

Title	Disclosure level and cost of equity capital of IPO firms: evidence from Singapore
Author(s)	Jian Ming and Xu Ming
Issue Date	2014
Issue Number	1
Paper Number	2
Citation	Jian, Ming & Xu, Ming (2014). <i>Disclosure level and cost of equity capital of IPO firms: evidence from Singapore</i> (Working Paper Series No. 2, Issue 1, 2014). Hong Kong: The Hong Kong Polytechnic University, College of Professional and Continuing Education, School of Professional Education and Executive Development. Retrieved January 6, 2015 from http://weblib.cpce-polyu.edu.hk/apps/wps/assets/pdf/w20140102.pdf
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Disclosure Level and Cost of Equity Capital of IPO Firms: Evidence from Singapore

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ABSTRACT

This paper examines the tendency of initial issuers to exhibit lower levels of disclosure in their prospectuses ensuing relaxed disclosure requirements by the exchange. We focus on disclosure pertaining to issuers' corporate governance structures with the element of disclosure branched into quality and quantity which we find to be highly correlated. Despite general postulation that disclosure quality and quantity will decline after relaxation, our results suggest otherwise. The departure is however largely attributed to companies' responses to investors' demand for enhanced disclosure following high-profile corporate failures. Furthermore, we also investigate the association between cost-of-equity capital and the quality and quantity of disclosure. Our findings are consistent with economic theory which advocates a negative relationship between them, suggesting that disclosure levels have a part to play in asset-pricing models.

KEYWORDS: Disclosure Level, Cost of Equity Capital, IPO, Singapore

1 INTRODUCTION

Massive cases of corporate fraud and mismanagement in the past decade prompted the Singapore government into undertaking measures to reinforce the economy's governance structure. In conjunction with the call for increased investor protection, Singapore Exchange Limited (SGX) drew up and enforced more stringent listing requirements.

Of particular concern to this article would be the ruling effected in September 1999, which made it mandatory for initial issuers to prepare their prospectuses according to the standards laid out in the IOSCO¹ document. This regulation was contemporaneous with the economy's desire to undergo a transition from a merit-based regime to a predominantly disclosure-based philosophy.

However, heading into the 21st century, the government recognized that in order for Singapore to flourish as a regional hub for corporate finance, regulations have to be relaxed to attract more listings, including those of foreign entities. Therefore from July 2002, the IOSCO document was rendered voluntary. In effect, the adequacy of prospectus disclosure would be determined subject to a general test prescribed by the law instead of the prior checklist approach.²

This paper thus seeks to understand the impact of this recent transition from mandatory disclosure to voluntary disclosure on the cost-of-equity capital borne by SGX registrants. Specifically, we focus on disclosure for corporate governance practices which have received much attention following the fall of WorldCom and Enron. Despite extensive research on the association between the levels of ongoing disclosure and listed firms' costs-of-capital, there had been little research focusing on the relationship between corporate governance disclosure levels in prospectuses and the cost-of-capital incurred by issuers. An understanding of this underlying relationship allows for a preliminary investigation of the justification for SGX's relaxation stance.

To investigate the effects of the deregulation on the quality and quantity of disclosure for Initial Public Offering (IPO) firms, prospectuses for companies which went listed before and after the transition are assessed, with a Disclosure Score (DSCORE) assigned accordingly.³ By examining the relation between the DSCOREs and the costs-of-capital, we want to shed light on the issue whether disclosure of corporate governance practice is useful in reducing the cost of capital.

The remainder of the paper is organized as follows. Section II provides a review of prior research that serves to establish the methodology adopted in this paper. Section III describes the data and research design. Results are presented in Section IV. We conclude in Section V with a summary of our results.

¹ IOSCO stands for the International organization for governmental securities commissions. It was formed in 1983 with the primary objective of promoting high standards of regulation in order to maintain just, efficient and sound markets.

² Announcements regarding changes to disclosure requirements on IPO prospectuses can be obtained on the SGX website under 'listing manual amendments'. Alternatively, it can be also be found at http://www.saicsa.org.sg/documents/SGX_new_LM.doc

³ Please see appendix 2 for the scheme for scores-assignment.

2 LITERATURE REVIEW

2.1 Disclosure Levels prior to and after relaxation of requirements

The pledge of commitment towards surplus voluntary disclosure is primarily motivated by three significant benefits. First, Diamond and Verrecchia (1991) and Kim and Verrecchia (1994) argued that voluntary disclosure reduces the information asymmetries between informed and uninformed investors. The resultant enhancement of investors' confidence in turn boosts the liquidity of stocks. Second, if management's private information is not fully revealed through required disclosures, forthcoming voluntary disclosure actually helps to lower the cost of information acquisition for analysts (Bhushan, 1989; Lang and Lundholm, 1999). This argument is further supported by Lang and Lundholm (1993), which found that firms with more informative disclosures have larger analyst followings, less dispersion in analyst forecasts and less volatility in forecast revisions, translating into increased information intermediation. Third, the lemons problem in the capital market creates an incentive for managers to provide voluntary disclosure to reduce the cost-of-capital. Grossman and Hart (1980) advocated that firms with private information about its product's quality will voluntarily disclose their information as a signal to distinguish themselves from firms of lower quality. Similarly, management has a strong interest in ensuring adequate levels of disclosure since a lower cost-of-capital makes it less likely that the firm will fail (Easterbrook and Fischel, 1991).

However, disclosure is not costless. Actually, a number of firm-borne costs related to disclosure prevent the firm from disclosing more in spite of the apparent capital benefit. On one hand, the disclosure of corporate governance issues such as the remuneration bands of individual directors and executive officers can be adverse to firms' talent-retaining efforts. Similarly, details concerning a firm's corporate governance structures may actually be proprietary in nature. As such, the disclosure of practices pertaining to a well functioning corporate governance and control system may be detrimental to the company's interests through the erosion of the firm's strategic competitiveness and its ability to earn above-average returns (Hitt, Ireland & Hoskisson, 2003). As such, firms may shy away from disclosing details pertaining to corporate governance practices. On the other hand, increased disclosure will presumably make it more difficult for controlling shareholders to divert corporate resources to their benefit and to engage in tunneling. The more information disclosed about the ongoing activities within the firm, the easier it is for the shareholders and regulators to uncover diversion (Ferrell, 2004).

Such kind of cost is particularly relevant in Singapore's context due to the predominant characteristic of concentrated ownership structure of firms listed on SGX. Fan and Wong (2002) indicated that a high level of concentration of control is present in East Asian corporations with Singaporean firms displaying an average of 26% of the voting rights in the hands of the largest shareholder. Furthermore, 50% of Singapore firms are family owned with most of the family owners having a high degree of voting control over the firms. Under concentrated ownership, conflicts of interest often arise between controlling and minority shareholders, with the formers' decisions giving rise to the expropriation of the minority shareholders (Shleifer and Vishny, 1997; La Porta et al, 1999).

Although empirical evidence suggests that firms might opt to disclose more than required, SGX carried on to ease the disclosure requirements with the intention of facilitating initial listings, which will consequently help to attract registrants. Assuming that SGX were to be successful in achieving its objective, issuers should be observed to take advantage of the newly-granted discretion. This implies that firms listed after the implementation of the relaxation regulation should exhibit lower levels of disclosure in terms of quality and quantity in contrast to firms listed prior to the deregulation.

