendents of immigrants who arrived during British rule (p.668, Siddique and Suryadinata 1981). This emerging idea of redistributive policy, emphasising affirmative action, was encapsulated in the New Economic Policy (NEP) of 1971.

The continuing need for affirmative action policy to increase corporate equity ownership by the Bumiputras has recently been questioned in a report issued by the Centre for Public Policy Studies. (CPPS 2006) now that the Bumiputra share of the equities traded in the stock exchange has reached the 30 per cent target set by NEP. Now the policy for harmonious inter-ethnic distribution of the ownership of capital entails encouragement for the formation of a particular type of joint venture between communities that has already started to emerge.

This paper is organised as follows. Section 2 explains the origins of the NEP and its objectives. Section 3 examines the contribution of inter-ethnic, mostly Bumiputra-Chinese, joint ventures towards the goal of greater equity ownership of the Bumiputras. Section 4 outlines the argument in the above CPPS report that affirmative action is no longer needed because of the emergence of a trend toward the formation of genuine inter-ethnic joint venture companies. Section 5 examines the evidence cited in support of the policy recommendations in that report. Section 6 suggests a different approach to analysing ownership data, based on a larger dataset that is collected for the purpose of the paper, of listed companies to examine the claims made in the CPPS report. Section 7 concludes.

2. New Economic Policy

The NEP of 1971 followed by the National Development Policy (NDP) in 1991, reserved certain economic privileges for the ethnic Bumiputra with the proclaimed intention of addressing the economic imbalance between ethnic groups, especially between the Bumiputra and the Chinese. At the initial stages there was broad support for this redistributive policy even amongst economists who might not have focussed on ethnicity because that focus was in practice a focus in favour of redistribution in favour of the poor and into the countryside. The Bumiputras were largely poor and they mainly lived in the countryside.

Even though there was some opposition from other communities, Malaysia's handling of ethnic tension for the three decades following the 1969 riots could be considered a success (McKay 2006). The policy delivered high rates of economics growth by increasing the purchasing power amongst the poor and in the countryside and by improving the quality of the human capital by tapping into new talents by investing in the education of the hitherto-neglected pool of the majority ethnic community. Despite initial rumblings of discontent amongst some sections of the Chinese businesses, cooperative business ventures developed across ethnic divide, the desirability of which was first discussed in the 1970s and is now a common feature in Malaysia (Milner 1976, Jesudason 1997)[3].

However, rumblings persist, and many still see the affirmative action policy as a form of discrimination that is contrary to its objective of achieving national unity (Jomo 2004, Heng 1997, Brown 2005; Haskell 2005). More importantly, even some of those who supported the policy of redistribution along ethnic lines have began to raise doubts about exclusive reliance on ethnic identity in the discourse on income and wealth re-distribution. Now that considerable improvements have been made in the economic and social position of the Bumiputra community and intra-ethnic inequality has increased especially in the Bumiputra community, new thinking is needed (Chakravarty and Roslan 2006). It is argued that NEP is not designed to address the new problem. For example, then Prime Minister Mahathir Mohammed wrote in 1998:

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[3] Except Gomez (2005) which attempts to provide some statistics on such joint venture with limited framework.

The NEP, it must be iterated, was not concerned with making all Bumiputras earn equally, or share equally, the wealth distributed amongst them. ... The intention of the NEP was to create in the Bumiputra community the same division of labour and rewards as was found in the non-Bumiputra communities, particularly the Chinese. ... The equitableness was not to be between individuals, but between communities (pp33-34)

A view is emerging that the very success of the NEP within its own remit of reducing inter-ethnic inequality by empowering the Bumiputras has made the NEP now redundant. In this view, policy must now remove focus on affirmative action, recognising that increasing intra-ethnic disparity in income and wealth needs now to be addressed. Even amongst those who share this view, there is debate about the extent of the new problem, the method of addressing the problem and the consequence of ignoring the issue of intra-ethnic inequality. The report by CPPS (2006) analysed here is a contribution to this particular debate about the desirable direction of post-NEP policy.

The report is optimistic about promoting share ownership on an equitable inter-ethnic basis through joint ventures, without emphasis of the NEP for privileged share ownership for the Bumiputra community. An analysis of this report entails a description of the nature of inter-ethnic joint ventures in Malaysia.

3.   Inter-ethnic Joint Ventures

The idea of inter-ethnic joint ventures is not new to Malaysia. It has emerged as a natural consequence of the ethnic focus of redistribution policy, and the goal of delivering the NEP target of 30 per cent share ownership by Bumiputras. The earlier forms of such ownership structures have been faulted for allegedly creating rent seeking opportunities to the detriment of society (Jomo 2004). It was argued that Chinese-Bumiputra joint ventures were often set up to gain government favour by a small coterie of "crony capitalists", a term coined by Jomo (1989) and elaborated upon in Gomez and Jomo (1997). A joint venture set up for the purpose of rent

seeking is known as an *Ali-Baba Company*[4]. According to this sceptical view of joint ventures (Jomo 2004: iii), "[i]nter-ethnic business coalitions have become increasingly important overtime, often with an ethnic Malay partner securing rent for securing access to government-determined business opportunities, and the ethnic Chinese partner with access to capital and business acumen getting the job done". Genuine entrepreneurial spirit is not central to this definition of joint venture. The Bumiputra's role is mainly to advance his Chinese partner's business opportunities with better terms and access to government contract, licences, permits, trade protection (Ritchie 2005). It is argued that this kind of ethnic joint venture is counter productive in combating income inequality within the Bumiputras because only those in the Bumiputra community with connections for example with an influential member of the ruling party (UMNO), a top civil servant, a member of the royalty or a retired senior army officer can benefit.

There is a different view of joint ventures which emphasises the contribution of the Bumiputra partner beyond opening up opportunities for rent seeking. According to this view, the model of Chinese capital and Bumiputra connection may be too simplistic a description of joint ventures in modern times. Since a number of large Bumiputra trust funds have been created through the affirmative action policies of the past three decades, Bumiputras today are less reliant on Chinese capital than they might have been in earlier times. The NEP and its successor NDP have also created a Bumiputra middle class possessing of management expertise. (Gomez 2005, Heng 1997). In this more favourable view of inter-ethnic cooperation, the role of ethnic rent may no longer be central to the success of joint venture companies (CPPS 2006, Norhashim and Abd. Aziz 2005, Gomez (2005). Consider Heng (1997:275): "Apart from being dependent on Malay political patronage, the investments of these tycoons were more closely integrated with Malay capital, an interdependent and complementary relationship which in turn has advanced the wealth of both the Chinese and Malay partners".

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[4] The term refers to *Ali* - a Malay '*rentier capitalist*' out to gain quick profit either by outright selling of their business or by subcontracting the business to *Baba* - a Chinese.

4. Centre for Public Policy Studies (2006) Report on Ethnic Joint Venture Ownership

The Centre for Public Policy Studies (2006) is an independent non-governmental organisation which examines social and economic issues in Malaysia[5]. It published a report in 2006 concerning joint ventures as a way of fostering inter-ethnic cooperation in business. According to this report, affirmative action characterising the NEP has now become outmoded because of the very success of the policy in reaching the target level of Bumiputra ownership of corporate capital. The report argues that the target of 30 per cent corporate ownership by the Bumiputra community has already been surpassed and the continuation of the affirmative action policy is now in danger of becoming counter-productive even to the welfare of the Bumiputra community by discouraging corporate investment and creating a feeling of alienation amongst other ethnic communities. The report is optimistic about creating inter-ethnic joint ventures as an equitable and harmonious model of corporate ownership that should be encouraged.

The report relies on the argument that the ethnic Bumiputras in recent years have acquired considerable business expertise, and they now contribute to the success of many joint ventures on equal footing with their Chinese counterparts. These joint ventures are genuine partnerships across the ethnic divide (CPPS 2006: 16-17): "These business ties that are becoming increasingly inter-ethnic in nature have been established on the basis of equal competency among the partners, with both contributing to the productive development of the firm". The new generation of Malaysians are now more open toward business cooperation that can benefit each other (Gomez 2005). There are many examples of successful inter-ethnic joint ventures (Gomez 2005), and these are cited in defence of the policy recommendations contained in the CPPS report examined here (CPPS 2006)[6]

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[5] as per CPPS website: http://www.cpps.org.my/sub_page.aspx?catID=1&ddlID=8
[6] *MK Land Bhd* owned by Mustafa Kamal Abu Bakar and Kasi Palaniappan, *Air Asia Bhd* owned by Tony Fernandes and Kamarudin Meranun and *UMW Bhd* whose partners were Eric Chia, Mokhzani Abd. Rahim and Shamsuddin Kadir.

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In the identification of genuine joint ventures the CPPS report is almost similar to claims by Gomez (2005) that 17 companies (28 percent) listed on the stock exchange in Malaysia are genuine inter-ethnic joint ventures. This data and the analysis are presented in the following section.

5.   Share Ownership Data Informing CPPS (2006)

As mentioned before, the CPPS (2006) report takes the ownership data from *Bursa Malaysia* as is also done in Gomez (2005). The concept of a genuine partnership in a joint venture is defined and these companies are identified by reference to the ownership structures of companies listed in *Bursa Malaysia* for the year 2000.

The shareholding pattern of a joint venture company is categorised in terms of the percentage of shares held by three main groups of shareholders, identified by their ethnicity. The three groups are classified into Bumiputra (B), Other Malaysians (OM) and Foreigners (F), where the OM group is mainly Chinese. Although there are prominent Indian presence in business, the corporate ownership of Indians as an ethnic group is negligible[7].

According to CPPS, a genuine joint venture is an equitable partnership between the two domestic ethnic groups, OM and B. While the rent-seeking motive is not completely discounted, the definition of a genuine (or equitable) joint venture is a joint venture where both partners have the ability to influence operational matters and strategic directions of the company to mutual benefit. The test for a genuine B-OM joint venture is based on the distribution of shares amongst the three groups, B, OM, and F. To form an equitable partnership, each of the two domestic groups must have a share of equity in the band of 25 to 67 percent. The rationale for that particular test of equitable ownership is questioned in this paper.

The joint ventures that are considered genuine amongst those that are listed in *Bursa Malaysia* for the year 2000 appear in Table 1 below (CPPS: 36-40). Some of the salient aspects of their ownership structure are highlighted below:

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[7] Corporate Ownership by ethnic Indians is around 2 percents (Fazilah 2002).

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a) The largest shareholder (owner OM) has 66.83 percent of the shares (Company 7)

b) The smallest shareholder has (owner: B) has 24.94 percent of the shares (Company 8)

c) The largest shareholding difference between OM (holds 65.47 per cent) and B (owns 31.29 per cent) shareholders is 34.18 percent. (Company 9)

d) The smallest shareholding difference between OM (holds 49.46) and B (owns 49.41) shareholders is 0.05 percent. (Company 16)

For a genuine or equitable joint venture to obtain, both parties must have the ability to influence decisions. A minimum requirement for a group to be able to exert influence in policy formulation is that neither party has a controlling majority. This condition is not satisfied by 41 per cent of the companies, 7 out of 17, listed in Table 1. There is a majority shareholder representing only one ethnic group is present in companies 2, 3, 5, 7, 9, 10 and 14 in Table I. The majority shareholder has operational control. In one of the above companies, a single group has 66.7 per cent of outstanding shares, thus being able to gain strategic control of the company, allowing amendments to be made to the company's articles or incorporation (constitution).

There are other problems and they lie in the way that the data is analysed. The method of testing whether a joint venture is genuine relies on the requirement that neither ethnic group should have less than a quarter or more than two thirds of the outstanding share capital. The logic of the use of a fixed percentage band for each ethnic group without reference to the distribution of shareholdings within groups is questionable. For example, a joint venture between a single ethnic Chinese shareholder and a single ethnic Bumiputra shareholder is naturally less complicated than a joint venture between three ethnic Chinese shareholders and single ethnic Bumiputra shareholder. An encompassing interest amongst the three Chinese shareholders can be difficult to articulate. Information on the number of shareholders is useful for users to gauge the ease or difficulty of forming this joint venture.[8]

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[8] There is a dynamic problem, especially when shares change hand. A genuine partnership can become *Ali-Baba* and vice versa even as the aggregate ownership shares between ethnic groups remains the same especially if the intra-ethnic distribution of shares changes.

Table I: Inter-Ethnic Joint Venture Bursa Malaysia Companies, 2000
(as per CPPS Report 2006)

	Company Name	Shareholdings			Activities (including as holding company)
		Bumiputra	Other Malaysians	Foreigners	
1.	*Lingkaran Trans Kota Holdings*	42.93	47.21	9.86	Management services, toll highway operation
2.	*Kilang Papan Seribu Daya Bhd*	38.08	56.02	5.9	Integrated timber activities and related products
3.	*GrandHoover Bhd*	50.35	48.98	0.68	Investment and property holding, manufacturing and trading of building materials
4.	*Mercury Industries Bhd*	44.36	44.01	11.63	Manufacturing of lacquer and paints, property development,
5.	*Perfect Food Industries Bhd*	52.87	44.94	2.19	Manufacturing and marketing of biscuits
6.	*Gamuda Bhd*	32.94	32.82	34.24	Civil engineering construction
7.	*TAP Resources Bhd*	32.89	66.83	0.28	Infrastructure earthworks, structural, architectural and manufacturing of bricks
8.	*Road Builder (M) Holdings Bhd*	43.33	24.94	31.73	Building construction, property development, manufacturing of concrete products.
9.	*BTM Resources Bhd*	31.29	65.47	3.24	Logging, sawmilling of timber and logs.
10	*MESB Bhd*	50.89	44.90	4.21	Supply of engineering equipment, tools and parts
11.	*Nationwide Express Courier Services Bhd*	49.36	48.69	1.95	Express courier service
12.	*Rohas-Euco Industries Bhd*	49.47	47.47	3.06	Manufacturing of steel parts of water tank panels and transmission towers
13.	*SP Setia Bhd*	44.42	42.84	12.74	Building contractors
14.	*Kuala Lumpur City Corporation Bhd*	52.16	43.13	4.53	Manufacturing of air-conditioning systems and related activities.
15.	*Rumpun Hijau Capital Bhd*	49.89	46.71	3.40	Manufacturer and dealer of footwear products
16.	*Syarikat Binaan Sawmill Bhd*	49.41	49.46	1.13	Trading, manufacture and sale of moulded and sawn timber and wood products.
17.	*United Chemical Industries Bhd*	44.71	49.29	6.0	Manufacture and sale of polyethylene woven bags and related products.

Further complications arise if shares are held in very small parcels by a large number of shareholders. For example, suppose that a single person in one ethnic group holds, say 25 per cent of the shares, but a larger percentage of the shares is held by the other domestic ethnic group, but these shares are distributed amongst a very large number of individuals in very small parcels. Then the power of control of the direction of the company policy by the majority group is weakened if not removed. The transactions cost of organising a very large number of small shareholders can render it impossible for them to exercise any power in shareholder meetings, as discussed in Chakravarty and Hodgkinson (2001), and Chakravarty, Goddard and Hodgkinson and (2004).

6. A Different Framework of Analysis

CPPS studies discussed above attempts to measure companies that are already in the state of ethnically a joint venture but whether this is formed out of the lack of partner from similar community or purely on business competency basis entails further information, the latter is perhaps at its purest form. The former reflects capital competency. It is for this reason this study proposed a new framework for analysing ethnic joint venture companies. In summary, the framework focuses on the following states of joint ventures;

- a) Companies that could form joint ventures
- b) Companies that actually form joint ventures.
  - i) Convenient joint venture
  - ii) Pure joint venture

6.1 Companies that could form joint ventures

This study purposely avoid analysis of fixed shareholdings. Any test by exclusive reference to the percentage of shares held by each ethnic group for an inter-ethnic joint venture being genuine is problematic because, *inter alia,* the test is predicated on the assumption that there is complete coherence of interest for all members within an ethnic group. At the very least, data on the size distribution of equities in a joint venture is needed for a richer analysis of the potential for both ethnic groups to exert influence on policy directions.

In particular, an inter-ethnic joint venture is only when the venture achieved an objective otherwise not achievable individually without this coalition, thus serving the interest of both parties. A joint venture is not in the sense that is promoted by CPPS if one of the party can achieved the objective individually as this imply the other party as powerless in decision regarding to this objective i.e. neither party should be able to command a large enough percentage of shared to ignore the wishes of the other party. For example, in a situation when one party already has operational control of a joint venture, then the other is disenfranchised. To test for inter-ethnic partnership, these objectives and different winning coalitions of shareholders have to be identified from data on the size distribution of shares. The objectives identified are[9]:

i)   Controlling company's operation. More than 50 percent

ii)   Forming strategic coalition. More than 66.6 percent

These ideas about testing potential inter-ethnic joint venture are illustrated here. A new comprising 203 or 19.8 percents companies listed in *Bursa Malaysia* in the year ending in 2005, has been constructed for the purpose. The companies are selected randomly from all industries and boards. Details discussion on sample size is as per appendix I.

The criteria for the inclusion of shareholders[10] are explained below[11];

a)   Shareholders have significant holdings. In this study, any shareholding of more than two percent is considered as significant.

b)   All Bumiputra shareholders are considered as one single shareholder. The majority[12] of companies (41 percent) have one Bumiputra shareholder.

c)   Only three largest Chinese shareholders are analysed. Analysing one Chinese shareholder will reduce to one-to-one analysis thus concealing the information on total number of Chinese shareholders required. For computational simplicity

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[9] These are the common percentages for the objectives although percentages may vary according to company's own rules.
[10] Instructions to ensure consistency in identifying categories of shareholders are as per Appendix II.
[11] Excel spreadsheet function incorporating all the rules and assumption has been developed to facilitate this analysis. This function is as per Appendix IV.
[12] The percentages are based on the 86.7 percent (39 companies) that have Bumiputra shareholders from the initial 44 companies analysed.

and practicality, this study limits the maximum size of potential coalition to four i.e. one Bumiputra and three Chinese.

A detail set of instruction to ensure consistency in classifying shareholders and the relevant source of information have been developed (Appendix II and III). An Excel spreadsheet function incorporating all the rules and assumption has also been developed to facilitate this analysis (Appendix IV).

In this framework, a company with an ethnic Bumiputra and three ethnic Chinese shareholders, there are altogether seven possible inter-ethnic coalitions[13] and one all Chinese coalition. Table II illustrates the framework of analysing potential joint ventures involving at most three largest Chinese and one Bumiputra shareholders. A company in this sample, *Metronic Global*, has three Chinese shareholders. There are five potential candidates for winning coalitions of which four are inter-ethnic, that could gain operational control of *Metronic Global* by combine shares exceeding 50 percents. These are identified in columns 3, 4, 7, 9 and 10.

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[13] i.e. 2^n-1

1	2	3 Chinese-Chinese JV	4	5	6	7	8	9	10
			Bumiputra and Chinese JV						
			1st	2nd	3rd	1st & 2nd	1st & 3rd	2nd & 3rd	All 3 Chinese
Present Situation									
Mixed Executive Directors	Yes								
S/holders%									
1st Chinese	47.2								
2nd Chinese	2.9								
3rd Chinese	2.4								
Bumiputra	24.2								
Coalitions									
All Chinese[1]		54.1%							
Bumiputra-Chinese			71.4%	27.1%	26.6%	74.3%	29.5%	73.8%	76.7%
Objective		Operational	Operational Strategic			Operational Strategic		Operational Strategic	Operational Strategic
Coalition Size		>3	2	2	2	3	3	3	4

Note:
1. Refers to coalition among all Chinese with at least one percents shares in the company.

This table also offers a glimpse of the complexity that begins to emerge in identifying potential coalitions to gain operational control when we consider intra-ethnic distribution of shares and more parties of Chinese shareholders. In this preliminary analysis, Bumiputra shareholders are grouped into one for simplicity. Only the distribution amongst the Chinese shareholders is separated. As an example, when Bumiputra shareholder are separated into two blocks the number of inter-ethnic coalitions to be analysed increased by three times to 21 coalitions[14] and when a

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[14] i.e. $(2^2)-1 \times (2^3)-1$

Chinese shareholders are increased to four than this coalitions increases[15] further to 45. The number of coalitions may become prohibitive for analysis when we consider intra-ethnic distributions.

6.2   Companies that actually form ethnic joint ventures

Capital contribution by ethnic Bumiputra although may augurs well for this community may not necessarily indicate a company is an inter-ethnic joint venture in the sensed that is promoted by CPPS since capital contribution is not equitable to management contribution. To be classified as genuine inter-ethnic joint venture this community representation in the management is imperative. On the other hand, management representation alone may not necessarily imply genuine partnership since this is also possible through professional employment. Actual ethnic joint venture companies therefore requires both i) the existence of sufficient capital contribution to achieve common interest as detailed in section 6.1 and ii) management representations. As for the latter, executive directorships by both ethnic is used as indication of management contribution.   In particular the positions in focus are of executive chairman, executive deputy chairman and managing director.

6.2.1   Business competency

To analyse ethnic joint venture companies in the mould promoted by CPPS (2006) requires further test. The real test is when this ethnic joint venture is formed not because of shareholdings size in their community is limited but because of pure business competency basis. To highlight this point compare the following two joint ventures;

   i)   Joint venture is formed and shareholding from their community is insufficient i.e. need partner from other ethnic (convenient joint venture)

   ii)   Joint venture is formed and shareholding from their community is sufficient i.e. do not need partner from other ethnic (pure joint venture)

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[15] i.e. $(2^2)-1 \times (2^4)-1$

In the first situation the partner must choose parties from other ethnic in achieving desired objective while in the second situation selection of partner is voluntary, even though both joint ventures are of inter-ethnic. The second situation best described inter-ethnic joint venture based on pure business competency. Simply, partner from other ethnic is chosen although this is not necessary from shareholding distribution basis.

In the example from *Metronic Global* (Table II) actual joint venture is formed since it passes both test on shareholding distribution and executive directorship. This actual joint venture can further be classified as joint venture by choice since the combine shareholding among ethnic Chinese of 59 percents is sufficient to gain control of the company[16] without the help of ethnic Bumiputra. It is the movement in percentages of such companies that should be the focus in analysing progress inter-ethnic joint venture companies.

The sample is restricted by the number of companies for which sufficient details of the identity of shareholders is published in the annual accounts and in smaller cases in the internet to determine the ethnicity of relevant blocks, those holding two percents or more of the outstanding equity. This size of sample is sufficient to make inferences on corporate Malaysia. (Details discussions on sample size and the link to the identity of shareholders are as per Appendix I and III). If we take the entire sample of 203 companies, joint ventures that could be formed to gain operational control and strategic purpose are present in 13.8 percents and 11.8 percents of the sample respectively (Table IV, column 2). Coalition sizes for each joint venture objectives without considering distribution of intra-ethnic Bumiputra coalition is 2.7 and 2.5 respectively. (Table IV, column 2). This figure is certainly higher when distribution of ethnic Bumiputras ownership is analysed.

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[16] In analysing this aspect of joint venture total shareholdings size for ethnic Chinese are those with at least one percents shares. Shareholding of less than one percents ownership are considered too small to actively participate in company's voting exercise. Among the reasons for such incidence is the existence of easier way of exiting from this company i.e. liquidating the shares, lack of expertise, information being free ride by other smaller shareholders and limited size (see Forbes and Watson 1993). Intra-ethnic analysis among ethnic Bumiputra is not necessary as this framework assumed this community act in unison as a single block.

Percentages of companies that can be said as of actual ethnic joint venture are small. Actual joint venture for purpose of operational control accounts for only 2.5 percents of the samples. The figure is only 1.0 percents for strategic purpose. Actual joint venture for purpose of operational control that can be classified as pure is only 1.5 percents of the samples while there is none[17] for strategic purpose.

Table IV: Joint Venture Statistics in Malaysia

Joint Venture	Could Form[1]	Actual[2]
Operational Control[3]	13.8% (28 companies)	2.5% (5 companies) 1.5 % pure 1.0 % convenient
Strategic Control[4]	11.8% (24 companies)	1.0% (2 companies) 0 % pure 1 % convenient

Note:
1. Details are as per appendix V.
2. Details are as per appendix VI & VII.
3. Minimum coalition size is 2.7
4. Minimum coalition size is 2.5

7.   Conclusions

Two stories emerge from our data. The study by CPPS may have over-estimated the emergence of inter-ethnic joint ventures in Malaysia. Even if we ignore the intra-ethnic distribution within the Bumiputra community, there are only 13.8 per cent of the companies that could form such joint venture. If the bar is set higher at strategic control, then only slightly less than 12 per cent qualify as companies this company. The numbers of companies that actually form such joint ventures for operational purpose by satisfying both capital and managerial criteria is even less at only 2.5 percents. If a capital criterion is made stricter in that its insufficiency is not the reason for choosing a partner from other ethnic than only a nadir 1.5 percents is classifiable

as pure. The CPPS report also underestimates the difficulty of forming coalitions when shareholding within ethnic groups is dispersed. This study however may not tell whether real progress towards pure ethnic joint venture companies as promoted by CPPS has been made, if any, without trend analysis. Nevertheless, it can confirm that ethnic joint venture both pure and convenient is not a feature of corporate Malaysia and that ethnic joint venture analysis may be more complicated than it seems.

It is indeed the case that an objective of public policy in Malaysia has been to increase the ownership of corporate equity for Bumiputras, but it remains to be seen if the underlying objective of equitable control is also in the process of being achieved through the formation of genuine partnerships across the ethnic divide to gain control of companies. Only a small percentage of companies listed in the stock exchange can be considered as inter-ethnic partnerships in that sense. There is more work needed in the first instance on the identification of such companies, an exercise for which the size distribution of shares to highlight not just inter-ethnic but also intra-ethnic distribution of equity is needed. Only ownership data enriched as proposed here can shed light on potential coalitions across the ethnic divide that could gain control of companies.

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Essay 4

Corporate Governance and Voting Power

ABSTRACT[1]

Over the last few decades, response to the voting power concept in corporate governance studies has been relatively poor compared to studies in political science. With only very few exceptions (e.g. Chakravarty and Hodgkinson, 2001 and Leech, 2002) the majority of researchers appear to focus only on the cash flow right concept. The contentious issue of this study is corporate governance researchers should embrace the usefulness of voting power. The concepts are thus explained, the applications illustrated and the issues discussed. In addition, in response to recent growing reference to the Straffin index its issues are investigated. This study highlights the lack of explanation on concepts and meanings as one of the main weaknesses of the Straffin index. Despite all these issues, the voting power concept should seriously be considered in corporate governance studies. At the very least the Penrose-Banzhaf index is applicable with greater confidence since it appropriately defines the meaning of power.

Key Words: Corporate Governance, Voting power, Penrose-Banzhaf index, Shapley-Shubik index and Straffin index

1. Introduction

It is a wonder why the voting power concept has never gained popularity in corporate governance studies. With only very few exceptions (e.g. Chakravarty and Hodgkinson, 2001 and Leech, 2002) the majority of researchers appear to focus only on fixed cash flow based analysis. It is the optimism that voting power, although a complex concept if properly understood, is insightful to corporate governance studies that leads to this study. The needs to illustrate and discuss the Straffin index in view of growing application of this index e.g. Kauppi and Widgren (2004; 2006) and Grondahl (2006) is another reason for this study.

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2. Cash Flow Right and Voting Power

This study begins by explaining the difference between cash flow rights and voting power concepts. In general, the cash flow right concept reflects fairness in distribution of right and risk. This right covers both direct cash and indirect cash[2] and equally important it includes share of company risk and liabilities from borrowings, company's guarantees and any future losses from investments.

It is this concept that is common in analysis of control. A main feature of this concept is that the benchmark is set arbitrarily. For examples, in Berle and Means (1932) less than 20 percent ownership was a benchmark for classifying a company as controlled by the management while in (Goergen and Renneboog, 2001) three percent ownership was set as a measure of substantial director's shareholding/

Closely related to this concept of cash flow right is a measure widely used in ownership studies known as the Herfindahl index[3] - an index that is defined as the sum of the squared percentage of shareholding[4] and is used to measure degrees of ownership concentration. Examples of application of such an index are many e.g. Chakravarty, et. al.[5] (2004) and in Van der Elst[6] (2004).

Voting power on the other hand is measured from the voting perspective instead of a shareholder share of right and risk. The focus of voting power is on probability of winning an election and not on fairness in distribution of a company's assets and risk. There is a clear difference between these two. Winning an election, entails among others, formulating a company's policy such as policy on dividends payments. Often this policy will affect all shareholders including the losers. Share of right and risk on the other hand does not guarantee a shareholder control over a company's policy. A

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[2] Example includes dividend and shares in public offering.

[3] Although the resulting index is not necessarily proportionate to cash flow.

[4] It is defined as the sum of the squared percentage of shareholding. e.g. in a company with four shareholders of 40, 20, 20 and 20 percents respectively the index, i.e. $h = (1 \times 0.4^2) + (3 \times 0.2^2) = 0.28$. The median of this index is used for cross industry or cross country analysis e.g. in Van der Elst (2004).

[5] In their illustration on how distribution of block holders and rate of participation complicates corporate voting outcome

[6] In his studies on rent-seeking behaviour among selected European countries, company specific characters such as identity of largest shareholders is concluded as likely to influence this behaviour.

clear example is a small shareholder who, despite his/her right, often has no control over company's policy.

Another difference is from the technical perspective. Cash flow right does not correlate to voting power. It is possible to see a small shareholder i.e. small cash flow right with voting power equal to that of larger shareholders. A comparison between columns 3 and 4 of Table I highlights this point. For example 'Foreign shareholders' may enjoy equal voting power to that of Bumiputra[7] although the former is over four times smaller than the latter (9.9% versus 42.9%). Studies on corporate governance, particularly those that involve analysing ownership structure, should be better informed on the schism between the two concepts.

Table I:
Example[1]-Differences between Shares of Assets/Risk and Voting

Shareholder	Percentage of Shares %	Cash flow right	Voting Power[2]
A- Bumiputra	42.9	0.429	0.50
B - Other M'sians	47.2	0.472	0.50
C - Foreigners	9.9	0.099	0.50

Note:
1. The company used as an illustration is Lingkaran Trans Kota Holdings obtained from Centre of Public Policy Studies report 2005 and is listed in chapter 2, table I
2. As measured by Penrose-Banzhaf index. Detailed discussion is in the following sections.

3   Voting Power Index

This section details the concept of voting power discussed previously. Penrose (1946) perhaps first introduced the general idea of this concept. Penrose highlights voting power as not necessarily correlating to percentage of votes. Instead, it is based on chances or probability of winning an election where voters with a higher chance will have more voting power. The current popular indices, namely the Shapley-Shubik index and the Banzhaf index, are essentially similar in principle to this idea[8]. Closely related to these two indices is the Straffin index, which until recently received little attention. Discussions on these indices will follow.

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[7] A main ethnic group in Malaysia.
[8] As in Penrose 1946 power in both indices are not correlated to voting weight but is based on the concept of probability.

3.1 Shapley-Shubik Index

The Shapley-Shubik index (1954) is perhaps the earliest and most widely used voting power index. Conceptually, this index measures power by the probability of a player being pivotal over all possible coalition that includes all [9] the voters. In detail, this pivot is when *arrival* of a shareholder results in the formation of a winning coalition. The *arrival* (or *order*) of a shareholder in the coalitions are thus important assumptions of the Shapley-Shubik index (Straffin 1977). Consequently, the total number of pivots always equals the number of coalitions, given that there is only one pivotal *arrival* per coalition. The index therefore always sums up to unity. In the voting power fraternity, the index is said to be *normalised* by definition, which is a useful feature since it permits inter-player comparison.

From *Table II*, each shareholder is pivotal in two coalitions and since the number of coalitions are 6 i.e. 3!. The Shapley-shubik index for each shareholder is thus; A = 2/6 or 0.33, B = 2/6 or 0.33 and C = 2/6 or 0.33.

Table II:
Determination of Pivotal Shareholders and Shapley-Shubik Index

	Arrivals		Pivotal
1ˢᵗ	2ⁿᵈ	3ʳᵈ	shareholder
A	B	C	*B*
A	C	B	C
B	A	C	*A*
B	C	A	C
C	A	B	*A*
C	B	A	*B*

Note:
1. A – Bumiputra 42.93%; B- Other Malaysians 47.21%; C – Foreigners 9.9%. Majority required 50.01%

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[9] Even though *all shareholders* are assumed to be in a coalition a member could be a *dummy* once the winning coalition has been formed. This is therefore similar to analysing only a winning coalition.

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3.2   Penrose-Banzhaf Index

Penrose index 1946 is another well-known voting power index. This index is defined as the number of times a shareholder is pivotal over the total number of coalitions involving that shareholder. This pivot is not restricted to only one shareholder since the order of arrival is not considered here. Consequently, there could be more pivots than the number of winning coalitions. Hence, the index does not always sum to unity. Using similar examples used in the previous illustration, pivotal shareholders and the index for Penrose-Banzhaf index are illustrated in the following table.

Table III:
Determination of Pivotal Shareholders and Penrose-Banzhaf Index

Winning Coalitions, Pivotal Shareholder (Underlined)		
Note:		
<u>A</u>	<u>B</u>	
<u>A</u>	<u>C</u>	
<u>B</u>	<u>C</u>	
C	B	A

1.   A – Bumiputra 42.93%; B- Other Malaysians 47.21%; C – Foreigner Shareholders 9.9%. Majority required 50.01

In this example, there are four winning coalitions. However, pivotal shareholders (underlined) are present only in three coalitions. From the table it can be measured that each shareholder is pivotal in two coalitions and since the number of coalitions involving a shareholder is 4 i.e. 2^{n-1}, the Penrose-Banzhaf index for each shareholder is; A= 2/4 or 0.50, B= 2/4 or 0.50 and C= 2/4 or 0.50.

Closely related to the Penrose index is the Banzhaf index (1965). The differences is the latter index is defined in a relative form i.e. power is normalised. In detail, the Banzhaf index is defined as the number of times each shareholder is pivotal over the total number of pivots. Since only one shareholder is pivotal per coalition total pivots will always equal to the number of coalitions, hence the index is normalised by definition. In the above example there are six pivots and six coalitions hence the index for Bumiputra is 2/6, Other Malaysians 2/6 and Foreigner 2/6. Defining the index as

the number of pivots over total coalitions involving that shareholder i.e. changing the denominator of the normalised Banzhaf, achieved similar results to the Penrose index hence the Penrose-Banzhaf index.

