

**AN EMPIRICAL INVESTIGATION ON THE
UNDERPRICING AND EARNINGS
MANAGEMENT OF INITIAL PUBLIC
OFFERINGS IN BANGLADESH**

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**AN EMPIRICAL INVESTIGATION ON THE UNDERPRICING
AND EARNINGS MANAGEMENT OF INITIAL PUBLIC
OFFERINGS IN BANGLADESH**

By

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DEDICATION

In memory of my loving father and mentor

Alhaj Md. Abu Bakar Mian

(1940 – 2010)

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TABLE OF CONTENTS

	pg #
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	vi
LIST OF TABLES	xi
LIST OF FIGURES	xiv
LIST OF ABBREVIATION	xv
LIST OF APPENDICES	xvi
ABSTRAK	xviii
ABSTRACT	xx

CHAPTER 1: INTRODUCTION

pg #

1.1	Background of the Study	1
1.2	Research Problem	7
1.3	Objectives of the Study	8
1.4	Research Questions	10
1.5	Significance of the Study	11
1.6	Definition of terms	14
1.7	Organization of the study	16

CHAPTER 2: INSTITUTIONAL REVIEW

2.0	Introduction	18
2.1	The Bangladesh capital market – an overview	18
2.1.1	The Securities Exchange Commission	21
2.1.2	The Dhaka Stock Exchange (DSE)	22
2.1.3	The Chittagong Stock Exchange (CSE)	23
2.1.4	Stock Exchange Trends	24
2.1.4.1	Sectoral dominance	26
2.1.4.2	NRB direct investment	28
2.1.4.3	Increasingly crowded primary market	29
2.1.5	Determination of offer price	29

2.2 An overview of underwriters in Bangladesh	30
2.3 An overview of ownership structure of listed companies	34
2.4 Performance analysis of DSE	36
2.5 Performance analysis of CSE	38
2.6 IPO listing process	40
2.7 Summary	42

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction	44
3.2 Conceptual Foundation	47
3.2.1 The IPO listing process	47
3.3 Trends in stock prices	49
3.4 Evidences from major stock exchanges	53
3.5 Evidences from Asian stock exchanges	54
3.6 IPO and other related studies on the Bangladesh capital market	56
3.7 Determinants of underpricing	58
3.8 Reasons for underpricing	62
3.8.1 Underpricing as a consequence of the bookbuilding Process	63
3.8.1.1 Winner's Curse	63
3.8.1.2 Retail investor exclusion theory	65
3.8.1.3 Market feedback hypothesis	66
3.8.2 Underpricing as a consequence of an investment bank cartel	67
3.8.2.1 Investment Bank Power Theory	67
3.8.2.2 Tacit aftermarket tie-ins hypothesis	68
3.8.3 Underpricing as an intentional choice on the part of the issuer	68
3.8.3.1 Dispersion of ownership theory	68
3.8.3.2 Stock price momentum hypothesis	69
3.8.3.3 Bandwagon effects theory	70
3.9 Dual listing and underpricing	73
3.10 Earnings Management	75

3.10.1 Earnings Management in Initial Public Offerings	79
3.10.2 Vehicles used in managing earnings	83
3.10.3 Discretionary accruals models	84
3.10.3.1 The Healy model	84
3.10.3.2 The DeAngelo model	85
3.10.3.3 The Industry model	86
3.10.3.4 The Jones model	86
3.10.3.5 The modified Jones model	87
3.11 Reasons of earnings management	92
3.11.1 Minimizing political costs	92
3.11.2 Minimizing financing costs	92
3.11.3 Maximizing managers' wealth	93
3.12 Summary	93
 CHAPTER 4: DATA AND METHODOLOGY	
4.1 Introduction	95
4.2 Sampling and data description	95
4.2.1 Data collection methods	95
4.2.2 Population and sample	96
4.3 Hypotheses development	98
4.3.1 Effect of dual listing on IPO underpricing	98
4.3.2 Determinants of underpricing	99
4.3.3 Earnings management vehicles	102
4.3.4 Relationship between discretionary accruals and IPO underpricing	104
4.4 Methodology	105
4.4.1 Measuring the level of underpricing/overpricing	105
4.4.2 Measuring the level of underpricing/overpricing of dual listed stocks	106
4.4.3 Effect of dual listing on IPO underpricing	106
4.4.4 Determinants of underpricing	107
4.4.5 Degree of earnings management	108
4.4.5.1 Vehicles used in earnings management	112

4.4.5.2 Effectiveness of modified Jones model	114
4.5 Relationship between IPO underpricing and earning management	114
4.6 Summary	115

CHAPTER 5: FINDINGS

5.1 Introduction	117
5.2 Descriptive analysis of data	117
5.3 Level of underpricing/overpricing	120
5.3.1 IPO underpricing on yearly basis	122
5.3.2 IPO overpricing on yearly basis	125
5.3.3 IPO underpricing on industry basis	126
5.3.4 IPO overpricing on industry basis	126
5.3.5 Underpricing among Foreign based companies	130
5.4 Dual listing and underpricing	131
5.4.1 Underpricing among companies listed only in DSE	132
5.4.2 Underpricing among companies listed only in CSE	133
5.4.3 Price differences among dual listed IPOs between DSE and CSE	133
5.4.4 Effect of dual listing on underpricing	136
5.5 Determinants of underpricing in the Bangladesh capital market	136
5.5.1 Determinants of underpricing (DSE)	136
5.5.2 Determinants of underpricing (CSE)	140
5.5.3 Determinants of underpricing (Dual listed IPOs)	144
5.6 Earnings Management	148
5.6.1 Level of earnings management	149
5.6.2 Discretionary accrual estimation – comparison between extended model vs. modified Jones model	150
5.6.3 Vehicles used in earnings management	152
5.6.3.1 Results of the first-tier decomposition regressions	152
5.6.3.2 Results of the second-tier decomposition regressions	154