2.2 Association between disclosure levels and the cost-of-equity capital

According to the disclosure theory, it is largely advocated that disclosure and the cost-of-equity demonstrate a negative association (Healy and Palepu, 2001). This is justified primarily by the ability of increased disclosures to reduce the information asymmetry between managers and investors (Diamond and Verrecchia, 1991; Botosan, 1997).

There are two channels through which reduced information asymmetry brings about a lower cost-of-capital. Firstly, investors demand a risk premium for bearing information or estimation risk. To the extent that increased disclosure decreases estimation risk, the resultant reduction in risk premium and the required rate of return will effectively lower the cost-of-capital (Merton, 1987). Complementarily, stock market liquidity is perceivably enhanced by the reduced asymmetry thus lowering the cost-of-capital through reduced transaction costs (Amihud and Mendelson, 1986). Alternatively, the disclosure theory also predicts an increase in the cost-of-equity if disclosure induces increased stock price volatility (Botosan and Plumlee, 2002), decreased liquidity (Woodward, 2003), inadvertent release of proprietary information (Verrecchia, 1983) or an increase in litigation risk (Skinner, 1994).

While theory relating the level of disclosure and the firm's cost-of-capital is compelling, the empirical results have so far been mixed, depending on the disclosure metric and research design used respectively.

Botosan (1997) modeled the cost-of-equity capital (proxied by the implied cost-of-capital derived from Ohlson's residual income model) as a function of market beta, firm size and disclosure rank (proxied by her self-constructed measure of disclosure quantity) but failed to detect an unconditional negative association between her disclosure rank and the cost-of-capital. She did however document a significant relationship for her sample of firms with low analyst following. Hail (2002) performed a similar study with the disclosure proxy being the firm ranking for 27 disclosure items measured by the Swiss Banking Institute and succeeded in documenting a significantly negative association between disclosure level and cost-of-capital.

In contrast, Botosan and Plumlee (2002) found conflicting evidence on the association between disclosure and cost-of-capital. Using the total AIMR rankings of disclosure quality, they did not find any association between disclosure level and the cost-of-capital. However, decomposition of their disclosure scores gave rise to varied conclusions. Particularly, annual report scores were found to be significantly negatively related to the cost-of-capital, other publications scores were significantly positively related to the cost-of-capital while the investors' relations scores were unrelated to the cost-of-capital.

Our research focuses on the level of disclosure concerning corporate governance practices. The motivation is fuelled by recent trends of escalating awareness for corporate governance in public firms. If investors actually deem the disclosure of governance issues in prospectuses as being material and relevant to their purchase decision making, variation in the extent of disclosure ought to exhibit an impact on issuers' cost-of-capital. Instinctively, we expect to observe a negative relationship between the extent of governance disclosure and the cost-of-capital.

3 RESEARCH METHODOLOGY

3.1 Sample size

The IOSCO document of international disclosure standards for initial listings were passed in September 1998 and were subsequently adopted and incorporated by SGX (Singapore Exchange Limited) into its listing manual. However, in July 2002, SGX rendered previously mandatory disclosures required under the IOSCO document voluntary. Hence, in order to study the effect of the deregulation, we will take a sample of firms that went listed between September 1998 and December 2003.

Using the database in Thomson One Banker Analytics, we extract financial information of the 584 firms listed on SGX. We further identify among them the 287 firms listed between September 1998 and December 2003 (hereafter IPO firms). The remaining 297 firms listed prior September 1998 (hereafter non-IPO firms) will be used for control in our analysis. After excluding firms whose prospectus we are unable to obtain, the number of IPO firms is reduced to 133 firms. The breakdown is shown below:

1. Firms went listed between September 1998 and June 2002: 85 firms;
2. Firms went listed between July 2002 and December 2003: 48 firms.

To examine the relation between cost-of-capital and firm's disclosure level, both prospectuses and financial information of IPO firms are needed. Hence, firms without the necessary financial information are eliminated, and this further reduces our sample size to 64 firms.

3.2 Disclosure levels prior to and after relaxation of requirements

3.2.1 Checklist of Prospectus Disclosure

Owing to an absence of readily available disclosure indexes, we compose a checklist drawn from guidelines provided by the IOSCO document. The document was issued as a recommendation for the development of a generally-accepted body of non-financial prospectus disclosure standards. It helps to ensure a high level of investor protection by enhancing the comparability of information. SGX adopted the standards in September 1999.

However, the disclosure requirements for prospectuses laid down by the IOSCO document are extensive and elaborate. Since our paper aims to examine the disclosure levels of IPO issuers with regard to corporate governance structures, we make further reference to the Singapore Code of Corporate Governance (hereafter addressed as the Code). The Code was issued by the Corporate Governance Committee in March 2001. It was drafted to secure sufficient disclosure for investors who can then assess a company's governance practices and thereafter respond in an informed manner. Though compliance with the Code is not mandatory, listed firms have to provide explanations for deviations from the Code in their annual reports.

In effect, the checklist encompasses components which relate to the three main sections of the Code, namely Board Matters, Remuneration Matters and Accountability and Audit. The list is not meant to be exhaustive but is intended to include the primary factors to be considered by investors in determining the soundness of corporate governance structures. A detailed checklist is enclosed in Appendix 1.

3.2.2 Rationales for the selection of checklist categories

i) Group Structure

It is necessary for investors to know about the company's position within its group. In particular, investors should pay attention to excessive complexities in the group structure which may suggest establishments of special-purpose-entities intended for shareholder expropriation. Jian and Wong (2003) found that firms controlled by a corporate group engage in relatively more related-party transactions. Specifically, group-controlled listed firms report abnormally high levels of related-party sales, primarily to their controlling shareholders and other member firms. This is especially rampant during the issuance of new equity which provides incentives for the inflation of earnings. Furthermore, during the emerging markets crisis of 1997-1998, earnings of troubled firms within a group were often manipulated upwards with cash and profits being diverted away from other group members (Johnson et al, 2000).

ii) Directors and Senior Management

Disclosures regarding the activities performed by directors outside the company are required for prospective investors to assess their inclination of entering into related-party transactions which may undercut shareholder value. Investors may also evaluate the independence of directors by examining the nature of family relationships between them and other employees.

iii) Remuneration of Directors and Senior Executives

Disclosures are required for investors to assess the reasonableness of remuneration packages offered to directors and top executives. Shareholders should be notified of the amounts and weightages of the various compensation components. The duties of the remuneration committee should also be disclosed to facilitate an understanding of the role it plays in determining compensation policies. Moreover, the basis of determination for variable wage components like bonuses should be defined. This is especially important if the directors and top executives were to be related by blood or marriage. Shareholders can then evaluate whether the above-mentioned are adequately compensated based on merit or severely overpaid by virtue of relationships. Of particular concern to shareholders would be problems inherent within the company's option plan.

The adoption of large-scale option-based remuneration potentially introduces a range of undesirable incentive compatibility problems to the firm governance equation. Specifically germane to the investors would be the growing evidence of dubious executive behavior associated with share option schemes (Watts and Zimmerman, 1986). Prospective investors should therefore examine the weightage of executive compensation accruing from stock options within the remuneration package. This will aid in their appraisal of the executives' propensity to engage in acts of opportunism with the deliberation of maximizing payoffs from share options.