The former index is argued as less appropriate than the Penrose-Banzhaf index since normalising as in percentage does not reveal true voting power distribution (Felsenthal and Machover 2004). Accordingly, the Penrose-Banzhaf index is more appropriate than the normalised Banzhaf since distribution is not hidden by the effect of normalisation.

There is however one common similarity in many studies which apply this concept. The concept and the index are often represented in complex mathematical language, as described in Appendix IX and the discussion is highly abstract. This nonetheless is not indispensable e.g. Chakravarty and Hodgkinson (2001) and Felsenthal and Machover (2004).

3.3   Straffin Index

While the Shapley-Shubik, the Penrose and the Banzhaf index have been widely discussed at least in political science studies, discussion on the Straffin index is relatively limited. This index was proposed by Straffin (1977; 1978). Formally, this is an index under partial homogeneity assumption. Technically, it is the combination of the Shapley-Shubik index and the Penrose-Banzhaf index (Kauppi and Widgren, 2004). The idea is that the two different indices discussed above reflect different voting patterns but a common thread can be found in the theory of probabilistic voting. According to Straffin, the two indices are probabilistically connected as explained below using the concept of partial homogeneity as defined by Straffin (1977).

According to Straffin, the difference between two indices can be explained using probability concept. In particular, the difference starts from the initial assumption of the index. As for Banzhaf, the assumption starts from binomial poll distribution. This then can be translated as the probability of a voter voting 'yes' or 'no' is ½. On the other hand the assumption of Shapley-Shubik starts with uniform distribution i.e. $Pi =$

P. Consequently, whilst *P* is assumed ½ in Banzhaf it is not necessarily in the Shapley-Shubik index. This also means P can still be ½ in the Shapley-Shubik index but the P for the other voter is also ½.

Straffin further elaborates the meanings behind this difference. P= ½ implies voters vote independently whilst *Pi = P* implies voters vote homogenously. The term independence is now normally associated with Banzhaf since this is the assumption of the index. But this does not mean in the Shapley-Shubik index one vote influences the other but they still vote in a similar pattern because of the "[i] uniform standard or set of values" (Straffin 1977 p112). Straffin defines this state of affairs, where there is commonality of values between voters, as a state of homogeneity. Straffin proposes a more general index based on partial homogeneity. Shapley-Shubik is a special case of this general index in that Shapley-Shubik assumes complete homogeneity in the "standard of values". Penrose-Banzhaf is another special case in that the voters are assumed to have no common values.

Nevertheless, value is not the central consideration but rather commonality in voting practice. In the example used as an illustration by Straffin (1977) the value shared by the voters, i.e. provinces, was not the focus and was not discussed. It is sufficient therefore for studies applying the voting power concept to focus on voting pattern instead of precise value.

The situations for applying the Banzhaf index and the Shapley-Shubik index have been described. According to Straffin there is another situation when neither of these indices is appropriate. That is when voters are split between those who vote homogenously and those who vote independently. This split is known in the voting power fraternity as partial homogeneity. Accordingly, if users are able to identify this split and apply the index accordingly a better distribution of voting power is produced (Straffin 1977). Thus if 'C' and 'B' are expected to vote together applying Straffin is more appropriate since it will provide a better index.

In an earlier section, it was mentioned that a certain index reflects a certain voting pattern i.e. $P = \frac{1}{2}$ and P is homogenous for all voters. This identification is made possible by the used of a multilinear extension technique[10]. The calculation of the calculation of the Straffin index, the Penrose-Banzhaf index and the Shapley-Shubik index using this technique are illustrated in Appendix X and XI. As for the Straffin index, this illustration assumes 'B' and 'C' vote homogenously whilst 'A' votes independently. The results can be summarised as per the following *Table IV*.

Table IV:
Voting Power Index under Three Different Assumptions

Shareholders and percentage	Shapley-Shubik	*Penrose-Banzhaf*	Straffin index (B and C vote homogenously)
A 42.9%	0.33	0.50	0.67
B 47.2%	0.33	0.50	0.75
C 9.9%	0.33	0.50	0.75

3.4   Determining Voting Pattern

Straffin did not elaborate how to determine P for voter's affiliation hence which index is applicable. This is perhaps warranted in view of the growing suggestion to apply Straffin suggestion. This study described two possible methods to determine P in corporate settings. First is through an experts own estimation. For example, it may be reasonable to estimate that family members will vote together instead of against each other. Although uncomplicated and quick, this is arguably very subjective. This method however has its advantages particularly in the absence of prior records or in a situation where voting patterns keep changing and are time consuming to observe. Newly formed companies and companies with frequent changes in shareholders are some examples. This method is a practical option, especially when voter's affiliation does not have to be perfect i.e. one. In any event, after the index has been chosen P will not have any effect on the rankings of each voter.

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[10] In particular setting P at 1/2 in polynomial will get to the Banzhaf index whilst integrating the polynomial will get to the Shapley-Shubik index.

Alternatively, P is ascertainable from a historical voting pattern. This is illustrated in the following table. Assume there are three shareholders with equal weight[11] and two policies. The policies, and shareholders voting pattern are indicated in the table. For example in policy '1' Shareholder 'A' 'disagrees' whilst Shareholder 'B' and 'C' agree to the policy. The overall patterns of voting are shown in italics. Shareholder 'A' votes 'alone' in three of the four polices i.e. $P_A = \frac{3}{4}$ whilst shareholder 'B' and 'C' vote together in three out of four policies i.e. $P_{BC} = \frac{3}{4}$. Statistically, it can be concluded that shareholder 'A' voted independently whilst shareholders 'B' and 'C' voted homogenously, and as partial homogeneity is present the case for the Straffin power index can thus be considered.

Table V:
Shareholders Voting Affiliation

Shareholder Policy	A		B		C	
Policy 1	Disagree		Agree		Agree	
2	Agree		Disagree		Disagree	
3	Agree		Disagree		Disagree	
4	Agree		Disagree		Agree	
Affiliation	*Alone*	*$P_A = 3/4$*	*Alone*	*$P_B = 1/4$*	*Alone*	*$P_C = 0$*
	With B	*$P_{AB} = 0$*	*With A*	*$P_{AB} = 0$*	*With A*	*$P_{CA} = 1/4$*
	With C	*$P_{AC} = 1/4$*	*With C*	*$P_{BC} = 3/4$*	*With B*	*$P_{CB} = 3/4$*
	With B & C	*$P_{ABC} = 0$*	*With A & C*	*$P_{ABC} = 0$*	*With A & B*	*$P_{ABC} = 0$*

Employing a historical voting pattern is more objective. It also permits a detailed analysis. A voting pattern can be further analysed according to various policies e.g. dividend, financing and investment. On the other hand, it might suffer from the problems of aggregation. Many minor policies, such as on administration, can skew the voting pattern on the more important polices such as dividend and investment. Additionally, ownership structures in a publicly owned company are not static.

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[11] This is to negate the effect of voting weight and only concentrate of values.

4 Issues on Voting Power Concept and Index

As is customary with some concepts there are issues with the voting power index. A review of literature revealed three main issues; first is the resistance to this concept. Having established a positive opinion on this concept a user faces two further issues: the boundary of *a-priori* and intuitive meanings of the index.

4.1 Voter's Behaviour

The concept of voting power faces resistance e.g. from Garrett and Taebelis (1999; 2001) and Albert (2003). Failure to reflect the voter's behaviour is their main argument. That is, if this concept is to qualify as science it should be able to make predictions or explain human behaviour, which is the main aim of science. Moreover, in doing so theories should be proved or otherwise. The voting power fraternity allegedly fails to propose any theory thus the figures are meaningless. In particular, it cannot explain the voter's preference and policy arrangement (Garrett and Tsebelis, 1999). The index is also allegedly useless in political philosophy studies. In particular, assuming random voting is not convincing moral judgement for political philosophy studies. Political scientists and studies of constitutional analysis should allegedly ignore the voting power index (Albert, 2003). If this view is accepted voting power concept will have no analytical role in corporate voting analysis.

Despite this criticism, the voting power concept continues to flourish in political science studies. The concept is either defended directly as in Leech (2003) and Felsenthal et al. (2004) or implied in most studies that employ this technique. The central argument is the usefulness in its *a-priori* form. That is, the voting power index should only consider voters weight and voting rules (quota) consistent with practice in constitutional design, which ignores other factors such as preferences and agenda setting (Felsenthal and Machover, 2004). In addition, ignoring preference over independence essentially reflects sovereignty - the basic right of each voter (Felsenthal et. al 2003). At present the voting power index in its *a-priori* form that only considers voter's weight and quota is widely accepted although some recent questioning on its boundary is observed.

Recently, there have been questions on the boundary of *a-priori* assumption, hence questioning Felsenthal and Machover's pathological claim. It is argued that there is more to decision rules than just weight and quota. The boundary of *a-priori* should also consider prior discussion, *influence* and restrictions on forming coalitions all of which are consistent with the behavioural dimension of power (Holler and Napel, 2004). The rules should also realise power because of employee roles in an organisation, apart from quota required to win a meeting (Braham and Steffen, 2003). It is also argued that behavioural dimensions are of significant importance since they are consistent with definition of power as a social concept (Napel and Widgren 2005).

This argument on *a-priori* voting power is likely to continue consistent with continuing philosophical debates on the definition of power. The concept of power varies. Morriss (2002) as an example considered power as 'the ability to do something' as against power 'over something' as suggested by Oppenheim (1978). While voting power is generally regarded as a useful concept the issue of *a-priori* is set to continue.

4.2   Rankings and Intuitive Meanings

As a result of the different assumptions entailed in the construction of different indices, the indices do not always produce similar results. One example is when there are few large voting blocks but with many small voters (Straffin, 1977). Two sets of conclusions may appear following two different sets of rankings.

This observation encourages discussion on the merits of each index. An important discussion is on the intuitive meaning of each index (Felsenthal and Machover, 2001; 2004). According to them, both of the index starts with certain intuitive meaning, hence should be applied accordingly. When Shapley and Shubik studied the issue of voting power, they were concerned with the distribution of reward and they achieved this by adapting a technique called the Shapley value[12] (Felsenthal and Macover

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[12] When each shareholder has equal weight the application of the definition would produce exact result. This is known as Shapley value. The Shapley-Shubik index is a special kind because of the unequal weight.

2004). This technique was later adapted to become the Shapley-shubik index that is used today. Thus, the perspective of this index is power as reward, payoff or prize and is termed as P-Power (Felsenthal and Machover, 1998). There is an issue with this perspective. Power is viewed as reward and not influence as normally is the purpose in an election. Accordingly, the Shapley-Shubik index may not be appropriate to study control of management except where there are distributions of reward such as take-over bids (Chakravarty and Hodgkinson, 2001).

In contrast, when Penrose and Banzhaf were investigating voting power their intuitive meaning is power as *influence*, termed as I-Power (Felsenthal and Machover, 1998). This *influence* is due to winning an election which enables the winner to *influence* the policy of the voting body. Accordingly, if the subject of power in a study is *influence* then the Penrose-Banzhaf index is more appropriate. In the context of corporate ownership study, the application of the Banzhaf index might be more appropriate since power is obtained by being able to *influence* policy of a company.

Another issue with the Shapley-Shubik index is that the method of distributing these rewards is not convincing (Felsenthal and Machover, 2004). In particular, the Shapley-Shubik assumes only a pivotal member will gain reward from the winning coalition whilst other members in the coalition are left with nothing. This assumption is "[i] widespread but erroneous" (Felsenthal and Machover, 2004:19). They suggest this index should not be applied until the issue is solved conclusively.

However, Turnovec et. al., (2004) reject the argument that the Shapley-Shubik index reflects P-Power and the need to justify distribution of reward. They argued that the index is also definable from a probability perspective and is not P-Power but is a probability to be in pivotal situation whilst in the "process of forming a winning configuration" (Turnovec et al 2004:5). Defined this way i.e. "in the process of forming a winning configuration" as part of the passage of ultimately winning the reward devoids any need to justify the method of distributing this reward. The Shapley-Shubik index is still applied in voting power studies e.g. Echbo and Verma (1994). In some studies, both of the indices are tested for significant difference e.g. Chung and Kim (1999).

Felsenthal and Machover's general idea of intuitive meaning is not universally accepted. The acceptance implied in some studies is that probability theory best explained the voting power index e.g. Straffin (1977), Morris (2002) and Gelman et.al. (2002). A number of studies do not discuss the rational for selecting a voting power index based on their meaning further suggesting the insignificance of this meaning e.g. Jarrow and Leach (1989) and Chung and Kim (1999). On the other hand the meaning of power are discussed and the concept of I-power and the Banzhaf index in absolute form are accepted as appropriate in Chakravarty and Hodgkinson (2001) and Algaba et. al., (2007). Similarly, this study agrees with their reasoning that the purpose of voting election is to influence company's policy and in this respect the Banzhaf index is most appropriate. This study also concurs that normalised Banzhaf index hides voting power distribution (discussed in earlier section), hence the Penrose-Banzhaf index is the most appropriate in analysing corporate control.

4.3   Straffin Index and the Issues

Three decades ago Straffin suggested the index be applied according to shareholders voting behaviour "[i]...we need not simply apply either β or ϕ" (Straffin, 1977: 117). The application of this index "[i]....may give a better idea of the distribution of power than either pure classical index[13]" (Straffin, 1977 p117). However, unlike the Shapley-Shubik and Banzhaf indices, response to the Straffin index is poor albeit with some recent attention e.g. studies on individual power and the effect of hierarchical structure in an organisation (Braham and Steffen, 2003) and individual power in a committee (Grondahl 2006). The reasons are identified as follows: i) voting power distribution ii) practical limitations and iii) the meanings and concept.

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[13] i.e. the Shapley-Shubik and Banzhaf index.

4.3.1 Voting Power Distribution

The current acceptance in the voting power fraternity is that the index should be in *a-priori* form which means that voters weight and quota required to win an election are considered. A consequence of these considerations is a logic, known as property, should apply to voting power distribution. The logic is that voters with equal weight have equal power and no voters with larger weight have less power than voters with smaller weight, formally termed as local monotonicity postulate in the voting power fraternity.

The application of the Straffin index assumes that some voters will vote in a cohesive manner. Due to this coalition, it is possible for smaller shareholders to increase their voting power so as to be larger than that of bigger shareholders, hence violation of this property. In the example used in this study the Straffin index has resulted in smaller shareholders (B and C) having more power than larger shareholder (A) at 0.75 versus 0.67 (*Table IV*). This violation is a common hindrance for using the Straffin index and has been discussed in some studies e.g. Braham and Steffen (2002), Holler and Napel (2004).

4.3.2 Practical Limitation

It is natural when power is studied that it invites comparisons such as who has more power and has power increased? There are plenty of examples e.g. analysing voting power of United Nations members[14] (Penrose, 1946), the power of President, Senate and House in the U.S congress (Shapley and Shubik, 1954), the power of each country in the European Union e.g. Algaba et al (2007). In corporate governance and finance studies analysis is on voting power and shareholding pattern (e.g. Chakravarty and Hodgkinson, 2001) and dividend policy (e.g. Renneboog and Trojanowski, 2007). All these studies involve analysing the voting power of each voter.

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[14] Where he suggested each nation voting power should be based on square-root of the voting population commonly known as square-root rule.

Suitability of the Straffin index however is questionable when a coalition is not present. This in itself is a considerable limitation. Analysing a coalition's dynamic inherently requires information on voting power after and before a coalition is formed. Applying one index at the pre-coalition stage and another index at the post coalition stage is comparing an index with a different basis. The Banzhaf index and Shapley-Shubik index is inappropriate comparison to the Straffin index since they are based on different assumptions either conceptually or intuitively, as discussed in previous sections.

4.3.3 Meaning and Concepts

Another possible reason for the lack of appeal for Straffin index is lack of explanation on the meaning of power it represents. At present two intuitive meaning of power discussed in the literature are I-Power and P-Power which represents Penrose-Banzhaf index and Shapley-Shubik index respectively (Felsenthal and Machover, 2001; 2004). For I-Power the meaning is power to influence the outcome of an election. That is, withdrawal from the coalition will turn a winning coalition into a losing coalition or vice-versa. At the other end is P-Power where the meaning of power is payoffs or rewards in helping a winning coalition. These have been explained in the earlier sections.

The enquiry now is on the possible meaning of the Straffin index – an enquiry that has not been attempted in previous studies. Two routes of enquiries are possible. First, the meaning is related to the present meaning of the Banzaf index and the Shapley-Shubik. In particular, is the Straffin index an I-Power and P-Power index under partial homogeneity assumption? For example, in applying the Straffin index, the meaning of power for voter 'A' who votes independently, is influence and voter 'B' and 'C' who vote homogenously, is reward. If this example is accepted then it would suggest the meaning of power attributable to each voter may vary between influence and reward. Similarly, would this mean accepting that in a single voting body, two different concepts can exist simultaneously– for some voters the concept of arrival is important while for others it is irrelevant? Alternatively, there may well be a very new meaning and concept unrelated to these two indices.

At present if the first route is accepted i.e. the Straffin index is an I-Power and P-Power under partial homogeneity assumption then two set of meanings and concepts can simultaneously underlie this index. This also implies acceptance that I-Power is analysable against P-Power and so are the concepts of arrival, independence and homogeneity. This is perhaps best illustrated in the following scenarios. Scenario 1 is a single company analysis. In this scenario users have to accept that voter 'A' power in situation 1 that is based on homogenous assumption, power as payoff and that the concept of *arrival* is important can be analysed against situation 2 that is based on independence assumption, power as *influence* and that the concept of *arrival* is not important.

Scenario 1: Intra-company variation in voting pattern, meaning and coalition basis

Company X

Coalitions Status		Assumption on Voting Pattern/Meaning/Coalition Basis	
Situation 1	Situation 2	Situation 1	Situation 2
A	A	Homogenous Reward Arrival	Independent Influence No arrival
B	B	Homogenous Reward Important	Homogenous Reward Important
C	C	Independent Influence No arrival	Homogenous Reward Arrival

Note:
* Coalition

Analysis

This scenario is extendable to inter-company analysis. In the second scenario, the largest voter in Company X (situation 2) which is based on different concepts, is analysable against the largest voter in Company Y, which is based on altogether different concepts. These two scenarios highlight possible complication arising from accepting the Straffin index.

The Shapley-Shubik and the Banzhaf index, on the other hand is less complicated as application of these indices permits analysis based on singular meaning and concept consistently throughout the analysis. A unifying concept and meaning underlying the Straffin index is required, unless of course one accepts that the meanings and concepts of voting power has dynamic property in the sense that it can alternate between power as influence and power as prize.

Scenario 2: Inter-company variation in voting pattern, meaning and coalition basis

Company X

Coalitions Status		Assumption on Voting Pattern/Meaning/Concepts	
Situation 1	Situation 2	Situation 1	Situation 2
A	A 42.93%	Homogenous Reward Arrival	Independent Influence No arrival
B	B 47.21%	Homogenous Reward Important	Homogenous Reward Important
C	C 9.86%	Independent Influence No arrival	Homogenous Reward Arrival

Company Y

Analysis

Coalitions Status		Assumption on Voting Pattern/Meaning/Concepts	
Situation 1	Situation 2	Situation 1	Situation 2
A	A 34%	Independent Influence No arrival	Homogenous Reward Arrival
B	B 31%	Homogenous Reward Important	Homogenous Reward Important
C	C 22%	Homogenous Reward Important	Homogenous Reward Arrival
	D 13%	-	Independent Influence No arrival

Note:
* Coalition

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5. Conclusions

Over the last few decades, response to the voting power concept in corporate governance studies is relatively poor compared to studies in political science. The contentious issue of this study is corporate governance researchers should embrace the usefulness of the voting power concept. The voting power concepts are thus explained, the applications illustrated and the issues discussed. In response to recent attention received by the Straffin index this index and its issues are also discussed. This study highlights the a-priori issue, practical limitations and lack of explanation on concepts and meanings as issues facing the Straffin index. More studies are clearly required if this index is to gain wide acceptance.

Despite all these issues, corporate governance studies should seriously consider the voting power concept. At the very least, the Penrose-Banzhaf index is applicable with greater confidence since the underlying meaning of this index exemplifies the purpose of a corporate election, that is influence over a company's policy. Nevertheless, will the next decade witness more application of voting power concept in corporate governance studies? I am hopeful.

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Essay 5

Ethnic Bumiputra's Achievement in Corporate Malaysia: Distribution of Lawmakers, Equity versus Control, Coalition and Shareholders Participation

ABSTRACT[1]

After the then Malaya independence from the British in 1957, there was a serious economic imbalance between ethnic Bumiputra and ethnic Chinese communities. The climax of this economic imbalance culminated into the 1969 racial riot. An affirmative economic action plan under the banner of the New Economic Policy that favours the Bumiputra was consequently drafted to address this issue. The target is 30 percent corporate ownership, which the government maintained as not having been achieved until today. However, in 2006 the Centre of Public Policy Studies published contradictory estimates. Debates and controversies ensue. This study extends these debates by discussing two separate issues. The first is corporate equity ownership. It offers a new basis for allocating ownership of government–linked companies to each ethnic group hence a new equity estimate. In particular, when the basis of allocation is lawmakers the Bumiputra's equity ownership is estimated at 37.3 percent against 45.1 percent as per population size employed by the CPPS (2006). In the second part, the issue is corporate control as opposed to corporate equity ownership. A few observations are made. Firstly, intra-ethnic mismatch between equity and control is observed. The Bumiputra corporate control is at 7.4 percent against ownership of 18.3 percent. Secondly is the incidence of inter-ethnic corporate control gap, i.e. 7.4 percent for the Bumiputra versus 58.6 percent for the Chinese. This gap however reduces upon analysis of two scenarios. Coalition with government entity increases corporate control of ethnic Bumiputra community while lack of shareholders participation reduces that of ethnic Chinese. The combine influences narrow the corporate control gap between the two ethnic groups. The possible influence of small shareholders participation on the Chinese level of corporate control is less expected.

Key Words: Bumiputra, Government-Linked Companies, Corporate Ownership, Malaysia

1. Introduction

How successful is ethnic Bumiputra community in corporate Malaysia? Over the last few years, in this country of 27 million populations[2] who normally live side-by-side in relative peace and harmony this has been a controversial question – a question that

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[1] Helpful comments from my dissertation supervisor, Professor Shanti P. Chakravarty, are gratefully acknowledged.

[2] Are nearly 27 million. As per Census 2000 and distribution of population is as estimated in early 2007. http://www.statistics.gov.my/english/frameset_census.php?file=pressdemo and http://www.statistics.gov.my/ Accessed 11 January 2007.

appears in the prelude to the 12th general election in 2008 and is likely to resurface prior to the next one. Despite this relative peace, strain in this multi language, religion and races of 65 percent ethnic Bumiputra[3], 24 percent ethnic Chinese and eight percent ethnic Indians remains. The root is the New Economic Policy (NEP), a three decade policy that bequeathed preferential economic treatment only to the Bumiputra (e.g. Jomo, 2004). This policy, which is only a temporary expedient, continues until today much to the dissatisfaction of sections of non-Bumiputra. Recently, a report by the Centre of Public Policy Studies (2006) (CPPS, 2006) has reignited dissatisfaction towards the NEP by claiming the Bumiputra's corporate achievement as surpassing the 30 percent target set at the beginning of this policy, contrary to the government's official figure. The CPPS (2006) claim is indeed important since if their estimate is true this essentially supports this Centre's claim for reviewing the NEP. As is *de rigueur* in multi-ethnic society this claim fuels ethnic sentiment. While on one side, stoutly defending the NEP are sections of ethnic Bumiputra group, on the other side vehemently protesting are sections of ethnic Chinese community. Seemingly, the crux of the disputes is the estimates. Thus, it is the first issue discussed in this study. Precisely, this study highlights the existence of another basis of estimating ethnic Bumiputra corporate ownership. This study illustrates one of them.

However, most importantly this study draws attention to an alternative way of looking at the whole issue of Bumiputra corporate achievement – the second focus of this study. In particular, corporate achievement is also analysable from the control perspective. Distribution of corporate control in Malaysian is accordingly analysed and described. In analysing this distribution, a concept known as voting power concept is employed. Influences to this distribution from the ethnic Bumiputra-government and small shareholders lack of participation are also investigated. I hope the findings can contribute in a small part to the debates on ethnic Bumiputra corporate achievement.

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[3] 50 percent of ethnic Bumiputra are Malays.
http://www.statistics.gov.my/english frameset_census.php?file=pressdemo and

2. Estimates of ethnic Bumiputra's Corporate Ownership

Ethnic Bumiputra community's corporate ownership in 2005 was estimated at 45.4 percent by the CPPS (2006), substantially higher than the 18.4 percent released by the government's economic planning unit (EPU). The main thinking processes which caused this difference is the CPPS treatment of government-linked companies[4] (GLC) as part of ethnic Bumiputra companies. In fact, according to the CPPS (2006) GLC is majority owned by ethnic Bumiputra. This is in contrast to EPU methodology, which considers GLC as being an independent entity, totally unrelated to any ethnic group. The CPPS (2006) rational is that ethnic Bumiputra group has strong influence on the government and their domination of GLC's management, hence a large part of GLC are allocated to the Bumiputra. For that reason, the CPPS made a simple adjustment to the original figures released by the EPU. In detail, 70 percent of GLC is allocated to the Bumiputra (Table I, Column 3). The percentage of ethnic Bumiputra population, around 65 percent is the likely reason for this allocation.

Table I:
Bumiputra Corporate Ownership: A Comparison
(*RM Figures are in Billion*)

	EPU	CPPS[3]	New Estimate[4]
Bumiputra Direct Ownership [1]	18.4% (RM131.6)	20% (RM143.1)	18.4% (RM131.6)
GLC Contribution[2]	-	70% (RM 182.0)	52% (RM135.2)
Total Ownership	18.4% (RM131.6)	45.4% (RM325.1)	37.3% (RM266.8)

Note:
1. Total Market Valuation (TMV) is RM715.4 billion (as per CPPS (2006))
2. Owned by GLC: RM260.0 billion
3. GLC contribution is based on percentage of population
4. GLC contribution is based on percentage of lawmakers

Sources: Adapted from the CPPS (2006).

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[4] This is a term often used in the media and studies although the precise term should be government controlled companies as these companies are controlled by the government.

3.   Law Makers as the Basis of Estimation

Having discussed both the EPU and the CPPS (2006) rational does not mean however that this study disagrees with them. The purpose of this first part is to highlight other basis of estimating ethnic Bumiputra corporate ownership especially if one concurs with the general idea that each ethnic group should share the GLC. At present the CPPS basis for apportioning ethnic Bumiputra shares in GLC is based on percentage of population. In general, this is a fair basis as it is consistent with the general democratic process where the majority get the lion share. There can however be an exception. In an extreme example, ethnic Bumiputra parties can be defeated in a general election hence losing control of the government and subsequently control of GLC. Theoretically, this means the entire ethnic Bumiputra managers in GLC can be sacked and replaced with managers from non-Bumiputra ethnic group. Being majority of the population does not necessarily guarantee control of the government and GLC. In fact, the present coalition government did loose the third Malaysian general election in 1969 and almost a suffer similar fate in 2008 (see Ratnam and Milne, 1970 and Brown, 2008).

It is for the above reason that a proportion of ethnic Bumiputra lawmakers in the Malaysian Parliament is offered as one of the basis for estimating ethnic Bumiputra equity ownership. Ethnic Bumiputra community ability to protect their interest is in part dependent on the proportion of lawmakers representing them in the parliament. They are in a better position to approve legislation in favour of their ethnic group if they are the majority in the parliament. Similarly, if non-Bumiputra is the majority they have the advantage in approving legislation such as rescinding NEP.

The result as per this basis is presented in Table I. The Bumiputra corporate ownership is estimated at 37.3 percent as 52 percent[5] of the lawmakers are the Bumiputra hence the shares in GLC. An outcome of this basis is that the Bumiputra corporate equity ownership has surpassed the 30 percent corporate ownership target albeit less optimistic than the CPPS (2006) estimate.

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[5] Website of Malaysian Parliament.
http://www.parlimen.gov.my DewRakyat_KedAhli_detail.php?id=21
1 October 2008

Having made this estimate based on the proportion of lawmakers it should be emphasised that this study does not intend to stake claims this is the best basis of estimation. There is of course a host of other basis such as proportion of directors and senior managers in GLC which hitherto have not been fully investigated. The main purpose is to highlight the existence of these possible bases and one of them offered in this study is proportion of lawmakers.

4.   Corporate Control and Voting Power

So far, this study has analysed corporate achievement from a corporate equity ownership perspective. In this second part, this study intends to describe control of Malaysian companies. In this respect, a concept known as voting power is employed. This concept is also discussed in essay 2 and 4 of this dissertation.

Presently the CPPS (2006) study analyses corporate equity ownership. It is based on the cash flow right concept. This concept has certain features. Firstly, it focuses on the right of shareholders in terms of cash or anything that is convertible into cash also known in general accounting terms as an asset. Secondly, the share of assets is exactly proportionate to the percentage of shares owned. Therefore, when the CPPS (2006) reported that Bumiputra corporate ownership is at 45.4 percent this means their rights of corporate assets is exactly at 45.4 percent.

On the other hand voting power as the name suggests focuses on power of each shareholder in a voting sense and is based on the concept of probability as the following discussion illustrates. In practice, the concept is represented by a few indexes. In this study, the Penrose-Banzhaf index has been chosen as this is popular and is well accepted, as has been discussed in essay 4 of this thesis. In detail the index of Penrose (1946) is similar[6] to Banzhaf (1965), so the term Penrose-Banzhaf. It is an index which measures the number of times a voter is important (often called pivotal) to form winning partnerships (often called coalition) over the total number of coalitions involving that voter.

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[6] in a non-normalised form.

Suppose there is a company that mimics the composition of Malaysian populations, Bumiputra 65 percent, Chinese 26 percent and Indians 9 percent and a super majority of more than 66.7 percent is required to pass an agenda[7]. The following *Table II* list all the winning coalitions and the underlined are pivotal voters. There are three winning coalitions altogether i.e. those coalitions that managed to accumulate shareholdings exceeding the 66.7 percent required to pass an agenda. In coalition one, both ethnic Bumiputra and ethnic Chinese shareholders are pivotal since without each other a winning coalition is not formable. Similarly, in coalition two both ethnic Bumiputra and ethnic Indians shareholders are pivotal. However, in a coalition three only the Bumiputra are pivotal to the coalitions. The Chinese and the Indians are not pivotal to this coalition since without them a winning coalition is still formable. In total, the Bumiputra is pivotal in three coalitions the Chinese in two coalitions and the Indian in one coalition. 1. As the number of coalitions, involving each ethnic shareholder[8] is four, the Penrose index is Bumiputra = 3/4 or 0.75, Chinese = 1/4 or 0.25 and Indians = 1/4 or 0.25.

Table II:
Malaysian Plc A: Determination of Pivotal Shareholders for super majority

	Winning Coalitions, Pivotal Shareholder (Underlined)		
1	Bumiputra (65%)	Chinese (26%)	
2	Bumiputra (65%)	Indians (9%)	
3	Bumiputra (65%)	Chinese (26%)	Indians (9%)

The above calculation is for super majority approval of an agenda. This is typically required for major decisions such as amendment to a company's constitution and approving a takeover bid. In some voting situations, a simple majority of more than 50 percent majority is normally required to pass a bill or policy[9]. In this situation, the Bumiputra is pivotal in all coalition by virtue of their size of shareholdings. Applying similar technique will results in the Penrose voting power index of the followings;

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[7] This however may very from companies to companies according to their constitution.
[8] e.g. for Bumiputra shareholder the coalitions are: Bumiputra alone; Bumiputra and Other Malaysians; Bumiputra and Foreigners; Bumiputra and Other Malaysians and Foreigners.
[9] Ibid 7.

ethnic Bumiputra = 4/4 or 1.0, Chinese = 0/4 or 0 and Indians = 0/4 or 0. The Bumiputra whose voting power is 1.0 has total control of this company.

Assume there is another company – Malaysian Plc 'B' with the following composition; Bumiputra 40 percent, Chinese 40 percent and Indians 20 percent and a simple majority of over 50 percent is required to pass a policy. Table III compares the resulting voting power indices. In Malaysian Plc 'A' ethnic Bumiputra group voting power is '1' or absolute. For other ethnic group their voting power is '0'. Ethnic Bumiputra group therefore is the controlling[10] shareholder of Malaysian Plc 'A'. In Malaysian Plc 'B' the voting power of each ethnic group is 0.5 and none have absolute voting power. Replacing voting power of 'one' as reflecting full or absolute power and anything 'less than one' as having to share this power it can be observed that in Malaysian Plc 'A' the Bumiputra has full operational control of the company while in Malaysian Plc 'B' the power is shared among the ethnics groups.

Table III:
Distribution of Shareholding and Operational Control[1]

	Malaysian Plc 'A'			Malaysian Plc 'B'		
	Ownership	Voting Power	Control	Ownership	Voting Power	Control
Bumiputra	65%	1	Full[2]	40%	0.5	Sharing[2]
Chinese	26%	0	None	40%	0.5	Sharing
Indians	9%	0	None	20%	0.5	Sharing

Note:
1. As measured by the Penrose-Banzhaf Index and assuming in each ethnic group the shareholders act in unison.

The above framework is discussed in detail in essay two. It permits analysing distribution of ownership versus corporate control among each ethnic. The rest of this study is concerned with this analysis.

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[10] Practically, identification of a controlling shareholder is possible without measuring voting power that is by indentifying a shareholder larger than 50 percent for simple majority and 66.7 percent for super majority rule. Although easier to perform this is only possible when a clear majority shareholder exists. When no clear majority shareholder is present control information is lost. In this situation, the voting power index has to be calculated.

4.1 Sample Description

The followings are sample description for second part of this study. A total of 203 or 19.8 percent companies[11] with sufficient information for analysis have been randomly selected from the list[12] provided by Malaysian Bourse via random sampling method along the line of industry category. All annual reports for the year ended 2005 were downloaded from compilation available in Malaysian Bourse website. Details on sample size is discussed in Appendix I.