5.6.3.3 Results of the third-tier decomposition regressions	155
5.7 Relationship between IPO underpricing and earnings management	158
5.8 Summary	159
 CHAPTER 6: DISCUSSION AND CONCLUSIONS	
6.1 Recapitulations	162
6.2 Discussion	162
6.2.1 Effect of dual listings on the level of underpricing	169
6.2.2 Determinants of underpricing	170
6.2.3 Earnings management	172
6.2.4 Vehicles used in earnings management	174
6.2.5 Relationship between IPO underpricing and earnings management	177
6.3 Contributions of the study	177
6.3.1 Contribution to the body of knowledge	178
6.3.2 Practical contributions	179
6.4 Recommendations	180
6.5 Limitations of the study	183
6.6 Suggestions for further research	183
6.7 Conclusions	184
 REFERENCES	187
LIST OF PUBLICATIONS	203

LIST OF TABLES

	pg #
Table 2.1: Market capital as percentage of GDP	19
Table 2.2: Bangladesh capital market – at a glance	20
Table 2.3: DSE general index performance (2002-2007)	25
Table 2.4: Comparative strengths of securities	25
Table 2.5: Comparative performance of major sectors	27
Table 2.6: Portfolio Investment by the non-resident Bangladeshis	28
Table 2.7: Oversubscription of IPOs	29
Table 2.8: Ownership concentration by Top shareholders	35
Table 2.9: Comparative analysis of Dhaka Stock Exchange (Yearly)	37
Table 2.10: Comparative analysis of Chittagong Stock Exchange (Yearly)	39
Table 3.1: Average initial returns in major stock markets	53
Table 3.2: Average initial returns in Asian stock markets	55
Table 3.3: Past research on the determinants of underpricing	61
Table 4.1: Numbers of new listing as of 2005 at DSE and CSE	97
Table 5.1: New issues on an industry to industry basis (DSE)	118
Table 5.2: New issues on an industry to industry basis (CSE)	119
Table 5.3: Overall Levels of IPO underpricing and overpricing (DSE)	120
Table 5.4: Overall Levels of IPO underpricing and overpricing (CSE)	121
Table 5.5: IPO underpricing on a yearly basis (DSE)	122
Table 5.6: IPO underpricing on a yearly basis (CSE)	124
Table 5.7: IPO overpricing on a yearly Basis (DSE)	125
Table 5.8: IPO overpricing on a yearly Basis (CSE)	126
Table 5.9: IPO underpricing on an industry basis (DSE)	127

Table 5.10:	IPO underpricing on an industry basis (CSE)	128
Table 5.11:	IPO overpricing on an industry basis (DSE)	129
Table 5.12:	IPO overpricing on an industry basis (CSE)	130
Table 5.13:	IPO Underpricing among foreign based Companies	131
Table 5.14:	New issues on an industry to industry basis (Dual listed)	131
Table 5.15:	IPO underpricing/overpricing among dual listed companies	132
Table 5.16:	IPO underpricing among companies listed only in DSE	133
Table 5.17:	IPO underpricing among companies listed only in CSE	133
Table 5.18:	Mean of price differentials among dual listed IPOs of DSE and CSE	134
Table 5.19:	Results of correlations (Determinants of underpricing – DSE)	138
Table 5.20:	Results of regressions (Determinants of underpricing, DSE)	139
Table 5.21:	Results of correlations (Determinants of underpricing, CSE)	142
Table 5.22:	Results of regressions (Determinants of underpricing)	143
Table 5.23:	Results of correlations (Determinants of underpricing – Dual listed IPOs)	146
Table 5.24:	Results of regressions (Determinants of underpricing – Dual listed IPOs)	147
Table 5.25:	Level of earnings management	149
Table 5.26:	Comparison between modified Jones model and extended modified Jones model	151
Table 5.27:	Results of the first-tier decomposition regressions	153
Table 5.28:	Results for the second-tier decomposition regressions	154
Table 5.29:	Results for the third-tier decomposition regressions	156

Table 5.30:	Results of correlations (IPO underpricing and earnings management)	158
Table 5.31:	Summary of hypotheses testing	160

LIST OF FIGURES

	pg #
Figure 5.1: Level of underpricing on yearly basis (DSE)	123
Figure 5.2: Level of underpricing on yearly basis (CSE)	124
Figure 5.3: Level of underpricing on industry basis (DSE)	127
Figure 5.4: Level of underpricing on industry basis (CSE)	129
Figure 5.5: Price differentials between DSE and CSE	135
Figure 5.6: Differences of price observations from day1 to end of the year	135

LIST OF ABBREVIATIONS

BSB:	Bangladesh Shilpa Bank
BSRS:	Bangladesh Shilpa Rin Sangstha
CSE:	Chittagong Stock Exchange
CPF:	Central Provident Fund
DSE:	Dhaka Stock Exchange
GAAP:	Generally Accepted Accounting Principles
GDP:	Gross Domestic products
IPO:	Initial Public Offerings
ICB:	Investment Corporation of Bangladesh
KLSE:	Kuala Lumpur Stock Exchange
NBFIs:	Non-bank Financial Institutions
NCB:	Nationalized Commercial Banks
NRBs:	Non-resident Bangladeshis
NYSE:	New York Stock Exchange
SEC:	Securities and Exchange Commission