Particularly, CEOs have been found to manipulate the timing of voluntary disclosures to facilitate the expropriation of higher remuneration from the firm without corresponding increases in value for the shareholders (Carlin and Ford, 2004). Furthermore, executives have been accused of engaging in financial reporting fraud to boost their firms' stock prices in view of impending expiration of their options (Rittenberg and Schwieger, 2004). All these disturbing illustrations ought to be taken into consideration by prospective investors.

iv) Board Practices

The primary function of the audit committee is to oversee the firm's financial reporting process. Indeed, earnings have been found to exhibit increased informativeness to market

participants upon the formation of audit committees (Wild, 1994). Moreover, earnings overstatements are less prevalent for firms which have audit committees (Defond and Jiambalvo, 1991).

However, above research has largely ignored the relationship between the composition of audit committees and their resultant effectiveness. Klein (2000) discovered that a non-linear negative relation exists between audit committee's independence from management and the extent of earnings manipulation. Xie, Davidson and Dadalt (2001) also noted that the presence of corporate executives and investment bankers on audit committees are associated with reduced earnings management. This arises from increased competence and experience which allows for a better understanding and detection of earnings management. Consequentially, it is necessary for the prospective investors to take into account the existence, composition, activeness and scope of duties of audit committees.

v) Substantial Shareholders

The identities of substantial shareholders (holding at least 5% of the firm's equity) along with their effective equity holdings and special voting rights are critical to prospective investors especially in the face of tunneling. Indeed, Johnson, La Porta, Silanes and Shleifer (2000) presented tunneling in a variety of forms, ranging from the expropriation of corporate opportunities by controlling shareholders, to the transfer of assets to controlling shareholders at non-market prices.

vi) Related-party Transactions

Agency theory suggests that related-party transactions may be generated by opportunism. Indeed, it is suggested that such transactions are often associated with weaker corporate governance (Kohlbeck & Mayhew, 2004). Comprehensibly, these transactions could give rise to agency costs in the forms of transferred benefits to related-parties at the expense of shareholders as well as increased opportunity for the management to manipulate financial statements. Notably, Enron engaged in a series of large transactions with related entities which created earnings that should not have been recognized (Swartz and Watkins, 2003).

Given the innate agency costs associated with related-party transactions, prospective investors thus have incentives to monitor the firm's pre-listed activities so as to gauge the likelihood of the realization of agency costs mentioned above.

vii) Plan of Distribution

The rationales underlying the inclusion of this category within the checklist are in conjunction with those mentioned earlier on under the category of substantial shareholdings. Furthermore, knowledge of any intended subscriptions in the offerings by existing major shareholders or directors could pose as a signal of confidence in the company's prospects since insiders are often equipped with more potent private information relative to the public (Rock, 1986).

3.2.3. Point-assignment scheme

The point-assignment scheme relating to each firm's disclosure practices (both quality and quantity) is aligned to the score system conceptualized by Botosan (1997). Appendix 2 provides an elaboration of the point assignment scheme for the disclosure checklist. To obtain the scores for the quality of disclosure, we execute a summation of all the points allocated to

each firm on all the checklist items. The rationale is that a firm which exercises more precision and depth by providing more detailed descriptions of its corporate governance structures is one which has a higher quality of disclosure. Similarly, to obtain the scores for the quantity of disclosure, we sum up the weighted points allocated to each firm for all the sub-categories of disclosure components. The underlying rationale is that a firm which provides more descriptions is one which has a higher quantity of disclosure.

3.3 Association between disclosure levels and the cost of equity capital

3.3.1 The Model

Most asset pricing models have ignored the fact that firm's disclosure level does have an impact on the cost-of-equity capital [Botosan, 1997]. Thus, we factor the prospectus disclosure level of IPO firm into our model composed as follows, and regress the cost-of-equity capital on the disclosure score (DSCORE)⁴.

$$\text{AdjRe} = \beta_0 + \beta_1\text{Beta} + \beta_2\text{D/B} + \beta_3\#\text{Ann} + \beta_4\ln(\$Vol) + \beta_5\text{Ltg} + \beta_6\text{B/M} + \beta_7\text{Trnovr} + \beta_8\text{AdjDSCORE} + \varepsilon$$

Where AdjRe = Industry-adjusted cost-of-equity

Beta = Market beta

D/B = Book leverage

#Ann = Number of analyst following

ln(\$Vol) = Natural log of dollar volumeTP⁵PT

Ltg = Long-term growth rate

B/M = Book-to-market ratio

Trnovr = Daily turnover

AdjDSCORE= Industry-adjusted disclosure score

Besides, to test the robustness of the relationship between DSCORE and cost-of-equity, two additional tests are performed. Firstly, we derive two sets of DSCOREs, one in terms of quantity (AdjDS_Quant), and the other in terms of quality (AdjDS_Qual) and then regress the cost-of-equity on each of them. Secondly, we obtain a new set of control variables using the Pearson correlation and regress the cost-of-equity on these variables.

3.3.2 Cost-of-capital computation

⁴ We arrive at our main model through the elimination of potential multi-collinear variables using Spearman rank correlation as will be discussed in section 4.2.1. The fundamental model is as follows:

$$\text{AdjRe} = \beta_0 + \beta_1\text{Beta} + \beta_2\text{D/B} + \beta_3\text{D/M} + \beta_4\ln(\text{Size}) + \beta_5\#\text{Ann} + \beta_6\ln(\$Vol) + \beta_7\text{DispFest} + \beta_8\text{Ltg} + \beta_9\text{B/M} + \beta_{10}\text{Trnovr} + \beta_{11}\text{AdjDSCORE} + \varepsilon$$

⁵ We use the natural log transformation of \$Vol and Size to minimize the influence of outliers caused by considerable variations in firm-size.

The cost-of-equity estimates derived from average realized returns have proven disappointing in many regards. For example, after extensive testing of CAPM and three-factor based industry cost-of-capital, Fama and French (1997) conclude that these cost-of-capital estimates are “unavoidably imprecise.” Instead of using ex-post mean returns, we use an implied cost-of-capital computed from a discounted residual income valuation model (Gebhardt, Lee and Swaminathan, 2000). In other words, we estimate the rate of return that the market implicitly uses to discount the expected future cash flows of the firm.

Implied cost-of-equity is computed as the internal rate of return that equates the present value of expected future cash flows to the current stock price. This requires forecasting cash flows up to a terminal period and determining an appropriate terminal value to capture the value of cash flows beyond the terminal period. We implement this procedure using the residual income model (RIM).⁶ RIM is algebraically equivalent to the dividend discount model, but it provides better intuition on the role of economic profits on stock valuation.⁷

We follow closely to the method employed by Gebhardt, Lee and Swaminathan (2000) albeit with some modifications. Firstly, we forecast earnings up to twelve future years and estimate a terminal value for cash flows beyond year twelve. Secondly, based on SGX industry classifications, we compute the target industry ROE which is the median of past ROEs (year 1998 to 2003) from all firms in the same industry. Thirdly, we use data from Thomson First Call to obtain earnings forecasts for the next three years.⁸ Lastly, we compute future book values using the dividend payout ratio from Thomson Financial and earnings forecasts from Thomson First Call as follows: $B_{t+1} = B_t + FEPS_{t+1} (1 - k)$, where k is the dividend payout ratio.