4.2 Analysis and Assumptions

Salient points on the analysis and assumptions are listed below:

i. Data from companies annual reports were collected and recorded manually mainly from four sections of the annual report; list of thirty largest shareholders, substantial shareholders, director's shareholding and director's background information[13]. Based on the information shareholders were grouped into ethnicity, government and foreign. A detail set of instruction to ensure consistency in classifying shareholders and the relevant source of information have been developed (Appendix II and III).

ii. Since the information available in the annual report is limited to the top thirty shareholders the trend analysis was used to identify the remaining smaller shareholders. In particular, the ratio of last ten shareholders was used to estimate the distribution of the remaining shareholdings. This estimate was then added to form the total equity ownership by each category of shareholders. This estimate form the basis for a) estimating equity ownership of each category of shareholder b) calculating the voting power to determine the level of corporate control and c) analysing the influence of coalition with

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[11] From the total of 1026 listed companies with annual report ended in 2005.
[12] As per population parameter on 7 April 2007 and adjusted for newly listed companies.
http://bursa.listedcompany.com/misc/1H08_17July08_1.pdf
[13] At present Listing Requirement of Bursa Malaysia[13] (2001) requires the names of substantial shareholders together with percentage of direct and deemed interest to be disclosed in an annual report. Companies are also required to list names of the thirty largest shareholders in the company[13]. In particular Chapter 9 Appendix 9 (c) section 23 page 202-203

government entity to the level of corporate control. Total estimate of the corporate ownership excluding shareholders with less than one percent shares has been developed. Analysis on the influence of small shareholders lack of participation to the level of corporate control was based on this data. Detailed organisation of data is as per appendix I.

iii.   An important assumption in this study is that the determination of identity and ethnicity of a shareholder is based on one immediate layer of ownership. An example, a company being analysed (Company B) is 30 percent owned by company 'A', which is majority owned by the Bumiputra. All the 30 percent will be attributed to the Bumiputra, even though other ethnic group also own some shares in company 'B'. There are two rationales behind this assumption; first, this study is about control as much as ownership. It is worth noting that it is only the controlling shareholder of company 'A' that can vote in company 'B', minority shareholders in company 'A' cannot vote in company 'B'. Secondly is to improve manageability of the data.

iii.   Another assumption of this study is that ownership is based on issued capital at par value, as the focus of this study is percentage of ownership and not value of ownership. In any event, overall and across the companies either the use of par value or market value is not expected to influence the overall distribution of ownership. This is also the value used by the EPU.

iv.   This study assumes the majority require to pass an agenda is based on the total outstanding shares i.e. total issued share capital of the company[14].

A spreadsheet based on an Excel programme has also been developed to help calculate the Penrose-Banzhaf voting power index (Appendix XI).

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[14]According to CFA (2009) manual on shareowner right across the market, in Malaysia majority needed to changes the article association is based on outstanding shares. Similar requirement is expected for operational control.

4.3 Corporate Equity Ownership versus Corporate Control

Having discussed the theoretical differences between corporate control and corporate equity ownership, the purpose now is to investigate in detail the existence of an inter and intra ethnic corporate mismatch. Table IV summarises the findings.

In brief, ownership[15] by the Bumiputra are 18.3 percent, government 21.7 percent, Chinese 35.8 percent, Indians 3.1 percent and foreigner 21.1 percent. (Table IV, Column 2). Ethnic Chinese community is the largest corporate owner in Malaysia. Their ownership is 17.5 percent larger than that of the Bumiputra.

On corporate control the distribution is as follows; Bumiputra 7.4 percent, ethnic Chinese 58.6 percent, government 5.4 percent, ethnic Indians 1.0 percent and foreigner 10.8 percent (Table IV, Column III). On corporate control that is formed by sharing the power with other ethnics, the Bumipura control is at 13.3 percent, government 10.3 percent, Chinese 13.3 percent, Indians 3.4 percent and foreign investors 13.8 percent. Ethnic Bumiputra and ethnic Chinese group have a similar level of shared corporate control. It is corporate control that is gained without the help of other ethnic group i.e. full control that ethnic Chinese group are dominant (58.6 percent) against ethnic Bumiputra (7.4 percent). The corporate control gap between the two ethnic groups is 51.2 percent.

Another important observation is intra-ethnic mismatch between corporate ownership and corporate control. As for example on full operational control for the Bumiputra it is 18.3 percent ownership against 7.4 percent control[16]. This is also observed for other of shareholders (Table IV Column 2 versus Column 3). However, it is only for the

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[15] Detail comparison to EPU estimates are hindered due to differences in classification, in particular EPU classified shareholders into Bumiputra, Chinese, Indians, others, nominees companies, locally controlled firms and foreigners. EPU does not specifically classified government shareholdings. As comparison, for the year 2004 EPU estimates equity for ethnic Bumiputra is 18.7%, Chinese 40.9%, Indians 1.5% and Foreigners 28.8%. Source: CPPS 2006.

[16] The Bumiputra lower level of corporate control can be explained by the spread of investments. The Bumiputra capital is much lower than ethnic Chinese at RM9.5 billion against RM18.6 billion but the spread is over 185 companies which is only slightly lower than ethnic Chinese of 193 companies. Because of this mismatch average percentage of ownership per company is lower for the Bumiputra (17.6 percent) than the Chinese (42.2 percent). Consequently, the Bumiputra despite its much larger corporate ownership only control 7.4 percent of the companies.

Chinese that corporate control is higher than corporate ownership at 35.8 percent ownership against 58.6 percent control.

Table IV:
Corporate Ownership Estimate versus[1] Operational Corporate Control[2]

	Ownership	Control - Full[3]	Control - Sharing[4]
Bumiputra	18.3%	7.4%	13.3%
Government	21.7%	5.4%	10.3%
Chinese	35.8%	58.6%	13.3%
Indians	3.1%	1.0%	3.4%
Foreign Investors	21.1%	10.8%	13.8%

Note:
1. Details are per Appendix XII.
2. This is as measured by Penrose-Banzhaf index voting power and assuming each ethnic group vote as one shareholder and is based on total shares issued.
3. Total does not add to 100 percent since the remaining controls are shared among the shareholders.
4. Total does not add to 100 percent since the remaining control are not shared.

4.4   Ethnic Bumiputra-Government Entities Coalition

This section looks at the distribution of control when government entity form coalition with ethnic Bumiputra group. The following table summarise the findings. By itself, ethnic Bumiputra group and the government control 7.4 percent and 5.4 percent of the companies respectively. By forming coalition total control exceeds the sum of their parts by 4.4 percent. A list of these companies is as per Appendix XIII. Combined corporate control is now 17.2 percent (Table V, column 4). The corporate control gap between the Bumiputra and Chinese is at 41.4 percent (17.2 against 58.6 percent) a reduction from 51.2 percent before the influence of the coalition was analysed.

Influence of ethnic Bumiputra-government coalition and small shareholders lack of participation on full operational control

	Total Control[1]	Total Control[3] - Influence of Small s/holders lack of participation	Total Control Influence of Bumiputra-Government coalition	Total Control – Combine influence of coalition & small s/holders lack of participation[3]
Bumiputra	7.4%	6.9%	17.2%	16.7%
Government	5.4%	5.4%		
Chinese	58.6%	38.4%	58.6%	38.4%
Indians	1.0%	0.5%	1.0%	0.5%
Foreign Investors	10.8%	6.4%	10.8%	6.4%

Note:
1. Total does not add to 100 percent since the remaining controls are shared among the shareholders.
2. Is based on total shares issued.
3. As for ethnic Bumiputra, control of 9 companies is gained through coalition with the government but 1 company is lost through influence of small shareholders participation hence combined influence is gained of control on 8 companies i.e. extra 3.9 percent. Total combined influence is therefore 3.9 percent plus 7.4 percent (ethnic Bumiputra) plus 5.4 percent (government) i.e. 16.7 percent.

4.5   Shareholders Participation

This section investigates the influence of small shareholders participation in distribution of control. Small shareholders participation is another factor that may affect the state of corporate control. In the UK despite a call for an increase in shareholders activism around 42 percent did not exercise their voting right (Mallin 2006). There are several reasons for this lack of participation. General reasons cited are free-riding issues (see Forbes and Watson 1993) and the lack of expertise (e.g. Kang 2006). Shareholders prefer easier exit strategy by selling their shares rather than spending time and effort to voice their dissatisfaction in an AGM (see Forbes and Watson 1993). In Malaysia, the rate of participation among shareholders is not

available but similar to the UK it is expected to concern mostly small shareholders due to their lack of resources to absorb company's information and attend an AGM.

In this study, a shareholding of less than one percent is classified as small. The general finding is that a lack of small shareholders participation reduces corporate control for all shareholders. This finding is summarised in Table V. An important finding is that a smaller reduction is observed for the Bumiputra than ethnic Chinese group. The Bumiputra corporate control is reduced by 0.5 percent (from 7.4 to 6.9 percent) while the ethnic Chinese corporate control is reduced[17] by 20.2 percent (from 58.6 to 38.4 percent). The corporate control gap between ethnic Bumiputra and ethnic Chinese groups following the influence of small shareholders participation is 31.5 percent (6.9 percent against 38.4 percent). A list of companies with possible small shareholders influences is as per Appendix XIV.

4.6   Combined Influences of Coalition and Shareholders Participation

Finally, when both the influence of a coalition and a lack of participation are combined corporate control of the Bumiputra is at 16.7 percent while for the Chinese it is at 38.4 percent (Table V Column 6). For the Bumiputra this is an increased from its pre coalition and pre small shareholders analysis of 7.4 percent while for the Chinese this is a drop from 58.6 percent. Consequently, this narrows the corporate control gap between the two ethnic groups to 21.7 percent (16.7 against 38.4 percent) from the initial 51.2 percent (7.4 against 58.6 percent).

5.   Ethnic Bumiputra's Corporate Achievement

In an attempt to understand ethnic Bumiputra corporate achievement saga this study has reviewed a controversial report by the CPPS (2006). There are two issues raised in this study. Firstly is the existence of an alternative method of estimating the

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[17] This may be explained by the distribution of individual shareholders. There are more individual shareholders among ethnic Chinese than among ethnic Bumiputra. In the analysis of first 44 companies, average number of ethnic Chinese per company is 13.2 shareholders against 2.3 shareholders for the Bumiputra. Lack of small shareholders participation as a result has greater influence on the Chinese corporate control than the Bumiputra.

Bumiputra corporate ownership. One of them offered in this study is the proportion of lawmakers as a basis for allocating ethnic Bumiputra ownership in GLC. As per this basis, ethnic Bumiputra corporate ownership is estimated at 37.3 percent in comparison to 45.4 percent as per CPPS estimates. Clearly if one accepts GLC as partly owned by ethnic Bumiputra even on a pessimistic basis such as proportion of lawmakers, the NEP target of 30 percent has been achieved.

Secondly, and most importantly, is another way of looking at the whole issue of corporate achievement that is by analysing ownership vis-à-vis control. A few observations are made following this analysis. Firstly, ethnic Bumiputra's corporate achievement in equity ownership does not match against the achievement in management as measured by the level of corporate control. Secondly, the incidence of a corporate control gap against ethnic Chinese is very clear. Nevertheless, this gap reduces following further analyses. As expected, ethnic Bumiputra's corporate control increases when coalitions with a government entity is formed. This gap reduces further upon analysis of small shareholders lack of participation in a corporate voting exercise. In this analysis, it is less expected that the drop to this community level of corporate control is minimal in comparison to ethnic Chinese group.

Coming back to the racially sensitive question - has ethnic Bumiputra community been successful in achieving its corporate objective? As per corporate ownership, the answer is certainly 'yes' if some ownership in GLC is allocated to ethnic Bumiputra community, even on a pessimistic basis as offered in this study. On the other hand, as per corporate control, the total is still less than 30 percent, even if one assumes they are acting in coalition with a government entity. Regardless, what is the ideal treatment for GLC? Is an allocation to each ethnic the answer or is the answer full allocation to ethnic Bumiputra in the assumption that GLC works in harmony with this community, hence essentially a coalition? This study does not have answers to these questions but a few likely conclusions can be drawn: lack of small shareholders participation and ethnic Bumiputra shareholders coalition with a government entity influence the level of corporate control and most importantly analysing corporate control does widen discussion on the Bumiputra corporate achievement. More information however is needed if discussion is to extend beyond collective achievement as pitted in this study.

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Appendix I
Data Collection and Organisation

Sampling Methodology

There are a few strategies one can adopt to determine a sample size in a study; adopting size similar to previous study, using published sample size tables and by employing statistical formula (Israel, 1992). This study employs the third strategy i.e. employing statistical formula.

Among statistical formula are sample size are for i) estimating population mean ii) estimating proportion iii) testing mean and iv) testing proportion (Kaizemer 1988). This study falls under the first category.

The formulas are; $n = \dfrac{(z^2\sigma^2/e^2)}{1 + \dfrac{(z^2\sigma^2/e^2) - 1)}{N}}$,

where n is sample size, z is the value that represents degree of confidence (i.e. the confidence that a certain percentage (e.g. 95%) of the computed intervals will contain the population mean), e is the desired level of precision (i.e. permitted sampling error) N is the size of population and σ^2 is the variance (or its estimate). This estimate of variance or square root of standard deviation (i.e. measurement which represents a set of data dispersion from its mean, it is closely related to the concept of normal distribution and central limit theorem briefly explained in the later sections and the square root of it is known as variance) can be obtained from previous similar studies (Kaizemer, 1988) or from a pilot study (Arsham, 2007). A pilot study has also been conducted to estimate this variance (Table I of this appendix). However, the result from the pilot study may not be appropriate estimate for determining sample size. This is explained in Israel, 1992:4.

> "The disadvantage of the sample size based on the mean is that a "good" estimate of the population variance is necessary. Often, an estimate is not available. Furthermore, the sample size can vary widely from one attribute to another because each is likely to have a different variance. Because of these problems, the sample size for the proportion is frequently preferred"

Difficulty to have a good estimate is confirmed in this study where variance from the first batch of a sample is over 69 percent larger than variance from the second batch of the sample i.e. RM669,741,311^2 against RM373,710,492^2 (Table I of this appendix).

It is for this reason that according to Israel (1992) the formula for estimating sample size for proportion is often used. In this study the precise formula is for finite population. This formula is similar to that of determining estimating population mean except that variance is replaced with proportion i.e. $z^2\sigma^2 / e^2$ is replaced with Z^2pq / e^2, where p and q represents degree of variability in the population. In detail p is the estimate of a proportion of an attribute in the population while q is (1-p) or the estimate of an attribute that is not present in the population. In situation of total uncertainty the variation is largest when p is set at 0.5. This study however expects ¾ of the population to share similar attributes in respect to the size of capital.

Employing this formula and assuming i) degree of variability of p= ¾ and $q = $ ¼ ii) level of precision of 5 percent and iii) confidence level of 95 percent the size is calculated at 226 or 21.9% of the population. The resulting size from this formula is generally more conservative i.e. higher than sample size required for population mean. (Israel ,1992:4).

The above formula is particularly useful if the randomly selected sample size is less than 30, standard deviation is known and population is normally distributed (i.e. the curve of the population distribution is bell-shaped and that 68 percent and 95 percent of the data fall within one and two standard deviations respectively). In the situation where standard deviation is unknown and population is not normally distributed any sample size calculated below 30 should be increased to 30 or more. The reason lays in central limit theorem which says that as sample size increases (to more than 30) the shape of distribution resulting from this sample converges to normal distribution, thus permitting inference of the sample mean to the population parameters (Kaizemer, 1988; Arsham, 2007).

However, the practical application of more than 30 sample size as sufficient to invoke this theory is only true provided that the population distribution is not "extremely skewed" (Waner, 2003:59). In this respect, "the most popular way to compute the asymmetry of a distribution is Pearson's mode skewness": Trauth 2007: Chapter 3 p35. In detail Pearson's mode skewness is measured as (mean – mode) / standard deviation. In this study Pearson's mode of skewness for the pilot study is calculated at 0.364 (Table I) i.e. is less than one standard deviation, thus not extremely skewed.

Additionally,

"If descriptive statistics are to be used, e.g., mean, frequencies, then nearly any sample size will suffice. On the other hand, a good size sample, e.g., 200-500, is needed for multiple regression, analysis of covariance, or log-linear analysis, which might be performed for more rigorous state impact evaluations." (Israel 1992:4).

The sample size of this study is 203 or 19.8 percent of population. It is considered as sufficient. Firstly, as stated by Israel, this is sufficient for descriptive type of studies. Secondly, the size is also certainly larger than 30, sufficient to invoke central limit theorem. Thirdly, the size is close to a less conservative figure of 226 as calculated using appropriate formula discussed in the previous section.

Apart from overall sample size, adjustment is necessary when the analysis involves group comparisons. In this respect the suggestion has been made that for each major group a minimum of 100 samples is required while for a smaller group a sample size of 20 to 50 is required (Sudman 1976). This suggestion however is not applicable to this study due to unavailability of population parameter for this group. In fact one of the purposes of this study is to determine this parameter i.e. the size of this group.

Having determined the sample size, selection of sample is based on a random table generated from an Excel programme.

Table I
Comparisons of Variance between Two Batches of Samples

1st Batch		2nd Batch	
Companies	Issued Capital (RM)	Companies	Issued Capital (RM)
3A	7,000,000	AKN Technology	115,677,151
Binapuri	80,924,600	Amanah Mellienia FB	500,000,800
BSA	66,000,000	EON Capital	693,208,732
Cycle & C	100,745,000	Gadang Holdings	106,014,037
Chin Teck	91,235,250	Minply Holdings	44,000,000
D&O	73,000,000	Hock Seng Lee	116,535,200
Daya Materials	18,963,000	Integrated Logistics	161,010,904
DVM Technologies	16,250,000	Ingenuity Solutions	13,235,232
Farm's Best	55,530,263	Kretam Holdings	116,855,266
Foremost	52,620,000	MISC	1,859,913,793
Golden Frontiers Bhd	62,257,204	Mulpha Land	60,490,000
H&L	302,167,829	Major Team Holdings	98,877,380
Hong Leong Bank	1,527,954,334	NCB Holdings	470,252,708
Hua Yang	90,000,000	Pacific Mas Bhd	170,993,500
IBHD	80,784,000	PDZ Holdings	76,792,728
IJM	462,061,980	PLB Engineering	91,279,667
IPower	63,000,000	Saptech	161,098,968
Isyoda	60,000,000	TDM Bhd	215,524,302
JPK	45,140,000	Texcycle	17,079,300
KFC	198,274,670	Woodland	40,000,999
KPJ	201,060,615	Ya Horng Electronics	46,420,750
LB Aluminium	124,237,500	YTL Land	172,314,729
LCL	40,493,900	Advanced Packaging	41,008,500
Lien Hoe	303,456,545	TPC	40,000,000
Lion Forest	209,940,571	Metech	40,500,000
Lipo	50,356,000	Chuan Huat Resources	44,774,000
Maybank	3,724,872,121		
MBMR	235,870,667		
Mentiga	37,500,000		
Mtronic	28,354,000		
Oriental Holdings	517,000,000		
OSK	610,368,867		
PCCS	60,012,002		
Rapid Synergy	41,997,900		
Redtone	25,200,000		
SDKM	40,000,000		
Sittat	194,590,426		
Spritzer	49,000,000		
Sunrise	422,684,967		
Tongher	84,995,000		
Toyo Ink Group	52,620,000		
UMS	40,690,000		
YTL Cement	241,623,429		
YTL e-solution	135,000,000		
YTL Power	2,421,538,289		
Variance	$669,741,311^2$		$373,710,492^2$
Mean	296,608,242		
Mode	52,620,000		
Pearson Mode of Skewness	0.364		

<u>Online Research</u>

Although data for these studies are obtained mainly from information available in annual reports, in 38 from the total samples of 203 companies (19.7 percent of the samples) information is also obtained from online research in order to classify shareholders into Bumiputra, government, Chinese, foreigner and Indians (list is as per appendix III). This online research was performed when ownership is by private limited company i.e. *Sdn. Bhd.* that is considered significant i.e. holding two percent of more shares and is not fund managed by a financial institution (real identity hence classification are possible through analysis of these institutions annual reports).

In this respect, a basic evaluation technique for online data discussed e.g. in Kirk (1996) and Standler (2004) was employed. In particular, among the criteria to determine the quality of internet information are i) credibility of authors e.g. not anonymous and the existence of resumes and address ii) clear publishing body iii) unbiased point of view iv) inclusion of referrals v) details are verifiable e.g. methodology is outlined. These however are only suggestions. It is the researchers' responsibility to decide the quality of information (Standler ,2004). Online information obtained for the purpose of this study is the ethnicity of the owner of private limited company. In this respect, all information from business publications, government agencies and newspapers are considered as appropriate. Information from public forums is totally ignored. In detail, Google searches on company's name are conducted and the link together with date of access are provided as evidence (list is as per appendix III). Link rot however is unavoidable.

After the internet research had been conducted 34 companies were rejected, since classifications of significant shareholders were not possible leaving 203 companies as a total sample size.

<u>Data Organisation</u>

In this study data was used for essay 1, 3 and 5. The starting data was company's annual report. In particular, the main source of data is from the section on the largest thirty shareholders which is required by law, in particular Chapter 9 of Bursa Malaysia Listing Requirement (2001). These listings of the thirty largest shareholders form the

main part of the data set of essays that form this dissertation. The data set for each essay are as follows;

Essay 1: Since the annual reports only list the top thirty (largest thirty) shareholders the data is augmented as follows. The ethnicity of the remaining shareholders is projected based on the trend i.e. ratio of the last ten shareholders in the list. The projection of these non-top thirty shareholders is added to each category of shareholders to form the total estimate of the ethnicity. The data is organised as per the following table I. It is from these estimates that majority control and calculation of voting power were determined. The full list of estimate and analysis is per appendix XII. Detailed guidelines, instruction and assumptions on how shareholders are classified into Bumiputra, Government, Chinese, foreigners and Indians are discussed in appendix II.

Table I. Total Equity Estimates

	Bumiputra	Government	Chinese	Foreign	Indians	Issued Capital (RM)
Company: Abric						
Top 30 s/holders (%)	13.12	1.21	45.83	0	0	99,052,500
Non-top 30 estimates (%)			38.34			
Total Equity (%)	13.12	1.21	84.17	0.00	0.00	
Voting Power			1.00			

Essay 3: Only a non-augmented data set was used in this study i.e. only data obtained from top thirty shareholders listed in the company's annual report were used for ethnic joint venture analysis. Total Bumiputra ownership (Bumi), three largest Chinese blocks (C1, C2, C3) and sum of all Chinese i.e. not limited to the three blocks excluding those with less than one percent shares were determined (All C). Data and the analysis was organised as per the following table II. The full list of distribution is as per appendix V. Detailed guidelines, instructions and assumptions on how shareholders are classified into Bumiputra, Government, Chinese, foreigners and Indians are discussed in appendix II.

Table II. Distribution of shareholdings and Joint Venture Analysis
(All figures are in percentages)

	Current S/holdings	JV: All Chinese	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
Company: Abric Bhd									
C1	33.5								
C2	4.5								
C3	1.1								
Bumi	13.1		46.6	17.6	14.2	51.1	18.7	47.7	52.2
All C		39.1							
JV: Operational			0	0	0	0	Oper.	0	0	0
JV: Strategic			0	0	0	0	0	0	0

Essay 5: This essay essentially employs a similar data set to that used in chapter 1. The additional data set is total shareholding, excluding those with less than one percent ownership. Total shareholders with this amount of shareholdings are identified and excluded from total estimates. The data was organised as per the following table III. It is from these estimates that voting power to determine levels of corporate control following lack of small shareholders participation were calculated. The full list of estimates and analysis is per appendix XII. Detailed guidelines and assumptions on how shareholders were classified into Bumiputra, Government, Chinese, foreigners and Indians are discussed in appendix II.

Table III. Total Equity Estimates Excluding Shareholdings less than 1 Percent

	Bumiputra	Government	Chinese	Foreign	Indians	Issued Capital (RM)
Company: Abric						
Top 30 s/holders (%)	13.12	1.21	45.83	0	0	99,052,500
Non-top 30 estimates (%)			38.34			
Total Equity (%)	13.12	1.21	84.17	0.00	0.00	
Voting Power			1.00			
Equity excluding< 1%s/holders(%)	12.47	1.21	39.08			
Voting Power	0.50		0.50			
Equity (RM)	12,995,688	1,198,535	83,372,489	0	0	

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http://www.klse.com.my/website/bm/regulation/rules/listing_requirements/

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Kazmier, L.J. 1988 .*Theory and Problems of Business Statistics*. 2nd Ed. McGraw-Hill: New York.

Kirk, E. E. 1996. *Evaluating Information Found on the Internet*. Sheridan Libraries. Baltimore. http://www.library.jhu.edu/researchhelp/general/evaluating/ Accessed 18 July 2009.

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Sudman, S.1976. *Applied Sampling*. New York: Academic Press.

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Waner, S. 2003. Business Statistics I: QM I. Lecture Notes. Hofstra University. http://people.hofstra.edu/faculty/Stefan_Waner/RealWorld/pdf...
Download June 2009.

Appendix II

Guidelines and Assumption in Identifying Shareholders Ethnicity

1. Information needed to identify the shareholders as discussed below is available mostly in the annual report itself. In the annual report, information on director's shareholdings, substantial and the 30th largest shareholders are normally presented. From this annual report ethnicity were identified, except in some cases involving shareholdings by private limited (i.e. *Sdn Bhd*) where online research were conducted (Link is as per Appendix III).

2. Individual shareholders were based on their name e.g. ethnic Bumiputra's and Chinese name. They were also assumed to be Malaysians unless clearly indicated in the annual report.

3. Institutional shareholders were based on their ultimate owner. This was particularly relevant for government and Bumiputra investment agencies. Examples are:

    a. Bumiputra: *Lembaga Tabung Haji, Permodalan Nasional Berhad, Majlis Amanah Rakyat, Amanah Saham Bumiputra, Amanah Saham Nasional, Amanah Saham Johor,, Takaful Nasional Sdn Bhd, Yayasan Sultan Iskandar, Amanah Saham Sarawak, Saham Amanah Sabah. Realmild Sdn Bhd, Trek Perintis Sdn Bhd. Trak Layar Sdn Bhd. Gabungan Kesturi Sdn Bhd*

    b. Government: *Employee Provident Fund, Khazanah Nasional, Socso, Pasdec, State Secretary, Valuecap, Felda, Kumpulan Wang Simpanan Guru-guru, LTAT, Amanah Raya Bhd, Amanah Saham Wawasan 2020, Amanah Saham Malaysia, Ministry of Finance, Various State Corporations, Syarikat Prasarana Negara Bhd, Kumpulan Wang Simpanan Guru, Avenue Capital Bhd, Amanah Saham Didik, Jabatan Akauntan Negara, Perbadanan Negeri, Koperasi Polis DiRaja Malaysia Bhd, Malaysia Industrial Development Finance Bhd, Harwood Timber Sdn Bhd, USains Holdings Sdn Bhd, Risda, Koperasi Permodalan Felda, Yayasan Pahang, Amanah Saham Didik.*

3. Owner's of private limited company (i.e. *Sdn Bhd)*, was firstly determined from annual report itself. In this respect the owners was assumed to be the directors representing this limited company. If the owners were of two ethnic groups the majority was the owner of the company, otherwise the ownership was apportioned accordingly. If information was not available in the annual report (e.g. they were not represented in the board of directors) online research was conducted to determine the identity of the owner. This study assumed ownership of private limited company was not easily sellable as that of public listed companies, the information within past 5 years and to the presents was therefore assumed to still hold truth. The links of these local private companies are as per Appendix III.

4. All shareholdings with words *'asing'* (which in English means foreign) were assumed own by foreign investors unless otherwise stated.

Appendix III

Internet Link of Private Limited Companies

1. Advanced Synergy Capital
    Kobena 5.93%
    http://www.kobena.com.my/introduction.htm 18 may 2009

2. Amalgamated Containers
    Tirta Enterprise Sdn Bhd 2.31%
    announcements.bursamalaysia.com/EDMS/...nsf/.../LDHB_tables.doc

3. Asas Dunia
    Seranting Juta Sdn Bhd 2.22%
    http://www.google.co.uk/search?hl=en&as_q=&as_epq=seranting+juta
    +sdn+bhd&as_oq=&as_eq=&num=10&lr=&as_filetype=&ft=i&as_sit
    esearch=&as_qdr=all&as_rights=&as_occt=any&cr=&as_nlo=&as_nh
    i=&safe=images
    announcements.bursamalaysia.com/EDMS/hsubweb.nsf/.../$FILE/Asa
    s%20Dunia%20Audited%20Acc.%2031.12.99.pdf
    Kumpulan Pinang Holdings Sdn Bhd 2.01%
    http://www.alacrastore.com/deal
    snapshot/Kumpulan_Pinang_Holdings_Bhd_acquires_a_minority_stak
    e_in_Tem_Fat_Hing_Fung_Holdings_Ltd_from_Perfect_View_Devel
    opment_Ltd-154963 18 May 2009

3. AirAsia
    IDBIF Malaysia Investment Limited 4.60%
    www.allbusiness.com/trade-development/.../7622677-1.html
    Deucalion Capital II Limited 3.77%
    www.highbeam.com/doc/1O9-Deucalion.html 7 July 2009

4. Bina Puri
    Jentera Jati Sdn Bhd =14.83+10.37
    www.binapuri.com.my/Inv_Info/press/2009/Feb/ED230209.pdf 4 July
    2009

5. DKLS Industries
    Pembinaan Bumiasia SB 3.1%
    http://www.cidb.gov.my/directory/local_contractor_details.php?cont_i
    d=267
    MBf Leasing Sdn Bhd (now merged with AmBank) 2.61%
    http://www.google.co.uk/search?hl=en&q=MbF+leasing+merger+mal
    aysia+2005&cta=
    www.geocities.com/osprey_asia/alliancebank1.pdf -
    Isyoda (M) Sdn Bhd 2.06% As per Isyoda Berhad Annual Report

6. Fututech
    Dinosun 4.3%
    www.fututech.com.my/Fututech%2004%20AR.pdf 5 July 2009

7. Heavaboard,
    Media Zone Sdn Bhd 4.99%

    http://www.google.co.uk/search?hl=en&as_q=&as_epq=media+zone+
    sdn+bhd&as_oq=&as_eq=&num=10&lr=&as_filetype=&ft=i&as_site
    search=&as_qdr=all&as_rights=&as_occt=any&cr=&as_nlo=&as_nhi
    =&safe=images
    announcements.bursamalaysia.com/EDMS/subweb.nsf/.../$FILE/Sriwa
    ni-AnnualReport%202003%20(585KB).pdf 15 May 2009

8. Ho Hup Construction
    Central Effective Sdn Bhd 14.51%

    www.theedgedaily.com/cms/content.jsp?id=com.tms.cms... 6 July
    2009

9. Hovid
    Fajar Kinabalu Sdn Bhd 3.88%

    announcements.bursamalaysia.com/.../Transmile-Appendices.pdf 7
    July 2009

10. Hwa Tai Industries
    Gelombang Sinar Sdn Bhd 2.47%

    announcements.bursamalaysia.com/.../PMC%20-
    %20Audited%20Accounts%202006.pdf -

11. Johan Holdings Bhd
    Makmur Setiajaya Sdn Bhd 18.75%

    http://www.google.co.uk/search?hl=en&as_q=&as_epq=Makmur+Seti
    ajaya&as_oq=&as_eq=&num=10&lr=&as_filetype=&ft=i&as_sitescar
    ch=&as_qdr=all&as_rights=&as_occt=any&cr=&as_nlo=&as_nhi=&s
    afe=images
    announcements.bursamalaysia.com/EDMS/subweb.nsf/.../$FILE/Gken
    t-FinancialStatements-Properties-AGM%20(325KB).pdf

12. JPK
    Kemboja Semasa Sdn Bhd2.35%

    announcements.bursamalaysia.com/.../JPK-
    AnnualReport%202001%20(370KB).pdf 4 July 2009

13. Kosmo
    Grant Thornton Consulting Sdn Bhd 11.5%
    http://www.gt.com.my/6 July 2009

14. KUB Malaysia
    Gaya Edisi Sdn Bhd 30.32%
    http://biz.thestar.com.my/news/story.asp?file=/2009/6/20/business/415
    9231&sec=business 5 July 2009

15. Landmarks Bhd
    Dynaura Trading Sdn Bhd 9.10%
        http://www.zoominfo.com/people/Hashim_Dato_981580980.aspx 5
        July 2009

16. MAS
    Warisan Harta Sabah Sdn Bhd 2.4%
    www.warisanharta.com.my/6 July 2009

17. Media Prima Berhad
    Gabungan Kesturi Sdn Bhd 13.92%
        http://www.asiafinest.com/forum/lofiversion/index.php/t135619.html
        16 may 2009

18. Mentakab
    Chermang Development Sdn Bhd 57.17%
        http://www.crmz.com/Report/ReportPreview.asp?BusinessId=8350940
        6 July 2009

19. Muda Holdings Bhd
    Hartaban Holdings Sdn Bhd 7.13%
    Styme Sdn Bhd 2.93%
        http://announcements.bursamalaysia.com/EDMS%5Cannweb.nsf/Lsv
        AllByID/482568AD00295D0748257123003316462?OpenDocument 16
        May 2009
    Quarry Land Sdn Bhd 1.73% - Chinese
        http://www.google.co.uk/search?q=%22quarry+lane+sdn+bhd%22&hl
        =en&start=10&sa=N
        www.malaysian-
        re.com.my/media/annual_reports/2004_financial_malay.pdf

20. MLABS Systems
    USAINS holding Sdn Bhd 4.27%
        http://www.usainsgroup.com/
    Harwood Timber Sdn Bhd 2.14%
        http://www.google.co.uk/search?hl=en&as_q=&as_epq=harwood+tim
        ber+sdn+bhd&as_oq=&as_eq=&num=10&lr=&as_filetype=&ft=i&as
        _sitesearch=&as_qdr=all&as_rights=&as_occt=any&cr=&as_nlo=&as
        _nhi=&safe=images
        sarawaktimber.org.my/publication/1205830543-
        CorporateProfife2007.pdf
    Siliconnet Technologies Sdn Bhd
        http://www.google.co.uk/search?hl=en&q=%22siliconnet+technologie
        s%22+sains&meta=
        www.sains.com.my/sains/aboutsains/subsidiaries_snt.shtml - 31k

21. Mulpha International
    Klang Enterprise Sdn Bhd 5.49%
    www.asx.com.au/asxpdf/20081106/pdf/31dg1pxtx9ztb6.pdf July 2009

22. NCB Holdings
    MISC Enterprises Holdings Sdn Bhd 15.35%
    www.misc.com.my/corporateinfo_org_structure_popup.php 5 July
    2009

23. Pan Malaysia Corporation
    Oriental Omega Sdn Bhd 5.07%
    Tarrega Holdings Sdn Bhd 26.44%
    http://www.google.co.uk/search?hl=en&as_q=&as_epq=Oriental+Om
    ega+Sdn+Bhd&as_oq=&as_eq=&num=10&lr=&as_filetype=&ft=i&a
    s_sitesearch=&as_qdr=all&as_rights=&as_occt=any&cr=&as_nlo=&a
    s_nhi=&safe=images
    announcements.bursamalaysia.com/EDMS/hsubweb.nsf/1c0706d8c06
    0912d48256c6f0017b41c/.../$FILE/PMC-Circul...