LIST OF APPENDICES

Appendix A: Regression on determinants of underpricing (DSE)	205
Appendix B: Correlations (Determinants of underpricing, DSE)	210
Appendix C: Regression on determinants of underpricing (CSE)	211
Appendix D: Correlations (Determinants of underpricing, CSE)	215
Appendix E: Regression on determinants of underpricing (Dual listed IPOs)	216
Appendix F: Correlations (Determinants of underpricing, Dual listed IPOs)	221
Appendix G: Regression on vehicles used by income decreasing firms (1 st tier)	222
Appendix H: Regression on vehicles used by income decreasing firms (2 nd tier)	224
Appendix I: Regression on vehicles used by income decreasing firms (3rd tier)	226
Appendix J: Regression on vehicles used by income increasing firms (1 st tier)	228
Appendix K: Regression on vehicles used by income increasing firms (2nd tier)	230
Appendix L: Regression on vehicles used by income increasing firms (3rd tier)	232
Appendix M: Regression on vehicles used (Total sample - 1 st tier)	234
Appendix N: Regression on vehicles used (Total sample – 2nd tier)	236
Appendix O: Regression on vehicles used (Total sample – 3rd tier)	238

Appendix P: Output on relationship between underpricing and earnings management	240
Appendix Q: Regression on relationship between underpricing and earnings management	241

SATU KAJIAN EMPIRIKAL MENGENAI TERKURANG HARGA DAN PENGURUSAN PEROLEHAN DALAM TAWARAN AWAM PERMULAAN DI BANGLADESH

ABSTRAK

Kajian ini menyelidik syarikat-syarikat baru yang disenaraikan di Bursa Saham Dhaka (DSE) dan Bursa Saham Chittagong (CSE) bagi tempoh 1995-2005. Tujuan kajian ini adalah untuk meneroka isu-isu yang berkaitan dengan terbitan saham awal (IPO) iaitu penentuan harga terendah dan pengurusan perolehan dalam konteks pasaran modal Bangladesh. Data diperoleh daripada prospektus syarikat, DSE dan CSE Daily Diaries; laman sesawang DSE, CSE dan SEC websites, dan Laporan Tahunan syarikat yang tersenarai. Sepanjang tempoh kajian dilakukan terdapat sebanyak 132 syarikat yang disenaraikan di DSE dan 206 lagi di CSE. Berdasarkan penemuan, kesimpulan dapat dibuat mengenai penetapan harga terendah IPO; (i) tahap penetapan harga terendah masih sangat tinggi (156.16 peratus di DSE dan 433.91 peratus di CSE). Faktor penyumbang utama adalah 'Kaedah harga tetap' dalam penetapan harga IPOs dan kewujudan situasi dwipenyenaraian. Faktor-faktor lain termasuklah saiz penawaran, saiz firma dan sektor di mana firma tersebut disenaraikan. Sektor di mana sesebuah IPO disenaraikan adalah faktor baru yang diuji dalam kajian ini dan didapati mempunyai kesan yang signifikan ke atas tahap penetapan harga terendah, (ii) Penemuan mengesahkan dwipenyenaraian memberi kesan yang signifikan ke atas penetapan harga terendah. Oleh itu, diputuskan bahawa 'teori satu harga' tidak boleh digunakan dalam konteks modal dengan keadaan dwipenyenaraian di Bangladesh.

Penemuan mengesahkan dalam hipotesis ini terdapat amalan pengurusan perolehan yang berleluasa dalam kalangan firma IPO di Bangladesh. Model Jones yang diubahsuai digunakan untuk mengesan pengurusan perolehan dan didapati tidak berkesan. Kajian ini kemudiannya menggunakan model Jones yang dilanjutkan dan didapati amat berkesan untuk mengenal pasti pengurusan perolehan dalam konteks

pasaran modal Bangladesh. Didapati bahawa firma yang mempunyai peningkatan pendapatan cenderung menggunakan pendekatan yang berbeza berbanding firma yang mengalami penurunan pendapatan. Kajian ini tidak menemui sebarang hubungan di antara penetapan harga terendah dengan pengurusan perolehan IPO.

Kajian ini memberi sumbangan kepada pengetahuan dengan penemuan bahawa ‘teori satu harga’ dan ‘teori Modified Jones’ tidak terpakai dalam konteks pasaran modal Bangladesh. Melalui kajian ini dicadangkan beberapa kaedah untuk mengurangkan tahap penetapan harga terendah dan untuk mengawal amalan kewangan palsu dalam kalangan firma IPO di Bangladesh. Kajian lebih lanjut perlu dijalankan dengan menggunakan sampel yang lebih besar dan memasukkan pemboleh ubah lain yang dapat membantu menjelaskan dengan lebih lanjut tentang isu-isu yang berkaitan penetapan harga terendah dan pengurusan perolehan dalam konteks Bangladesh.

AN EMPIRICAL INVESTIGATION ON THE UNDERPRICING AND EARNINGS MANAGEMENT OF INITIAL PUBLIC OFFERINGS IN BANGLADESH

ABSTRACT

This study examined companies, which were newly listed on the Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE) for the period 1995-2005. The purpose of this study is to explore issues related to initial public offerings (IPO) underpricing and earning management in the context of Bangladesh capital market. Data were collected from company prospectuses, DSE and CSE Daily Diaries; DSE, CSE and SEC websites, and annual Report of listed Companies. A total of 132 companies listed at DSE and 206 at CSE respectively which are listed during the study period were selected for this study. Based on the findings, the following conclusions can be drawn on IPO underpricing; (i) the level of underpricing is still very high (156.16 percent at DSE and 433.91 percent at CSE respectively). The main contributory factors are the ‘Fixed price method’ in pricing the IPOs and existence of dual listing phenomenon. The other contributory factors are offer size, size of firm and the sector they are listed with. The sector that an IPO is listed with was a new factor tested in this study and found to have significant effect on the level of underpricing, (ii) the findings confirmed that dual listing significantly affect the level of underpricing. Therefore it is concluded that the ‘One price theory’ is not applicable in the context of Bangladesh capital with dual listing phenomenon.

