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主 論 文 の 要 旨

論文題目 Three Essays in Corporate Financial Policy
(企業金融政策に関する 3 論文)

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論 文 内 容 の 要 旨

Financial policy is one of the most studied areas in corporate finance. Many theories and ideas have been developed to explain the effect of financial policy. Although there has been controversy regarding its impact on firm value, the existence of market imperfections clearly justifies the importance of financial policy. This dissertation includes three essays in corporate financial policy. The first essay discusses the determinants of capital structure, one of the puzzling issues in corporate finance. How the capital structure decisions are made? What are the factors that influence the capital structure decisions? Why do some firms prefer to take on more leverage than others? The first essay adds some insights on these issues. Since most of the empirical studies are made on public firms, the second essay of this dissertation discusses capital structure decisions of private firms. Capital structure decisions of private firms are believed to be different than those of public firms. Private firms have limited access to external equity and debt market compared to public firms. Moreover, information asymmetry and ownership concentration in private firms are

likely to increase the costs of debt in private firms. Thus, it is important to investigate whether these differences result in differences in capital structure between private and public firms. Finally, the third essay of this dissertation is about announcement effect of cash dividend changes on share price in Dhaka Stock Exchange. Dividend policy is considered another unresolved issue in corporate finance. Most of the empirical studies are done on the developed market. This study is carried out on the DSE to find out whether dividend acts as a signaling device in an emerging market.

The Determinants of Capital Structure: Evidence from Japan

Why do some firms prefer to take on more leverage than others? What factors influence firms' capital structure decisions? Financial researchers have proposed a large number of theories and ideas to explain the capital structure dynamics. The trade-off theory and pecking order theory are the two most important theories that explain the capital structure decisions. According to trade-off theory, there are some costs and benefits of financing. Firm will choose a target leverage ratio by balancing the costs and benefits of financing. Optimal leverage ratio will minimize the costs and maximize the firm's value. According to pecking order theory, because of asymmetric information between managers and outside investors, firm will follow a hierarchy of financing. Firm prefers to use internal equity first, followed by debt and only in extreme circumstances equity is issued.

Empirical evidence in favor of these theories is mixed. Despite having many useful insights to capital structure decisions, none of these theories provide a unified framework that can simultaneously account for many empirical facts. To add to this already existing puzzle, Lemmon,

Roberts and Zender (2008) find that leverage ratios of US firms remain stable over long term. Cross-sectional differences in leverage ratios cannot be explained by the time-varying determinants. Almost 60% of the variation in leverage ratios can be explained by the firm fixed effect whereas only 30% of the variation in leverage ratios can be explained by the time-varying determinants only. An unobserved factor, missing from the existing model, explains most of the variation in leverage ratios.

The objective of this study is to examine the factors that determine the capital structure of Japanese firms. Since recent studies reveal that traditional capital structure theories cannot explain all the variation in leverage ratios, this study investigate the capital structure determinants in a different environment. Japan has some major differences as well as similarities with the US. Japanese firms traditionally relied on bank loans as a major source of financing. However, capital market began to play a major role since the financial big bang had been initiated. Japan also has a unique institutional settings characterized by keiretsu form of industrial organization. All these justify Japan is unique to test whether same empirical regularities are observed in a different environment.

The sample consists of non-financial firms listed on the First and Second Section of Tokyo Stock Exchange from 1980 to 2014. In total, 45,419 firms' year observations are included in the sample. The equity data and firm-specific variables were collected from the Nikkei-NEEDS database.

Following the methodology of Lemmon et al. (2008), we examine the long term trend in

leverage ratios of Japanese firms. Every year firms are sorted on the basis of book leverage and market leverage ratios and are divided into four equal portfolios. The leverage ratios for the same portfolio are observed for the next twenty years. Finally, the leverage ratios are averaged across the event time to determine the leverage ratio trend over time. OLS regression models are used to find the factors that affect the leverage ratio. Both book and market leverages are regressed on firm-specific factors that have been identified as the most important factors correlated with leverage in previous empirical studies.

This analysis reveals some interesting characteristics of leverage ratios of Japanese firms. At the beginning of the portfolio construction period a large gap exists in the leverage ratios among these four portfolios. At this point, the difference between the leverage ratios between the highest and lowest groups is the largest. The range of average leverage ratios is 50% for book and 52% for market leverage ratios. Over time, the gap shrinks as very high-, high-, and medium-levered portfolios' leverage ratios decline and low-levered firms' leverage ratios increase. Noticeable convergence is observed among four portfolio averages over time. After 20 years, the very high book leverage portfolio declines from 82% to 65%, whereas the low book leverage portfolio increases from 32% to 36% for the total sample. Similarly, the very high market leverage portfolio decreases from 74% to 66% and the very low market leverage portfolio increase from 22% to 37%. However, the cross-sectional differences between these portfolios remain persistent. We repeat the test on the survivor firms and found the similar results as for total sample. The long term trend in leverage ratios for Japanese firms are very similar to the findings of Lemmon et al. (2008), for US

firms. Lemmon et al. focus on two important characteristics of leverage - convergence and persistency. Leverage ratios of Japanese firms also exhibit these similar features. The leverage ratios of high (low) leverage firms decrease (increase) over a period of twenty years. However, the leverage ratios of four portfolios never coincide, i.e. high (low) leverage firms remain high (low) leveraged.