24. PK Resources
    Imapro Sdn Bhd 2.63%
    www.audit.gov.my/xboer/upload/3-kew.NS.pdf?CqC3=CqC3 -7 July
    2009

25. SHH Resources Bhd
    Naga DDB Sdn Bhd 11.16%
    http://investing.businessweek.com/research/stocks/private/snapshot.asp
    ?privcapId=37896928 20 May 2009

27. SHL Concolidated
    Unikburan Sdn Bhd 10.30%
    http://announcements.bursamalaysia.com/EDMS%5Cshweb.nsf/LsvAl
    lByID/482568AD0029498l482575320031A624?OpenDocument 20
    May 2009

28. Sin Chew Media Corporation
    Zaman Pemimpin Sdn Bhd 15.18%
    www.mingpaogroup.com/pdf/ar08_E013.pdf 7 July 2009
    Persada Jaya Sdn Bhd 4.01%
    http://www.kapitro.sarawak.gov.my/php/main/malay/kapitro/news.php
    ?nID=n37 7

29. Sitt Tatt
    MISL & Associates Sdn Bhd 22.13%
    http://www.allbusiness.com/banking-finance/financial-markets
    investing-securities/7645058-1.html
    http://findarticles.com/p/articles/mi_hb5556/is_200307/ai_n21968515/
    5 July 2009

30. Solution Engineering Holdings
    Technology Park Malaysia Corporation Sdn Bhd 4.98%
    http://www.tpm.com.my/#

31. Subur Tiasa
    Raya Abadi Sdn Bhd 8.78%
    Kinta Hijau Sdn Bhd 8.78%
    Bahagia Abadi 3.92%
    announcements.bursamalaysia.com/EDMS/.../Subur-Circular.pdf5 July
    2009

32. TDM
    Pemika Terengganu Sdn Bhd 15.22%
    www.terengganu-inc.com/pdf/Terengganu_Inc_Portfolio-1.pdf 5 July
    2009

33. Tomypack
    Pascorp Holding Sdn Bhd 2.5%
    announcements.klse.com.my/.../482568AD00295D0748256B5A0008E
    EA9?... 6 July 2009

34. Worldwide Holdings
    LGB Holdings Bhd 3.31%
    http://www.klse.com.my/website/bm/listed_companies/company_anno
    uncements/annual_reports/index.jsp (in Taliworks Bhd) 6 July 2009

35. Wimems Corporation
    Commerce Technology Ventures Sdn Bhd 5.28%
    http://www.mastic.gov.my/servlets/sfs;jsessionid=E37B29763DC06E4
    A9D84DB0345AA7886?s=17XiLLsfQBMF9VMIq5p&t=/contentMan
    ager/onStory&i=1108620651187&b=1108620651187&l=0&e=UTF-
    8&active=no&ParentID=1118732422218&sort=Price&StoryID=1118
    817933432
    http://www.alacrastore.com/storecontent/Thomson_M&A/Pintar_Selal
    u_Sdn_Bhd_acquires_IMU_Education_Sdn_Bhd-1817551040 18 May
    2009
    Kenwin Investment Limited 5.39%
    http://www.google.co.uk/search?hl=en&as_q=&as_epq=Kenwin+Inve
    stment&as_oq=&as_eq=&num=10&lr=&as_filetype=&ft=i&as_sitese
    arch=&as_qdr=all&as_rights=&as_occt=any&cr=&as_nlo=&as_nhi=
    &safe=images
    www.eupe.com.my/eupe_ar_2006.pdf

36. YTL Land
    Pemasaran Simen Negara Sdn Bhd 3.02%
    http://www.alacrastore.com/dealsnapshot/Vicat_SA_acquires_a_minor
    ity_stake_in_Pemasaran_Simen_Negara_Sdn_Bhd_from_Malaysia-
    438385 5 July 2009

37. YTL Cement
   Seri Yakin 2.91%
   > announcements.bursamalaysia.com/EDMS/.../YTLCem-Circular.pdf 5
   > July 2009

38. YTL Power
   Bara Aktif Sdn Bhd 3.15%
   > announcements.bursamalaysia.com/.../YTLPowr-FinancialHighlights-
   > ChairmanStatement-CorpInfo-DirectorsProfile%20(400KB).pdf 4 July
   > 2009

   Valuecap Sdn Bhd 2.54%
   > www.khazanah.com.my/portfolio.htm

Appendix IV

Excel Spreadsheet Function for Determining Viability of Joint Venture as per Shares Ownership Distribution

	B	G	H	I	J	K
2			JV			
3		Current S/holdings	Chinese			
4		ings	≥ 1%	Bumi	Bumi	Bumi
5				C1	C2	C3
6						
7	Com: 3A					
8	C1	47.3				
9	C2	4.8				
10	C3	4.4				
11	Bumi	3.96		=G11+G8	=G11+G9	=G11+G10
12	All C		58.8			
13	Operational		=IF(H12>=50," Oper", "0")	=IF(AND(AND(AND(AND($C11="Big" ,$C8="Big",$D11="No control",$D8="No control",I11>50)))),"Oper.",0)	=IF(AND(AND(AND(AND($C11="Big" ,$C9="Big",$D11="No control",$D9="No control",J11>50)))),"Oper.",0)	=IF(AND(AND(AND(AND($C11="Big", $C10="Big",$D11="No control",$D10="No control",K11>50)))),"Oper.",0)
14	Strategic		=IF(H12>=66.66,"Strat", "0")	=IF(AND(AND(AND(AND($C11="Big" ,$C8="Big",$F11="No Strat",$F8="No Strat",I11>66.67)))),"Strat",0)	=IF(AND(AND(AND(AND($C11="Big" ,$C9="Big",$F11="No Strat",$F9="No Strat",J11>66.67)))),"Strat",0)	=IF(AND(AND(AND(AND($C11="Big", $C10="Big",$F11="No Strat",$F10="No Strat",K11>66.67)))),"Strat",0)

	B	G	L	M	P	Q
2						
3		**Curre nt**				
4		**S/hol dings**	**Bumi**	**Bumi**	**Bumi**	**Bumi &**
5			**C1, C2**	**C2, C3**	**C1, C3**	**All C**
6	**Com:**					
7	**3A**					
8	C1	47.3				
9	C2	4.8				
10	C3	4.4				
11	Bumi	3.96	=G11+G8+G9	=G11+G10+G9	=G11+G8+G10	=G11+G10+G9+G8
12	All C					
13	Operat ional		=IF(AND(AND(AND(AND(AN D(AND(\$D9="No control",\$C9="Big",\$C11="Big" ,\$C8="Big",\$D11="No control",\$D8="No control",L11>50)))))),"Oper.",0)	=IF(AND(AND(AND(AND(AN D(AND(\$D9="No control",\$C9="Big",\$C11="Big", \$C10="Big",\$D11="No control",\$D10="No control",M11>50)))))),"Oper.",0)	=IF(AND(AND(AND(AND(AN D(AND(\$D10="No control",\$C10="Big",\$C11="Big ",\$C8="Big",\$D11="No control",\$D8="No control",P11>50)))))),"Oper.",0)	=IF(AND(AND(AND(AND(AND(AND(AND(\$C10="Big",\$D10="No control",\$D9="No control",\$C9="Big",\$C11="Big",\$C8="Bi g",\$D11="No control",\$D8="No control",Q11>50)))))),"Oper.",0)
14	Strate gic		=IF(AND(AND(AND(AND(AN D(AND(\$F9="No Strat",\$C9="Big",\$C11="Big",\$ C8="Big",\$F11="No Strat",\$F8="No Strat",L11>66.67)))))),"Strat",0)	=IF(AND(AND(AND(AND(AN D(AND(\$F9="No Strat",\$C9="Big",\$C11="Big",\$ C10="Big",\$F11="No Strat",\$F10="No Strat",M11>66.67)))))),"Strat",0)	=IF(AND(AND(AND(AND(AN D(AND(\$F10="No Strat",\$C10="Big",\$C11="Big",\$ C8="Big",\$F11="No Strat",\$F8="No Strat",P11>66.67)))))),"Strat",0)	=IF(AND(AND(AND(AND(AND(AND(AND(\$C10="Big",\$F10="No Strat",\$F9="No Strat",\$C9="Big",\$C11="Big",\$C8="Big" ,\$F11="No Strat",\$F8="No Strat",Q11>66.67)))))),"Strat",0)

Note:
Bumi = Bumiputra, C1 = First Chinese, C2 = Second Chinese, C3 = Third Chinese
Big = Significant Shareholder, Ocean = insignificant Shareholder
MGO = Mandatory General Offer, Strat = Strategy

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Appendix V

Companies that could form ethnic oint Venture Companies and total samples detail analysis

	Operational			Strategic
1	3A		1	Baswell Corp
2	Abric Bhd		2	Batu Kawan Berhad
3	Batu Kawan Berhad		3	Box-Pack (Malaysia) Bhd
4	Chuan Huat Resources		4	BSA
5	Country Heights Hol		5	BSL Corporation
6	DKLS Industries		6	Chuan Huat Resources
7	Eng Tech		7	Country Heights Hol
8	EP Manufacturing		8	DFZ Capital
9	Focal Aims Bhd		9	Efficient e-solutions
10	Fututech Bhd		10	Hock Seng Lee
11	Haveaboard		11	IBHD
12	HPI Resources Berhad		12	Minetech Resources
13	Isyoda		13	Mtronic
14	Kosmo		14	Pan Malaysian Corp
15	LCL		15	Pintaras Jaya
16	Lipo		16	Scientex Incorporated
17	LKT Industrial		17	SHL Consolidated
18	Minetech Resources		18	Sin Chew
19	Metronic Global		19	Spritzer
20	Ornapaper Bhd		20	Subur Tiasa
21	Spritzer		21	Triumphal Associates
22	Texcycle		22	Yee Lee Corp
23	The Meddia Shoppe		23	YTL Land
24	Unico-Desa Plantations		24	YTL Power
25	United U-Li Corp			
26	Versatile Creative			
27	Wong Engineering Corp			
28	Woodland			

Could form joint venture	13.8%	11.8%
Coalition Size	2.7	2.5

etails of the analysis are as follows;

(All figures are in percentage)

	Current S/holdings	JV Chinese ≥ 1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
1 **3A**									
C1	47.3	58.8							
C2	4.8								
C3	4.4								
Bumi	4.0		51.3	8.8	8.4	56.1	13.2	55.7	60.5
All C		58.8							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		0	0	0	0	0	0	0	0

ote: C1 = 1st Chinese, C2= 2nd Chinese, C3= 3rd Chinese, Bumi = Bumiputra,
  Oper. = Operational Control, Strat. = Strategic control

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| | | JV Chinese-Chinese ≥ 1% | JV Bumiputra and Chinese | | | | | | |
	Current S/holdings		Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
2 Abric Bhd									
C1	33.5								
C2	4.5								
C3	1.1								
Bumi	13.1		46.6	17.6	14.2	51.1	18.7	47.7	52.2
All C		39.1							
Operational		0	0	0	0	Oper.	0	0	0
Strategic		0	0	0	0	0	0	0	0
3 Advanced Packaging									
C1	7.4								
C2	6.0								
C3	5.0								
Bumi	3.1		10.6	9.1	8.1	16.5	14.1	15.6	21.5
All C		66.1							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
4 Advanced Synergy Capital									
C1	0.8								
C2	0.8								
C3	0.6								
Bumi	58.8		59.6	59.6	59.4	60.4	60.2	60.3	61.0
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
5 Affin Holdings									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	1.9		1.9	1.9	1.9	1.9	1.9	1.9	1.9
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
6 AirAsia Bhd									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	27.1		27.1	27.1	27.1	27.1	27.1	27.1	27.1
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
7 AKN Technology									
C1	12.2								
C2	1.2								
C3	0.0								
Bumi	20.6		32.8	21.8	20.6	34.0	21.8	32.8	34.0
All C		13.3							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
8 Alimunium Company M									
C1	15.9								
C2	0.4								
C3	0.3								
Bumi	0.5		16.3	0.8	0.8	16.7	1.2	16.7	17.0
All C		15.9							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
9 Amtel Holdings									
C1	20.5								
C2	4.4								
C3	3.4								
Bumi	3.3		23.9	7.7	6.7	28.2	11.1	27.3	31.6
All C		40.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
10 Asas Dunia									
C1	41.0								
C2	0.7								
C3	0.3								
Bumi	6.6		47.5	7.2	6.8	48.2	7.5	47.8	48.5
All C		41.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
11 Asia Pacific Land									
C1	32.2								
C2	1.4								
C3	0.7								
Bumi	1.3		33.5	2.7	2.0	34.9	3.4	34.1	35.6
All C		33.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
12 Astro All Asia Network									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	9.0		9.0	9.0	9.0	9.0	9.0	9.0	9.0
All C		0.0							
Operational	0		0	0	0	0	0	0	0
Strategic	0		0	0	0	0	0	0	0
13 AT Systemization									
C1	69.1								
C2	11.0								
C3	1.8								
Bumi	0.0		69.1	11.0	1.8	80.1	12.8	70.9	81.9
All C		83.0							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0
14 Baswell Corp									
C1	52.2								
C2	1.4								
C3	1.2								
Bumi	27.2		79.4	28.6	28.4	80.8	29.8	80.6	82.0
All C		54.8							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
15 Batu Kawan Berhad									
C1	49.1								
C2	4.9								
C3	3.4								
Bumi	10.5		59.6	15.4	13.9	64.5	18.8	63.0	67.9
All C		64.6							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		0	0	0	0	0	0	0	Strat
16 Berjaya Capital									
C1	52.7								
C2	0.8								
C3	0.0								
Bumi	0.0		52.7	0.8	0.0	53.6	0.8	52.7	53.6
All C		52.7							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
17 Binapuri									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	32.5		32.5	32.5	32.5	32.5	32.5	32.5	32.5
All C		41.3							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
18 Box-Pack (Malaysia) Bhd									
C1	54.9								
C2	0.4								
C3	0.2								
Bumi	29.5		84.4	29.8	29.6	84.7	30.0	84.6	84.9
All C		54.9							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
19 Brite-Tech									
C1	44.9								
C2	10.0								
C3	9.9								
Bumi	0.3		45.2	10.3	10.2	55.2	20.2	55.1	65.1
All C		77.2							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0
20 BSA									
C1	52.7								
C2	1.0								
C3	0.6								
Bumi	16.8		69.5	17.8	17.4	70.5	18.4	70.1	71.1
All C		53.7							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
21 BSL Corporation									
C1	51.0								
C2	2.5								
C3	1.7								
Bumi	24.3		75.3	26.7	26.0	77.7	28.4	77.0	79.4
All C		57.3							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	Strat	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
22 CB Industrial Product									
C1	32.0								
C2	3.6								
C3	3.6								
Bumi	2.6		34.6	6.2	6.2	38.2	9.8	38.2	41.8
All C		50.8							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
23 Chin Teck									
C1	3.5								
C2	3.2								
C3	3.1								
Bumi	0.6		4.1	3.9	3.7	7.4	6.9	7.2	10.4
All C		22.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
24 Chuan Huat Resources									
C1	45.5								
C2	4.0								
C3	3.1								
Bumi	20.7		66.2	24.8	23.9	70.2	27.9	69.3	73.4
All C		54.7							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		0	0	0	0	Strat	0	Strat	Strat
25 Country Heights Hol									
C1	43.3								
C2	17.4								
C3	4.0								
Bumi	2.1		45.4	19.6	6.1	62.8	23.5	49.4	66.8
All C		70.3							
Operational		Oper	0	0	0	Oper.	0	0	Oper.
Strategic		Strat	0	0	0	0	0	0	Strat
26 Crest Builder Hold									
C1	52.7								
C2	2.6								
C3	2.1								
Bumi	6.3		59.1	8.9	8.5	61.6	11.0	61.2	63.8
All C		59.3							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
27 Cycle & C									
C1	0.9								
C2	0.3								
C3	0.3								
Bumi	4.0		4.9	4.3	4.3	5.2	4.6	5.2	5.5
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
28 D&O									
C1	23.7								
C2	2.7								
C3	2.2								
Bumi	0.6		24.3	3.3	2.8	27.0	5.5	26.5	29.2
All C		30.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
29 Daya Materials									
C1	55.7								
C2	5.0								
C3	2.9								
Bumi	0.6		56.3	5.6	3.5	61.3	8.5	59.2	64.2
All C		68.7							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0
30 DFZ Capital									
C1	4.6								
C2	4.2								
C3	3.3								
Bumi	64.7		69.3	68.9	68.0	73.5	72.2	72.6	76.8
All C		13.4							
Operational		0	0	0	0	0	0	0	0
Strategic		0	Strat	Strat	Strat	Strat	Strat	Strat	Strat
31 DKLS Industries									
C1	45.4								
C2	2.9								
C3	1.6								
Bumi	9.2		54.6	12.1	10.9	57.5	13.7	56.2	59.1
All C		55.3							
Operational		Oper	Oper.	0	0	Oper.	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
32 Dolomite Corporation									
C1	31.4								
C2	25.8								
C3	2.4								
Bumi	1.1		32.5	26.9	3.5	58.3	29.3	34.9	60.7
All C		64.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
33 DVM Technologies									
C1	16.0								
C2	3.9								
C3	1.6								
Bumi	1.7		17.7	5.6	3.3	21.6	7.2	19.3	23.2
All C		21.4							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
34 E&O Properties									
C1	45.1								
C2	4.0								
C3	0.8								
Bumi	0.3		45.4	4.3	1.1	49.4	5.1	46.2	50.2
All C		49.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
35 Efficient e-solutions									
C1	60.6								
C2	4.0								
C3	0.7								
Bumi	12.0		72.6	16.0	12.7	76.6	16.7	73.3	77.3
All C		60.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	Strat	0	0	0
36 Eng Tech									
C1	33.4								
C2	1.8								
C3	1.3								
Bumi	25.7		59.2	27.5	27.0	60.9	28.8	60.4	62.2
All C		36.5							
Operational		0	Oper.	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
37 EON Capital									
C1	17.1								
C2	0.5								
C3	0.0								
Bumi	0.3		17.4	0.8	0.3	17.9	0.8	17.4	17.9
All C		17.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
38 EP Manufacturing									
C1	5.4								
C2	4.4								
C3	4.2								
Bumi	38.9		44.3	43.3	43.1	48.7	47.5	48.6	52.9
All C		15.6							
Operational		0	0	0	0	0	0	0	Oper.
Strategic		0	0	0	0	0	0	0	0
39 ExcelForce MSC									
C1	4.1								
C2	1.6								
C3	1.0								
Bumi	1.0		5.1	2.6	2.0	6.7	3.6	6.0	7.6
All C		4.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
40 Farm's Best									
C1	36.6								
C2	1.8								
C3	1.5								
Bumi	0.2		36.8	2.0	1.7	38.6	3.5	38.3	40.1
All C		39.9							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
41 Focal Aims Bhd									
C1	16.5								
C2	16.2								
C3	3.4								
Bumi	28.3		44.8	44.4	31.7	60.9	47.8	48.2	64.4
All C		49.6							
Operational		0	0	0	0	Oper.	0	0	Oper.
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
42 Foremost									
C1	21.0								
C2	4.4								
C3	4.0								
Bumi	0.3		21.3	4.7	4.3	25.7	8.7	25.3	29.7
All C		37.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
43 Fututech Bhd									
C1	24.9								
C2	24.0								
C3	2.2								
Bumi	5.9		30.7	29.9	8.0	54.8	32.1	32.9	56.9
All C		52.3							
Operational		Oper	0	0	0	Oper.	0	0	Oper.
Strategic		0	0	0	0	0	0	0	0
44 Gadang Holdings									
C1	29.4								
C2	4.7								
C3	2.5								
Bumi	2.8		32.2	7.6	5.3	37.0	10.0	34.7	39.4
All C		52.2							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
45 Global Soft (MSC) Bhd									
C1	26.1								
C2	3.8								
C3	2.7								
Bumi	6.6		32.7	10.4	9.3	36.4	13.1	35.4	39.1
All C		42.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
46 Golden Frontiers Bhd									
C1	35.0								
C2	0.7								
C3	0.6								
Bumi	0.0		35.0	0.7	0.6	35.7	1.3	35.6	36.3
All C		35.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
47 GPRO Technology									
C1	40.8								
C2	1.7								
C3	1.5								
Bumi	2.7		43.5	4.4	4.2	45.2	5.9	45.0	46.7
All C		45.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
48 Grand-Flo Solution									
C1	42.5								
C2	8.1								
C3	5.0								
Bumi	0.0		42.5	8.1	5.0	50.6	13.1	47.5	55.6
All C		66.0							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
49 Gula Perak									
C1	21.6								
C2	3.6								
C3	2.5								
Bumi	8.8		30.4	12.4	11.3	34.0	14.9	32.9	36.5
All C		39.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
50 H&L									
C1	0.2								
C2	0.1								
C3	0.1								
Bumi	67.7		67.9	67.8	67.8	68.0	67.9	68.0	68.1
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
51 Haveaboard									
C1	42.1								
C2	5.0								
C3	3.8								
Bumi	15.1		57.1	20.1	18.9	62.1	23.9	60.9	65.9
All C		61.8							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
52 Ho Hup Construction Bhd									
C1	26.6								
C2	3.8								
C3	2.0								
Bumi	15.7		42.2	19.5	17.7	46.1	21.5	44.2	48.1
All C		34.3							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
53 Hock Seng Lee									
C1	60.8								
C2	3.4								
C3	0.5								
Bumi	12.4		73.2	15.8	12.8	76.6	16.3	73.7	77.1
All C		64.2							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	Strat	0	0	0
54 Hong Leong Bank									
C1	62.4								
C2	0.3								
C3	0.2								
Bumi	1.5		63.9	1.8	1.7	64.2	2.0	64.1	64.4
All C		62.4							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
55 Hovid Bhd									
C1	50.1								
C2	1.0								
C3	0.9								
Bumi	15.0		65.2	16.0	15.9	66.1	16.9	66.1	67.0
All C		50.1							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
56 HPI Resources Berhad									
C1	48.7								
C2	4.7								
C3	4.7								
Bumi	7.6		56.2	12.3	12.3	60.9	17.0	60.9	65.6
All C		67.9							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		Strat	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1. C3	Bumi & All C
57 Hua Yang									
C1	51.0								
C2	6.5								
C3	5.0								
Bumi	2.3		53.3	8.8	7.3	59.8	13.8	58.3	64.8
All C		71.3							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0
58 Hwang-DBS (M) Bhd									
C1	30.3								
C2	2.4								
C3	1.2								
Bumi	11.6		41.9	14.0	12.7	44.2	15.1	43.0	45.4
All C		36.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
59 Hwa-Tai Industries									
C1	24.3								
C2	2.5								
C3	1.3								
Bumi	0.9		25.1	3.3	2.2	27.6	4.6	26.5	28.9
All C		28.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
60 IBHD									
C1	51.1								
C2	0.8								
C3	0.5								
Bumi	19.8		70.9	20.6	20.3	71.7	21.1	71.4	72.2
All C		51.1							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
61 IJM									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	27.7		27.7	27.7	27.7	27.7	27.7	27.7	27.7
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
62 Impressive Edge Group									
C1	63.3								
C2	1.4								
C3	0.6								
Bumi	0.0		63.3	1.4	0.6	64.7	2.0	63.9	65.3
All C		62.3							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
63 Ingenuity Solutions									
C1	19.0								
C2	7.8								
C3	6.2								
Bumi	16.4		35.4	24.2	22.7	43.2	30.5	41.6	49.4
Operational			0	0	0	0	0	0	0
Mandatory			MGO	0	0	MGO	0	MGO	MGO
Strategic			0	0	0	0	0	0	0
64 Integrated Logistics									
C1	6.6								
C2	5.1								
C3	2.5								
Bumi	13.0		19.6	18.0	15.5	24.6	20.6	22.1	27.2
All C		18.8							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
65 IPower									
C1	52.8								
C2	9.4								
C3	1.8								
Bumi	0.0		52.8	9.4	1.8	62.2	11.2	54.6	64.0
All C		65.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
66 Isyoda									
C1	5.0								
C2	4.0								
C3	2.7								
Bumi	41.9		46.9	45.9	44.6	50.9	48.6	49.6	53.6
All C		17.2							
Operational		0	0	0	0	Oper.	0	0	Oper.
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
67 Jasakita									
C1	40.3								
C2	4.9								
C3	4.8								
Bumi	0.8		41.1	5.7	5.6	46.1	10.5	45.9	50.8
All C		73.8							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0
68 Johan Holdings									
C1	52.7								
C2	7.6								
C3	0.3								
Bumi	3.3		56.0	10.9	3.6	63.6	11.2	56.2	63.9
All C		60.3							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
69 Johor Land Bhd									
C1	0.7								
C2	0.2								
C3	0.2								
Bumi	3.1		3.9	3.3	3.3	4.0	3.5	4.0	4.2
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
70 JPK									
C1	24.7								
C2	9.0								
C3	3.8								
Bumi	4.7		29.4	13.7	8.5	38.4	17.5	33.2	42.2
All C		40.4							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
71 JT International									
C1	1.2								
C2	0.6								
C3	0.2								
Bumi	3.5		4.7	4.2	3.7	5.4	4.3	4.9	5.5
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
72 K & N Kenanga Holdings									
C1	1.0								
C2	0.5								
C3	0.3								
Bumi	64.1		65.1	64.6	64.4	65.6	64.9	65.3	65.8
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
73 KarenSoft Technology									
C1	14.7								
C2	4.3								
C3	2.6								
Bumi	0.8		15.5	5.1	3.5	19.8	7.8	18.1	22.4
All C		22.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
74 Keladi Maju									
C1	16.8								
C2	12.1								
C3	5.6								
Bumi	0.0		16.8	12.1	5.6	28.9	17.7	22.4	34.5
All C		86.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0
75 KESM Industries									
C1	5.9								
C2	4.8								
C3	0.3								
Bumi	21.1		27.0	25.9	21.4	31.8	26.2	27.3	32.1
All C		10.7							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
76 KFC									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	47.7		47.7	47.7	47.7	47.7	47.7	47.7	47.7
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
77 Kein Hing International									
C1	53.8								
C2	1.5								
C3	1.1								
Bumi	5.4		59.2	6.9	6.5	60.7	8.0	60.3	61.8
All C		56.4							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
78 Kim Loong Resources									
C1	73.6								
C2	0.7								
C3	0.5								
Bumi	2.1		75.6	2.8	2.6	76.3	3.3	76.1	76.8
All C		73.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0
79 Kosmo									
C1	2.5								
C2	0.6								
C3	0.6								
Bumi	49.6		52.1	50.2	50.2	52.7	50.8	52.7	53.2
All C		2.5							
Operational		0	Oper.	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
80 KPJ									
C1	1.0								
C2	1.0								
C3	0.3								
Bumi	7.1		8.0	8.0	7.3	9.0	8.3	8.3	9.2
All C		0.9							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
81 Kramat Holdings									
C1	2.5								
C2	1.3								
C3	0.7								
Bumi	53.1		55.6	54.4	53.8	56.9	55.0	56.3	57.5
All C		3.8							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
82 Kretam Holdings									
C1	26.0								
C2	3.0								
C3	2.6								
Bumi	2.9		28.9	5.9	5.5	31.9	8.5	31.5	34.5
All C		42.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
83 Kuantan Floor Mills									
C1	2.4								
C2	1.8								
C3	1.1								
Bumi	3.6		6.0	5.4	4.7	7.8	6.6	7.1	9.0
All C		6.5							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
84 KUB Malaysia Bhd									
C1	1.1								
C2	0.4								
C3	0.3								
Bumi	31.3		32.3	31.6	31.6	32.7	32.0	32.6	33.0
All C		1.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
85 Landmarks Bhd									
C1	19.4								
C2	0.8								
C3	0.7								
Bumi	11.4		30.9	12.2	12.1	31.6	12.9	31.5	32.3
All C		19.4							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
86 LB Aluminium									
C1	50.3								
C2	4.0								
C3	1.5								
Bumi	1.8		52.1	5.8	3.3	56.1	7.3	53.6	57.6
All C		58.7							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
87 LBS Bina Group									
C1	44.6								
C2	0.0								
C3	0.0								
Bumi	4.0		48.6	4.0	4.0	48.6	4.0	48.6	48.6
All C		44.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
88 LCL									
C1	35.4								
C2	4.3								
C3	4.0								
Bumi	14.1		49.5	18.4	18.1	53.8	22.4	53.5	57.8
All C		49.9							
Operational		0	0	0	0	Oper.	0	Oper.	Oper.
Strategic		0	0	0	0	0	0	0	0
89 Linear Corporation									
C1	20.4								
C2	5.2								
C3	3.1								
Bumi	4.3		24.7	9.5	7.5	29.9	12.6	27.8	33.0
All C		33.9							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
90 Lion Corporation Bhd									
C1	64.5								
C2	0.8								
C3	0.3								
Bumi	0.0		64.5	0.8	0.3	65.3	1.1	64.8	65.6
All C		64.5							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
91 Lion Forest									
C1	81.2								
C2	0.6								
C3	0.4								
Bumi	0.1		81.3	0.7	0.5	81.9	1.1	81.7	82.3
All C		81.2							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
92 Lipo									
C1	45.3								
C2	5.0								
C3	4.7								
Bumi	3.6		48.9	8.6	8.3	53.9	13.3	53.6	58.6
All C		59.3							
Operational		Oper	0	0	0	Oper.	0	Oper.	Oper.
Strategic		0	0	0	0	0	0	0	0
93 Lityan Holdings									
C1	0.7								
C2	0.5								
C3	0.5								
Bumi	26.9		27.6	27.4	27.4	28.1	27.9	28.1	28.6
All C		5.8							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
94 LKT Industrial									
C1	30.2								
C2	1.5								
C3	0.6								
Bumi	23.4		53.6	24.9	24.0	55.1	25.5	54.2	55.7
All C		31.7							
Operational		0	Oper.	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
95 Lysaght Galvanized Steel									
C1	55.1								
C2	5.4								
C3	0.8								
Bumi	0.5		55.6	5.9	1.3	61.0	6.7	56.5	61.9
All C		60.5							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
96 Maica Holdings									
C1	17.4								
C2	4.9								
C3	4.7								
Bumi	6.1		23.5	11.0	10.8	28.4	15.7	28.2	33.0
All C		64.2							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
97 Malaysia Packaging									
C1	1.0								
C2	0.8								
C3	0.7								
Bumi	0.2		1.2	1.0	0.9	2.0	1.7	1.9	2.7
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
98 Malaysians Plantations									
C1	4.8								
C2	4.2								
C3	2.1								
Bumi	3.7		8.5	7.9	5.7	12.7	9.9	10.5	14.7
All C		11.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
99 MAS									
C1	0.1								
C2	0.0								
C3	0.0								
Bumi	6.6		6.7	6.6	6.6	6.7	6.6	6.7	6.7
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
100 Maybank									
C1	0.3								
C2	0.0								
C3	0.0								
Bumi	48.9		49.2	48.9	48.9	49.2	48.9	49.2	49.2
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
101 MBMR									
C1	0.4								
C2	0.4								
C3	0.4								
Bumi	67.4		67.8	67.8	67.8	68.2	68.2	68.2	68.6
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
102 Measat Global Bhd									
C1	0.1								
C2	0.1								
C3	0.1								
Bumi	0.4		0.6	0.5	0.5	0.7	0.6	0.6	0.8
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
103 Mechmar Corporation									
C1	21.3								
C2	2.6								
C3	1.4								
Bumi	4.8		26.2	7.4	6.2	28.7	8.8	27.6	30.1
All C		26.4							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
104 Media Prima									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	13.9		13.9	13.9	13.9	13.9	13.9	13.9	13.9
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
105 Mentakab									
C1	0.5								
C2	0.2								
C3	0.2								
Bumi	70.1		70.6	70.3	70.3	70.8	70.5	70.8	71.0
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
106 Mentiga									
C1	0.8								
C2	0.6								
C3	0.5								
Bumi	59.5		60.3	60.1	60.0	60.9	60.6	60.8	61.4
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
107 MESB Berhad									
C1	13.4								
C2	11.4								
C3	9.6								
Bumi	9.8		23.2	21.2	19.4	34.6	30.8	32.8	44.2
All C		42.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
108 Metech									
C1	2.5								
C2	1.8								
C3	1.8								
Bumi	2.3		4.8	4.2	4.2	6.7	6.0	6.7	8.5
All C		15.3							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
109 Minetech Resources									
C1	41.9								
C2	3.6								
C3	2.6								
Bumi	24.7		66.6	28.2	27.3	70.2	30.8	69.2	72.8
All C		56.5							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		0	0	0	0	Strat	0	Strat	Strat
110 Minply Holdings									
C1	34.7								
C2	4.3								
C3	1.6								
Bumi	4.8		39.5	9.1	6.4	43.8	10.7	41.1	45.4
All C		43.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
111 MISC									
C1	0.6								
C2	0.0								
C3	0.0								
Bumi	1.2		1.8	1.2	1.2	1.8	1.2	1.8	1.8
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
112 MK Land Holding									
C1	0.6								
C2	0.5								
C3	0.0								
Bumi	47.9		48.5	48.4	47.9	49.0	48.4	48.5	49.0
All C		2.8							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
113 Mlabs System									
C1	1.9								
C2	1.4								
C3	1.2								
Bumi	21.8		23.7	23.2	23.0	25.1	24.4	24.9	26.3
All C		5.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
114 Metronic Global									
C1	47.2								
C2	2.9								
C3	2.4								
Bumi	24.2		71.4	27.1	26.6	74.3	29.5	73.8	76.7
All C		54.1							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		0	Strat	0	0	Strat	0	Strat	Strat
115 Muda Holdings									
C1	41.9								
C2	1.7								
C3	0.7								
Bumi	1.9		43.9	3.7	2.6	45.6	4.4	44.6	46.3
All C		43.7							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
116 Mulpha International									
C1	6.6								
C2	5.5								
C3	1.2								
Bumi	4.0		10.7	9.5	5.2	16.2	10.7	11.9	17.3
All C		13.3							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
117 Mulpha Land									
C1	5.1								
C2	0.4								
C3	0.4								
Bumi	0.0		5.1	0.4	0.4	5.5	0.7	5.5	5.8
All C		5.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
118 Multi Vest Resoures									
C1	0.9								
C2	0.4								
C3	0.4								
Bumi	2.7		3.5	3.1	3.1	4.0	3.5	3.9	4.4
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
119 N2N Connect Bhd									
C1	4.4								
C2	3.6								
C3	2.4								
Bumi	1.0		5.4	4.6	3.3	9.0	6.9	7.7	11.3
All C		14.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
120 Naim Indah Corp									
C1	17.6								
C2	14.6								
C3	6.8								
Bumi	0.2		17.8	14.9	7.1	32.4	21.7	24.6	39.3
All C		41.8							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
21 NCB Holdings									
C1	0.2								
C2	0.1								
C3	0.1								
Bumi	51.2		51.4	51.3	51.3	51.5	51.4	51.5	51.6
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C