Findings confirmed our hypothesis that there are widespread uses of earning management among IPO firms in Bangladesh. The modified Jones model was employed to detect earning management and found it to be ineffective. This study then used an extended modified Jones model and found it to be very effective in detecting earning management in context of Bangladesh capital market. It is found that income increasing firms tend to use different tools as opposed to income

decreasing firms. The study did not find any relationship between IPO underpricing and earning management.

This study contributes to the body of knowledge with findings that the ‘One price theory’ and the ‘Modified Jones theory’ are not applicable in the context of Bangladesh capital market. The study recommended several measures to reduce the level of underpricing and to curb fraudulent financial practices by the IPO firms in Bangladesh. Further research should be undertaken with larger sample and inclusion of other variables which may help explain more on issues related to underpricing and earning management in context of Bangladesh.

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Over the years, as an important part of market capitalization, Initial Public Offerings (IPOs) have gained significance in emerging stock markets. In the context of Asian markets, this is evident as more companies seek to be listed in the market to raise funds for their undertakings. In the 1990s, hundreds of firms across the world went public and IPOs of the stock market are one of the most popular discussions in the world of finance. Topics such as the reasons why a company goes public, underwriters influences towards IPO, IPO underpricing, IPO flipping, IPO short profit, IPO long run underperformances are topics of interest. Few studies also investigated the relationships between earnings management and IPO long term performance. Over the years, hundreds of empirical studies have been carried out and theoretical literature written to enhance people's knowledge towards these issues; yet it is arduous for people to clearly understand the various issues related to IPOs especially with different types of equities in different industries and in different markets.

Initial public offering underpricing, or high IPO return is a phenomenon common to most stock markets, regardless of whether these markets are in developed or emerging economies (Ritter, J.R. 1994). A common perception is that underpricing of IPOs is a contradiction to market efficiency and may hurt emerging firms trying to raise capital for expansion. This perception has spawned an extensive literature attempting to explain this apparent financial anomaly. A number of IPOs underpricing have been put forth and tested against the data of various stock markets.

According to Ritter (1984), IPO underpricing occurs depending on the period a firm chooses to go public. Rock's model of "underpricing" as an expected equilibrium results are supported by Beaty and Ritter (1986), who in turn, proposed that underpricing is related to *ex ante* uncertainty. As a follow up to IPOs underpricing, McDonald and Fisher (1972), Reilly (1973), Dawson (1987), Yong O. (1996), Hoque and Musa (2002), Lowry et al., (2006), Taufil Mohd K. N. (2007), Allen, D.E. et al, (2008), Merikas, A. (2009); and Chorruck, J. et al, (2010) maintained that there are significant returns to the investors in the short run.

Previous studies indicated that underpricing occurs across a number of different times and samples (McGuinness, 1992). The degree of underpricing varies from one issue to another. Studies on Malaysian new stock offers such as those by Dawson (1987), Othman Yong (1991 and 1996), Sufar S.B. (1987), Ku Ismail *et al.* (1993), Yeap M. (2006), Taufil Mohd K. N. (2007) indicate significant returns received by investors at the time of initial listing. Studies on Bangladesh new stock offers by Islam S. (1999), and Hoque and Musa (2002) indicate existence of higher degree of underpricing. The analysis of the excess returns after trading began also reveals that the price adjusts rapidly to the underpricing of the initial offers. This result is consistent regardless of whether the amount of increase registered at the opening day is high or low.

The degree of underpricing in the Bangladesh capital market is rather high compared to that of other Asian and advanced stock markets. Islam M.S. (1999) documented that the average initial returns is 116.01 percent with a standard deviation of 261.94 percent during the period of 1994-1999. Hoque and Musa (2002)

find that during the period between 1994 and 2001, the IPOs of DSE was largely underpriced at 285.21 percent. At the same period the degree of underpricing in Malaysia was 46.44% (Yeap, M. 2006), Singapore and Turkey were 31.4% and 13.6% respectively (Laughran et al., 2004) and in US market was 22% (Lowry et al., 2006).

Several reasons have been proposed in the institutional, finance, and economics literature as to why underpricing occurs. Some theoretical work suggests that the underpricing of IPOs is associated with asymmetric information and investors' concerns that the decision to issue equity is an attempt to expropriate wealth from outsiders (Ibbotson, 1995). Empirical studies have found evidence that the underpricing for IPOs of financial institutions is related to proxies for asymmetric information. Offer size (Chang, E. et al, 2008; and Megginson & Weiss, 1991), age of the firm (Merikas, A. et al, 2009; Allen, D.E. et al, 2008; and Muscarella & Vetsuypens, 1989; Barry & Brown, 1985; Megginson & Weiss, 1991; Logue, 1973; Mc Donald & Fisher, 1972; and Narasimhan M.S. and Ramana L.V. 1995), the volatility of the post-offer return (Chang, E. et al, 2008; Ritter, 1984; and Lowry et.al., 2006) and the length of time from price setting to listing date (Taufil Mohd K.N., 2007) have all been associated with IPO underpricing.