Fama and French (1997) document industry effect on cost-of-equity. In other words, the market tends to consistently assign a higher (or lower) discount rate to certain firms and industries. Gebhardt, Lee and Swaminathan (2000) also document a similar result which reaffirms the industry effect on the cost-of-equity. Therefore, we use the industry adjusted cost-of-equity in the regression model instead of the unadjusted one to resolve this problem. For DSCOREs, we also adjust them with industry means in anticipation that firms in different industries will tend to disclose at different levels.

Our research stretches over a period of time from 1998 to 2003, during which the structure changes might lead to fluctuations in the cost-of-equity. To tackle this problem, we compute the industry mean of cost-of-equity by year of the non-IPO firm and make adjustment to the IPO firm in the same industry accordingly.⁹

3.3.3 Control Variables

⁶ The model is sometimes referred to as the Edwards-Bell-Ohlson (EBO) valuation equation. Recent implementations of this formula are most often associated with the theoretical work of Ohlson (1991, 1992, 1995) and Feltham and Ohlson (1995). Earlier theoretical treatments can be found in Preinreich (1938), Edwards and Bell (1961), and Peasnell (1982). Recent papers that empirically implement the residual income model include Bernard (1994), Abarbanell and Bernard (1995), Penman and Sougiannis (1997), Frankel and Lee (1998, 1999), Lee, Myers and Swaminathan (1999) and Dechow et al. (1999).

⁷ Residual income model is identical to the dividend discount model, but expresses firm value in terms of accounting numbers. Thus, it relies on the same theory and is subject to the same theoretical limitations as the dividend discount model.

⁸ Thomson First Call analysts supply a one year ahead ($FEPS_{t+1}$) and a two year ahead ($FEPS_{t+2}$) EPS forecast, as well as an estimate of the long-term growth rate (Ltg).

⁹ For the computation of cost of capital of control firm, closing price on June 30 of the year is selected.

The following control variables included in our regression model are risk factors supported by theory and/or prior empirical research. All the source data are extracted from Thomson Financial.

Market Beta

Market beta is included to capture its hypothesized role in the CAPM (Litner, 1965; Mossin, 1966; Sharpe, 1964). Consistent with theory, a positive association between expected cost-of-equity and market beta is anticipated.

Financial Leverage

Modigliani and Miller (1958) suggest that a firm's cost-of-equity should be an increasing function of the amount of debt in its capital structure. Fama and French (1992) document a positive relation between market leverage and ex-post mean stock returns. Gebhardt, Lee and Swaminathan (2000) also suggest looking at the relation between book leverage and implied cost-of-equity. Thus, D/B, the ratio of total long-term debt to total book value of equity, and D/M, the ratio of total long-term debt to the total market value of equity are selected. A positive association between expected cost-of-equity and financial leverage (D/B and D/M) is anticipated.

Market Value of Equity

Banz (1981) establishes a negative association between firm size, as measured by the market value of equity, and realized returns. Berk (1995) argues that unless the empirical model for expected returns is complete, a negative association between market value and expected cost-of-equity will be observed. Thus, we expect a negative association between expected cost-of-equity and market value of equity.

Number of Analyst Following

Gebhardt, Lee and Swaminathan (2000) hypothesized the number of analysts as a proxy for the risk of investing. They suggest that risk of investing and thus cost-of-equity increases when information about the firm is more difficult to obtain. Brennan, Jegadeesh and Swaminathan (1993) report that stocks with greater analyst coverage react faster to market-wide common information compared to those with less analyst coverage. Therefore, we expect firms with greater analyst coverage to have a lower cost-of-equity.

Dollar Trading Volume

Amihud and Mendelson (1986) suggest that cross-sectional differences in liquidity affect expected returns. Brennan, Chordia, and Subrahmanyam (1998) show that average dollar trading volume is negatively correlated with future returns. Therefore, we expect stocks with higher trading volume to have lower cost-of-equity.

Dispersion of Analyst Forecast

Gebhardt, Lee and Swaminathan (2000) document a positive relationship between dispersion of analyst forecasts and implied cost-of-capital. We use the standard deviation of EPS current mean forecast one year ahead from the Thomson First Call as the proxy for the dispersion of analyst forecasts. We expect firm with high dispersion of analyst forecast to have high cost-of-equity.

Expected Growth in Earnings

La Porta (1996) demonstrates a negative association between realized returns and expected earnings growth but concludes that this is most likely due to systematic pricing errors. However, Botosan and Plumlee (2001) suggest a positive association between the expected cost-of-equity and long-term earnings growth will be observed, as expected cost-of-equity is an only function of risk. Since the dependent variable in our analysis is expected cost-of-equity, we predict a positive association with expected earnings growth. We use the mean current long-term earnings growth rate when it is available and the ratio of FY2 to FY1 if it is not available.

Book-to-Market

Fama and French (1992) and Lakonishok, Schleifer and Vishny (1994) document a positive association between book-to-market and realized returns. Gebhardt, Lee and Swaminathan (2001) establish a similar association with their measure of expected cost-of-equity capital. Accordingly, we expect to observe a positive association between expected cost-of-equity and book-to-market.

Turnover

Lee and Swaminathan (2000) find that average daily turnover (defined as daily shares traded divided by daily shares outstanding) provides information on the level of investor neglect or attention in a stock and, therefore, on whether a stock is undervalued or overvalued. Accordingly, we expect high turnover firms to have lower cost-of-equity.

3.3.4 Additional Issues on IPO

Empirical work documents the underpricing and underwriter price support phenomenon of IPOs in many countries. This poses problems to our research with the volatile stock prices they bring about in the first few days of trading. Asquith, Jones and Kieschnick (1998) document that underwriter's price stabilization lasts for up to four weeks. Thus, in this research, we use the data forty days after the IPO firm is listed. This is to eliminate any mispricing effect caused by price support of the underwriters.

4 RESULTS OF ANALYSIS**4.1 Effects of deregulation on disclosure levels**4.1.1 Descriptive statistics

Table 1 provides the descriptive statistics of our experimental variables for analysis of disclosure levels. DS_Quant has a mean of 14.29 and a median of 13.75 while DS_Qual has a mean of 21.95 and a median of 21.00. The minimum for DS_Quant is 9.42 while that for DS_Qual is 15.00. For both variables, there is at least one firm achieving a perfect score of 20 and 30 respectively.

Table 2 presents the descriptive statistics of all our independent variables and dependent variable for the analysis of cost of equity capital. For the unadjusted cost-of-capital (Re), it has a mean of about 0.16 and a median of 0.12, with a standard deviation of 0.18.

4.1.2 Trend analytical test

One possible explanation why we observe an increase in disclosure level is because we have left out some exogenous factors in our analysis. Specifically, higher levels of disclosure may arise due to issuers' responses to increased demands of public information by the investors, following the exposure of several high-profile corporate failures.

Instead of segregating our IPO firms into two main classes (pre- and post-deregulation), we now categorize them into six groups using a mid-year cut-off, from July to June of the next year. We begin with group 1 which comprises firms listed before July 1999 and end with group 6 consisting of firms listed after July 2003.

Figure 1 depicts the trend of the quantity of disclosure made by issuers over the period whereas Figure 2 portrays the trend of the quality of disclosure made over the same period. Some interesting observations can be made from the Figures. Firstly, the quantity and quality facets of disclosure are adjudged to move in tandem. This implies that firms which disclose more also tend to disclose with higher precision and depth.