122 New Hong Fatt

C1	50.4								
C2	3.8								
C3	3.1								
Bumi	0.0		50.4	3.8	3.1	54.2	6.9	53.5	57.3
All C		66.5							
Operational		Oper	0	0	0	0	0	0	0
Strategic			0	0	0	0	0	0	0

123 Nikko Electronics Bhd

C1	6.7								
C2	5.2								
C3	4.9								
Bumi	4.5		11.3	9.8	9.5	16.5	14.7	16.2	21.5
All C		18.7							
Operational			0	0	0	0	0	0	0
Strategic			0	0	0	0	0	0	0

124 NS Oil Palms Bhd

C1	2.9								
C2	2.2								
C3	0.8								
Bumi	0.0		2.9	2.2	0.8	5.0	3.0	3.7	5.8
All C		5.0							
Operational			0	0	0	0	0	0	0
Strategic			0	0	0	0	0	0	0

125 Nylex Malaysia Bhd

C1	71.0								
C2	0.8								
C3	0.6								
Bumi	1.1		72.1	1.9	1.7	72.9	2.5	72.8	73.5
All C		71.0							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0

126 Online One Corporation

C1	72.9								
C2	2.5								
C3	2.2								
Bumi	0.0		72.9	2.5	2.2	75.3	4.6	75.1	77.5
All C		91.0							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
127 Oriental Holdings									
C1	53.8								
C2	0.5								
C3	0.3								
Bumi	8.7		62.5	9.2	9.0	63.0	9.5	62.8	63.3
All C		53.8							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
128 Ornapaper Bhd									
C1	24.8								
C2	7.1								
C3	4.5								
Bumi	19.0		43.7	26.1	23.5	50.9	30.6	48.3	55.4
All C		42.2							
Operational		0	0	0	0	Oper.	0	0	Oper.
Strategic		0	0	0	0	0	0	0	0
129 OSK									
C1	30.4								
C2	2.3								
C3	1.5								
Bumi	3.7		34.1	6.0	5.2	36.4	7.5	35.6	37.9
All C		35.7							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
130 Pacific Mas Bhd									
C1	0.9								
C2	0.3								
C3	0.2								
Bumi	3.5		4.4	3.7	3.7	4.6	3.9	4.6	4.8
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
131 P.I.E. Industries									
C1	2.5								
C2	0.4								
C3	0.4								
Bumi	12.9		15.3	13.3	13.3	15.7	13.6	15.7	16.1
All C		83.0							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
132 Pan Malaysia Holdings									
C1	68.6								
C2	0.6								
C3	0.2								
Bumi	9.8		78.4	10.4	10.1	79.0	10.6	78.7	79.3
All C		68.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0
133 Pan Malaysian Corp									
C1	58.8								
C2	0.8								
C3	0.6								
Bumi	16.1		74.8	16.9	16.6	75.6	17.4	75.4	76.2
All C		58.8							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
134 PBA Holdings Bhd									
C1	0.2								
C2	0.0								
C3	0.0								
Bumi	7.6		7.7	7.6	7.6	7.7	7.6	7.7	7.7
All C		5.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
135 PCCS									
C1	52.2								
C2	2.2								
C3	1.8								
Bumi	3.3		55.5	5.5	5.1	57.7	7.3	57.3	59.5
All C		57.3							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
136 PDZ Holdings									
C1	21.7								
C2	10.0								
C3	8.3								
Bumi	0.0		21.7	10.0	8.3	31.7	18.3	30.0	40.0
All C		83.0							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
137 Pintaras Jaya									
C1	54.7								
C2	6.3								
C3	1.2								
Bumi	11.3		65.9	17.6	12.5	72.2	18.8	67.2	73.5
All C		62.2							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	Strat	0	0	0
138 PJI Holdings Bhd									
C1	16.6								
C2	15.4								
C3	3.3								
Bumi	9.3		25.8	24.7	12.6	41.2	28.0	29.1	44.6
All C		41.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
139 PK Resources Bhd									
C1	45.8								
C2	2.4								
C3	1.3								
Bumi	1.6		47.3	4.0	2.8	49.8	5.2	48.6	51.0
All C		51.8							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
140 PLB Engineering									
C1	56.3								
C2	3.2								
C3	1.4								
Bumi	2.3		58.6	5.5	3.7	61.8	6.9	60.0	63.1
All C		60.9							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
141 Pos Malaysia Serv & Hold									
C1	1.6								
C2	0.0								
C3	0.0								
Bumi	0.0		1.6	0.0	0.0	1.6	0.0	1.6	1.6
All C		1.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
142 Progressive Impact Corp									
C1	4.2								
C2	0.3								
C3	0.0								
Bumi	80.7		84.9	81.0	80.7	85.2	81.0	84.9	85.2
All C		4.2							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
143 PSCI Group									
C1	3.0								
C2	1.0								
C3	0.7								
Bumi	15.4		18.4	16.4	16.1	19.4	17.1	19.1	20.1
All C		3.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
144 QL Resources Bhd									
C1	63.6								
C2	1.7								
C3	1.3								
Bumi	3.0		66.6	4.7	4.2	68.3	6.0	67.8	69.6
All C		66.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
145 QSR Brands Bhd									
C1	6.6								
C2	3.1								
C3	0.5								
Bumi	6.7		13.3	9.8	7.3	16.4	10.3	13.8	16.9
All C		9.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
146 Ranhill Bhd									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	70.4		70.4	70.4	70.4	70.4	70.4	70.4	70.4
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
147 Rapid Synergy									
C1	20.7								
C2	5.3								
C3	3.4								
Bumi	5.9		26.6	11.2	9.3	31.9	14.6	30.0	35.3
All C		57.1							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
148 RB Land									
C1	1.4								
C2	0.6								
C3	0.2								
Bumi	0.1		1.5	0.7	0.2	2.1	0.8	1.7	2.2
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
149 Redtone									
C1	15.7								
C2	10.7								
C3	10.0								
Bumi	3.5		19.2	14.2	13.5	29.9	24.2	29.2	39.9
All C		53.3							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
150 Saptech									
C1	1.5								
C2	0.3								
C3	0.2								
Bumi	53.8		55.2	54.0	54.0	55.5	54.3	55.5	55.7
All C		1.5							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
151 SapuraCrest Petroleum									
C1	0.9								
C2	0.3								
C3	0.0								
Bumi	39.6		40.5	39.9	39.6	40.8	39.9	40.5	40.8
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
152 Sarawak Concrete Indusries									
C1	6.0								
C2	0.7								
C3	0.5								
Bumi	41.3		47.3	41.9	41.7	48.0	42.4	47.8	48.5
All C		6.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
153 Scientex Incorporated									
C1	60.6								
C2	3.2								
C3	1.5								
Bumi	9.4		70.0	12.6	10.9	73.2	14.0	71.5	74.6
All C		66.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	Strat	0	0	0
154 Scomi Group Bhd									
C1	1.1								
C2	1.0								
C3	0.4								
Bumi	39.3		40.4	40.3	39.7	41.4	40.7	40.8	41.8
All C		1.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
155 SDKM									
C1	0.6								
C2	0.5								
C3	0.3								
Bumi	30.3		30.9	30.8	30.6	31.4	31.1	31.2	31.7
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
156 SHH Resources Holdings									
C1	17.4								
C2	11.8								
C3	15.4								
Bumi	4.1		21.6	16.0	19.6	33.4	31.4	37.0	48.8
All C		59.5							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
157 SHL Consolidated									
C1	56.5								
C2	3.5								
C3	1.3								
Bumi	10.9		67.5	14.4	12.2	71.0	15.7	68.7	72.2
All C		63.4							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	Strat	0	0	0
158 Silverstone Corp									
C1	57.9								
C2	1.3								
C3	0.8								
Bumi	0.0		57.9	1.3	0.8	59.2	2.1	58.7	60.0
All C		59.2							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
159 Sin Chew Media Corp									
C1	53.9								
C2	0.3								
C3	0.3								
Bumi	24.3		78.2	24.6	24.6	78.5	24.9	78.5	78.8
All C		53.9							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
160 Sitt Tatt									
C1	6.6								
C2	0.6								
C3	0.5								
Bumi	4.1		10.7	4.7	4.6	11.3	5.2	11.2	11.8
All C		11.5							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
161 South Malaysia Indus									
C1	14.8								
C2	7.7								
C3	2.3								
Bumi	15.4		30.1	23.0	17.6	37.8	25.3	32.4	40.1
All C		26.2							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
162 Solution Engineering									
C1	61.7								
C2	1.4								
C3	1.1								
Bumi	4.6		66.3	6.1	5.7	67.8	7.1	67.4	68.9
All C		64.2							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
163 SP Setia									
C1	9.8								
C2	2.3								
C3	1.0								
Bumi	7.0		16.8	9.3	8.0	19.1	10.3	17.8	20.1
All C		13.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
164 Spritzer									
C1	45.9								
C2	4.9								
C3	4.4								
Bumi	13.3		59.2	18.2	17.7	64.1	22.6	63.6	68.5
All C		67.7							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		Strat	0	0	0	0	0	0	Strat
165 Subur Tiasa									
C1	50.2								
C2	8.8								
C3	2.5								
Bumi	16.3		66.5	25.0	18.7	75.3	27.5	69.0	77.8
All C		59.8							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	Strat	0	Strat	Strat
166 Sunrise									
C1	30.8								
C2	0.8								
C3	0.8								
Bumi	1.1		31.9	1.9	1.9	32.7	2.7	32.7	33.5
All C		30.8							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
167 Tanco Holdings									
C1	26.3								
C2	5.1								
C3	4.5								
Bumi	3.4		29.7	8.4	7.9	34.8	12.9	34.2	39.3
All C		37.9							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
168 TDM Bhd									
C1	2.3								
C2	1.8								
C3	1.6								
Bumi	2.8		5.1	4.5	4.4	6.8	6.1	6.7	8.4
All C		5.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
169 Tebrau Teguh									
C1	5.0								
C2	4.2								
C3	3.1								
Bumi	2.1		7.1	6.4	5.2	11.3	9.5	10.2	14.4
All C		16.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
170 Techventure									
C1	6.8								
C2	3.0								
C3	2.2								
Bumi	10.7		17.5	13.7	12.9	20.5	15.9	19.7	22.7
All C		11.7							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
171 Texcycle									
C1	49.6								
C2	4.2								
C3	3.7								
Bumi	6.0		55.5	10.2	9.6	59.8	13.9	59.2	63.5
All C		67.5							
Operational		Oper	Oper.	0	0	Oper.	0	Oper.	Oper.
Strategic		Strat	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
172 The Meddia Shoppe									
C1	17.7								
C2	10.8								
C3	8.4								
Bumi	15.0		32.7	25.8	23.5	43.6	34.3	41.2	52.0
All C		44.5							
Operational		0	0	0	0	0	0	0	Oper.
Strategic		0	0	0	0	0	0	0	0
173 Tien Wah Holdings									
C1	0.9								
C2	0.5								
C3	0.5								
Bumi	0.0		0.9	0.5	0.5	1.4	1.0	1.4	1.9
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
174 Titan Chemicals									
C1	0.0								
C2	0.0								
C3	0.0								
Bumi	31.8		31.8	31.8	31.8	31.8	31.8	31.8	31.8
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
175 Tomypak Holdings Bhd									
C1	6.8								
C2	2.1								
C3	1.5								
Bumi	1.9		8.7	4.0	3.4	10.8	5.5	10.1	12.2
All C		11.3							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
176 Tongher									
C1	57.4								
C2	6.9								
C3	3.8								
Bumi	1.2		58.6	8.1	5.0	65.5	11.9	62.4	69.3
All C		70.1							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1. C3	Bumi & All C
177 Toyo Ink Group									
C1	11.1								
C2	10.7								
C3	9.6								
Bumi	15.1		26.2	25.8	24.7	36.9	35.4	35.8	46.5
All C		25.9							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
178 Toyochem Corp									
C1	1.7								
C2	0.5								
C3	0.3								
Bumi	15.5		17.2	16.0	15.8	17.7	16.3	17.5	18.0
All C		1.7							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
179 TPC									
C1	41.1								
C2	1.6								
C3	1.5								
Bumi	4.4		45.6	6.1	6.0	47.2	7.6	47.1	48.7
All C		44.3							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
180 Transmile Group									
C1	20.2								
C2	3.3								
C3	2.0								
Bumi	1.4		21.6	4.7	3.4	24.9	6.7	23.6	26.9
All C		26.1							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
181 TRC Synergy									
C1	4.9								
C2	4.4								
C3	2.5								
Bumi	54.9		59.8	59.2	57.3	64.1	61.7	62.2	66.6
All C		11.7							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
182 Triumphal Associates									
C1	53.6								
C2	0.9								
C3	0.6								
Bumi	21.0		74.5	21.9	21.5	75.5	22.4	75.1	76.0
All C		53.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
183 UEM Builders Bhd									
C1	1.4								
C2	0.9								
C3	0.7								
Bumi	3.5		4.9	4.4	4.2	5.9	5.1	5.6	6.5
All C		2.5							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
184 UMS									
C1	22.3								
C2	5.5								
C3	3.5								
Bumi	0.4		22.7	5.9	4.0	28.2	9.5	26.2	31.7
All C		50.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
185 UMW									
C1	0.6								
C2	0.0								
C3	0.0								
Bumi	55.6		56.2	55.6	55.6	56.2	55.6	56.2	56.2
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
186 Unico-Desa Plantations									
C1	28.3								
C2	27.0								
C3	3.1								
Bumi	2.3		30.6	29.3	5.4	57.6	32.4	33.7	60.7
All C		59.5							
Operational		Oper	0	0	0	Oper.	0	0	Oper.
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
187 United U-Li Corp									
C1	47.0								
C2	1.9								
C3	1.5								
Bumi	9.4		56.4	11.3	10.9	58.3	12.9	57.9	59.9
All C		51.6							
Operational		Oper	Oper.	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
188 United Plantations Bhd									
C1	0.5								
C2	0.0								
C3	0.0								
Bumi	1.2		1.6	1.2	1.2	1.6	1.2	1.6	1.6
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
189 UPA Holdings									
C1	54.9								
C2	4.0								
C3	1.7								
Bumi	4.7		59.6	8.7	6.5	63.6	10.4	61.3	65.3
All C		61.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
190 Versatile Creative									
C1	20.6								
C2	4.6								
C3	4.6								
Bumi	23.9		44.5	28.5	28.5	49.1	33.1	49.1	53.7
All C		40.4							
Operational		0	0	0	0	0	0	0	Oper.
Strategic		0	0	0	0	0	0	0	0
191 White Horse									
C1	12.8								
C2	3.7								
C3	2.8								
Bumi	9.2		22.0	12.9	12.0	25.7	15.7	24.8	28.5
All C		25.9							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
192 Wong Engineering Corp									
C1	49.8								
C2	3.0								
C3	1.0								
Bumi	3.1		52.9	6.1	4.0	55.9	7.0	53.8	56.8
All C		52.8							
Operational		Oper	Oper.	0	0	Oper.	0	0	0
Strategic		0	0	0	0	0	0	0	0
193 Woodland									
C1	36.3								
C2	7.8								
C3	3.5								
Bumi	11.6		47.9	19.4	15.1	55.8	22.9	51.4	59.3
All C		52.9							
Operational		Oper	0	0	0	Oper.	0	Oper.	Oper.
Strategic		0	0	0	0	0	0	0	0
194 Worldwide Holdings									
C1	3.3								
C2	1.9								
C3	1.3								
Bumi	0.2		3.5	2.1	1.5	5.4	3.4	4.8	6.7
All C		6.6							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
195 Ya Horng Electronics									
C1	1.5								
C2	1.4								
C3	0.7								
Bumi	29.7		31.2	31.1	30.4	32.6	31.8	31.9	33.3
All C		2.9							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
196 Ye Chiu Metal Smelting									
C1	5.3								
C2	0.7								
C3	0.7								
Bumi	0.2		5.5	0.9	0.9	6.2	1.7	6.2	6.9
All C		0.0							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥1%	Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
197 Yee Lee Corp									
C1	55.3								
C2	1.6								
C3	1.2								
Bumi	17.7		73.0	19.3	18.9	74.6	20.5	74.2	75.8
All C		58.1							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
198 Yi-Lai Bhd									
C1	3.9								
C2	3.4								
C3	0.9								
Bumi	22.8		26.7	26.2	23.6	30.1	27.1	27.5	31.0
All C		7.3							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
199 YNH Property Bhd									
C1	26.3								
C2	1.2								
C3	1.1								
Bumi	13.5		39.8	14.7	14.6	41.0	15.8	40.9	42.1
All C		28.5							
Operational		0	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
200 YTL Cement									
C1	52.8								
C2	0.2								
C3	0.2								
Bumi	0.6		53.4	0.8	0.8	53.6	1.0	53.6	53.8
All C		55.8							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	0	0	0	0	0	0	0
201 YTL e-solution									
C1	74.1								
C2	0.8								
C3	0.1								
Bumi	0.0		74.1	0.8	0.1	74.9	0.9	74.2	75.0
All C		74.1							
Operational		Oper	0	0	0	0	0	0	0
Strategic		Strat	0	0	0	0	0	0	0

	Current S/holdings	JV Chinese ≥ 1%	JV Bumiputra and Chinese						
			Bumi C1	Bumi C2	Bumi C3	Bumi C1, C2	Bumi C2, C3	Bumi C1, C3	Bumi & All C
202 YTL Land									
C1	63.2								
C2	1.8								
C3	0.3								
Bumi	7.8		71.0	9.6	8.0	72.8	9.9	71.3	73.1
All C		65.1							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0
203 YTL Power									
C1	60.6								
C2	0.2								
C3	0.0								
Bumi	7.3		68.0	7.5	7.3	68.2	7.5	68.0	68.2
All C		60.6							
Operational		Oper	0	0	0	0	0	0	0
Strategic		0	Strat	0	0	0	0	0	0

Appendix VI

Actual Joint Ventures Analysis for Operational Purpose

	Could Form	Total Chinese Coalition	Do not need to form	Inter-ethnic Exec. Chairman MD, Deputy	Actual JV
1	3A	58.82	√	√	By choice
2	Abric Bhd	39.08			
3	Batu Kawan Berhad	64.60	√		
4	Chuan Huat Resources	54.74	√		
5	Country Heights Hol	70.31	√		
6	DKLS Industries	55.26	√		
7	Eng Tech	36.48			
8	EP Manufacturing	15.58			
9	Focal Aims Bhd	49.55		√	Necessary
10	Fututech Bhd	52.27	√	√	By choice
11	Haveaboard	61.81	√		
12	HPI Resources Berhad	67.90	√		
13	Isyoda	17.24			
14	Kosmo	2.48			
15	LCL	49.94		√	Necessary
16	Lipo	59.34	√		
17	LKT Industrial	31.74			
18	Minetech Resources	56.46	√		
19	Metronic Global	54.12	√	√	By choice
20	Ornapaper Bhd	42.17			
21	Spritzer	67.68	√		
22	Texcycle	67.51	√		
23	The Meddia Shoppe	44.51			
24	Unico-Desa Plantations	59.45	√		
25	United U-Li Corp	51.64	√		
26	Versatile Creative	40.43			
27	Wong Engineering Corp	52.78	√		
28	Woodland	52.88	√		

Joint venture by choice	3 or 1.5% of the samples
Necessary joint venture	2 or 1.0% of the samples
Total actual joint venture	5 or 2.5% of the samples

Appendix VII

Actual Joint Ventures Analysis for Strategic Purpose

	Could Form	Total Chinese Coalition	Do not need to form	Inter-ethnic Exec. Chairman MD, Deputy	Actual JV
1	Baswell Corp	54.82			
2	Batu Kawan Berhad	64.60			
3	Box-Pack (Malaysia) Bh	54.92			
4	BSA	53.73			
5	BSL Corporation	57.29			
6	Chuan Huat Resources	54.74			
7	Country Heights Hol	70.31	✔		
8	DFZ Capital	13.40		✔	Necessary
9	Efficient e-solutions	60.60			
10	Hock Seng Lee	64.23			
11	IBHD	51.06			
12	Minetech Resources	56.46			
13	Metronic Global	54.12		✔	Necessary
14	Pan Malaysian Corp	58.78			
15	Pintaras Jaya	62.20			
16	Scientex Incorporated	66.62			
17	SHL Consolidated	63.42			
18	Sin Chew	53.86			
19	Spritzer	67.68	✔		
20	Subur Tiasa	59.77			
21	Triumphal Associates	53.56			
22	Yee Lee Corp	58.13			
23	YTL Land	65.06			
24	YTL Power	60.62			

Joint venture by choice	None
Necessary joint venture	2 or 1.0% of the samples
Total actual joint venture	5 or 2.5% of the samples

Appendix VIII

Voting Power index in Mathematical Notation

A shareholder is normally identified with i and a company with n shareholders will be represented by a set N = {1,2,.....n} and v = a simple weighted voting game . A coalition among the shareholders will be represented by T and the weight or percentage of shares of each shareholder is represented by w. The rule i.e. the majority required to win a voting election is represented by q. The rules for winning or losing coalition is represented as w (T) is $\geq$ q and w (T) < q respectively. A shareholder (i) is said to be pivotal when without him the weight is less than the quota i.e. w (T) < q but with him i.e. T + {i} the weight is more than the quota i.e. w (Ti) $\geq$ q. Applying these notations to the example used in this study;

i	A- Bumiputra, B -Other Malaysians and C-Foreigner,		
n	3		
w_A	42.93%,	w_B 47.21%,	w_C 9.86%
q	50.1 percent		
T	Shapley-Shubik:	n!	
	Penrose/Banzhaf	2^{n-1}	

Shapley-shubik index

The index is represented by a Greek letter Φ (phi) and the following definition;

$$\Phi_i = \sum_{\substack{i = swings \\ for\ T}} \frac{(T-1)!\ (n-T)!}{n!} [v(T) - v(Ti)]$$

The notation (T – 1)! represents the number of possible ordering for voters before i and (n – T)! is possible ordering after i. Technically the combination of these two notations sum to n!. The partitioning into two notions is to represents the order i is analysed. While v(T) – v(Ti) is how the coalition is analysed i.e. whether a game with T players i.e. v(T) without a member i i.e. v(Ti) results in a swing for player i. And if

this result in a swing for player *i* the contribution of player *i* is said to be full i.e. one. This is explained in the tribute to Shapley when the index is described as *"....the marginal contribution of last rotating member is ....1.* (Roth[1] 1988). And as there is only one swing for each orderings and each with the contribution score of one the total of swings will always equal to n!. The sum of Shapley-Shubik index for that reason will always equal to one.

Banzhaf Index

Penrose/Banzhaf index is normally represented by Greek beta (β') and is within this probabilistic model.

Penrose - Banzhaf Index, $\quad \beta' = \eta / 2^{n-1}$

The number of coalition involving a shareholder is 2^{n-1} hence the denominator. The number of times a shareholder being pivotal is represented as η. This η will not equal to the denominator hence the index is an absolute form (will not sum up to 1 or 100 percent). The numbers of each shareholder being pivot over total combine number of pivotal for all the shareholder is known as normalised Banzhaf index (i.e. presenting each shareholder index relative others). In some studies the term Banzhaf index is in normalised version. The index is normally presented by β.

Banzhaf Index, $\quad\quad \beta = \eta / \sum \eta$

These are only probabilistic models. The exact voting power still has to be calculated directly or by other methods e.g. multilinear extension.

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[1] Roth, A.E. (1988). The expected utility of playing a game. in *The Shapley value – Essays in honor of Lloyd S. Shapley.* Cambridge University Press: Cambridge.

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Straffin index

Formally, a partial homogeneity structure of N is a partition P = {S1.......Sm} of N into disjoint subsets. Straffin (1977). Technically this index is defined as voting power under P-partial homogeneity assumption;

K (G,P) = voting power index under P-partial homogeneity assumption.

Where: K = voting power index

G = Game.

P = Probability. P is not known. But for the homogeneity assumption *"simply assign the same P to the members of each subset..."*And for independent assumption *"select that P from [0,1] independently..."* (Straffin 1977:114)

Appendix IX

Straffin Index Using Multilinear Extension Technique

Straffin used multilinear extension technique to illustrate this voting power index. The used of this technique permits the calculation of index even without knowing the precise P mentioned in the mathematical notations. This technique has also been illustrated by Owen (1972). This study will also apply this technique to the example used in previous section. The explanation is largely based on Straffin (1977), Straffin (1978) and Owen (1972).

Let g be a game whose subset of $N = (x_1, x_2 \ldots x_n)$ and f is a function for g and S is any random coalition. As this n players will have 2^n number of subsets, substituting the component to either 0 or 1 results in $\{0, 1\}^N$ dimensional space i.e. the cube. The corners of this cube will be the value of f. The value of f at each corner can then be extended to other corner in the cube.

Multilinear extension of g is defined by;

$$f(x_1, x_2, x_3, x_4) = \sum_{S \subset N} \left\{ \prod_{i \in S} x_i \prod_{i \notin S} (1 - x_i) \right\} g(S)$$

for $0 \leq x_i \leq 1$, $i = 1, 2 \ldots n$

The definition is translated into the 'product of all winning coalition times 1-each member of a losing coalition. Applying this to the example in this study: A 42.93% = x_1, B 47.21% = x_2 and C 9.86% = x_3 and the quota is 50.01%.

In [0, 1] normalisation, the multilinear extension of g is;

$$f(x_1, x_2, x_3, x_4) = x_1 x_2 (1 - x_3) + x_1 x_3 (1 - x_2) + x_2 x_3 (1 - x_1) + x_1 x_2 x_3$$
$$= x_1 x_2 + x_2 x_3 + x_1 x_3 - 2 x_1 x_2 x_3$$

(x is the probability of voting 'yes' and 1-x is probability of voting 'no'. E.g. since $x_1 x_2$ is a winning coalition (90.14%), the linear equation will be $x_1 x_2 (1 - x_3)$.

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The power polynomials i.e. the ith partial derivative for each shareholder would thus be;

$$f_1 (x_1, x_2, x_3) = x_2 + x_3 - 2x_2x_3$$

$$f_2 (x_1, x_2, x_3) = x_1 + x_3 - 2x_1x_3$$

$$f_3 (x_1, x_2, x_3) = x_2 + x_1 - 2x_1x_2$$

To illustrate the idea of Straffin index, assumes 'A' vote independently whilst 'B' and 'C' vote homogenously.

'A' is critical when;

x_2 Yes	x_3 No
	or
x_2 No	x_3 Yes
	or
x_2 Yes	x_3 Yes

The polynomial is thus;

$$K'_A = \int_0^1 \int_0^1 x_2 (1 - x_3) \, dx_2 dx_3$$

or

$$\int_0^1 \int_0^1 (1 - x_2) x_3 \, dx_2 dx_3$$

or

$$\int_0^1 \int_0^1 x_2 x_3 \, dx_2 dx_3$$

Since x_2 and x_3 vote homogenously integration of x_2 and x_3 together will get to K'

$$K'_A = \int_0^1 x_2 (1 - x_3) \, dx$$

$$+$$

$$\int_0^1 (1 - x_2) x_3 \, dx$$

$$+$$

$$\int_0^1 x_2 x_3 \, dx$$

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So that;

$$= \quad 2 \cdot \ [\tfrac{1}{2}x^2 - \tfrac{1}{3}x^3]_0^1 \ + \ [\tfrac{1}{3}x^3]_0^1$$

$$= \quad 2/3 \ \text{or} \ 0.67$$

'B' is critical when;

x_1 Yes	x_3 No

or

x_1 No	x_3 Yes

or

x_2 Yes	x_3 Yes

The polynomial is thus;

$$K'_B \quad = \quad \int_0^1 \int_0^1 x_1 (1 - x_3) \ dx_1 dx_3$$

or

$$\int_0^1 \int_0^1 (1 - x_1) \ x_3 \ dx_1 dx_3$$

or

$$\int_0^1 \int_0^1 x_1 \ x_3 \ dx_1 \ dx_3$$

Since x_1 vote independently whilst x_3 vote homogenously setting x_1 at ½ directly into the polynomial and integrating x_3 will get to K'.

$$K'_B \quad = \quad \int_0^1 x_1 \ dx \cdot \int_0^1 (1 - x_3) \ dx$$

$$+$$

$$\int_0^1 1 - x_1 \ dx \cdot \int_0^1 x_3 \ dx$$

$$+$$

$$\int_0^1 x_1 \ dx \cdot \int_0^1 x_3 \ dx$$

So that; $= \quad 3 \cdot \tfrac{1}{2} \cdot \tfrac{1}{2} \quad = \quad \tfrac{3}{4} \ \text{or} \ 0.75$

'C' is critical when;

        x_1 Yes x_2 No

                or

        x_1 No x_2 Yes

                or

        x_2 Yes x_1 Yes

The polynomial is thus;

$$K'_C = \int_0^1 \int_0^1 x_1 (1- x_2) \, dx_1 dx_2$$

or

$$\int_0^1 \int_0^1 (1- x_1) x_2 \, dx_1 dx_2$$

or

$$\int_0^1 \int_0^1 x \, x_2 \, dx_1 \, dx_2$$

Since x_1 vote independently whilst x_2 vote homogenously setting x_1 at ½ directly into the polynomial and integrating x_2 will get to K'.

$$K'_C = \int_0^1 x_1 \, dx \cdot \int_0^1 (1-x_3) \, dx$$

$$+$$

$$\int_0^1 1- x_1 \, dx \cdot \int_0^1 x_3 \, dx$$

$$+$$

$$\int_0^1 x_1 \, dx \cdot \int_0^1 x_3 \, dx$$

So that;

$$K'_C = 3 \cdot \tfrac{1}{2} \cdot \tfrac{1}{2} = \text{¾ or } 0.75$$

In summary; $K'_A = 2/3$ or 0.67 $K_B = 3/4$ or 0.75 $K_C = 3/4$ or 0.75

Appendix X

Shapley-Shubik and Banzhaf index using Multilinear Extension Technique

Multilinear extension can also be used to obtain Shapley-Shubik and Banzhaf index. These are illustrated as follows. From illustration in Appendix II the power polynomials i.e. the ith partial derivative for each shareholder are as follows;

$$f_1(x_1, x_2, x_3) = x_2 + x_3 - 2x_2x_3$$

$$f_2(x_1, x_2, x_3) = x_1 + x_3 - 2x_1x_3$$

$$f_3(x_1, x_2, x_3) = x_2 + x_1 - 2x_1x_2$$

Shapley-Shubik index

Integrating these partial derivatives will get to the power index of each shareholder;

'A':

$$\phi_A = \int_0^1 \int_0^1 (x_2 + x_3 - 2x_2x_3) \, dx_2dx_3$$

So that;

$$\int_0^1 2x - 2x^2 \, dx = [x^2 - \tfrac{2}{3}x^3]_0^1 = \tfrac{1}{3} \text{ or } 0.33$$

'B':

$$\phi_B = \int_0^1 \int_0^1 (x_1 + x_3 - 2x_1x_3) \, dx_1dx_3$$

So that;

$$\int_0^1 2x - 2x^2 \, dx = [x^2 - \tfrac{2}{3}x^3]_0^1 = \tfrac{1}{3} \text{ or } 0.33$$

'C':

$$\phi_C = \int_0^1 \int_0^1 (x_2 + x_3 - 2x_2x_3) \, dx_2dx_3$$

So that;

$$\int_0^1 2x - 2x^2 \, dx = [x^2 - \tfrac{2}{3}x^3]_0^1 = \tfrac{1}{3} \text{ or } 0.33$$

Penrose-Banzhaf Index

Setting x at ½ directly into the power polynomial give Penrose-Banzhaf

'A': $f_1(x_1, x_2, x_3) = x_2 + x_3 - 2x_2x_3$

$$\beta'_A \quad = \quad f_1(½, ½, ½)$$

$$= \quad x_2 + x_3 - 2x_2x_3$$

$$= \quad ½ + ½ - 2x - 2x^2$$

$$= \quad ½ \text{ or } 0.50$$

'B': $f_2(x_1, x_2, x_3) = x_1 + x_3 - 2x_1x_3$

$$\beta'_B \quad = \quad f_1(½, ½, ½)$$

$$= \quad ½ + ½ - 2x - 2x^2$$

$$= \quad ½ \text{ or } 0.50$$

'C': $f_3(x_1, x_2, x_3) = x_2 + x_1 - 2x_1x_2$

$$\beta'_C \quad = \quad f_1(½, ½, ½)$$

$$= \quad ½ + ½ - 2x - 2x^2$$

$$= \quad ½ \text{ or } 0.50$$

Appendix XI

Excel Spreadsheet Function for Calculating Voting Power (Penrose-Banzahf Index)