Studies of short run and long run behavior of returns on IPOs reveal that IPOs are underpriced in the short run, whereas in the long run the evidence is that of underperformance, i.e., negative returns accrue to the investors holding these IPOs (Chorruk, J. et al, 2010; and Balwinder Singh and RK Mittal, 2003). This study explores a possible source for over optimism. IPO firms can enhance their earnings

by adopting discretionary accounting accrual adjustments that raise reported earnings. Over time, investors may recognize that the firms' earnings are not maintaining momentum, and hence, investors may lose their optimism, resulting in poor long run performance. Teoh et al., (1998) and Abdullah et al., (2004) revealed that the offering firms report significant improvements in their operating performance in the pre-offer period, which are not due to their cash flow performance. They have also recorded that an aggressive earnings management pre-offer leads to worse operating and return performance post-offer. Most of the prior studies on earnings management have focused on why firms manage earnings. Several reasons have been identified that include; income smoothing (Yoon and Miller, 2002b), ownership control (DeAngelo, 1986), equity offerings (Rangan, 1997; Teoh et al., 1998; Yoon and Miller, 2002a) and political costs (Jones, 1991).

However, few prior studies document the types of vehicles firms use when the firms either increase or decrease reported earnings. For example, McNichols and Wilson (1998) document that banks use bad-debt expenses to manipulate reported earnings and Yoon et al., (2006) find that in the Korean capital market asset disposal gains or losses and bad-debt expenses are used to manipulate earnings.

Researchers found it arduous and challenging to detect or measure earnings management. It is not possible to observe earnings management directly. Therefore, researchers have investigated two venues for earnings management, the choice of accounting methods and the management of accruals. Past research in their attempt to study accruals use two models: Healy (1985) and DeAngelo (1986) use total accruals as a proxy for earnings management while Jones (1991), Dechow, Sloan and

Sweeney (1995), Rangan (1997), Teoh et al. (1998a) and Teoh et al. (1998b) use discretionary accruals as a measure of earnings management. The possible explanation to exclude non-discretionary accruals is that since non-discretionary accruals are used to reflect business condition; subject to firms condition and sales growth and thus it cannot be controlled by managers, it is excluded from the studies. The most popular discretionary model is the standard Jones (1991) model. This model is able to decompose accruals into discretionary and non-discretionary accruals. When changes in sales are adjusted for the change in receivables, standard Jones model becomes a modified Jones model, which is proposed by Dechow et al. (1995). The modified model is designed to reduce the measurement error of discretionary accruals when discretion is applied over sale. The study by Dechow et al., (1995) finds that modified Jones model provides the most powerful test of earnings management compared to Healy DeAngelo and standard Jones and industry model. However a recent study by Yoon et al., (2006) document that the Modified Jones model is not effective in measuring discretionary accruals for Korean firms. Therefore this study will attempt to test additional vehicles i.e. bad debt expenses, depreciation expenses, and asset disposal gains or losses with the existing modified Jones Model.

Bloomberg (Oct.9, 2007) reported that the Dhaka Stock Exchange Index is at a 10-year high, up 66 percent this year, making it Asia's top performer after China. Citigroup Inc., JPMorgan Chase & Co. and Merrill Lynch & Co. are betting Bangladesh capital market may be the next Asian success story. September 2007, New York-based Citigroup, the largest U.S. bank, became the first foreign lender to get a license to offer merchant- banking and investment-banking services. JPMorgan

named Bangladesh one of the ``Frontier Five" markets worth investigating in an April 4 note, along with Kazakhstan, Kenya, Nigeria and Vietnam. Bangladesh has two Stock Exchanges, Dhaka Stock Exchange (DSE), established in 1954 where trading is conducted by Computerized Automated Trading System and Chittagong Stock Exchange (CSE), established in 1995 which is also conducted by Computerized Automated Trading System . All exchanges are self-regulated, private sector entities which must have their operating rules approved by the Securities and Exchange Commission (SEC).

Loughran et al. (1994) show that institutional differences in pricing and allocation of shares play an important role in explaining cross sectional differences in underpricing among the 25 countries that they review. Bangladesh stock market is different from other markets in many ways. Firstly there are two stock exchanges namely the Dhaka Stock Exchange (DSE) and the Chittagong Stock Exchange (CSE). The DSE and CSE are regulated by the Securities and Exchange Commission which is situated in Dhaka. Each Stock Exchange establishes listing requirements, approves, suspends or removes listing privileges of companies, monitors listed companies in compliance with legal regulatory provisions. The Securities and Exchange Commission permits dual listing. This means that a company can be listed in both the DSE and the CSE at the same time. Secondly it is an increasingly crowded primary market with sectoral dominance i.e., textiles has the largest number of companies listed (15%) with relatively small in size, and finance sector constitute 14% of total number of companies listed. Finally the offer price of IPOs is determined by using fixed price method whereby most of the stock exchanges across the globe uses book-building method. Under the fixed price method, IPOs are allowed to be priced at TK10, TK100, and TK1000 only.

Under these backdrops, this study will be of particular interest to the firm that intends to go public, potential subscribers of the initial offering, regulating agencies and finally, underwriters.

1.2 Research Problem

Early research related to initial public offerings (IPOs) documented the tendency of IPOs to provide abnormal returns to investors who purchased those at the initial offering. Recent studies on the performance of the IPOs suggest that IPO issuing firms outperform in the pre-offer period and underperform post-offer (Teoh et al., 1998, Abdullah et al., 2004). It is argued that investors fail to recognize the earnings management in the short term and overplay for the IPO, resulting in a wealth transfer from IPO investors to pre-IPO shareholders. However in the long term, the market realizes its error in the face of disappointing post-IPO earnings, and the resulting downward revisions in the market valuations of issuers account for the observed underperformance of IPOs. Researchers have various explanations for this phenomenon based on the US and a few other markets. High reported earnings would translate directly into a higher offering price thus ensuring full subscription at low cost. It was reported that the price at which a firm goes public has a direct and immediate impact on the issuers (DuCharme et al., 2000). A higher offering price benefits issuers in two ways: shares retained by the entrepreneurs are worth more and more cash is received for the secondary shares sold. However there was no evidence recorded from the Dhaka Stock Exchange on earnings management. Even if the evidence of earnings management is documented, there was no attempt made to investigate the vehicles/tools used by the DSE listed firms when the firms manage earnings. Based on the earnings management hypothesis, managers of IPO firms

manipulate earnings through income-increasing accounting accruals to benefit existing shareholders and maximize the offer proceeds.