Secondly, for the period before July 2002, both Figures 1 and 2 exhibited only gradual increments in the levels of disclosure quantity and quality. This was however followed by a considerable upward jump in the period between July 2002 and June 2003. We believe that the underlying cause for the tremendous escalation is the desire of investors to gain more assurance in the quality of their investments through better disclosure practices, especially after the world witnessed the spectacular collapse of WorldCom in July 2002. This is despite the efforts of SGX to relax the disclosure requirements with effect from the same month.

Intuitively, we would have expected to observe a sustained upsurge in the disclosure levels for the period after June 2003 of at least equal magnitude. There are two reasons attributing to our anticipation. Firstly, the deregulation implemented by SGX in the previous year was seemingly ineffective. Secondly, investors continue to demand higher levels of disclosure which culminated in the implementation of the Sarbanes Oxley Act in the US in June 2003.

However, as seen in Figures 1 and 2, firms that were listed from July 2003 onwards, exhibited only a mild increase in disclosure levels. This observation is divergent from our earlier expectation, which thus suggests that SGX's relaxation regulation may have a part to play in decelerating the rapid upsurge of disclosure levels. This perceivably provides supporting evidence for the effectiveness of the deregulation. More importantly, it implies that in the absence of extraneous factors discussed above, deregulation should lead to a decline in the issuers' disclosure levels as hypothesized.

4.2 Disclosure level and cost-of-capital

4.2.1 Multivariate analysis of the association between cost-of-equity and DSCORE

Correlation between independent variables makes it difficult for us to draw inferences if all of them were to be included in the regression model. Therefore, to derive a more parsimonious model, we need to examine their pair-wise correlations. Table 3 reports the Spearman and Pearson rank correlations computed among our independent variables. For each collinear pair, we eliminate the variable which is more highly correlated with our experimental variables of AdjDS_Quant and AdjDS_Qual. Additionally, AdjDS_Quant and

AdjDS_Qual are also found to be highly correlated with a Spearman (Pearson) correlation coefficient of 97.6% (97.7%).

For the Spearman (Pearson) correlation test, we single out the following variables as explanatory variables in the model together with Beta, Ltg and Trnovr: D/B, #Ann, ln(\$Vol) and BM (DM, #Ann, ln(\$Vol) and ln(size)). The three former variables are included in the parsimonious set of factors by virtue of the absence of significant correlation between each of them and the rest of the independent variables.

Subsequently, we turn to examine the relation between the cost-of-equity and adjusted DSCORE. Table 4 presents the results of estimating regressions with and without employing DSCOREs as explanatory variables. In panel A, the control variables are selected by looking at the Spearman rank correlation. In panel B, the control variables are selected by looking at the Pearson correlation. Both the results in panels A and B suggest there is incremental explanatory power of both adjusted DSCOREs in relation to cost-of-equity, after controlling for industry effects.

Each panel in Table 4 reports multiple regression results for three different model specifications. Model 1 in panel A (panel B) involves only the control variables selected under Spearman (Pearson). Model 2 includes AdjDS_Quant to Model 1 while Model 3 includes AdjDS_Qual to Model 1. The association between AdjRe and each of the control variables is consistent with our expectation, with Beta, D/M, D/B and #Ann being the exception. However, their correlation coefficient is not significant. In addition, Gebhardt, Lee and Swaminathan [2000] also document a similar finding on beta and they conclude that beta is only of limited importance in the market assessment of a stock's systematic risk.

With reference to Model 1 in panel A(panel B), only the coefficients of ln(\$Vol), Ltg, and Trnovr are statistically significant at p-value less than 5%(5%), 1%(5%), and 10%(10%) respectively. For Model 2 in panel A(panel B), only the coefficients of ln(\$Vol), Ltg, and AdjDS_Quant are statistically significant at p-value less than 5%(5%), 1%(1%), and 5%(10%) respectively. Whereas, for Model 3 in panel A(panel B), only the coefficients of ln(\$Vol), Ltg, and AdjDS_Qual are statistically significant at p-value less than 5%(5%), 1%(5%), and 10%(10%) respectively.

Therefore, we conclude that there is at least some extent of significant negative relationship between DSCORE and cost-of-equity. Further, there is at least some extent of significant negative relationship between adjusted DSCORE and cost-of-equity for either set of control variables selected using Spearman or Pearson correlation. These two tests mentioned above have made our findings more robust. An additional observation made is that Trnovr coefficient becomes insignificant after DSCORE is added to the model.¹⁰

Adjusted R-square is 14.9%(17.0%) for Model 1 panel A(panel B), 19.8%(20.5%) for Model 2 panel A(panel B), and 18.8%(19.7%) for Model 3 panel A(panel B) which suggest that quantity of disclosure explains an incremental change of 4.9%(3.5%) in cost-of-equity whereas quality of disclosure accounts for 3.9%(2.7%). We conclude that, all else equal, firms with higher disclosure levels for either quantity or quality will experience lower cost-of-equity.

¹⁰ It is most probably due to the fact that DSCORE provides information that decreases the effect of Trnovr which is essentially a mispricing variable on stock. This means that DSCORE may have reduced the information asymmetry and thus enable investor to assign a proper cost-of-equity to the stock consistent with empirical findings of other researchers.

5 CONCLUSION

In this paper, we examine two main issues, namely the impact that a deregulation of disclosure requirements has, on the levels of governance disclosure in issuers' prospectuses, and the relationship between manifested disclosure levels and the corresponding cost-of-equity capital.

Our results indicate that there is a statistically significant increase in both the quantity and quality of disclosure after the deregulation, posing suspicion on its effectiveness. Subsequent trend analysis however displaces the suspicion by providing support that relaxed requirements have indeed helped to decelerate observed escalations in the disclosure levels arising from investors' demand for enhanced disclosures. This therefore implies that SGX may have successfully induced a lower disclosure level, but whether this helps to attract more IPOs warrants further investigation.

Moreover, our multivariate regression test has revealed a significantly negative relationship between both the quantity and quality of disclosure with the equity cost-of-capital. This observation is synchronized with both traditional economic theory and recent efforts to incorporate disclosure scores into asset pricing models.

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Table 1. Descriptive Statistics for DSCORE

DS_Quant represents DSCORE for Quantity of disclosure and DS_Qual represents DSCORE for Quality of disclosure. The above descriptive statistics are for sample firms in hypothesis I.

		Mean	Std. Dev	Median	Min	Max
DS_Quant	33	14.29	2.60	9.42	9.42	20.00
DS_Qual	33	21.95	3.57	13.75	15.00	30.00

Table 2. Descriptive Statistics on firm factors, estimated cost of capital and DSCORE

In this table, Beta is a measure of the sensitivity of a stock's price to the movement of an index (S&P 500) extracted from Thomson Financial, the Beta factor is the slope of a straight line fitted to 156 observations of weekly relative price changes. These observations are equal to the ratio of the weekly percent price change in a particular stock to the weekly percent change of the S&P 500. D/B represents the book leverage ratio, it is calculated using the debt of the firm, book value per share and share outstanding on Thomson Financial Database. D/M represents the market leverage, it is calculated using debts, market value per share and common share outstanding. #Ann represents the number of analysts following. \$Vol represents dollar volume, it is calculated using price of share multiply volume of shares traded. Size represents market capitalization of the firms. DispFcst represents dispersion in analyst forecast. Ltg represents long term growth rate of firms. B/M represents book to market ratio, it calculated using book value per share divided by market value per share. Trnovr represents the daily turnover. AdjRe is the estimated industry adjusted cost of capital. AdjDS_Quant is the adjusted Disclosure Score(DSCORE) on the information provided in the prospectus in term of quantity. AdjDS_Qual is the adjusted Disclosure Score(DSCORE) on the information provided in the prospectus in term of quality. The above descriptive statistics is for hypothesis II.