		C	D	E	F	G	H	I	J	K
		%	Coalition	Combine Vote	Results	Bumiputra	Government	Chinese	Foreigner	Indians
3	Majority	50.01								
4										
5	Bumiputra	0	A	=C5	=IF(E5>=$C$3,"Winning","Losing")	=IF(AND($F5="Winning",$E5-$C$5<$C$3),1,0)				
6	Government	0	B	=C6	=IF(E6>=$C$3,"Winning","Losing")		=IF(AND($F6="Winning",$E6-$C$6<$C$3),1,0)			
7	Chinese	0	C	=C7	=IF(E7>=$C$3,"Winning","Losing")			=IF(AND($F7="Winning",$E7-$C$7<$C$3),1,0)		
8	Foreigner	0	D	=C8	=IF(E8>=$C$3,"Winning","Losing")				=IF(AND($F8="Winning",$E8-$C$8<$C$3),1,0)	
9	Indians	0	E	=C9	=IF(E9>=$C$3,"Winning","Losing")					=IF(AND($F9="Winning",$E9-$C$9<$C$3),1,0)
10		=SUM(C5:C9)	AB	=C5+C6	=IF(E10>=$C$3,"Winning","Losing")	=IF(AND($F10="Winning",$E10-$C$5<$C$3),1,0)	=IF(AND($F10="Winning",$E10-$C$6<$C$3),1,0)			
11			AC	=C5+C7	=IF(E11>=$C$3,"Winning","Losing")	=IF(AND($F11="Winning",$E11-$C$5<$C$3),1,0)		=IF(AND($F11="Winning",$E11-$C$7<$C$3),1,0)		
12			AD	=C5+C8	=IF(E12>=$C$3,"Winning","Losing")	=IF(AND($F12="Winning",$E12-$C$5<$C$3),1,0)			=IF(AND($F12="Winning",$E12-$C$8<$C$3),1,0)	
13			BC	=C6+C7	=IF(E13>=$C$3,"Winning","Losing")		=IF(AND($F13="Winning",$E13-$C$6<$C$3),1,0)	=IF(AND($F13="Winning",$E13-$C$7<$C$3),1,0)		

	C	D Coalition	E Combine Vote	F Results	G Bumiputra	H Government	I Chinese	J Foreigner	K Indians
14		BD	=C6+C8	=IF(E14>=$C$3,"Winning","Losing")		=IF(AND($F14="Winning",$E14-$C$6<$C$3),1,0)		=IF(AND($F14="Winning",$E14-$C$8<$C$3),1,0)	
15		CD	=C7+C8	=IF(E15>=$C$3,"Winning","Losing")			=IF(AND($F15="Winning",$E15-$C$7<$C$3),1,0)	=IF(AND($F15="Winning",$E15-$C$8<$C$3),1,0)	
16		ABC	=C5+C6+C7	=IF(E16>=$C$3,"Winning","Losing")	=IF(AND($F16="Winning",$E16-$C$5<$C$3),1,0)	=IF(AND($F16="Winning",$E16-$C$6<$C$3),1,0)	=IF(AND($F16="Winning",$E16-$C$7<$C$3),1,0)		
17		ABD	=C5+C6+C8	=IF(E17>=$C$3,"Winning","Losing")	=IF(AND($F17="Winning",$E17-$C$5<$C$3),1,0)	=IF(AND($F17="Winning",$E17-$C$6<$C$3),1,0)		=IF(AND($F17="Winning",$E17-$C$8<$C$3),1,0)	
18		BCD	=C6+C7+C8	=IF(E18>=$C$3,"Winning","Losing")		=IF(AND($F18="Winning",$E18-$C$6<$C$3),1,0)	=IF(AND($F18="Winning",$E18-$C$7<$C$3),1,0)	=IF(AND($F18="Winning",$E18-$C$8<$C$3),1,0)	
19		CDA	=C7+C8+C5	=IF(E19>=$C$3,"Winning","Losing")	=IF(AND($F19="Winning",$E19-$C$5<$C$3),1,0)		=IF(AND($F19="Winning",$E19-$C$7<$C$3),1,0)	=IF(AND($F19="Winning",$E19-$C$8<$C$3),1,0)	
20		ABCD	=C5+C6+C7+C8	=IF(E20>=$C$3,"Winning","Losing")	=IF(AND($F20="Winning",$E20-$C$5<$C$3),1,0)	=IF(AND($F20="Winning",$E20-$C$6<$C$3),1,0)	=IF(AND($F20="Winning",$E20-$C$7<$C$3),1,0)	=IF(AND($F20="Winning",$E20-$C$8<$C$3),1,0)	
21		AE	=C5+C9	=IF(E21>=$C$3,"Winning","Losing")	=IF(AND($F21="Winning",$E21-$C$5<$C$3),1,0)				=IF(AND($F21="Winning",$E21-$C$9<$C$3),1,0)
22		BE	=C6+C9	=IF(E22>=$C$3,"Winning","Losing")		=IF(AND($F22="Winning",$E22-$C$6<$C$3),1,0)			=IF(AND($F22="Winning",$E22-$C$9<$C$3),1,0)
23		CE	=C7+C9	=IF(E23>=$C$3,"Winning","Losing")			=IF(AND($F23="Winning",$E23-$C$7<$C$3),1,0)		=IF(AND($F23="Winning",$E23-$C$9<$C$3),1,0)
24		DE	=C8+C9	=IF(E24>=$C$3,"Winning","Losing")				=IF(AND($F24="Winning",$E24-$C$8<$C$3),1,0)	=IF(AND($F24="Winning",$E24-$C$9<$C$3),1,0)
25		ABE	=C5+C6+C9	=IF(E25>=$C$3,"Winning","Losing")	=IF(AND($F25="Winning",$E25-$C$5<$C$3),1,0)	=IF(AND($F25="Winning",$E25-$C$6<$C$3),1,0)			=IF(AND($F25="Winning",$E25-$C$9<$C$3),1,0)

	Coalition	Combine Vote	Results	Bumiputra	Government	Chinese	Foreigner	Indians
26	ACE	=C5+C7+C9	=IF(E26>=$C$3,"Winning","Losing")	=IF(AND($F26="Winning",$E26-$C$5<$C$3),1,0)		=IF(AND($F26="Winning",$E26-$C$7<$C$3),1,0)		=IF(AND($F26="Winning",$E26-$C$9<$C$3),1,0)
27	ADE	=C5+C8+C9	=IF(E27>=$C$3,"Winning","Losing")	=IF(AND($F27="Winning",$E27-$C$5<$C$3),1,0)			=IF(AND($F27="Winning",$E27-$C$8<$C$3),1,0)	=IF(AND($F27="Winning",$E27-$C$9<$C$3),1,0)
28	BCE	=C6+C7+C9	=IF(E28>=$C$3,"Winning","Losing")		=IF(AND($F28="Winning",$E28-$C$6<$C$3),1,0)	=IF(AND($F28="Winning",$E28-$C$7<$C$3),1,0)		=IF(AND($F28="Winning",$E28-$C$9<$C$3),1,0)
29	BDE	=C6+C8+C9	=IF(E29>=$C$3,"Winning","Losing")		=IF(AND($F29="Winning",$E29-$C$6<$C$3),1,0)		=IF(AND($F29="Winning",$E29-$C$8<$C$3),1,0)	=IF(AND($F29="Winning",$E29-$C$9<$C$3),1,0)
30	CDE	=C7+C8+C9	=IF(E30>=$C$3,"Winning","Losing")			=IF(AND($F30="Winning",$E30-$C$7<$C$3),1,0)	=IF(AND($F30="Winning",$E30-$C$8<$C$3),1,0)	=IF(AND($F30="Winning",$E30-$C$9<$C$3),1,0)
31	ABDE	=C5+C6+C8+C9	=IF(E31>=$C$3,"Winning","Losing")	=IF(AND($F31="Winning",$E31-$C$5<$C$3),1,0)	=IF(AND($F31="Winning",$E31-$C$6<$C$3),1,0)		=IF(AND($F31="Winning",$E31-$C$8<$C$3),1,0)	=IF(AND($F31="Winning",$E31-$C$9<$C$3),1,0)
32	ABCE	=C5+C6+C7+C9	=IF(E32>=$C$3,"Winning","Losing")	=IF(AND($F32="Winning",$E32-$C$5<$C$3),1,0)	=IF(AND($F32="Winning",$E32-$C$6<$C$3),1,0)	=IF(AND($F32="Winning",$E32-$C$7<$C$3),1,0)		=IF(AND($F32="Winning",$E32-$C$9<$C$3),1,0)
33	ACDE	=C5+C7+C8+C9	=IF(E33>=$C$3,"Winning","Losing")	=IF(AND($F33="Winning",$E33-$C$5<$C$3),1,0)	=IF(AND($F33="Winning",$E33-$C$6<$C$3),1,0)	=IF(AND($F33="Winning",$E33-$C$7<$C$3),1,0)	=IF(AND($F33="Winning",$E33-$C$8<$C$3),1,0)	=IF(AND($F33="Winning",$E33-$C$9<$C$3),1,0)
34	BCDE	=C6+C7+C8+C9	=IF(E34>=$C$3,"Winning","Losing")		=IF(AND($F34="Winning",$E34-$C$6<$C$3),1,0)	=IF(AND($F34="Winning",$E34-$C$7<$C$3),1,0)	=IF(AND($F34="Winning",$E34-$C$8<$C$3),1,0)	=IF(AND($F34="Winning",$E34-$C$9<$C$3),1,0)
35	ABCDE	=C5+C6+C7+C8+C9	=IF(E35>=$C$3,"Winning","Losing")	=IF(AND($F35="Winning",$E35-$C$5<$C$3),1,0)	=IF(AND($F35="Winning",$E35-$C$6<$C$3),1,0)	=IF(AND($F35="Winning",$E35-$C$7<$C$3),1,0)	=IF(AND($F35="Winning",$E35-$C$8<$C$3),1,0)	=IF(AND($F35="Winning",$E35-$C$9<$C$3),1,0)

No. Winning				=SUM(G5:G35)	=SUM(H5:H35)	=SUM(I5:I35)	=SUM(J5:J35)	=SUM(K5:K35)
Total no. of coalition involving a s/holder			=2^(5-1)					
Penrose-Banzhaf				=G38/$F$40	=H38/$F$40	=I38/$F$40	=J38/$F$40	=K38/$F$40

Appendix XII

Distribution of Corporate Equity and Corporate Control

Note:

1. Information relevant for essay 1 is only the first three rows of analysis of each company.
2. All the information is relevant for essay 5

(Detailed discussion on data set for both essays is per appendix I)

	Bumiputra	Government	Chinese	Foreign	Indians
1 3A					
Top 30 s/holders (%)	3.96	0	68.79	0	0
Non-top 30 estimates (%)			26.70		
Total Equity (%)	3.96	0.00	95.49	0.00	0.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	3.25	0.00	58.82	0.00	0.00
Voting Power			*1.00*		
Equity (RM)	277,200	0	6,684,300	0	0
2 Abric Bhd					
Top 30 s/holders (%)	13.12	1.21	45.83	0	0
Non-top 30 estimates (%)			38.34		
Total Equity (%)	13.12	1.21	84.17	0.00	0.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	12.47	1.21	39.08		
Voting Power	*0.50*		*0.50*		
Equity (RM)	12,995,688	1,198,535	83,372,489	0	0
3 Advanced Packaging					
Top 30 s/holders (%)	3.13	0	69.19	2.48	0
Non-top 30 estimates (%)			24.10		
Total Equity (%)	3.13	0.00	93.29	2.48	0.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	3.13	0.00	66.08	2.48	0.00
Voting Power			*1.00*		
Equity (RM)	1,283,566	0	38,256,830	1,017,011	0
4 Advanced Synergy Capital					
Top 30 s/holders (%)	58.82	1.32	3.85	1.2	0
Non-top 30 estimates (%)	3.43		23.98	6.85	
Total Equity (%)	62.25	1.32	27.83	8.05	0.00
Voting Power	*1.00*				
Equity excluding < 1% s/holders(%)	58.67	1.32	0.00	0.00	0.00
Voting Power	*1.00*				
Equity (RM)	97,638,027	2,070,563	43,646,527	12,627,297	0
5 Affin Holdings					
Top 30 s/holders (%)	1.87	75.8	0	4.48	0
Non-top 30 estimates (%)		6.90		10.35	
Total Equity (%)	1.87	82.70	0.00	14.83	0.00
Voting Power		*1.00*			
Equity excluding < 1% s/holders(%)	1.87	74.50	0.00	1.24	
Voting Power		*1.00*			
Equity (RM)	22,668,105	1,002,487,841	0	179,768,980	0

	Bumiputra	Government	Chinese	Foreign	Indians
6 AirAsia Bhd					
Top 30 s/holders (%)	27.1	0.95	0	32.19	22.38
Non-top 30 estimates (%)	1.74			15.64	
Total Equity (%)	28.84	0.95	0.00	47.83	22.38
Voting Power	*0.50*			*0.5*	*0.50*
Equity excluding < 1% s/holders(%)	27.10	0.00	0.00	24.41	22.38
Voting Power	*0.50*			*0.50*	
Equity (RM)	67,342,904	2,218,453	0	111,697,960	52,262,091
7 AKN Technology					
Top 30 s/holders (%)	20.63	17.1	13.31	15.89	0
Non-top 30 estimates (%)	6.50		9.76	16.26	
Total Equity (%)	27.13	17.10	23.07	32.15	0.00
Voting Power	*0.50*		*0.50*	*0.50*	
Equity excluding < 1% s/holders(%)	20.63	17.10	13.31	13.38	0.00
Voting Power	*0.38*	*0.38*	*0.13*	*0.13*	
Equity (RM)	31,387,838	19,780,793	26,682,092	37,190,204	0
8 Alimunium Company M					
Top 30 s/holders (%)	0.45	2.09	17.45	59.74	0
Non-top 30 estimates (%)	0.00	5.59	9.32	3.73	
Total Equity (%)	0.45	7.68	26.77	63.47	0.00
Voting Power				*1.00*	
Equity excluding < 1% s/holders(%)	0.00	1.60	15.88	58.36	0.00
Voting Power				*1.00*	
Equity (RM)	603,292	10,298,862	35,889,160	85,088,278	0
9 Amtel Holdings					
Top 30 s/holders (%)	3.34	3.27	45.8	1.69	0
Non-top 30 estimates (%)	4.59		36.72	4.59	
Total Equity (%)	7.93	3.27	82.52	6.28	0.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	2.73	3.27	40.02	1.08	
Voting Power					
Equity (RM)	3,652,029	1,505,944	38,003,210	2,892,149	0
10 Asas Dunia					
Top 30 s/holders (%)	6.55	5.74	42.57	31.17	0
Non-top 30 estimates (%)	2.64	2.64	5.28	2.64	
Total Equity (%)	9.19	8.38	47.85	33.81	0.00
Voting Power	*0.25*	*0.25*	*0.75*	*0.25*	*0.00*
Equity excluding < 1% s/holders(%)	4.23	4.69	40.96	30.65	0.00
Voting Power			*0.50*	*0.50*	
Equity (RM)	17,611,484	16,059,558	91,686,243	64,782,364	0
11 Asia Pacific Land					
Top 30 s/holders (%)	1.29	1.71	37.86	2.65	0
Non-top 30 estimates (%)	5.65	5.65	33.89	11.30	
Total Equity (%)	6.94	7.36	71.75	13.95	0.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	0.00	0.00	33.58	1.14	0.00
Voting Power					
Equity (RM)	49,290,590	52,274,024	509,698,370	99,078,419	0

	Bumiputra	Government	Chinese	Foreign	Indians
12 Astro All Asia Network					
Top 30 s/holders (%)	9.04	22.13	0	8.42	42.06
Non-top 30 estimates (%)	3.67			12.85	1.84
Total Equity (%)	12.71	22.13	0.00	21.27	43.90
Voting Power	*0.25*	*0.25*		*0.25*	*0.75*
Equity excluding < 1% s/holders(%)	9.04	22.13	0.00	4.07	42.06
Voting Power	*0.25*	*0.25*			*0.75*
Equity (RM)	235,262,100	409,626,300	0	393,615,150	812,496,450
13 AT Systemization					
Top 30 s/holders (%)	0	2.61	85.43	2.23	0
Non-top 30 estimates (%)			7.78	1.95	
Total Equity (%)	0.00	2.61	93.21	4.18	0.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	0.00	2.61	83.01	2.23	0.00
Voting Power			*1.00*		
Equity (RM)	0	437,046	15,608,756	699,274	0
14 Baswell Corp					
Top 30 s/holders (%)	27.17	0.21	61.07	0	2
Non-top 30 estimates (%)	0.96	0.96	7.64		
Total Equity (%)	28.13	1.17	68.71	0.00	2.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	25.10	0.00	54.82	0.00	2.00
Voting Power			*1.00*		
Equity (RM)	13,500,000	559,200	32,980,800	0	960,000
15 Batu Kawan Berhad					
Top 30 s/holders (%)	10.47	7.02	66.48	1.19	0
Non-top 30 estimates (%)					
Total Equity (%)	10.47	7.02	66.48	1.19	0.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	10.47	6.31	64.60	0.00	0.00
Voting Power			*1.00*		
Equity (RM)	30,506,963	20,454,525	193,706,100	3,467,363	0
16 Berjaya Capital					
Top 30 s/holders (%)	0	0	53.55	0	0
Non-top 30 estimates (%)			46.45		
Total Equity (%)	0.00	0.00	100.00	0.00	0.00
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	0.00	0.00	52.72	0.00	0.00
Voting Power			*1.00*		
Equity (RM)	0	0	567,850,217	0	0
17 Binapuri					
Top 30 s/holders (%)	32.47	1.35	47.43	0.86	0.75
Non-top 30 estimates (%)			16.90		
Total Equity (%)	32.47	1.35	64.33	0.86	0.75
Voting Power			*1.00*		
Equity excluding < 1% s/holders(%)	32.47	1.35	41.34	0.00	0.00
Voting Power	*0.50*		*0.50*		
Equity (RM)	26,276,218	1,092,482	52,058,795	695,952	606,935

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		Bumiputra	Government	Chinese	Foreign	Indians
18	**Box-Pack (Malaysia) Bhd**					
	Top 30 s/holders (%)	29.45	0	57.71	0.32	0
	Non-top 30 estimates (%)			11.60		
	Total Equity (%)	29.45	0.00	69.31	0.32	0.00
	Voting Power			*1.00*		
	Equity excluding < 1% s/holders(%)	29.22		54.92		
	Voting Power			*1.00*		
	Equity (RM)	17,676,918	0	41,602,281	192,075	0
19	**Brite-Tech**					
	Top 30 s/holders (%)	0.31	2.93	85.68	0	3.39
	Non-top 30 estimates (%)	0.63		5.71		
	Total Equity (%)	0.94	2.93	91.40	0.00	3.39
	Voting Power			*1.00*		
	Equity excluding < 1% s/holders(%)	0.00	2.93	77.22	0.00	3.39
	Voting Power			*1.00*		
	Equity (RM)	141,750	439,500	13,709,250	0	508,500
20	**BSA**					
	Top 30 s/holders (%)	16.8	10.57	57.09	0.32	0
	Non-top 30 estimates (%)	1.39	4.16	6.93	1.39	
	Total Equity (%)	18.19	14.73	64.02	1.71	0.00
	Voting Power			*1.00*		
	Equity excluding < 1% s/holders(%)	16.57	7.94	53.73	0.00	0.00
	Voting Power			*1.00*		
	Equity (RM)	12,002,760	9,720,480	42,253,200	1,125,960	0
21	**BSL Corporation**					
	Top 30 s/holders (%)	24.29	0	60.95	2.06	0
	Non-top 30 estimates (%)			9.16	1.02	
	Total Equity (%)	24.29	0.00	70.11	3.08	0.00
	Voting Power		'	*1.00*		*0.00*
	Equity excluding < 1% s/holders(%)	22.40	0.00	57.29	1.55	0.00
	Voting Power			*1.00*	*0.25*	
	Equity (RM)	11,902,100	0	34,354,880	1,508,220	0
22	**CB Industrial Product**					
	Top 30 s/holders (%)	2.58	0.96	51.63	16.67	0
	Non-top 30 estimates (%)	4.89	2.45	12.23	4.89	
	Total Equity (%)	7.47	3.41	63.86	21.56	0.00
	Voting Power			*1.00*		
	Equity excluding < 1% s/holders(%)	2.58	0.00	50.75	16.67	0.00
	Voting Power			*1.00*		
	Equity (RM)	5,088,583	2,319,495	43,498,186	14,686,726	0
23	**Chin Teck**					
	Top 30 s/holders (%)	0.62	3.18	22.94	47.22	0
	Non-top 30 estimates (%)	2.60	2.60	13.02	7.81	
	Total Equity (%)	3.22	5.78	35.96	55.03	0.00
	Voting Power				*1.00*	
	Equity excluding < 1% s/holders(%)	0.00	2.69	21.98	45.54	0.00
	Voting Power			*0.50*	*0.50*	
	Equity (RM)	2,941,424	5,277,047	32,808,196	50,208,583	0

	Bumiputra	Government	Chinese	Foreign	Indians
24 Chuan Huat Resources					
Top 30 s/holders (%)	20.74	0	54.43	0.74	0.54
Non-top 30 estimates (%)			22.10		
Total Equity (%)	20.74	0.00	76.53	0.74	0.54
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	20.74	0.00	54.74	0.00	0.00
Voting Power					
Equity (RM)	9,286,128	0	34,265,542	331,328	241,780
25 Country Heights Hol					
Top 30 s/holders (%)	2.14	0.63	72.4	7.55	0
Non-top 30 estimates (%)	3.27		9.80	3.27	
Total Equity (%)	5.41	0.63	82.20	10.82	0.00
Voting Power			1.00		
Equity excluding small s/holders (%)	1.61	0.00	70.31	7.01	22.38
Voting Power			1.00		
Equity (RM)	14,910,256	1,736,957	226,642,514	29,826,027	0
26 Crest Builder Hold					
Top 30 s/holders (%)	6.34	4.44	62.26	2.17	0
Non-top 30 estimates (%)	2.17		17.38	2.17	
Total Equity (%)	8.51	4.44	79.64	4.34	0.00
Voting Power			1.00		
Equity excluding small s/holders (%)	5.50	4.44	59.30	0.00	0.00
Voting Power			1.00		
Equity (RM)	10,533,557	5,494,478	98,549,152	5,373,203	0
27 Cycle & C					
Top 30 s/holders (%)	3.96	22.57	1.59	59.35	0
Non-top 30 estimates (%)	0.97	3.90	4.87	0.00	0.00
Total Equity (%)	4.93	26.47	6.46	59.35	0.00
Voting Power				1	
Equity excluding small s/holders (%)	3.77	20.62	0.00	59.10	0.00
Voting Power				1.00	
Equity (RM)	4,970,758	26,663,172	6,508,127	59,792,158	0
28 D&O					
Top 30 s/holders (%)	29.9	0.47	37.19	20.25	0
Non-top 30 estimates (%)	0.00	1.17	9.34	1.17	0.00
Total Equity (%)	29.90	1.64	46.53	21.42	0.00
Voting Power	0.50		0.50	0.50	
Equity excluding small s/holders (%)	29.90	0.00	30.63	19.29	0.00
Voting Power	0.50		0.50	0.50	
Equity (RM)	21,827,000	1,195,010	33,963,980	15,634,410	0
29 Daya Materials					
Top 30 s/holders (%)	0.26	0	75.05	10.84	0.43
Non-top 30 estimates (%)					
Total Equity (%)	0.26	0.00	75.05	10.84	0.43
Voting Power			1.00		
Equity excluding small s/holders (%)	0.00	0.00	68.73	10.84	0.00
Voting Power			1.00		
Equity (RM)	49,304	0	14,231,732	2,055,589	81,541

	Bumiputra	Government	Chinese	Foreign	Indians
30 DFZ Capital					
Top 30 s/holders (%)	64.69	0	15.54	15.9	0
Non-top 30 estimates (%)			1.58	0.18	
Total Equity (%)	64.69	0.00	17.12	16.08	0.00
Voting Power	1.00				
Equity excluding small s/holders (%)	64.69		13.40	0.00	0.00
Voting Power	1.00				
Equity (RM)	73,214,040	0	19,380,387	18,194,294	0
31 DKLS Industries					
Top 30 s/holders (%)	6.22	1.48	60.1	4.8	0
Non-top 30 estimates (%)	2.66	2.66	21.31		
Total Equity (%)	8.88	4.14	81.41	4.80	0.00
Voting Power			1.00		
Equity excluding small s/holders (%)	8.09	1.19	55.26	4.80	0.00
Voting Power			1.00		
Equity (RM)	8,235,432	3,841,471	75,468,598	4,449,581	0
32 Dolomite Corporation					
Top 30 s/holders (%)	1.12	0	65.92	6.86	1.88
Non-top 30 estimates (%)	2.20		17.57	2.20	
Total Equity (%)	3.32	0.00	83.49	9.06	1.88
Voting Power			1.00		
Equity excluding small s/holders (%)	0.00	0.00	64.60	6.86	1.88
Voting Power			1.00		
Equity (RM)	8,712,034	0	219,345,688	23,792,576	4,939,271
33 DVM Technologies					
Top 30 s/holders (%)	1.74	0	26.36	37.66	0
Non-top 30 estimates (%)	10.15		23.68		
Total Equity (%)	11.89	0.00	50.04	37.66	0.00
Voting Power			1.00		
Equity excluding small s/holders (%)	0.00	0.00	21.42	37.66	0.00
Voting Power			0.50	0.50	
Equity (RM)	1,931,963	0	8,131,663	6,119,750	0
34 E&O Properties					
Top 30 s/holders (%)	0.29	0.61	50.44	14.81	0
Non-top 30 estimates (%)	3.16		9.47	18.94	
Total Equity (%)	3.45	0.61	59.91	33.75	0.00
Voting Power			1.00		
Equity excluding small s/holders (%)	0.00	0.00	49.09	9.90	0.00
Voting Power			0.50	0.50	
Equity (RM)	19,600,466	3,468,606	340,668,267	191,921,940	0
35 Efficient e-solutions					
Top 30 s/holders (%)	12.01	2.16	65.84	1.37	0
Non-top 30 estimates (%)	2.89	4.34	4.34	2.89	
Total Equity (%)	14.90	6.50	70.18	4.26	0.00
Voting Power			1.00		
Equity excluding small s/holders (%)	12.01	1.57	60.60	0.00	0.00
Voting Power			1.00		
Equity (RM)	1,788,240	779,760	8,421,360	511,440	0

	Bumiputra	Government	Chinese	Foreign	Indians
36 Eng Tech					
Top 30 s/holders (%)	25.71	5.4	38.68	14.98	0
Non-top 30 estimates (%)	1.45		5.80	7.25	
Total Equity (%)	27.16	5.40	44.48	22.23	0.00
Voting Power	0.25		0.75	0.25	
Equity excluding small s/holders (%)	25.71	5.40	36.48	14.09	0.00
Voting Power	0.25	0.00	0.75	0.25	
Equity (RM)	32,216,726	6,405,623	52,758,611	26,363,885	0
37 EON Capital					
Top 30 s/holders (%)	0.28	39.98	17.61	21.55	0
Non-top 30 estimates (%)	1.72	6.86	1.72	6.86	
Total Equity (%)	2.00	46.84	19.33	28.41	0.00
Voting Power		0.75	0.25	0.25	
Equity excluding small s/holders (%)	0.00	39.98	17.11	8.17	0.00
Voting Power		0.50	0.50		
Equity (RM)	13,836,446	324,726,698	133,969,520	196,968,329	0
38 EP Manufacturing					
Top 30 s/holders (%)	38.9	3.37	23.5	11.29	0
Non-top 30 estimates (%)	6.88	2.29	11.47	2.29	
Total Equity (%)	45.78	5.66	34.97	13.58	0.00
Voting Power	0.75	0.25	0.25	0.25	0.00
Equity excluding small s/holders (%)	38.90	3.37	15.58	11.29	0.00
Voting Power	0.75		0.25	0.25	
Equity (RM)	56,147,272	6,946,358	42,887,382	16,659,485	0
39 ExcelForce MSC					
Top 30 s/holders (%)	1	0	8.42	72.41	0
Non-top 30 estimates (%)	1.82		5.45	12.72	
Total Equity (%)	2.82	0.00	13.87	85.13	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	1.00	0.00	4.05	72.41	0.00
Voting Power				1.00	
Equity (RM)	225,360	0	1,109,680	6,810,320	0
40 Farm's Best					
Top 30 s/holders (%)	0.22	0	44.83	48.17	0.68
Non-top 30 estimates (%)			5.49		0.61
Total Equity (%)	0.22	0.00	50.32	48.17	1.29
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	39.91	47.81	0.00
Voting Power			0.50	0.50	
Equity (RM)	122,167	0	27,942,828	26,748,928	716,340
41 Focal Aims Bhd					
Top 30 s/holders (%)	28.25	0	49.55	0	0
Non-top 30 estimates (%)	11.10		11.10		
Total Equity (%)	39.35	0.00	60.65	0.00	0.00
Voting Power			1.00		0
Equity excluding < 1% s/holders(%)	26.85	0.00	49.55	0.00	0.00
Voting Power	0.50		0.50		
Equity (RM)	99,680,240	0	153,636,761	0	0

	Bumiputra	Government	Chinese	Foreign	Indians
42 Foremost					
Top 30 s/holders (%)	0.28	0	42.08	16.45	0
Non-top 30 estimates (%)	3.93		31.43	3.93	0.00
Total Equity (%)	4.21	0.00	73.51	20.38	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	37.01	16.16	0.00
Voting Power			0.50	0.50	
Equity (RM)	2,214,776	0	38,682,014	10,723,430	0
43 Fututech Bhd					
Top 30 s/holders (%)	5.85	0.24	56.04	4.71	2.4
Non-top 30 estimates (%)	7.90	2.63	13.17	2.63	
Total Equity (%)	13.75	2.87	69.21	7.34	2.40
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	5.09	0.00	52.27	4.71	2.15
Voting Power			1.00		
Equity (RM)	8,074,287	1,687,208	40,641,575	4,312,276	1,409,433
44 Gadang Holdings					
Top 30 s/holders (%)	2.83	0	55.22	9.25	0
Non-top 30 estimates (%)	0.00	0.00	30.78	0.00	0.00
Total Equity (%)	2.83	0.00	86.00	9.25	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	2.83	0.00	52.18	9.25	0.00
Voting Power			1.00		
Equity (RM)	3,000,197	0	91,172,072	9,806,298	0
45 Global Soft (MSC) Bhd					
Top 30 s/holders (%)	6.61	0.6	44.65	0	0
Non-top 30 estimates (%)		4.81	43.33		
Total Equity (%)	6.61	5.41	87.98	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	6.61	0.00	42.03	0.00	0.00
Voting Power					
Equity (RM)	1,050,323	860,279	13,979,301	0	0
46 Golden Frontiers Bhd					
Top 30 s/holders (%)	0	2.99	45.01	4.41	0
Non-top 30 estimates (%)		0.00	42.83	4.76	
Total Equity (%)	0.00	2.99	87.84	9.17	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	2.99	35.03	4.18	0.00
Voting Power					
Equity (RM)	0	1,861,490	54,687,351	5,708,363	0
47 GPRO Technology					
Top 30 s/holders (%)	2.68	15.31	47.13	0.43	0
Non-top 30 estimates (%)	6.61	3.31	19.84	3.31	
Total Equity (%)	9.29	18.62	66.97	3.74	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	1.40	15.31	45.09	0.00	0.00
Voting Power		0.50	0.50		
Equity (RM)	2,323,000	4,654,000	16,741,500	934,000	0

	Bumiputra	Government	Chinese	Foreign	Indians
48 Grand-Flo Solution					
Top 30 s/holders (%)	0	0	66	3.98	0
Non-top 30 estimates (%)			19.64	4.91	
Total Equity (%)	0.00	0.00	85.64	8.89	0.00
Voting Power			1.00		0.00
Equity excluding < 1% s/holders(%)			66.00		
Voting Power			1.00		
Equity (RM)	0	0	4,303,838	446,767	0
49 Gula Perak					
Top 30 s/holders (%)	8.8	2.24	39.06	0	0.81
Non-top 30 estimates (%)	4.77	4.77	33.39	0.00	4.77
Total Equity (%)	13.57	7.01	72.45	0.00	5.58
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	8.01	1.32	39.06	0.00	0.00
Voting Power					
Equity (RM)	61,949,668	32,002,002	330,748,226	0	25,473,776
50 H&L					
Top 30 s/holders (%)	67.71	9.44	0.43	3.58	0
Non-top 30 estimates (%)	0.00	5.54	5.54	7.38	0.00
Total Equity (%)	67.71	14.98	5.97	10.96	0.00
Voting Power	1.00				
Equity excluding < 1% s/holders(%)	67.71	8.34	0.00	1.62	0.00
Voting Power	1.00				
Equity (RM)	204,597,837	45,258,697	18,033,376	33,129,681	0
51 Haveaboard					
Top 30 s/holders (%)	15.82	2.51	63.37	2.82	0
Non-top 30 estimates (%)	2.73	2.73	6.83	1.37	
Total Equity (%)	18.55	5.24	70.20	4.19	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	15.09	1.88	61.81	2.82	0.00
Voting Power			1.00		
Equity (RM)	14,841,600	4,193,600	56,160,000	3,348,800	0
52 Ho Hup Construction Bhd					
Top 30 s/holders (%)	15.67	17.74	38.4	0.75	0
Non-top 30 estimates (%)	5.26		21.04		
Total Equity (%)	20.93	17.74	59.44	0.75	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	14.50	17.20	34.34	0.00	0.00
Voting Power		0.50	0.50		
Equity (RM)	213,904,685	181,302,872	607,477,043	7,665,003	0
53 Hock Seng Lee					
Top 30 s/holders (%)	12.36	9.48	66.09	2.03	0
Non-top 30 estimates (%)	1.00	0.00	8.03	1.00	
Total Equity (%)	13.36	9.48	74.12	3.03	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	12.36	9.48	64.23	1.23	0.00
Voting Power			1.00		
Equity (RM)	15,573,764	11,047,537	86,378,221	3,535,678	0