The persistency in leverage ratios implies that firm's future leverage ratios are anchored on its past leverage ratios. Regression analysis shows initial leverage ratios is significantly positively related to firms future leverage ratios. Even when other time varying determinants are included in the model the relationship remains highly significant. It implies that a certain part of initial leverage ratio remain fixed for long term. The adjusted R-squares from a regression of leverage on traditional capital structure determinants range from 25% to 39% based on model specifications. Conversely, adjusted R-square from a regression of leverage on firm fixed effect shows 70% of the variation in leverage ratios can be explained by the firm fixed effect only, which indicates most of the variations in leverage ratios is cross sectional which cannot be explained by the traditional capital structure determinants. The parameter estimates in pooled OLS regression fall by 40%, on an average, when fixed effect regression is used. Thus the parameter estimates in traditional leverage regression are inefficient where unobserved firm specific factors are ignored.

Among the time varying determinants, profitability is significantly negatively related to leverage which is consistent with the pecking order theory. Consistent with trade-off theory, leverage ratio is significantly positively related to industry median leverage ratios, firm size and tangibility. Age is

positively related to leverage; older firms have higher leverage than young firms. Keiretsu dummy is positive which means that the keiretsu firms have significantly higher leverage than the non-keiretsu firms. The institutional settings of Japanese firms have a significant effect on firms future leverage ratios.

The Determinants of Capital Structure: Insight from Private Firms

Theories of capital structure relate the differences in financing decisions to a number of firm-specific characteristics. Empirical studies based on these theories primarily focus on the public firms. Not many studies analyze the capital structure decisions of private firms. Although Public and private firms may be comparable in terms of firm specific characteristics, sources of financing for private firms are limited. Public firms can access external capital market to raise equity from public. Private firms do not have flexibility in financing (Huyghebaert and Van Hulle, 2006). The access to external equity and debt market is limited for private firms. Information asymmetry is significantly higher in private firms because of lack of disclosure of information. Ownership in the private company is concentrated in the hands of a group of investors. Owners are likely to retain control over the firms and unwilling to issue external equity (Stulz 1988, Amihud et al. 1990). Information asymmetry and ownership concentration prevalent in private firms are also likely to increase the costs of debt in private firms. Saunders and Steffen (2011) find that the cost of issuing debt for private firms is significantly larger than that for public firms. Thus, it is important to examine whether these differences affect the capital structure of private and public firms.

The objective of this study is to find out the factors that determine capital structure decisions

made by private firms. How does a firm's access to external equity market affects its choices of financing? Is there any difference in capital structure decisions made by the private and public firms? This study uses a large sample of Japanese private firm's data obtained from Nikkei NEEDS Financial Quest for the period 1980 to 2014. The study also compares result with public firms listed on the First Section of Tokyo Stock Exchange.

This study uses book leverage data to analyze the capital structure of private firms. Following the methodology of Lemmon, Roberts and Zender (2008), this study examines the trend in leverage ratios of Japanese private firms. This study finds that leverage ratios of very high-, high-, medium- and low-leverage portfolios remain stable over long term and differences among the portfolios remain persistent. Some features of the graphs are noticeable. At the beginning of the portfolio construction period (indicated as event time zero) a large gap exists in the leverage ratios among these four portfolios. For total sample, the leverage ratio of very high leverage portfolio is .89 and low leverage portfolio is .27 at the formation period. After the end of twenty years, leverage ratio of very high leverage portfolio decreases to 0.78 and the leverage ratio of low leverage portfolio increases to .34. The differences in leverage ratios between very high and low leverage portfolio is .62 and 0.44 at the beginning and end of the formation period respectively. The data of survivor firms also shows that average book leverage ratios of very high leverage portfolio decreases from .91 to .78 and the average book leverage ratio of low leverage portfolio remains almost constant at around .35. The difference in book leverage ratios between very high leverage portfolio and low leverage portfolio is 0.56 at the beginning of the portfolio formation period and

0.44 after twenty years the portfolio is formed. Decreasing trend in leverage ratio is observed in all portfolios except the low leverage portfolios. Leverage ratios of private firms exhibit greater persistence than public firms. The range in book leverage ratios for private firms is 62% and for public firms is 50% in the formation period. After twenty years the range in book leverage ratios is 44% for private firms and 29% for public firms. Changes in leverage ratio for private firms are less than that for public firms.