Bangladesh capital market is unique with an interesting characteristic whereby IPOs are allowed for dual listing. There are evidences of companies getting listed into both stock exchanges at the same time. Do the pricing differ in two exchanges for companies getting listed at the same time? There is an existence of higher degree of underpricing in the Bangladesh capital market (Hoque and Musa, 2002). If IPOs are underpriced, what are the determinants of IPO underpricing at the Bangladesh capital Market? Do the firms raising equity by IPOs at the Dhaka Stock Exchange manage earnings upward during the offer or do they time their offers to follow a price run-up? If they manipulate earnings upward during the offer, how does this relate to the level of underpricing? If they manipulate the earnings upward, what are the vehicles/tools used in managing earnings? Answers to these questions are available for US IPOs and other advanced stock markets, but these questions remain unanswered for DSE and CSE initial public offerings.

1.3 Objectives of the study

The purpose of this study is to investigate the price behavior of initial public offerings of the Bangladesh Capital Market during the period of 1995-2005. The specific purpose of this study was to test whether the market can set suitable prices for new stocks instantaneously after the settling, or whether systematically over- or underpricing of new stocks can be observed. It is widely alleged that underwriters may attempt to “underprice” new issues of common stock so that the initial offerings will be fully subscribed and rises in price of the newly-issued stock will quickly

adjust to reflect the available set of relevant information. To the extent that underpricing exists, the difference between offering price and subsequent market price constitutes a “rent” that is distributed by the underwriter to initial purchasers of the stock. It is hypothesized that this rent, viewed here as an “initial rate of return,” was significantly positive in this period. Studies were done on many different stock markets to understand this phenomenon. Of the three anomalies associated with initial public offerings – underpricing, “hot issue” markets and long-run underperformance- the significant average underpricing of IPO issues is the best known and most widely studied (Asquith, et al., 1998). Empirical studies show that the underpricing of initial public offerings of common stock appears to be a common phenomenon in many countries.

The evidence concerning the extent of underpricing of IPOs in Bangladesh is scanty, and there appears to be no consensus about the degree of underpricing and the extent of earnings management. The globalization and integration of stock markets have created enormous opportunities for domestic and international investors to diversify their portfolios across the globe. As a result, rigorous empirical studies examining the determinants of IPO underpricing and other characteristics of the Bangladesh capital market would be of great benefit to investors and policy makers at home and abroad. The objectives of this study are:

- i) To gauge the extent to which the IPOs are underpriced/overpriced in the DSE and CSE. Attempt is made to find out level of underpricing based on industries and firms’ ownership.
- ii) To find out whether dual listing of IPOs affect the degree of underpricing.

iii) To find out the determinants of IPO underpricing in the DSE and CSE.

Attempt is made to find out whether age of the firm, offer size, size of the firm, timing of offer and industry type significantly affect the level of underpricing.

iv) To investigate whether there is evidence that manager of issuing IPO firms in the DSE practices earnings management.

v) To validate the effectiveness of modified Jones model in detecting earning management in context of DSE.

vi) To investigate the vehicles/tools that the DSE listed firms use when the firms manage earnings.

vii) To examine the relationship between earnings management and underpricing of IPO firms in the DSE.

1.4 Research Questions.

In line with the objectives, the following research questions have been constructed:

i) Are new equity offerings underpriced at DSE and CSE?

ii) Does dual listing of IPOs affect the degree of underpricing?

iii) What determines IPO under-pricing at DSE and CSE? Does age of the firm, offer size, size of the firm, timing of offer and industry type affect the level of underpricing?

iv) Is there any evidence that manager of issuing IPO firms in the DSE practices earnings management?

v) Is the modified Jones model effective in detecting earning management in context of DSE?

vi) What are the vehicles/tools used by the DSE listed firms when the firms manage earnings?

vii) Is there any relationship between earnings management and level of IPO underpricing in the DSE?

1.5 Significance of the study

This study is important so as to educate people about the DSE and CSE, particularly about the various issues about going public, the extent of IPO underpricing/overpricing in different sectors, the extent of earnings management and vehicles used in managing earnings, gauge the new issue price behavior in the DSE and CSE from the year 1995 until 2005. However research time frame for earning management starts from fiscal year 0 to +3, meaning that annual reports of those companies listed in 2005 is extended up to 2008. As reported by Teoh et al. (1998b) and Abdullah et al. (2004), the fiscal year in which the IPO occurs and peaks is year 0 and decreases over time. Therefore attempt is made to detect earning management at year 0 and then follow up to year +3.

This study will provide an insight for the future investors regarding the types of IPOs that is best to invest in as in depth analysis of the issue of underpricing and the stock price behavior shall be explored. This study is useful for a number of reasons: firstly, to the best of knowledge, this is the first known comprehensive study of this kind that focuses on earnings management of IPO firms for the Bangladesh stock market. There was a study undertaken by Razzaque, Rahman and Salat (2006) which was confined into textile sector only with the sample of 1992 – 2002 and they could not conclude that earnings have been managed within the observation period.