	Bumiputra	Government	Chinese	Foreign	Indians
54 Hong Leong Bank					
Top 30 s/holders (%)	1.53	7.91	62.95	9.26	0
Non-top 30 estimates (%)	0.00	3.67	1.84	12.85	0.00
Total Equity (%)	1.53	11.58	64.79	22.11	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	1.53	7.36	62.42	2.48	0.00
Voting Power			1.00		
Equity (RM)	23,377,701	176,937,112	989,885,215	337,754,306	0
55 Hovid Bhd					
Top 30 s/holders (%)	15.03	4.2	53.96	12.77	0
Non-top 30 estimates (%)	2.81	1.40	4.21	5.62	
Total Equity (%)	17.84	5.60	58.17	18.39	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	14.22	3.71	50.12	12.77	0.00
Voting Power			1.00		
Equity (RM)	8,496,239	2,669,185	27,707,324	8,757,252	0
56 HPI Resources Berhad					
Top 30 s/holders (%)	7.56	2.61	72.02	0	0
Non-top 30 estimates (%)			16.31		
Total Equity (%)	7.56	2.61	88.33	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	7.00	1.91	67.90	0.00	0.00
Voting Power			1.00		
Equity (RM)	3,219,284	1,111,420	37,613,677	0	0
57 Hua Yang					
Top 30 s/holders (%)	2.32	3.09	76.68	0	0
Non-top 30 estimates (%)			17.91		
Total Equity (%)	2.32	3.09	94.59	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	2.32	3.09	71.25	0.00	0.00
Voting Power			1.00		
Equity (RM)	2,088,000	2,781,000	85,131,000	0	0
58 Hwang-DBS (M) Bhd					
Top 30 s/holders (%)	11.57	4.71	40.55	23.13	0
Non-top 30 estimates (%)	3.95	1.97	11.84	1.97	
Total Equity (%)	15.52	6.68	52.39	25.10	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	21.09	4.71	36.59	25.44	0.00
Voting Power	0.38	0.13	0.63	0.38	
Equity (RM)	40,246,957	17,335,395	135,887,297	65,108,881	0
59 Hwa-Tai Industries					
Top 30 s/holders (%)	0.85	0	33.87	6.15	0
Non-top 30 estimates (%)			58.30		
Total Equity (%)	0.85	0.00	92.17	6.15	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	28.07	6.15	0.00
Voting Power					
Equity (RM)	340,360	0	36,907,080	2,462,608	0

	Bumiputra	Government	Chinese	Foreign	Indians
60 IBHD					
Top 30 s/holders (%)	19.8	0	56.36	0.61	0
Non-top 30 estimates (%)			23.23		
Total Equity (%)	19.80	0.00	79.59	0.61	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	19.80	0.00	51.06	0.00	0.00
Voting Power			1.00		
Equity (RM)	15,995,232	0	64,295,986	492,782	0
61 IJM					
Top 30 s/holders (%)	27.68	21.26	0	15.07	0
Non-top 30 estimates (%)	0.00	14.08	0.00	21.11	0.00
Total Equity (%)	27.68	35.34	0.00	36.18	0.00
Voting Power	0.5	0.50		0.5	
Equity excluding < 1% s/holders(%)	25.91	21.26	0.00	10.56	0.00
Voting Power	0.25	0.25		0.25	
Equity (RM)	127,898,756	163,274,221	0	167,192,507	0
62 Impressive Edge Group					
Top 30 s/holders (%)	0	0	68.91	0.38	0
Non-top 30 estimates (%)			30.71		
Total Equity (%)	0.00	0.00	99.62	0.38	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	62.29	0.00	0.00
Voting Power			1.00		
Equity (RM)	0	0	15,803,518	60,282	0
63 Ingenuity Solutions					
Top 30 s/holders (%)	16.42	11.97	47.06	0.98	0.76
Non-top 30 estimates (%)	4.56	4.56	9.12	2.28	2.28
Total Equity (%)	20.98	16.53	56.18	3.26	3.04
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	15.80	10.00	45.35	0.00	0.00
Voting Power	0.25	0.25	0.75		
Equity (RM)	2,777,016	2,188,049	7,436,083	431,601	402,483
64 Integrated Logistics					
Top 30 s/holders (%)	12.98	1.3	21	26.26	0
Non-top 30 estimates (%)	11.54	0.00	15.38	11.54	
Total Equity (%)	24.52	1.30	36.38	37.80	0.00
Voting Power	0.50		0.50	0.50	
Equity excluding < 1% s/holders(%)	12.98	1.30	18.84	24.94	0.00
Voting Power	0.25		0.25	0.25	
Equity (RM)	39,476,653	2,093,142	58,582,207	60,858,901	0
65 IPower					
Top 30 s/holders (%)	0	4.18	70.44	0	0.65
Non-top 30 estimates (%)			24.73		
Total Equity (%)	0.00	4.18	95.17	0.00	0.65
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	4.18	65.55	0.00	0.00
Voting Power			1.00		
Equity (RM)	0	2,633,400	59,957,100	0	409,500

	Bumiputra	Government	Chinese	Foreign	Indians
66 Isyoda					
Top 30 s/holders (%)	41.89	9.27	20.25	2.98	0
Non-top 30 estimates (%)	10.11	2.53	12.64	0.00	0.00
Total Equity (%)	52.00	11.80	32.89	2.98	0.00
Voting Power	1.00				
Equity excluding < 1% s/holders(%)	40.63	8.00	17.24	2.98	0.00
Voting Power	0.63	0.13	0.38	0.13	0.00
Equity (RM)	31,198,800	7,078,200	19,731,000	1,788,000	0
67 Jasakita					
Top 30 s/holders (%)	0.81	0	77.29	0.3	0
Non-top 30 estimates (%)	2.16		17.28	2.16	
Total Equity (%)	2.97	0.00	94.57	2.46	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	73.77	0.00	0.00
Voting Power			1.00		
Equity (RM)	1,335,164	0	42,513,944	1,105,893	0
68 Johan Holdings					
Top 30 s/holders (%)	3.28	0	60.59	15.01	0
Non-top 30 estimates (%)	3.67		3.67	11.00	
Total Equity (%)	6.95	0.00	64.26	26.01	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	2.97	0.00	60.30	11.86	0.00
Voting Power			1.00		
Equity (RM)	17,679,233	0	163,504,919	66,192,800	0
69 Johor Land Bhd					
Top 30 s/holders (%)	3.13	69.37	0.97	0.86	0
Non-top 30 estimates (%)	4.88	7.31	7.31	4.88	
Total Equity (%)	8.01	76.68	8.28	5.74	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	2.72	68.54	0.00	0.00	0.00
Voting Power		1.00			
Equity (RM)	9,767,320	93,554,480	10,106,480	6,997,920	0
70 JPK					
Top 30 s/holders (%)	4.7	1.86	47.04	15.37	0
Non-top 30 estimates (%)	3.10	0.00	24.82	3.10	0.00
Total Equity (%)	7.80	1.86	71.86	18.47	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	4.70	1.86	40.37	15.00	0.00
Voting Power			0.50	0.50	
Equity (RM)	3,522,274	839,604	32,439,410	8,338,712	0
71 JT International					
Top 30 s/holders (%)	3.53	18.72	2.29	66.2	0
Non-top 30 estimates (%)	1.64	2.45	2.45	1.64	
Total Equity (%)	5.17	21.17	4.74	67.84	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	2.95	18.72	0.00	64.74	0.00
Voting Power				1.00	
Equity (RM)	13,510,867	55,377,295	12,407,192	177,414,480	0

	Bumiputra	Government	Chinese	Foreign	Indians
72 K & N Kenanga Holdings					
Top 30 s/holders (%)	64.1	0.89	2.09	17.69	0
Non-top 30 estimates (%)	1.49	2.97	5.94	4.46	
Total Equity (%)	65.59	3.86	8.03	22.15	0.00
Voting Power	1.00				
Equity excluding < 1% s/holders(%)	63.38	0.00	0.00	16.55	0.00
Voting Power	1.00				
Equity (RM)	401,228,585	23,626,152	49,148,758	135,492,494	0
73 KarenSoft Technology					
Top 30 s/holders (%)	0.84	0	32.09	0	0
Non-top 30 estimates (%)			67.07		
Total Equity (%)	0.84	0.00	99.16	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	22.55	0.00	0.00
Voting Power					
Equity (RM)	96,688	0	11,413,824	0	0
74 Keladi Maju					
Top 30 s/holders (%)	0	0	87.84	3.96	0.4
Non-top 30 estimates (%)			7.02		0.78
Total Equity (%)	0.00	0.00	94.86	3.96	1.18
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	86.57	3.96	0.00
Voting Power			1.00		
Equity (RM)	0	0	71,933,287	3,002,908	894,806
75 KESM Industries					
Top 30 s/holders (%)	21.09	1.01	13.38	48.91	0
Non-top 30 estimates (%)			13.31		
Total Equity (%)	21.09	1.01	26.69	48.91	0.00
Voting Power	0.25		0.25	0.75	
Equity excluding < 1% s/holders(%)	21.09	1.01	10.71	48.43	0.00
Voting Power	0.25		0.25	0.75	
Equity (RM)	9,068,805	434,305	11,476,833	21,031,545	0
76 KFC					
Top 30 s/holders (%)	47.72	23.78	0	13.76	0
Non-top 30 estimates (%)		11.79		2.95	
Total Equity (%)	47.72	35.57	0.00	16.71	0.00
Voting Power					
Equity excluding < 1% s/holders(%)	47.13	19.42	0.00	12.57	0.00
Voting Power					
Equity (RM)	94,616,673	70,530,266	0	33,127,732	0
77 Kein Hing International					
Top 30 s/holders (%)	5.44	0	63.5	4.79	0.6
Non-top 30 estimates (%)			23.10		2.57
Total Equity (%)	5.44	0.00	86.60	4.79	3.17
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	5.44	0.00	56.36	4.42	0.00
Voting Power			1.00		
Equity (RM)	2,692,800	0	42,868,485	2,371,050	1,567,665

	Bumiputra	Government	Chinese	Foreign	Indians
78 Kim Loong Resources					
Top 30 s/holders (%)	2.07	3.42	76.79	1.42	0
Non-top 30 estimates (%)	1.41	1.41	9.88	1.41	
Total Equity (%)	3.48	4.83	86.67	2.83	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	1.53	1.82	73.57	1.25	0.00
Voting Power			1.00		
Equity (RM)	5,947,762	8,254,421	148,082,356	4,837,149	0
79 Kosmo					
Top 30 s/holders (%)	49.62	0	6.21	36.39	4.96
Non-top 30 estimates (%)			1.60	0.18	
Total Equity (%)	49.62	0.00	7.81	36.57	4.96
Voting Power	0.5			0.5	
Equity excluding < 1% s/holders(%)	49.21	0.00	2.48	36.06	
Voting Power	0.50			0.50	
Equity (RM)	59,990,531	0	9,444,700	44,210,676	5,996,635
80 KPJ *					
Top 30 s/holders (%)	7.06	76.83	2.87	2.27	0
Non-top 30 estimates (%)	0.00	1.97	4.93	2.96	0.00
Total Equity (%)	7.06	78.80	7.80	5.23	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	6.72	75.19	0.94	0.00	0.00
Voting Power		1.00			
Equity (RM)	14,194,879	158,439,786	15,682,728	10,511,449	0
81 Kramat Holdings					
Top 30 s/holders (%)	53.09	0	9.86	1.01	0.39
Non-top 30 estimates (%)	3.57		32.09		
Total Equity (%)	56.66	0.00	41.95	1.01	0.39
Voting Power	1				
Equity excluding < 1% s/holders(%)	52.89	0.00	3.79	0.00	
Voting Power	1.00				
Equity (RM)	2,243,538	0	1,661,022	39,996	15,444
82 Kretam Holdings					
Top 30 s/holders (%)	2.93	0	46.46	15.36	0.65
Non-top 30 estimates (%)	3.38	0.00	27.06	3.38	3.38
Total Equity (%)	6.31	0.00	73.52	18.74	4.03
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	2.08	0.00	42.57	15.36	0.00
Voting Power			0.50	0.50	
Equity (RM)	7,375,904	0	85,907,317	21,901,014	4,711,604
83 Kuantan Floor Mills					
Top 30 s/holders (%)	4.72	0.83	11.43	30.04	3.16
Non-top 30 estimates (%)			34.87	9.96	4.98
Total Equity (%)	4.72	0.83	46.30	40.00	8.14
Voting Power	0.25		0.75	0.25	0.25
Equity excluding < 1% s/holders(%)	3.60	0.00	6.47	28.25	2.61
Voting Power					
Equity (RM)	2,126,502	373,940	20,861,341	18,023,002	3,668,215

	Bumiputra	Government	Chinese	Foreign	Indians
84 KUB Malaysia Bhd					
Top 30 s/holders (%)	31.25	27.77	2.33	1.04	0
Non-top 30 estimates (%)		10.12	23.62		
Total Equity (%)	31.25	37.89	25.95	1.04	0.00
Voting Power	0.50	0.50	0.50		
Equity excluding < 1% s/holders(%)	30.32	25.82	1.06	1.04	0.00
Voting Power	0.50	0.50			
Equity (RM)	169,889,029	205,997,923	141,064,977	5,653,907	0
85 Landmarks Bhd					
Top 30 s/holders (%)	11.44	1.73	23.11	13.79	0
Non-top 30 estimates (%)	4.76		9.53	33.34	
Total Equity (%)	16.20	1.73	32.64	47.13	0.00
Voting Power	0.375	0.13	0.38	0.625	
Equity excluding < 1% s/holders(%)	10.39	1.73	19.42	4.36	0.00
Voting Power					
Equity (RM)	75,154,569	8,024,280	151,375,950	218,608,283	0
86 LB Aluminium					
Top 30 s/holders (%)	1.8	3.38	63.77	0	0
Non-top 30 estimates (%)	0.00	0.00	27.66	0.00	0.00
Total Equity (%)	1.80	3.38	91.43	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	1.28	3.38	58.68	0.00	0.00
Voting Power			1.00		
Equity (RM)	2,236,275	4,199,228	113,590,346	0	0
87 LBS Bina Group					
Top 30 s/holders (%)	4.04	7.13	46.22	1.92	0
Non-top 30 estimates (%)	7.88	23.64	3.94	3.94	
Total Equity (%)	11.92	30.77	50.16	5.86	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	4.04	7.13	44.58	1.26	0.00
Voting Power	0.13	0.38	0.63	0.13	
Equity (RM)	45,147,808	116,543,461	189,984,400	22,195,147	0
88 LCL					
Top 30 s/holders (%)	14.07	5.6	52.79	15.76	0
Non-top 30 estimates (%)	1.09	0.00	6.56	3.28	0.00
Total Equity (%)	15.16	5.60	59.35	19.04	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	14.07	5.60	49.94	14.82	0.00
Voting Power	0.13	0.13	0.88	0.13	
Equity (RM)	6,140,090	2,267,658	24,032,320	7,709,634	0
89 Linear Corporation					
Top 30 s/holders (%)	4.33	0	36.67	7.95	0
Non-top 30 estimates (%)	4.78		28.67	14.33	
Total Equity (%)	9.11	0.00	65.34	22.28	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	1.66	0.00	33.92	6.81	0.00
Voting Power					
Equity (RM)	6,840,543	0	49,071,959	16,736,349	0

	Bumiputra	Government	Chinese	Foreign	Indians
90 Lion Corporation Bhd					
Top 30 s/holders (%)	0	0	65.58	1.34	0
Non-top 30 estimates (%)			16.91	11.28	
Total Equity (%)	0.00	0.00	82.49	12.62	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	64.49	1.34	0.00
Voting Power			1.00		
Equity (RM)	0	0	763,559,203	116,772,891	0
91 Lion Forest					
Top 30 s/holders (%)	0.12	0.41	84.29	3.04	0
Non-top 30 estimates (%)	1.05	0.00	7.37	2.11	0.00
Total Equity (%)	1.17	0.41	91.66	5.15	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	81.21	0.00	0.00
Voting Power			1.00		
Equity (RM)	2,462,603	860,756	192,433,627	10,803,542	0
92 Lipo					
Top 30 s/holders (%)	3.55	0.66	64.06	0	0
Non-top 30 estimates (%)	3.11	0.00	27.95	0.00	0.00
Total Equity (%)	6.66	0.66	92.01	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.36	0.00	59.34	0.00	0.00
Voting Power			1.00		
Equity (RM)	3,351,192	332,350	46,330,038	0	0
93 Lityan Holdings					
Top 30 s/holders (%)	26.87	6.01	5.83	0.6	0.27
Non-top 30 estimates (%)	6.02		54.16		
Total Equity (%)	32.89	6.01	59.99	0.60	0.27
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	26.68	6.01	5.83	0.00	0.00
Voting Power					
Equity (RM)	33,810,798	6,178,634	61,675,305	616,835	277,576
94 LKT Industrial					
Top 30 s/holders (%)	23.4	6.4	36.62	0	0.81
Non-top 30 estimates (%)			29.04		3.23
Total Equity (%)	23.40	6.40	65.66	0.00	4.04
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	22.76	6.40	31.74	0.00	0.00
Voting Power	0.50		0.50		
Equity (RM)	15,521,070	4,245,079	43,553,846	0	2,677,716
95 Lysaght Galvanized Steel					
Top 30 s/holders (%)	0.5	0.3	65.91	0.59	0
Non-top 30 estimates (%)	3.23		29.06		
Total Equity (%)	3.73	0.30	94.97	0.59	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	60.54	0.00	0.00
Voting Power			1.00		
Equity (RM)	1,550,518	124,740	39,488,942	245,322	0

	Bumiputra	Government	Chinese	Foreign	Indians
96 Maica Holdings					
Top 30 s/holders (%)	6.13	0	67.33	0	0
Non-top 30 estimates (%)	5.25		21.02		
Total Equity (%)	11.38	0.00	88.35	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	5.82	0.00	64.24	0.00	0.00
Voting Power			1.00		
Equity (RM)	7,420,175	0	57,584,573	0	0
97 Malaysia Packaging					
Top 30 s/holders (%)	0.18	0	7.92	69.07	0
Non-top 30 estimates (%)					
Total Equity (%)	0.18	0.00	7.92	69.07	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	0.00	0.00	0.00	68.71	0.00
Voting Power				1.00	
Equity (RM)	75,677	0	3,329,792	29,038,979	0
98 Malaysians Plantations					
Top 30 s/holders (%)	3.65	0.44	12.18	56.62	0
Non-top 30 estimates (%)	7.29	2.43	4.86	9.72	
Total Equity (%)	10.94	2.87	17.04	66.34	0.00
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	2.91	0.00	11.09	49.19	0.00
Voting Power	0.25		0.25	0.75	
Equity (RM)	127,152,627	33,354,749	198,082,332	771,216,667	0
99 MAS					
Top 30 s/holders (%)	6.57	87	0.08	1.03	0
Non-top 30 estimates (%)	1.06	0.53	0.53	3.19	
Total Equity (%)	7.63	87.53	0.61	4.22	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	6.50	86.39	0.00	0.00	
Voting Power		1.00			
Equity (RM)	95,672,637	1,096,989,421	7,669,852	52,911,956	0
100 Maybank					
Top 30 s/holders (%)	48.85	19.56	0.31	6.13	0
Non-top 30 estimates (%)		7.55		17.61	
Total Equity (%)	48.85	27.11	0.31	23.74	0.00
Voting Power	0.50	0.50		0.50	
Equity excluding < 1% s/holders(%)	48.85	19.56	0.00	1.36	0.00
Voting Power	0.50	0.50			
Equity (RM)	1,819,600,031	1,009,626,588	11,547,104	884,098,398	0
101 MBMR					
Top 30 s/holders (%)	67.41	14.06	2.64	0.25	0
Non-top 30 estimates (%)	8.31	0.00	4.16	1.39	0.00
Total Equity (%)	75.72	14.06	6.80	1.64	0.00
Voting Power	1				
Equity excluding < 1% s/holders(%)	65.30	14.06	0.00	0.00	0.00
Voting Power	1.00				
Equity (RM)	178,601,269	33,163,416	16,027,412	3,856,485	0

	Bumiputra	Government	Chinese	Foreign	Indians
102 Measat Global Bhd					
Top 30 s/holders (%)	0.43	27.21	0.54	0.58	59.55
Non-top 30 estimates (%)	2.15	1.07	6.44		
Total Equity (%)	2.58	28.28	6.98	0.58	59.55
Voting Power					1.00
Equity excluding < 1% s/holders(%)	0.00	26.32	0.00	0.00	59.55
Voting Power					1.00
Equity (RM)	7,840,932	86,025,181	21,241,687	1,764,058	181,120,051
103 Mechmar Corporation					
Top 30 s/holders (%)	4.83	0	32.61	6.33	0
Non-top 30 estimates (%)	0.00	0.00	39.36	16.87	
Total Equity (%)	4.83	0.00	71.97	23.20	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	4.83	0.00	26.41	4.49	0.00
Voting Power					
Equity (RM)	7,227,902	0	107,701,723	34,716,376	0
104 Media Prima					
Top 30 s/holders (%)	13.92	16.06	0	37.11	0
Non-top 30 estimates (%)		6.58		26.33	
Total Equity (%)	13.92	22.64	0.00	63.44	0.00
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	15.72	12.83	0.00	32.76	0.00
Voting Power	0.25	0.25		0.25	
Equity (RM)	85,051,988	138,343,901	0	387,609,770	0
105 Mentakab					
Top 30 s/holders (%)	70.06	0.19	2.13	3.91	0.11
Non-top 30 estimates (%)			12.78	6.39	2.13
Total Equity (%)	70.06	0.19	14.91	10.30	2.24
Voting Power	1				
Equity excluding < 1% s/holders(%)	69.92	0.00	0.00	1.56	0.00
Voting Power	1.00				
Equity (RM)	42,210,569	114,473	8,983,151	6,205,665	1,349,581
106 Mentiga					
Top 30 s/holders (%)	59.52	1.25	4.6	0.54	0
Non-top 30 estimates (%)	16.15	0.00	16.15	0.00	0.00
Total Equity (%)	75.67	1.25	20.75	0.54	0.00
Voting Power	1.00				
Equity excluding < 1% s/holders(%)	57.94	1.25	0.00	0.00	0.00
Voting Power	1.00				
Equity (RM)	28,374,375	468,750	7,779,375	202,500	0
107 MESB Berhad					
Top 30 s/holders (%)	9.78	0	47.64	1.97	
Non-top 30 estimates (%)	12.18		28.43		
Total Equity (%)	21.96	0.00	76.07	1.97	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	6.76	0.00	42.62	1.31	0.00
Voting Power			0.50		
Equity (RM)	9,224,460	0	31,948,140	827,400	0

	Bumiputra	Government	Chinese	Foreign	Indians
108 Metech					
Top 30 s/holders (%)	2.33	20.06	20.31	40.35	0
Non-top 30 estimates (%)			15.54		
Total Equity (%)	2.33	20.06	35.85	40.35	0.00
Voting Power		0.50	0.50	0.50	
Equity excluding < 1% s/holders(%)	2.33	20.06	15.29	40.35	0.00
Voting Power		0.25	0.25	0.75	
Equity (RM)	943,650	8,124,300	14,519,250	16,341,750	0
109 Minetech Resources					
Top 30 s/holders (%)	24.67	0	61.22	0	0
Non-top 30 estimates (%)	1.41		12.70		
Total Equity (%)	26.08	0.00	73.92	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	24.67	0.00	56.46	0.00	0.00
Voting Power			1.00		
Equity (RM)	14,344,550	0	40,655,450	0	0
110 Minply Holdings					
Top 30 s/holders (%)	4.79	0	51.1	0	0
Non-top 30 estimates (%)			44.11		
Total Equity (%)	4.79	0.00	95.21	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.97	0.00	43.07	0.00	0.00
Voting Power					
Equity (RM)	2,107,600	0	41,892,400	0	0
111 MISC					
Top 30 s/holders (%)	1.21	74.29	0.61	4.23	0
Non-top 30 estimates (%)	1.85	0.00	12.92	3.69	
Total Equity (%)	3.06	74.29	13.53	7.92	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	0.00	72.51	0.00	0.00	0.00
Voting Power		1.00			
Equity (RM)	56,838,966	1,381,729,957	251,683,534	147,342,371	0
112 MK Land Holding		49.06			
Top 30 s/holders (%)	47.9	1.16	2.77	11.7	25.02
Non-top 30 estimates (%)				8.02	3.44
Total Equity (%)	47.90	1.16	2.77	19.72	28.46
Voting Power	0.75		0.25	0.25	0.25
Equity excluding < 1% s/holders(%)	47.30	1.16	2.77	18.66	25.03
Voting Power	0.82	0.06	0.06	0.19	0.19
Equity (RM)	578,134,599	14,000,754	33,432,836	237,952,476	343,440,919
113 Mlabs System					
Top 30 s/holders (%)	21.78	0	7.53	5.74	51.44
Non-top 30 estimates (%)	1.05		7.36	1.05	1.05
Total Equity (%)	22.83	0.00	14.89	6.79	52.49
Voting Power					1
Equity excluding < 1% s/holders(%)	19.00	0.00	5.62	5.39	48.78
Voting Power					
Equity (RM)	2,332,449	0	1,521,526	693,850	5,362,425

	Bumiputra	Government	Chinese	Foreign	Indians
114 Metronic Global					
Top 30 s/holders (%)	24.23	0	60.92	1.24	0.29
Non-top 30 estimates (%)	0.00	0.00	9.82	1.23	1.23
Total Equity (%)	24.23	0.00	70.74	2.47	1.52
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	22.81	0.00	54.12	0.00	0.00
Voting Power			1.00		
Equity (RM)	6,870,174	0	20,058,754	699,777	430,414
115 Muda Holdings					
Top 30 s/holders (%)	1.93	5.25	48.6	1.09	0
Non-top 30 estimates (%)		8.57	25.72	8.57	
Total Equity (%)	1.93	13.82	74.32	9.66	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	1.93	4.16	43.65	0.00	0.00
Voting Power					
Equity (RM)	2,749,344	19,689,863	105,865,422	13,763,815	0
116 Mulpha International					
Top 30 s/holders (%)	4.03	0.84	13.71	45.32	0
Non-top 30 estimates (%)		7.19	7.19	21.58	
Total Equity (%)	4.03	8.03	20.90	66.90	0.00
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	4.03	0.00	13.31	41.39	0.00
Voting Power			0.50	0.50	
Equity (RM)	50,575,355	100,799,317	262,314,159	839,525,787	0
117 Mulpha Land					
Top 30 s/holders (%)	0	0	9.63	69.56	0
Non-top 30 estimates (%)		0.00	18.73	2.08	
Total Equity (%)	0.00	0.00	28.36	71.64	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	0.00	0.00	5.09	68.43	0.00
Voting Power				1.00	
Equity (RM)	0	0	17,154,359	43,335,641	0
118 Multi Vest Resoures					
Top 30 s/holders (%)	2.69	1.09	4.05	6.72	27.03
Non-top 30 estimates (%)	5.80		29.00	23.20	
Total Equity (%)	8.49	1.09	33.05	29.92	27.03
Voting Power			0.50	0.50	0.50
Equity excluding < 1% s/holders(%)	2.43	1.09	0.00	3.56	27.03
Voting Power					
Equity (RM)	12,718,371	1,632,865	49,510,267	44,821,397	40,492,058
119 N2N Connect Bhd					
Top 30 s/holders (%)	0.95	1.44	17.87	67.16	0
Non-top 30 estimates (%)	1.22		9.75	1.22	
Total Equity (%)	2.17	1.44	27.62	68.38	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	0.00	1.44	14.10	64.30	0.00
Voting Power				1.00	
Equity (RM)	293,140	194,616	3,733,113	9,241,422	0

	Bumiputra	Government	Chinese	Foreign	Indians
120 Naim Indah Corp					
Top 30 s/holders (%)	0.22	0	48.55	0	
Non-top 30 estimates (%)	5.05		45.46		
Total Equity (%)	5.27	0.00	94.01	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	41.77	0.00	0.00
Voting Power					
Equity (RM)	5,762,160	0	102,768,908	0	0
121 NCB Holdings					
Top 30 s/holders (%)	51.21	30.27	0.41	1.57	0
Non-top 30 estimates (%)	4.94	1.65	4.94	4.94	0.00
Total Equity (%)	56.15	31.92	5.35	6.51	0.00
Voting Power	1				
Equity excluding < 1% s/holders(%)	50.05	30.27	0.00	0.00	0.00
Voting Power	1.00				
Equity (RM)	264,065,706	150,095,259	25,177,330	30,632,261	0
122 New Hong Fatt					
Top 30 s/holders (%)	0	0	73.09	6.72	0
Non-top 30 estimates (%)			17.69	1.97	
Total Equity (%)	0.00	0.00	90.78	8.69	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	66.51	6.72	59.55
Voting Power			1.00		
Equity (RM)	0	0	68,230,168	6,528,102	0
123 Nikko Electronics Bhd					
Top 30 s/holders (%)	4.54	7.15	19.72	45	0
Non-top 30 estimates (%)	9.39		14.08		
Total Equity (%)	13.93	7.15	33.80	45.00	0.00
Voting Power					
Equity excluding < 1% s/holders(%)	2.27	6.97	18.72	45.00	0.00
Voting Power					
Equity (RM)	138,261,250	70,977,020	335,547,587	446,708,520	0
124 NS Oil Palms Bhd					
Top 30 s/holders (%)	0	0	8.4	64.45	0
Non-top 30 estimates (%)			24.44	2.72	
Total Equity (%)	0.00	0.00	32.84	67.17	0.00
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	0.00	0.00	5.02	60.20	0.00
Voting Power				1.00	
Equity (RM)	0	0	22,842,312	46,724,650	0
125 Nylex Malaysia Bhd					
Top 30 s/holders (%)	1.1	5.78	74.17	2.03	0
Non-top 30 estimates (%)	4.23		8.46	1.41	
Total Equity (%)	5.33	5.78	82.63	3.44	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	5.21	71.04	0.00	0.00
Voting Power			1.00		
Equity (RM)	9,416,557	10,211,576	145,983,132	6,077,478	0

	Bumiputra	Government	Chinese	Foreign	Indians
126 Online One Corporation					
Top 30 s/holders (%)	0	0	92.64	1.88	0
Non-top 30 estimates (%)			4.93	0.55	
Total Equity (%)	0.00	0.00	97.57	2.43	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	90.95	1.88	0.00
Voting Power			1.00		
Equity (RM)	0	0	16,538,454	411,546	0
127 Oriental Holdings					
Top 30 s/holders (%)	8.72	15.31	55.09	6.13	0
Non-top 30 estimates (%)	1.36	2.71	5.42	4.07	
Total Equity (%)	10.08	18.02	60.51	10.20	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	7.58	0.00	53.76	4.05	0.00
Voting Power			1.00		
Equity (RM)	52,087,750	93,163,400	312,836,700	52,708,150	0
128 Ornapaper Bhd					
Top 30 s/holders (%)	18.96	0	46.65	14.44	0
Non-top 30 estimates (%)			19.81		
Total Equity (%)	18.96	0.00	66.46	14.44	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	18.96	0.00	42.17	13.78	0.00
Voting Power	0.25		0.75	0.25	
Equity (RM)	14,267,514	0	50,011,549	10,866,187	0
129 OSK					
Top 30 s/holders (%)	3.72	3.65	37.6	12	0
Non-top 30 estimates (%)	8.19	0.00	20.47	12.28	0.00
Total Equity (%)	11.91	3.65	58.07	24.28	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.11	3.65	35.66	8.77	0.00
Voting Power	0.13	0.13	0.13	0.13	
Equity (RM)	72,670,517	22,278,464	354,410,683	148,191,457	0
130 Pacific Mas Bhd					
Top 30 s/holders (%)	3.45	20.48	1.94	49.42	0.15
Non-top 30 estimates (%)		2.33	11.65	6.99	2.33
Total Equity (%)	3.45	22.81	13.59	56.41	2.48
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	3.45	20.25	0.00	49.00	0.00
Voting Power	0.25	0.25		0.75	
Equity (RM)	5,899,276	39,001,907	23,229,467	96,452,304	4,238,929
131 P.I.E. Industries					
Top 30 s/holders (%)	12.89	3.2	5.14	61.5	0
Non-top 30 estimates (%)			13.77		
Total Equity (%)	12.89	3.20	18.91	61.50	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	0.00	74.08	82.97	61.50	0.00
Voting Power				1.00	
Equity (RM)	8,055,477	1,999,808	11,817,615	38,433,810	0

	Bumiputra	Government	Chinese	Foreign	Indians
132 Pan Malaysia Holdings					
Top 30 s/holders (%)	9.81	3.73	69.99	0.25	0
Non-top 30 estimates (%)	1.36	1.36	8.17	2.72	
Total Equity (%)	11.17	5.09	78.16	2.97	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	9.61	2.07	68.63	0.00	0.00
Voting Power			1.00		
Equity (RM)	103,763,778	47,288,640	725,965,614	27,605,939	0
133 Pan Malaysian Corp					
Top 30 s/holders (%)	16.05	0.31	61.64	0.85	0
Non-top 30 estimates (%)	3.90	1.95	11.71	1.95	
Total Equity (%)	19.95	2.26	73.35	2.80	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	15.12	0.00	58.78	0.00	0.00
Voting Power			1.00		
Equity (RM)	77,157,828	8,746,668	283,636,413	10,834,732	0
134 PBA Holdings Bhd					
Top 30 s/holders (%)	7.56	77.06	0.16	6.11	0
Non-top 30 estimates (%)	4.33		0.87	3.46	
Total Equity (%)	11.89	77.06	1.03	9.57	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	0.00	77.06	5.02	60.20	0.00
Voting Power		1.00			
Equity (RM)	19,676,194	127,576,568	1,696,937	15,843,599	0
135 PCCS					
Top 30 s/holders (%)	3.33	0	62.87	0	0
Non-top 30 estimates (%)			32.80		
Total Equity (%)	3.33	0.00	95.67	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.11	0.00	57.30	0.00	0.00
Voting Power			1.00		
Equity (RM)	1,998,400	0	57,413,482	0	0
136 PDZ Holdings					
Top 30 s/holders (%)	0	0	87.5	3.92	0
Non-top 30 estimates (%)			8.58		
Total Equity (%)	0.00	0.00	96.08	3.92	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	82.97	3.92	0.00
Voting Power			1.00		
Equity (RM)	0	0	73,782,453	3,010,275	0
137 Pintaras Jaya					
Top 30 s/holders (%)	11.25	3.7	65.98	1.84	0
Non-top 30 estimates (%)			16.10		
Total Equity (%)	11.25	3.70	82.08	1.84	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	11.25	3.70	62.20	1.25	0.00
Voting Power			1.00		
Equity (RM)	9,007,200	2,962,368	65,716,531	1,473,178	0