Variable	Beta	D/B	D/M	#Ann	ln(\$Vol)	ln(Size)	DispFcst	Ltg	B/M	Trnovr	AdjRe	AdjDS_Quant	AdjDS_Qual
N	64	64	64	64	64	64	64	64	64	64	64	64	64
Mean	1.000	1.334	0.28	4.030	1.946	4.851	0.007	0.327	0.437	0.017	0.006	0.000	0.000
Std. Dev.	0.806	3.147	0.62	4.549	0.346	1.774	1.774	0.508	0.607	0.023	0.176	2.608	3.607
Median	1.015	0.135	0.04	2.000	2.003	4.463	0.001	0.224	0.251	0.008	-0.020	-0.489	0.000
Max	2.940	18.746	3.54	21.000	2.465	9.127	0.109	2.500	2.521	0.124	0.860	4.476	6.000
Min	-2.070	-1.852	0.00	1.000	-0.077	1.819	0.000	-0.692	-0.544	0.000	-0.154	-5.266	-8.000

Table 3. Pearson and Spearman correlation test

The correlation table is split into two with the top right triangle representing Pearson correlation and the bottom left represent Spearman correlation. Table values are 1) parameter estimates, 2) p-values (in parentheses). Variable descriptions: Beta is a measure of the sensitivity of a stock's price to the movement of an index (S&P 500) extracted from Thomson Financial, the Beta factor is the slope of a straight line fitted to 156 observations of weekly relative price changes. These observations are equal to the ratio of the weekly percent price change in a particular stock to the weekly percent change of the S&P 500. **D/B** represents the book leverage ratio, it is calculated using the debt of the firm, book value per share and share outstanding on Thomson Financial Database. **D/M** represents the market leverage, it is calculated using debts, market value per share and common share outstanding. #Ann represents the number of analysts following. \$Vol represents dollar volume, it is calculated using price of share multiply volume of shares traded. Size represents market capitalization of the firms. DispFest represents dispersion in analyst forecast. Ltg represents long term growth rate of firms. B/M represents book to market ratio, it calculated using book value per share divided by market value per share. Trnovr represents the daily turnover. AdjRe is the estimated industry adjusted cost of capital. AdjDS_Quant is the adjusted Disclosure Score(DSCORE) on the information provided in the prospectus in term of quantity. AdjDS_Qual is the adjusted Disclosure Score(DSCORE) on the information provided in the prospectus in term of quality. ** represent 0.01 level of significant(two tailed) and * represent 0.05 level of significant(two tailed).

	Beta	D/B	D/M	#Ann	ln(\$Vol)	ln(Size)	DispFest	Ltg	B/M	Trnovr	AdjRe	AdjDS_Quant	AdjDS_Qual
Beta	1	-0.09	-0.024	0.059	-0.010	0.052	0.020	0.021	-0.115	-0.095	-0.082	-0.210	-0.217
	0.	(0.478)	(0.848)	(0.641)	(0.938)	(0.681)	(0.877)	(0.868)	(0.365)	(0.456)	(0.522)	(0.096)	(0.085)
D/B	-0.134	1	0.516**	-0.140	0.135	0.530**	-0.127	-0.083	-0.157	-0.019	-0.132	0.136	0.122
	(0.291)	0.	(0.000)	(0.270)	(0.286)	(0.000)	(0.318)	(0.516)	(0.216)	(0.882)	(0.300)	(0.284)	(0.335)
D/M	-0.092	0.814**	1	0.019	0.009	0.043	-0.103	-0.063	0.220	-0.087	-0.140	-0.003	-0.029
	(0.470)	(0.000)	0.	(0.879)	(0.947)	(0.736)	(0.420)	0.619	(0.080)	(0.495)	(0.270)	(0.981)	(0.820)
#Ann	0.048	-0.077	-0.015	1	0.186	-0.05	0.728**	-0.09	-0.033	-0.148	0.067	-0.030	-0.024
	(0.704)	(0.547)	(0.909)	0.	(0.141)	(0.697)	(0.000)	(0.480)	(0.796)	(0.242)	(0.597)	(0.817)	(0.849)
ln(\$Vol)	-0.091	0.199	0.117	0.156	1	0.120	0.134	0.022	-0.112	0.055	-0.267*	-0.117	-0.107
	(0.476)	(0.114)	(0.356)	(0.220)	0.	(0.346)	(0.291)	(0.865)	(0.377)	(0.666)	(0.033)	(0.356)	(0.399)
ln(Size)	0.101	0.452**	0.123	-0.044	0.341	1	0.097	-0.072	-0.485**	0.148	-0.250	0.094	0.092
	(0.428)	(0.000)	(0.333)	(0.732)	(0.006)	0.	(0.446)	0.573	(0.000)	(0.242)	(0.047)	(0.459)	(0.469)
DispFest	-0.081	-0.073	-0.171	0.578**	0.088	0.102	1	-0.002	-0.153	-0.084	0.051	0.041	0.064

	(0.524)	(0.565)	(0.175)	(0.000)	(0.490)	(0.422)	0.	0.990	(0.227)	(0.509)	(0.691)	(0.748)	(0.614)
Ltg	-0.041	-0.215	-0.100	-0.111	-0.060	-0.113	-0.191	1	-0.019	0.254*	0.268*	-0.015	-0.052
	(0.749)	(0.088)	(0.432)	(0.382)	(0.638)	(0.372)	(0.131)	0.	0.879	(0.043)	(0.032)	(0.907)	(0.685)
B/M	-0.110	-0.041	0.193	0.040	-0.304*	-0.651**	-0.152	0.091	1	-0.111	0.197	0.141	0.146
	(0.388)	(0.749)	(0.127)	(0.756)	(0.015)	(0.000)	(0.231)	(0.475)	0.	(0.384)	(0.119)	(0.266)	(0.250)
Trnovr	-0.087	0.028	0.054	-0.153	0.131	0.081	-0.046	0.037	-0.045	1	-0.158	0.114	0.094
	(0.493)	(0.826)	(0.673)	(0.229)	(0.301)	(0.524)	(0.718)	(0.771)	(0.727)	0.	(0.211)	(0.369)	(0.460)
AdjRe	0.072	-0.149	-0.181	-0.003	-0.307*	-0.149	0.014	0.172	0.144	0.020	1	-0.189	-0.179
	(0.573)	(0.241)	(0.152)	(0.983)	(0.014)	(0.240)	(0.912)	(0.174)	(0.258)	(0.874)	0.	(0.134)	(0.158)
AdjDS-Quant	-0.266*	0.013	0.016	-0.066	-0.087	0.092	-0.101	0.045	-0.017	0.217	-0.199	1	0.977**
	(0.034)	(0.919)	(0.898)	(0.605)	(0.493)	(0.472)	(0.428)	(0.723)	(0.896)	(0.086)	(0.116)	0.	(0.000)
AdjDS-Qual	-0.274*	00.03	0.036	-0.078	-0.052	0.084	-0.084	0.027	0.022	0.226	-0.178	0.976**	1
	(0.029)	-00.812	(0.777)	(0.540)	(0.685)	(0.511)	(0.508)	(0.834)	(0.864)	(0.073)	(0.160)	(0.000)	0.