Secondly, it attempts to investigate the vehicles/tools used by the DSE listed firms in managing earnings. CSE listed companies were excluded from the earning management study to avoid duplication since 95% companies listed with DSE are also listed with CSE. The finding of tools that are being used will (i) help policy makers to formulate appropriate policies to tackle misreporting of earnings and (ii) help the researcher to confirm whether modified Jones model is effective to detect earnings management in the Bangladesh capital market. Thirdly, the results of this study will be of great interest to academics, policy makers and investors both at home and abroad as it is expected that findings of this study will contribute to the body of knowledge and recommendations are put forward to increase the efficiency of the stock exchanges in Bangladesh. Finally, it may also be useful for international organizations (such as the World Bank) and foreign governments who are interested in the development of capital markets in the emerging countries.

Different levels of underpricing observed in different countries show that there might be some unique features in each country and these features might affect underpricing. Institutional differences in pricing and allocation of shares play an important role in explaining the degree of underpricing (Loughran et al., 1994). Bangladesh capital market is unique with an interesting characteristic which IPOs are allowed for dual listing. It is found that 95% IPOs that are listed with CSE are also listed at DSE. Therefore it will be interesting to find out the extent of underpricing and the efficiency in pricing of IPOs in Bangladesh capital market.

Models and methodologies used in this empirical study will contribute to the extension of knowledge and understanding of the area concerned. Most of the prior

studies on earnings management (Yoon and Miller, 2002a; Rangan, 1997; Teoh et al., 1998; Jones, 1991) have focused on why firms manage earnings. However there are very few prior studies (McNichols and Wilson, 1998; Yoon et al., 2006) focused on the specific vehicles used in managing earnings. Earlier research documented that the modified Jones model (Dechow et al., 1995) is effective. However recent findings by Yoon and Miller (2002b) documented that the modified Jones model does not fit well for Korean firms. Since Bangladesh capital market has few unique features, therefore attempt will be made to investigate whether the modified Jones model is effective to estimate the discretionary accruals for the DSE listed firms. If our findings confirm that the modified Jones model is not effective, then an extension of the modified Jones model will be proposed to fit to estimate the discretionary accruals for DSE listed firms.

The IPO process is especially susceptible to earnings management, offering managers both motivation and opportunities to manage earnings. Thus, it is pertinent to study the relationship between earnings management, if any, with initial and long run performance of IPOs. This study is relatively new and believes to be one of the first of its kind in Bangladesh. This study will be useful to investors where it helps to share some of the explanations on the phenomenal abnormal short-term gains and subsequently long-term performance. These findings have important implications for investors, firms and policy makers.

Further this study would contribute to the literature by testing the robustness of US findings in an institutional context that differs from the US IPO market in several important aspects. Specifically, this study examines the extend of

under/overpricing of IPOs at the DSE and CSE, the practice of earnings management, the vehicles used to manage earnings by the IPO issuing firms and the relationship between earnings management and underpricing of IPOs at the Bangladesh capital market.

1.6 Definition of terms

Dhaka Stock Exchange (DSE) – Dhaka Stock Exchange (DSE), established in 1954 where trading is conducted by Computerized Automated Trading System. It is a self-regulated non –profit organization and a private sector entity which must have their operating rules approved by the Securities and Exchange Commission (SEC).

Chittagong Stock Exchange (CSE) – Chittagong Stock Exchange (CSE), established in 1995 which is also conducted by Computerized Automated Trading System. It is a self-regulated non-profit organization and a private sector entity which must have their operating rules approved by the Securities and Exchange Commission (SEC).

Securities Exchange Commission (SEC) – The Securities and Exchange Commission (SEC) was established on June 8, 1993 under the Securities and Exchange Commission Act 1993 (Act 15 of 1993) as a capital market regulator with a view to ensuring proper issuance of securities, protection of the interest of investors in securities, development of the capital and securities markets, and regulation of the capital and securities markets in Bangladesh.

Initial Public Offerings (IPO) – IPOs are new issues to the public with an increase in a firm's authorized paid up capital. Seeking listing on the stock exchange is also called 'going public' or 'floatation'. The company seeking listing will therefore offer a part of its securities to be subscribed by the public, as a part of the listing exercise. This offer is called an Initial Public Offering (IPO).

Dual Listing – Dual listing refers to the listing of a security on more than one exchange. Stocks that are traded on a stock exchange of a country are also traded on another stock exchange in the same country or in the regional exchanges are termed as dual listed IPOs.

Age of the Firm – Age of the firm is referred to the date of incorporation to the date of IPO.

Size of the Company – The company size is measured by using the net assets of the company in the year of IPO

Offering Size – The number securities are approved to be offered at one time.

Issue Price – Is the initial price set for a security to be sold.

Timing of Offer – Timing of offer is measured as the time taken from the date of listing to the offer date.

Earning Management – refers to as ‘a purposeful intervention in the external financial reporting process with the intention of obtaining some private gains’. The main objective of earning management is to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers

Income Increasing Firm – refers to listed companies that have reported an increasing income for few consecutive years.

Income Decreasing Firm – refers to listed companies that have reported a decreasing income for few consecutive years.

Income Neutral Firm – refers to listed companies that have reported mixed trend of incomes e.g. income increased in the first year and then decreased in the second year.

Discretionary Accruals – refers to a situation where management uses its discretion to accrue revenues at year-end when the cash has not yet been received and it is highly questionable whether the revenues have been earned. The result of this managerial discretion will be an increase in revenues and total accruals (through an increase in receivables).