	Bumiputra	Government	Chinese	Foreign	Indians
138 PJI Holdings Bhd					
Top 30 s/holders (%)	9.25	11.4	41.06	0	0
Non-top 30 estimates (%)	7.66		30.63		
Total Equity (%)	16.91	11.40	71.69	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.45	20.25	41.06	0.00	0.00
Voting Power		0.50	0.50		
Equity (RM)	13,730,874	9,257,864	58,220,595	0	0
139 PK Resources Bhd					
Top 30 s/holders (%)	1.55	31.33	53.08	0	0
Non-top 30 estimates (%)		2.70	10.81		
Total Equity (%)	1.55	34.03	63.89	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	1.55	30.79	51.77	0.00	0.00
Voting Power			1.00		
Equity (RM)	1,767,550	38,808,561	72,855,000	0	0
140 PLB Engineering					
Top 30 s/holders (%)	2.33	0	65.71	0	0
Non-top 30 estimates (%)	3.20	0.00	28.76	0.00	0.00
Total Equity (%)	5.53	0.00	94.47	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	1.10	0.00	60.85	0.00	0.00
Voting Power			1.00		
Equity (RM)	5,044,114	0	86,235,553	0	0
141 Pos Malaysia Serv & Hold					
Top 30 s/holders (%)	0	35.99	1.6	19.41	0
Non-top 30 estimates (%)		4.18	4.18	33.43	
Total Equity (%)	0.00	40.17	5.78	52.84	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	0.00	35.99	1.60	12.00	0.00
Voting Power					
Equity (RM)	0	206,661,492	29,731,802	271,861,550	0
142 Progressive Impact Corp					
Top 30 s/holders (%)	80.67	2.58	4.49	5.14	0
Non-top 30 estimates (%)	2.78	1.67	0.56	0.56	
Total Equity (%)	83.45	4.25	5.05	5.70	0.00
Voting Power	1.00				
Equity excluding < 1% s/holders(%)	79.31	0.00	4.19	5.14	0.00
Voting Power	1.00				
Equity (RM)	39,219,150	1,995,150	2,371,150	2,676,650	0
143 PSCI Group					
Top 30 s/holders (%)	15.39	40.7	7.25	5.61	0
Non-top 30 estimates (%)	5.30	2.65	15.90	2.65	
Total Equity (%)	20.69	43.35	23.15	8.26	0.00
Voting Power	0.25	0.75	0.25	0.25	
Equity excluding < 1% s/holders(%)	15.01	40.70	2.99	1.90	0.00
Voting Power	0.50	0.50			
Equity (RM)	36,017,845	75,465,131	40,300,295	14,379,285	0

	Bumiputra	Government	Chinese	Foreign	Indians
144 QL Resources Bhd					
Top 30 s/holders (%)	2.96	1.23	73.84	4.65	0
Non-top 30 estimates (%)	1.69		13.49	1.69	
Total Equity (%)	4.65	1.23	87.33	6.34	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	1.51	1.23	66.61	3.81	0.00
Voting Power		1.00			
Equity (RM)	3,484,500	922,500	65,496,000	4,752,000	0
145 QSR Brands Bhd					
Top 30 s/holders (%)	6.73	53.29	12.79	19.54	0
Non-top 30 estimates (%)	0.76		4.59	2.30	
Total Equity (%)	7.50	53.29	17.38	21.84	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	5.11	53.29	9.64	17.52	0.00
Voting Power		1.00			
Equity (RM)	18,056,144	128,380,509	41,870,018	52,602,523	0
146 Ranhill Bhd					
Top 30 s/holders (%)	70.39	13.83	0	2.01	0
Non-top 30 estimates (%)	8.26	4.13		1.38	
Total Equity (%)	78.65	17.96	0.00	3.39	0.00
Voting Power	1.00				
Equity excluding < 1% s/holders(%)	68.33	13.30	0.00	2.01	
Voting Power	1.00				
Equity (RM)	469,760,723	107,274,734	0	20,229,359	0
147 Rapid Synergy					
Top 30 s/holders (%)	5.94	0	63.15	0	0
Non-top 30 estimates (%)	3.09		27.82		
Total Equity (%)	9.03	0.00	90.97	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	5.22	0.00	57.08	0.00	0.00
Voting Power			1.00		
Equity (RM)	3,792,830	0	38,205,070	0	0
148 RB Land					
Top 30 s/holders (%)	0.09	74.28	2.59	11.78	0
Non-top 30 estimates (%)	0.00	1.13	3.38	6.76	
Total Equity (%)	0.09	75.41	5.97	18.54	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	0.00	74.08	0.00	3.92	0.00
Voting Power		1.00			
Equity (RM)	511,368	428,446,792	33,909,377	105,319,069	0
149 Redtone					
Top 30 s/holders (%)	3.46	3.73	58.73	12.27	0
Non-top 30 estimates (%)		2.01	12.08	6.04	
Total Equity (%)	3.46	5.74	70.81	18.31	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.46	3.15	53.30	9.94	0.00
Voting Power			1.00		
Equity (RM)	871,920	1,447,236	17,843,616	4,613,868	0

	Bumiputra	Government	Chinese	Foreign	Indians

150 Saptech

	Bumiputra	Government	Chinese	Foreign	Indians
Top 20 s/holders (%)	53.78	13.71	1.94	0.81	1.18
Non-top 30 estimates (%)	5.47	13.67	5.47		2.73
Total Equity (%)	59.25	27.38	7.41	0.81	3.91
Voting Power	1.00				
Equity excluding < 1% s/holders(%)	51.51	13.34	1.45	0.00	0.00
Voting Power	1.00				
Equity (RM)	95,444,695	44,100,842	11,930,990	1,304,902	6,303,803

151 SapuraCrest Petroleum

	Bumiputra	Government	Chinese	Foreign	Indians
Top 30 s/holders (%)	39.6	4.73	1.22	31.86	0
Non-top 30 estimates (%)	9.04		4.52	9.04	
Total Equity (%)	48.64	4.73	5.74	40.90	0.00
Voting Power	75	0.25	0.25	0.25	
Equity excluding < 1% s/holders(%)	39.00	4.73	0.00	0.00	0.00
Voting Power					
Equity (RM)	85,507,474	8,315,864	10,088,039	71,899,697	0

152 Sarawak Concrete Indusries

	Bumiputra	Government	Chinese	Foreign	Indians
Top 30 s/holders (%)	41.25	8.81	9.26	0.95	0
Non-top 30 estimates (%)	3.74		29.91	3.74	
Total Equity (%)	44.99	8.81	39.17	4.69	0.00
Voting Power	0.63	0.38	0.38	0.13	
Equity excluding < 1% s/holders(%)	40.89	8.81	6.04	0.00	0.00
Voting Power					
Equity (RM)	33,101,781	6,482,178	28,821,778	3,450,049	0

153 Scientex Incorporated

	Bumiputra	Government	Chinese	Foreign	Indians
Top 30 s/holders (%)	9.4	0	60.6	0	
Non-top 30 estimates (%)	2.69		24.18		
Total Equity (%)	12.09	0.00	84.78	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	8.92	0.00	66.62	0.00	0.00
Voting Power			1.00		
Equity (RM)	7,504,625	0	52,640,408	0	0

154 Scomi Group Bhd

	Bumiputra	Government	Chinese	Foreign	Indians
Top 30 s/holders (%)	39.33	12.21	3.06	26.53	0
Non-top 30 estimates (%)	5.89	1.47	7.37		
Total Equity (%)	45.22	13.68	10.43	26.53	0.00
Voting Power	0.75	0.25	0.25	0.25	
Equity excluding < 1% s/holders(%)	39.33	12.21	1.06	26.53	0.00
Voting Power	0.75	0.25		0.25	
Equity (RM)	45,059,192	13,633,738	10,387,468	26,434,487	0

155 SDKM

	Bumiputra	Government	Chinese	Foreign	Indians
Top 30 s/holders (%)	30.31	0.57	3.72	45.16	0
Non-top 30 estimates (%)	0.00	0.00	20.24	0.00	0.00
Total Equity (%)	30.31	0.57	23.96	45.16	0.00
Voting Power	0.25		0.25	0.5	
Equity excluding < 1% s/holders(%)	30.17	0.00	0.00	43.78	0.00
Voting Power	0.50			0.50	
Equity (RM)	12,124,000	228,000	9,584,000	18,064,000	0

	Bumiputra	Government	Chinese	Foreign	Indians
156 SHH Resources Holdings					
Top 30 s/holders (%)	4.14	0	63.41	25.58	0
Non-top 30 estimates (%)			6.52		
Total Equity (%)	4.14	0.00	69.93	25.58	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	4.14	0.00	59.54	25.58	0.00
Voting Power			1.00		
Equity (RM)	2,069,897	0	34,963,252	12,789,361	0
157 SHL Consolidated					
Top 30 s/holders (%)	10.94	2.03	65.94	3.34	0
Non-top 30 estimates (%)	1.37	1.37	8.24	2.75	
Total Equity (%)	12.31	3.40	74.18	6.09	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	10.37	1.25	63.42	1.21	0.00
Voting Power			1.00		
Equity (RM)	29,812,694	8,239,470	179,602,537	14,735,650	0
158 Silverstone Corp					
Top 30 s/holders (%)	0	3.98	64.41	4.14	0
Non-top 30 estimates (%)			22.41	2.49	
Total Equity (%)	0.00	3.98	86.82	6.63	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	3.98	59.21	2.06	
Voting Power			1.00		
Equity (RM)	0	13,473,709	293,916,443	22,444,898	0
159 Sin Chew Media Corp					
Top 30 s/holders (%)	24.29	3.94	54.49	3.64	0
Non-top 30 estimates (%)			4.49	6.73	
Total Equity (%)	24.29	3.94	58.98	10.37	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	24.29	3.06	53.86	1.88	0.00
Voting Power			1.00		
Equity (RM)	36,677,900	5,949,400	89,056,780	15,661,720	0
160 Sitt Tatt					
Top 30 s/holders (%)	8.99	3.61	10.34	22.85	18.62
Non-top 30 estimates (%)		0.00	1.62	3.38	0.00
Total Equity (%)	8.99	3.61	11.96	26.23	18.62
Voting Power	0.19	0.06	0.19	0.44	0.31
Equity excluding < 1% s/holders(%)	4.11	3.08	11.50	22.37	18.11
Voting Power			0.25	0.25	0.25
Equity (RM)	17,493,679	7,024,714	23,273,015	51,039,123	36,232,737
161 South Malaysia Indus					
Top 30 s/holders (%)	15.36	0	30.97	0.7	0
Non-top 30 estimates (%)			47.67	5.30	
Total Equity (%)	15.36	0.00	78.64	6.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	14.73	0.00	26.15	0.00	0.00
Voting Power					
Equity (RM)	25,318,687	0	129,631,350	9,885,167	0

	Bumiputra	Government	Chinese	Foreign	Indians
162 Solution Engineering					
Top 30 s/holders (%)	4.61	4.98	73.72	0.46	0
Non-top 30 estimates (%)	3.07		10.76	1.54	
Total Equity (%)	7.68	4.98	84.48	2.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.07	4.98	64.24	0.00	0.00
Voting Power			1.00		
Equity (RM)	972,195	630,080	10,688,452	252,664	0
163 SP Setia					
Top 30 s/holders (%)	6.96	10.82	13.13	17.97	0.91
Non-top 30 estimates (%)		4.91	24.57	14.74	4.91
Total Equity (%)	6.96	15.73	37.70	32.71	5.82
Voting Power	0.125	0.38	0.63	0.375	0.125
Equity excluding < 1% s/holders(%)	6.96	10.82	13.13	17.97	0.00
Voting Power					
Equity (RM)	45,747,640	103,418,588	247,799,718	215,013,909	38,280,784
164 Spritzer					
Top 30 s/holders (%)	13.26	6.12	71.42	0	0
Non-top 30 estimates (%)	0.92		8.28		
Total Equity (%)	14.18	6.12	79.70	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	12.43	6.12	67.68	0.00	0.00
Voting Power			1.00		
Equity (RM)	6,948,200	2,998,800	39,053,000	0	0
165 Subur Tiasa					
Top 30 s/holders (%)	25.04	0.58	54.65	5.77	0
Non-top 30 estimates (%)	2.43		6.09	3.65	
Total Equity (%)	27.47	0.58	60.74	9.42	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	16.26	0.00	59.77	4.77	0.00
Voting Power			1.00		
Equity (RM)	54,948,000	1,160,000	121,470,000	18,842,000	0
166 Sunrise					
Top 30 s/holders (%)	1.06	12.86	33.39	12.5	0
Non-top 30 estimates (%)	7.68	11.52	11.52	7.68	
Total Equity (%)	8.74	24.38	44.91	20.18	0.00
Voting Power	0.25	0.25	0.75	0.25	0.00
Equity excluding < 1% s/holders(%)	1.52	12.86	30.79	11.99	0.00
Voting Power		0.25	0.25	0.25	0.00
Equity (RM)	36,951,120	103,063,276	189,840,499	85,306,280	0
167 Tanco Holdings					
Top 30 s/holders (%)	3.35	0	42.2	0.35	0.77
Non-top 30 estimates (%)	5.16		46.45		
Total Equity (%)	8.51	0.00	88.65	0.35	0.77
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	2.38	0.00	37.94	0.00	0.00
Voting Power					
Equity (RM)	28,502,209	0	296,873,734	1,172,104	2,578,628

	Bumiputra	Government	Chinese	Foreign	Indians
168 TDM Bhd					
Top 30 s/holders (%)	2.77	73.54	6.69	0.53	0
Non-top 30 estimates (%)	2.94	1.47	5.88	4.41	0.00
Total Equity (%)	5.71	75.01	12.57	4.94	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	2.53	73.54	5.64	0.00	0.00
Voting Power		1.00			
Equity (RM)	12,310,748	161,666,934	27,100,026	10,653,366	0
169 Tebrau Teguh					
Top 30 s/holders (%)	2.13	42.35	23.88	0.3	0.15
Non-top 30 estimates (%)	3.10		24.80		3.10
Total Equity (%)	5.23	42.35	48.68	0.30	3.25
Voting Power	0.25	0.25	0.75	0	0.25
Equity excluding < 1% s/holders(%)	1.98	42.35	16.06	0.00	0.00
Voting Power	0.00	0.50	0.50		
Equity (RM)	17,513,365	141,814,722	163,011,586	1,004,591	10,883,066
170 Techventure					
Top 30 s/holders (%)	10.71	4.88	18.4	8.09	0.93
Non-top 30 estimates (%)	11.31		33.94	5.66	5.66
Total Equity (%)	22.02	4.88	52.34	13.75	6.59
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	8.43	4.88	11.69	7.69	0.00
Voting Power					
Equity (RM)	11,066,346	2,452,042	26,300,158	6,907,422	3,309,754
171 Texcycle					
Top 30 s/holders (%)	5.95	0	69.96	0.46	18.59
Non-top 30 estimates (%)	0.50	0.00	4.54	0.50	0.00
Total Equity (%)	6.45	0.00	74.50	0.96	18.59
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	5.95	0.00	67.51	0.00	18.59
Voting Power	0.00	0.00	1.00		
Equity (RM)	1,102,298	0	12,723,395	164,644	3,175,042
172 The Meddia Shoppe					
Top 30 s/holders (%)	15.03	8.78	45.09	11.89	0
Non-top 30 estimates (%)	3.84	3.84	9.61	1.92	
Total Equity (%)	18.87	12.62	54.70	13.81	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	15.03	8.78	44.51	11.89	0.00
Voting Power	0.13	0.13	0.13	0.13	
Equity (RM)	2,484,378	1,661,606	7,200,247	1,818,130	0
173 Tien Wah Holdings					
Top 30 s/holders (%)		23.14	4.4	53.89	0
Non-top 30 estimates (%)			12.50	5.36	
Total Equity (%)	0.00	23.14	16.90	59.25	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	0.00	23.14	0.00	50.07	0.00
Voting Power				1.00	
Equity (RM)	0	10,508,244	7,675,469	26,905,465	0

	Bumiputra	Government	Chinese	Foreign	Indians
174 Titan Chemicals					
Top 30 s/holders (%)	31.79	7.21		44.81	0
Non-top 30 estimates (%)	1.62	4.86		9.71	
Total Equity (%)	33.41	12.07	0.00	54.52	0.00
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	31.49	6.58	0.00	38.64	0.00
Voting Power	0.50			0.50	
Equity (RM)	585,526,134	211,486,242	0	955,587,624	0
175 Tomypak Holdings Bhd					
Top 30 s/holders (%)	1.91	6.44	15.59	31.18	0
Non-top 30 estimates (%)	3.98		27.89	7.97	
Total Equity (%)	5.89	6.44	43.48	39.15	0.00
Voting Power	0.25	0.25	0.50	0.5	
Equity excluding < 1% s/holders(%)	1.13	6.44	11.29	30.74	0.00
Voting Power					
Equity (RM)	2,357,600	2,576,000	17,391,200	15,659,200	0
176 Tongher *					
Top 30 s/holders (%)	1.2	0.31	72.68	0	0
Non-top 30 estimates (%)	2.30	2.30	18.42		
Total Equity (%)	3.50	2.61	91.10	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	70.09	0.00	0.00
Voting Power			1.00		
Equity (RM)	2,977,375	2,220,919	77,433,845	0	0
177 Toyo Ink Group					
Top 30 s/holders (%)	0.28	0	30.66	27.87	0
Non-top 30 estimates (%)	3.93	0.00	31.43	3.93	0.00
Total Equity (%)	4.21	0.00	62.09	31.80	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	25.89	27.28	0.00
Voting Power			0.50	0.50	
Equity (RM)	2,214,776	0	32,672,810	16,732,634	0
178 Toyochem Corp					
Top 30 s/holders (%)	15.51	0	6.39	52.41	0
Non-top 30 estimates (%)			24.77		
Total Equity (%)	15.51	0.00	31.16	52.41	0.00
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	15.51	0.00	1.71	51.00	0.00
Voting Power				1.00	
Equity (RM)	6,326,095	0	12,709,292	21,376,573	0
179 TPC					
Top 30 s/holders (%)	4.44	2.82	48.92	7.45	0.32
Non-top 30 estimates (%)	3.61	3.61	25.24	0.00	3.61
Total Equity (%)	8.05	6.43	74.16	7.45	3.93
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.88	2.50	44.25	7.45	0.00
Voting Power	0.13	0.13	0.63	0.38	
Equity (RM)	3,218,000	2,570,000	29,662,000	2,980,000	1,570,000

	Bumiputra	Government	Chinese	Foreign	Indians
0 Transmile Group					
Top 30 s/holders (%)	1.36	21.19	26.11	20.79	0
Non-top 30 estimates (%)	0.00	2.80	11.18	13.98	
Total Equity (%)	1.36	23.99	37.29	34.77	0.00
Voting Power	0.00	0.50	0.50	0.50	
Equity excluding < 1% s/holders(%)	1.36	21.19	26.11	17.40	0.00
Voting Power	0.00	0.25	0.25	0.25	
Equity (RM)	3,184,230	56,159,509	87,318,132	81,408,576	0
81 TRC Synergy					
Top 30 s/holders (%)	54.86	11.66	14.26	7.52	0
Non-top 30 estimates (%)	2.04	0.00	6.13	2.04	
Total Equity (%)	56.90	11.66	20.39	9.56	0.00
Voting Power	1				
Equity excluding < 1% s/holders(%)	54.52	11.66	11.74	6.27	0.00
Voting Power	1.00	0.00			
Equity (RM)	52,577,448	10,773,840	18,836,664	8,835,288	0
82 Triumphal Associates					
Top 30 s/holders (%)	20.97	3.38	57.49	5.19	0
Non-top 30 estimates (%)			7.72	3.31	
Total Equity (%)	20.97	3.38	65.21	8.50	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	20.97	3.38	53.56	3.95	0.00
Voting Power			1.00		
Equity (RM)	18,279,744	2,946,377	56,845,034	7,408,657	0
83 UEM Builders Bhd					
Top 30 s/holders (%)	3.51	58.95	4.97	3.58	0
Non-top 30 estimates (%)	5.80	2.90	11.60	8.70	
Total Equity (%)	9.31	61.85	16.57	12.28	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	2.16	58.19	2.48	1.26	
Voting Power		1.00			
Equity (RM)	89,716,917	596,143,277	159,674,522	118,334,185	0
184 UMS					
Top 30 s/holders (%)	0.42	0	58.7	0	0
Non-top 30 estimates (%)	4.09		36.79		
Total Equity (%)	4.51	0.00	95.49	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	50.57	0.00	0.00
Voting Power			1.00		
Equity (RM)	1,834,305	0	38,855,695	0	0
185 UMW					
Top 30 s/holders (%)	55.61	10.96	0.64	18.15	0
Non-top 30 estimates (%)					
Total Equity (%)	55.61	10.96	0.64	18.15	0.00
Voting Power	1				
Equity excluding < 1% s/holders(%)	55.06	9.54	0.00	15.66	0.00
Voting Power	1.00				
Equity (RM)	281,921,994	55,563,119	3,244,562	92,013,742	0

	Bumiputra	Government	Chinese	Foreign	Indians
86 Unico-Desa Plantations					
Top 30 s/holders (%)	2.31	1.52	66.92	0.31	0
Non-top 30 estimates (%)	2.55	5.11	15.32	2.55	
Total Equity (%)	4.86	6.63	82.24	2.86	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	2.04	0.00	59.45	0.00	0.00
Voting Power			1.00		
Equity (RM)	10,739,712	14,634,624	181,594,752	6,323,712	0
87 United U-Li Corp					
Top 30 s/holders (%)	9.43	6.55	53.61	6.4	0
Non-top 30 estimates (%)	6.86	4.57	9.15	2.29	
Total Equity (%)	16.29	11.12	62.76	8.69	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	5.00	6.55	51.64	5.98	0.00
Voting Power			1.00		
Equity (RM)	10,752,060	7,341,840	41,420,280	5,733,420	0
88 United Plantations Bhd					
Top 30 s/holders (%)	1.17	19.99	0.46	50.24	0
Non-top 30 estimates (%)	2.44	2.44		19.53	
Total Equity (%)	3.61	22.43	0.46	69.77	0.00
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	0.00	19.65	0.00	45.49	0.00
Voting Power		0.50		0.50	
Equity (RM)	7,515,728	46,686,597	957,418	145,211,115	0
89 UPA Holdings					
Top 30 s/holders (%)	4.72	1.11	65.61	2.04	0
Non-top 30 estimates (%)	5.30		21.22		
Total Equity (%)	10.02	1.11	86.83	2.04	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	3.70	1.11	61.58	2.04	0.00
Voting Power			1.00		
Equity (RM)	6,386,591	707,214	55,319,449	1,299,745	0
90 Versatile Creative					
Top 30 s/holders (%)	23.87	0.73	44.75	0.73	0
Non-top 30 estimates (%)	11.24		14.06	2.81	
Total Equity (%)	35.11	0.73	58.81	3.54	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	21.34	0.00	40.43	0.00	0.00
Voting Power	0.50		0.50		
Equity (RM)	38,851,211	807,694	65,063,664	3,917,871	0
91 White Horse					
Top 30 s/holders (%)	9.2	1.05	25.86	34.12	0
Non-top 30 estimates (%)	2.98	2.98	2.98	20.84	
Total Equity (%)	12.18	4.03	28.84	54.96	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	9.20	1.05	25.86	34.12	0.00
Voting Power			0.50	0.50	
Equity (RM)	28,659,446	9,477,834	67,869,956	129,349,964	0

	Bumiputra	Government	Chinese	Foreign	Indians
192 Wong Engineering Corp					
Top 30 s/holders (%)	3.08	10.2	60.87	0	0
Non-top 30 estimates (%)	2.59		23.27		
Total Equity (%)	5.67	10.20	84.14	0.00	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	2.43	10.20	52.78	0.00	0.00
Voting Power			1.00		
Equity (RM)	2,546,902	4,585,772	37,825,876	0	0
193 Woodland					
Top 30 s/holders (%)	11.61	0	60.55	0.57	0
Non-top 30 estimates (%)	5.45	0.00	21.82	5.45	
Total Equity (%)	17.06	0.00	82.37	6.02	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	11.36	0.00	52.88	0.00	0.00
Voting Power			1.00		
Equity (RM)	6,825,770	0	32,947,223	2,409,660	0
194 Worldwide Holdings					
Top 30 s/holders (%)	0.18	62.36	8.85	3.72	0
Non-top 30 estimates (%)	2.49	2.49	19.91		
Total Equity (%)	2.67	64.85	28.76	3.72	0.00
Voting Power		1.00			
Equity excluding < 1% s/holders(%)	0.00	61.75	6.55	1.75	0.00
Voting Power		1.00			
Equity (RM)	4,616,126	112,158,554	49,744,858	6,433,867	0
195 Ya Horng Electronics					
Top 30 s/holders (%)	29.7	0	6.91	52.34	0
Non-top 30 estimates (%)	1.11	0.00	8.84	1.11	0.00
Total Equity (%)	30.81	0.00	15.75	53.45	0.00
Voting Power				1	
Equity excluding < 1% s/holders(%)	29.59	0.00	2.89	51.81	0.00
Voting Power				1.00	
Equity (RM)	14,299,912	0	7,311,268	24,809,570	0
196 Ye Chiu Metal Smelting					
Top 30 s/holders (%)	0.19	0	12.89	59.99	0
Non-top 30 estimates (%)	2.68		24.08		
Total Equity (%)	2.87	0.00	36.97	59.99	0.00
Voting Power				1.00	
Equity excluding < 1% s/holders(%)	0.00	0.00	0.00	57.34	0.00
Voting Power				1.00	
Equity (RM)	2,344,437	0	30,248,558	49,089,977	0
197 Yee Lee Corp					
Top 30 s/holders (%)	17.68	0	67.76	2.22	0
Non-top 30 estimates (%)	1.23		11.11		
Total Equity (%)	18.91	0.00	78.87	2.22	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	15.40	0.00	58.13	2.22	0.00
Voting Power			1.00		
Equity (RM)	11,859,835	0	49,452,137	1,392,029	0

	Bumiputra	Government	Chinese	Foreign	Indians
198 Yi-Lai Bhd					
Top 30 s/holders (%)	22.78	4.87	8.17	37.03	0
Non-top 30 estimates (%)	10.48	2.62	2.62	10.48	
Total Equity (%)	33.26	7.49	10.79	47.51	0.00
Voting Power	0.25	0.25	0.25	0.75	
Equity excluding < 1% s/holders(%)	21.85	4.11	7.31	35.72	0.00
Voting Power	0.50			0.50	
Equity (RM)	26,611,200	5,992,800	8,632,800	38,011,200	0
199 YNH Property Bhd					
Top 30 s/holders (%)	13.51	19.43	30.47	13.46	0
Non-top 30 estimates (%)		4.46	11.15	6.69	
Total Equity (%)	13.51	23.89	41.62	20.15	0.00
Voting Power	0.25	0.25	0.75	0.25	
Equity excluding < 1% s/holders(%)	13.51	18.49	28.54	13.46	0.00
Voting Power	0.25	0.25	0.50	0.25	
Equity (RM)	47,475,922	83,952,611	146,258,170	70,809,758	0
200 YTL Cement					
Top 30 s/holders (%)	3.5	21.83	53.6	9.82	0
Non-top 30 estimates (%)	2.19	0.00	8.77	0.00	0.00
Total Equity (%)	5.69	21.83	62.37	9.82	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	55.75	9.71	0.00
Voting Power			1.00		
Equity (RM)	13,753,206	52,746,395	150,695,700	23,727,421	0
201 YTL e-solution					
Top 30 s/holders (%)	0	0	75.23	10.59	0.1
Non-top 30 estimates (%)	0.00	0.00	6.40	5.12	1.28
Total Equity (%)	0.00	0.00	81.63	15.71	1.38
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	0.00	0.00	74.07	9.11	0.00
Voting Power			1.00		
Equity (RM)	0	0	110,193,750	21,203,100	1,861,650
202 YTL Land					
Top 30 s/holders (%)	7.77	13.33	66.15	0.59	0
Non-top 30 estimates (%)	1.10	0.00	7.71	2.20	0.00
Total Equity (%)	8.87	13.33	73.86	2.79	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	4.88	13.33	65.06	0.00	0.00
Voting Power			1.00		
Equity (RM)	15,286,040	22,969,553	127,266,489	4,811,027	0
203 YTL Power					
Top 30 s/holders (%)	7.34	16.2	60.82	2.41	0
Non-top 30 estimates (%)	2.59	3.89	1.30	5.18	
Total Equity (%)	9.93	20.09	62.12	7.59	0.00
Voting Power			1.00		
Equity excluding < 1% s/holders(%)	6.18	16.20	60.62	0.00	0.00
Voting Power			1.00		
Equity (RM)	240,507,183	486,438,611	1,504,162,723	183,891,618	0

Appendix XIII

Corporate Control Gain through Coalition with Government Entity

	Shareholders	Bumiputra	Government	Chinese	Foreigner	Indians
1.	**EP Manufacturing**					
	Equity (%)	45.78	5.66	34.97	13.58	0.00
	Equity coalition (%)		51.45			
2.	**IJM Corporation**					
	Equity (%)	27.68	35.34	0.00	36.18	0.00
	Equity coalition (%)		63.02			
3.	**KFC Holdings**					
	Equity (%)	47.72	35.57	0.00	16.71	0.00
	Equity coalition (%)		83.29			
4.	**KUB Malaysia Bhd**					
	Equity (%)	31.25	37.89	25.95	1.04	0.00
	Equity coalition (%)		69.14			
5.	**Maybank**					
	Equity (%)	48.85	27.11	0.31	23.74	0.00
	Equity coalition (%)		75.96			
6.	**PSCI Group**					
	Equity (%)	20.69	43.35	23.15	8.26	0.00
	Equity coalition (%)		64.04			
7.	**Sarawak Concrete Industries**					
	Equity (%)	44.99	8.81	39.17	4.69	0.00
	Equity coalition (%)		53.80			
8.	**SapuraCrest Petroleum**					
	Equity (%)	48.64	4.73	5.74	40.90	0.00
	Equity coalition (%)		53.37			
9.	**Scomi Group Bhd**					
	Equity (%)	45.22	13.68	10.43	26.53	0.00
	Equity coalition (%)		58.91			

Notes: Total percentages for some companies may not total to 100 percents as some sharcholders cannot be indentified.

Appendix XIV

Corporate Control Lost Without Support from Small Shareholders

Chinese (42 companies)

Company	Equity %	Equity W/out Small S/holders %
1. Abric Bhd	84.17	39.08
2. Advanced Packaging	93.29	66.08
3. Amtel Holdings	82.52	40.02
4. Asia Pacific Land	71.75	33.58
5. Binapuri	64.33	41.34
6. DVM Technologies	50.04	21.42
7. E&O Properties	59.91	49.09
8. Farm's Best	50.32	39.91
9. Focal Aims Bhd	60.65	49.55
10. Foremost	73.51	37.01
11. Global Soft (MSC) Bhd	87.98	42.03
12. Golden Frontiers Bhd	87.84	35.03
13. GPRO Technology	66.97	45.09
14. Gula Perak	72.45	39.06
15. Ho Hup Construction	59.44	34.34
16. Hwang-DBS (M) Bhd	52.39	36.59
17. Hwa-Tai Industries	92.17	28.07
18. Ingenuity Solutions	56.18	45.35
19. JPK	71.86	40.37
20. KarenSoft Technology	99.16	22.55
21. Kretam Holdings	73.52	42.57
22. LBS Bina Group	50.16	44.58
23. LCL	59.35	49.94
24. Lien Hoe	93.48	42.96
25. Linear Corporation	65.34	33.92
26. Lityan Holdings	59.99	5.83
27. LKT Industrial	65.66	31.74
28. Mechmar Corporation	71.97	26.41
29. MESB Berhad	76.07	42.62
30. Minply Holdings	95.21	43.07
31. Muda Holdings	74.32	43.65
32. Naim Indah Corp	94.01	41.77
33. Ornapaper Bhd	66.46	42.17
34. OSK	58.07	35.66
35. PJI Holdings Bhd	71.69	41.06
36. South Malaysia Indus	78.64	26.15
37. Tanco Holdings	88.65	37.94
38. Techventure	52.34	11.69
39. The Meddia Shoppe	54.70	44.51
40. Toyo Ink Group	62.09	25.89
41. TPC	74.16	44.25
42. Versatile Creative	58.81	40.43

Bumiputra (1 company)

Company	Equity %	Equity W/out Small S/holders %
1. Isyoda Corporation	52	40.63

Foreign Investors (9 companies)

Company	Equity %	Equity W/out Small S/holders %
1. Amanah Mellienia FB	58.53	36.77
2. Chin Teck	55.03	45.54
3. Malaysians Plantations	66.34	49.19
4. Media Prima	63.44	32.76
5. Mulpha International	66.90	41.39
6. Pacific Mas Bhd	56.41	49.00
7. Titan Chemicals	54.52	38.64
8. United Plantations Bhd.	69.77	45.49
9. White Horse	54.96	34.12

Indian (1 company)

Company	Equity %	Equity W/out Small S/holders %
1. Mlabs Systems	52.49	48.78

Note:
1. None of government companies lost control without support of small shareholders.