Table 4. Regression Result on estimated cost of capital and DSCORE

Panel A: Regression Result

	Intercept	Beta	D/B	In(\$Vol)	B/M	Ltg	Trnovr	#Ann		Adj.R ²
	(?)	(+)	(+)	(-)	(+)	(+)	(-)	(-)		
AdjRe	0.250*	-0.023	-0.002	-0.135**	0.039	0.118***	-1.589*	0.005		14.9%
	(0.051)	(0.373)	(0.726)	(0.032)	.(0.264)	(0.007)	(0.097)	(0.326)		
	Intercept	Beta	D/B	In(\$Vol)	B/M	Ltg	Trnovr	#Ann	AdjDS_Quant	Adj.R ²
	(?)	(+)	(+)	(-)	(+)	(+)	(-)	(-)	(-)	
AdjRe	0.281**	-0.033	2.633E-05	-0.154**	0.050	0.116***	-1.321	0.005	-0.017**	19.8%
	(0.026)	(0.208)	(0.997)	(0.014)	(0.148)	(0.006)	(0.158)	(0.261)	(0.040)	
	Intercept	Beta	D/B	In(\$Vol)	B/M	Ltg	Trnovr	#Ann	AdjDS_Qual	Adj.R ²
	(?)	(+)	(+)	(-)	(+)	(+)	(-)	(-)	(-)	
AdjRe	0.277**	-0.032	0.000	-0.150**	0.049	0.113***	-1.370	0.005	-0.011*	18.8%
	(0.029)	(0.217)	(0.946)	(0.017)	(0.159)	(0.008)	(0.146)	(0.273)	(0.062)	

Panel B: Regression Result

	Intercept	Beta	D/M	ln(\$Vol)	ln(Size)	Ltg	Trnovr	#Ann	
	(?)	(+)	(+)	(-)	(-)	(+)	(-)	(-)	Adj.R ²
AdjRe	0.351***	-0.025	-0.038	-0.136**	-0.015	0.111***	-1.595*	0.005	17.0%
	(0.007)	(0.332)	(0.251)	(0.028)	(0.222)	(0.010)	(0.095)	(0.330)	

	Intercept	Beta	D/M	ln(\$Vol)	ln(Size)	Ltg	Trnovr	#Ann	AdjDS_Quant	
	(?)	(+)	(+)	(-)	(-)	(+)	(-)	(-)	(-)	Adj.R ²
AdjRe	0.377***	-0.035	-0.038	-0.152**	-0.012	0.110***	-1.438	0.005	-0.015*	20.5%
	(0.004)	(0.177)	(0.237)	(0.014)	(0.297)	(0.009)	(0.125)	(0.296)	(0.070)	

	Intercept	Beta	D/M	ln(\$Vol)	ln(Size)	Ltg	Trnovr	#Ann	AdjDS_Qual	
	(?)	(+)	(+)	(-)	(-)	(+)	(-)	(-)	(-)	Adj.R ²
AdjRe	0.375***	-0.034	-0.040	-0.149**	-0.012	0.108**	-1.473	0.005	-0.010*	19.7%
	(0.004)	(0.186)	(0.220)	(0.016)	(0.290)	(0.011)	(0.117)	(0.302)	(0.096)	

Table values are 1) parameter estimates, 2) p-values (in parentheses). Variable descriptions: Beta is a measure of the sensitivity of a stock's price to the movement of an index (S&P 500) extracted from Thomson Financial, the Beta factor is the slope of a straight line fitted to 156 observations of weekly relative price changes. These observations are equal to the ratio of the weekly percent price change in a particular stock to the weekly percent change of the S&P 500. **D/B** represents the book leverage ratio, it is calculated using the debt of the firm, book value per share and share outstanding on Thomson Financial Database. **D/M** represents the market leverage, it is calculated using debts, market value per share and common share outstanding. #Ann represents the number of analysts following. \$Vol represents dollar volume, it is calculated using price of share multiply volume of shares traded. Size represents market capitalization of the firms. Ltg represents long term growth rate of firms. B/M represents book to market ratio, it calculated using book value per share divided by market value per share. Trnover represents the daily turnover. AdjDS_Quant is the adjusted Disclosure Score(DSCORE) on the information provided in the prospectus in term of quantity. AdjDS_Qual is the adjusted Disclosure Score(DSCORE) on the information provided in the prospectus in term of quality. ** *represent 0.01 level of significant(two tailed), ** represent 0.05 level of significant (two tailed) and * represent 0.10 level of significant(two tailed).

Figure 1. Trend Analysis on DS_Quant

Figure 1 is plotted after categorizing the firms into six groups using a mid-year cut-off, from July to June of the next year. We begin with group 1 which comprises firms listed before July 1999 and end with group 6 consisting of firms listed after July 2003. It shows the trend analysis for the quantity of the disclosure level of prospectuses.

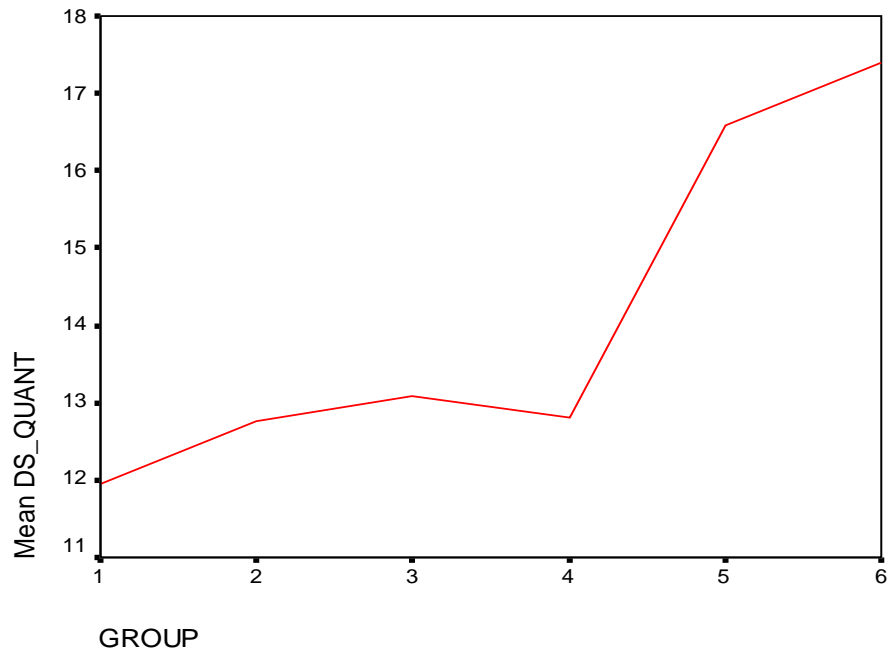
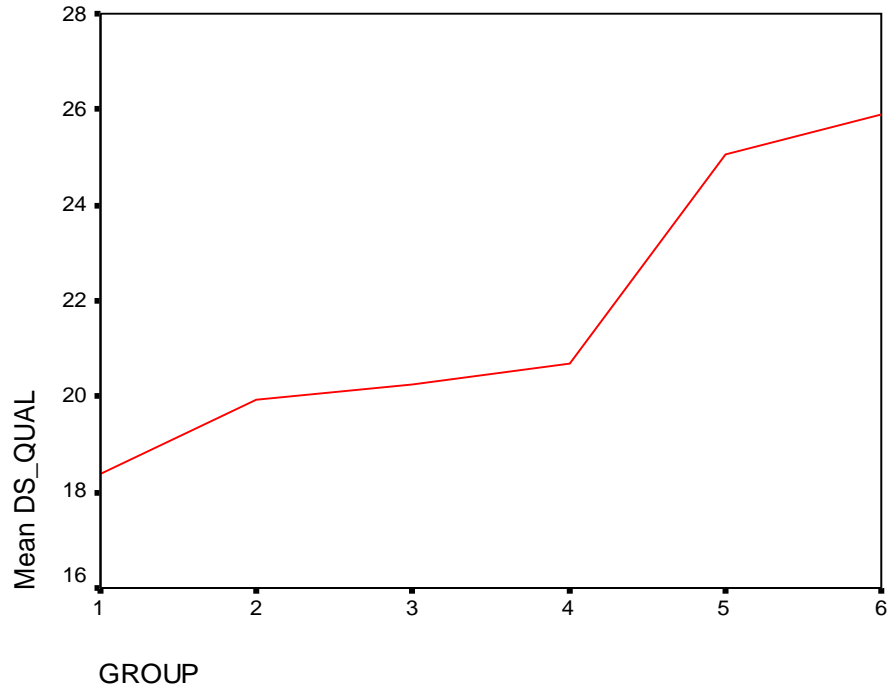