1.7 Organization of the study.

Chapter 2 documents the institutional review about the Dhaka Stock Exchange, Chittagong Stock Exchange, and the Securities and Exchange Commission. Chapter three provides the review of previous studies on IPOs across

major capital markets as well as the major explanations for the underpricing phenomena and earnings management. Chapter four describes the data and methods in empirical tests. Results are described in chapter five and finally discussion on findings, contributions of the study, limitations and suggestions for further research, and recommendations are presented in chapter six.

CHAPTER 2

INSTITUTIONAL REVIEW

2.0 Introduction

This chapter presents a comprehensive review of Bangladesh capital market that include general history of the market, comparative analysis in comparison with other regional capital markets, stock market trends in Bangladesh, an overview of underwriters in Bangladesh, an overview of ownership structure of listed companies, yearly performance analysis of Dhaka Stock Exchange and Chittagong Stock Exchange, and the listing procedures.

2.1 Bangladesh capital market – an overview

Bangladesh capital market is quite small compared to both other regional markets and to the size of its economy. Though generally a capital market has two prongs, the stock market and the debt market, Bangladesh market has only stock market in active operation, as a debt market is still in its developing stage. However, the stock market is also considerably small due to regulatory framework, lack of incentives and local business ethos.

Among over 40,000 small and medium companies only 350 have become listed till December 30, 2007, of which 33 have been de-listed in the past 15 years. Though the governments tried their best to attract the growing private companies to turn their enterprises into public limited and get listed to reap benefits and avail incentives offered time to time, on average only 10 companies have joined the market each year.

Though industrialization has picked pace in Bangladesh almost three decades back, capital market has failed to attract the entrepreneurs as the key source of capital, which has usually been occupied by the banking system since beginning. That is why Bangladesh capital market has one of the lowest market capitals as percentage of GDP in the region as well as other similar sized economies, as the following table 2.1 shows; while its neighbouring country India, sharing almost the same industrial history, has the highest.

Table 2.1: Market capital as percentage of GDP (As of December 2008)

<i>Sl</i>	<i>Country</i>	<i>Indices year ending 2008</i>	<i>Market Capital of the listed stocks(US\$ mn)</i>	<i>Market Capital as Percentage of GDP</i>
01.	Bangladesh	1631.34	\$15138.51	17.00%
02.	India	9647.31	\$647204.80	54.99%
03.	Pakistan	5865.01	\$23500.00	16.45%
04.	Sri Lanka	1631.34	\$4285.90	13.25%
05.	Malaysia	876.75	\$189239.20	101.35%
06.	Philippines	1872.85	\$52030.60	36.12%
07.	Singapore	1761.56	\$264974.40	164.23%
08.	Thailand	449.96	\$103128.20	42.03%
09.	Hong Kong	14387.48	\$1328768.50	641.39%

(Source: www.dsebd.org)

Bangladesh has two Stock Exchanges, Dhaka Stock Exchange (DSE), established in 1954 where trading is conducted by Computerized Automated Trading System and Chittagong Stock Exchange (CSE), established in 1995 which is also conducted by Computerized Automated Trading System . All exchanges are self-regulated, private sector entities which must have their operating rules approved by the Securities and Exchange Commission (SEC).

To be listed on the DSE or CSE, a firm must get approvals from the Securities and Exchange Commission (SEC) and the DSE/CSE itself. Approvals from the DSE/CSE are easier to get compared to SEC. SEC might approve, amend or reject a firm's request for listing. To get an approval from SEC, a firm must meet

certain criteria and must submit an application to SC. In the application, a firm must state, among other things, the price at which the shares will be offered or the offer price, the number of shares to be offered, the purpose of the initial public offering (IPO), the use of the proceeds to be raised from the IPO, the riskiness of investing in the firm's shares, the financial performance for the past three years, the value of landed properties if a valuation exercise is undertaken, and the ownership structure of the firm. After getting an approval, a firm publishes a prospectus. As of 30 June 2007 the total issued capital of all listed securities of Dhaka Stock Exchange was TK 164,279 million (US\$2380.16 million) where as in Chittagong Stock Exchange the total issued capital was TK 81,032 million (US\$1174.05 million). The table 2.2 present a summary of Bangladesh capital market.

Table 2.2: Bangladesh capital market – at a glance

<i>Indicators</i>	<i>DSE</i>		<i>CSE</i>		<i>Total</i>	
No. of companies	259		204		463	
No. of mutual funds	14		14		28	
No. of debentures	8		1		9	
No. of treasury bonds	44		-		34	
Total No. of Listed securities	325		219		544	
	<i>Figures in million</i>					
No. of shares of all listed companies	1735.00		1530.10		3265.10	
No. of certificates of all listed mutual funds	162.00		162.20		324.20	
No. of debentures of all listed debentures	0.40		0.05		0.45	
No. of all listed bonds	0.80		-		0.80	
Total No. of tradable Securities	1898.20		1692.35		3,590.55	
	<i>Figures in million</i>					
	<i>DSE</i>		<i>CSE</i>		<i>TOTAL</i>	
	<i>Taka</i>	<i>US \$</i>	<i>Taka</i>	<i>US \$</i>	<i>Taka</i>	<i>US \$</i>
Issued capital of all companies	82,751	1198.94	80,185.10	1161.77	162,936.10	2360.71
Issued capital of all mutual funds	835.00	12.10	835.00	12.10	1670	24.20
Issued debentures	140	2.03	12.80	0.18	152.80	2.21
Issued bonds	80,553	1167.10	-	-	80,553	1167.10
Total Issued capital	164279	2380.16	81032.90	1174.05	245,311.90	3,554.21
Total Market Capitalization	491684	7123.79	39849.90	577.37	531533.90	7701.16

(Source: Annual Report of SEC, 2006-2007)