Regression result shows initial leverage is significantly positively related to future leverage ratios. Almost 48% of the variation in leverage ratios of private firms can be explained by the initial leverage ratios. Among the traditional capital structure determinants, leverage is negatively related to profitability and positively related to firm size, tangibility, age and industry median leverage. Sales growth, a proxy for firm's future growth opportunities, is significantly positively related to leverage. Generally a negative relationship is expected, because growing firms want to keep more flexibility for financing in future. Possibly, the positive relationship results from private firms limited sources of financing. As private firms have limited access to external equity market, they have to rely on debt financing. Cash flow volatility is negatively related to leverage for private firm's but turns significantly positive when both public and private firms are included in the sample. Badertcher et al. (2015) find that as private firms cannot access public equity market, risk of bankruptcy is higher for private firms. The significant negative relationship could be due to higher risk of bankruptcy of private firms relative to public firms. The indicator variable private is significantly positive which means private firms leverage ratio is significantly higher than the public firms leverage ratio.

Adjusted R-square from a regression of leverage on firm specific effects shows almost 72 % of the variation in leverage ratios can be explained by the unobserved factor. Whereas adjusted R-square from a regression of leverage on traditional capital structure determinants can explain almost 31% of the variation in leverage ratios. Unobserved factors can explain more than twice the variation in leverage ratios as explained by the traditional capital structure determinants.

The Announcement Effect of Cash Dividend Changes on Share Prices: Evidence from Dhaka Stock Exchange

The motivation behind dividend payment is quite ambiguous. Tax on the dividend is often higher than the tax on capital gain. From the shareholders perspective dividend should be less preferable to capital gain as it reduces the wealth of investors. To solve the puzzle of dividend payment, many financial economists have looked into the reactions of the stock market on the announcement of a dividend. Early empirical evidence shows that dividend payment has a profound impact on share price (Pettit, 1972; Aharony and Swary, 1980). On the announcement of dividend increase, share price increase and vice versa. The rationale behind such reactions in the stock market has been explained by two prominent hypotheses. One is information signaling hypothesis and the other is free cash flow hypothesis. According to information signaling hypothesis ((Battachrya, 1979), dividends could be used as a tool to reduce the information asymmetry between shareholders and managers. When a dividend is increased (decreased) it sends a signal to the shareholders about managers` positive (negative) expectation of firms` future earnings. Therefore, share price increase (decrease) following the dividend increase (decrease) announcement. Free cash flow hypothesis

((Jensen, 1986), on the other hand, considers dividend as a mechanism to reduce agency problems between shareholders and managers. When free cash flows are available to managers, they tend to overinvest to maximize their own interests. The increase in dividend decreases the cash flows available to managers, leading to a positive impact on share price.

The objective of the study is to find out how stock price reacts to the announcement of dividend for companies listed on the Dhaka Stock Exchange. This study will shed light on whether dividend could be used as an effective tool to reduce the information asymmetry between shareholders and managers for DSE listed companies.

Focus of empirical studies has been the developed market, particularly the US. As an emerging market, Bangladesh has different institutional settings which make the announcement effect not as clear as in the US. There are some unique institutional characteristics that make Dhaka Stock Exchange an interesting market to examine the announcement effect of cash dividend changes on share prices. Ownership structure of Bangladeshi listed companies is concentrated at the hand of a single family or large individual investors. Because of concentrated ownership, agency conflict between shareholders and managers is not significant; rather agency conflict between minority shareholders and controlling shareholders is more noticeable. In contrast to the developed country, Bangladeshi companies do not follow a stable dividend policy. They are found not very cautious about the likely impact of changing dividend every now and then.

Standard event study methodology is used to investigate the announcement effect of cash dividend changes on share prices for an event window of -3 to + 3 days relative to dividend

announcement date. The study finds that announcement of dividend increase does not produce a significant abnormal return on the announcement day. Shareholders earning only normal return on the announcement day for dividend increase announcement are quite contrary to the expectation and inconsistent with the signaling hypothesis. Insignificant positive abnormal return on the announcement day could be related to concentrated ownership structure of Bangladeshi companies. If the concentrated ownership reduces the information asymmetry between shareholders and managers, dividend announcement is not expected to have a significant effect on share price. However, CAR (-20,-1) reveals that investors earned a significant positive abnormal return in the pre-announcement period. Significant positive abnormal return earned before the announcement day could be related to some kind of information leakage before the announcement is actually made. Dividend decrease is associated with significant negative reactions on the announcement day which is consistent with the signaling hypothesis. Abnormal returns associated with the announcement of decrease in dividend are larger than the announcement of increase or no change in the dividend. Negative reaction to dividend decrease clearly signifies investors demand cash dividend. No significant abnormal return is observed in the preannouncement period. Negative abnormal return persists even twenty days after the dividend decrease announcement is made which goes against the semi-strong form of market efficiency. Shareholders earn only normal return on the announcement day for no change in dividend group. The study shows that information content of dividend has a little explanatory power for an emerging market like Bangladesh.