Figure 2. Trend analysis on DS_Qual

Figure 2 is plotted after categorizing the firms into six groups using a mid-year cut-off, from July to June of the next year. We begin with group 1 which comprises firms listed before July 1999 and end with group 6 consisting of firms listed after July 2003. It shows the trend analysis for the quality of the disclosure level of prospectuses.



Appendix 1. Detailed description on disclosure items.**1. Group Structure:**

- a. Company Position within the group or an appropriate negative statement that the company is not part of any group
- b. Significant subsidiaries (or an appropriate negative statement):
 - i. Identification of significant subsidiaries
 - ii. Details pertaining to significant subsidiaries including principal activities, amount of issued and paid up capital as well as the effective percentage of equity held by the company

2. Directors and Senior Management:

- a. Principal business activities performed outside the issuing company by the director including present and past directorships held
- b. The nature of any family relationship between any of the persons of concern
- c. Any arrangement or understanding with major shareholders, customers, suppliers or others, pursuant to which any person referred to above was selected as a director or member of senior management

3. Directors' and Executives' Remuneration

- a. Individual compensation of bands of \$250,000 (**directors**)
- b. Individual compensation of bands of \$250,000 (**at least top 5 executives**)
- c. Details relating to bonus/ profit sharing plans
 - i. Amounts of bonuses received by directors and top executives
 - ii. Elaborated explanation of the method used to arrive at the amounts including the adoption of any formula or percentage of profits distributed as bonuses
- d. Details relating to stock option plan including exercise price, vesting period
- e. Amounts set aside for pension, retirement funds

4. Board Practices

- a. Details relating to the company's Audit Committee
 - i. Identification of its chairman and members
- b. Other relationships between each member and the company or other entities, apart from the appointment in the committee
 - i. Duties of the committee including the frequency of meetings
- c. Details relating to the company's Remuneration Committee
 - i. Identification of its chairman and members
 - ii. Other relationships between each member and the company or other entities, apart from the appointment in the committee
 - iii. Duties of the committee including the frequency of meetings

5. Substantial Shareholders

- a. The number and percentage of outstanding shares of each class owned by each of them or an appropriate negative statement if there are no major shareholders.
- b. Disclose any significant change in the percentage ownership held by any major shareholders during the past three years.
- c. Indicate whether the company's major shareholders have different voting rights, or an appropriate negative statement

6. Related Party Transactions

- a. The nature and extent of any transactions or presently proposed transactions which are material to the company or the related party, or any transactions that are unusual in their nature or conditions to which the company or any of its parent or subsidiaries was a party
 - i. Individuals/parties involved in the transaction
 - ii. Nature of the transaction (trade/non-trade)
 - iii. Extent of the transaction (specific monetary amount or other quantitative measures disclosed)

iv. Possible or realized consequences of the transaction to the company (e.g. potential cost cutting resulting from purchases from subsidiaries or litigation/legal liabilities rising from the transaction)

b. The amount of outstanding loans (including guarantees of any kind) made by the company or any of its parent or subsidiaries to or for the benefit of related parties

7. Plan of Distribution

a. Whether any person intends to subscribe >5% of the offering

b. Details relating to any preferential allocation arrangements

i. Material amounts of reserved shares allocated to individual directors or executives

ii. The price to be paid for each reserved share

c. Whether major shareholders, directors or members of the company's management, supervisory or administrative bodies intend to subscribe in the offering;

APPENDIX 2. DSCORE Marking Scheme

The first column on the left presents the 6 categories of corporate governance structure which we are interested in, along with their sub-categories. The middle column records the raw scores for Company X for its level of disclosure of each sub-category, which are subsequently summed up to arrive at the disclosure quality score for Company X. The right-most column records the weighted scores for Company X for each sub-category. The weighted score for each sub-category is computed by dividing the matching raw score by the maximum score of the sub-category. As an example, a raw score of 1(2) for the sub-category of Significant Subsidiaries under Panel A will give rise to a weighted score of 0.5(1). The weighted scores are also summed up to arrive at the disclosure quantity score for Company X.

	Company X Quality	Company X Quantity
Organizational Structure	Max	Max
Company position within group	1	1
Significant subsidiaries	2	1
Directors and Senior Management		
Principal business activities performed outside the issuing company	1	1
The nature of any family relationship between any of the persons named together	1	1
Any arrangement or understanding with major shareholders, customers, suppliers or others, pursuant to which any person referred to above was selected as a director or member of senior management	1	1
Remuneration		
Individual compensation of bands of \$250,000 (directors)	1	1
Individual compensation of bands of \$250,000 (at least top 5 executives)	1	1
Details relating to bonus/ profit sharing plans	2	1
Details relating to stock option plan	1	1
Pension, retirement amounts	1	1
Major Shareholders		

The number and percentage of outstanding shares of each class owned by each of them or an appropriate negative statement if there are no major shareholders.	1	1
Disclose any significant change in the percentage ownership held by any major shareholders during the past three years.	1	1
Indicate whether the company's major shareholders have different voting rights, or an appropriate negative statement	1	1
Related Party Transactions		
The nature and extent of any transactions or presently proposed transactions which are material to the company or the related party, or any transactions that are unusual in their nature or conditions to which the company or any of its parent or subsidiaries	4	1
The amount of outstanding loans (including guarantees of any kind) made by the company or any of its parent or subsidiaries to or for the benefit of related parties	1	1
Plan of Distribution		
Whether any person intends to subscribe >5% of the offering	1	1
Details relating to any preferential allocation arrangements	2	1
Whether major shareholders, directors or members of the company's management, supervisory or administrative bodies intend to subscribe in the offering;	1	1
Total	30	20