Chapter 19
Crisis Effects on the Capital Structure Determinants for Manufacturing Companies

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ABSTRACT
The purpose of the study is to investigate crisis effects on the capital structure determinants for manufacturing companies listed on the Istanbul Stock Exchange Market (ISE) in Turkey for the period 2005-2010. This period is divided into two parts: The period of 2005-2007 is used as pre-crisis period, and the period of 2008-2010 is used as a crisis period. The periods are compared to understand crisis effect on the capital structure determinants. The panel data analysis is used for this study. Short term, long term, and total debt ratios are used as a proxy for the analysis. The sample consists of 138 manufacturing companies in Turkey over the period of 2005-2010. As a result, manufacturing companies’ capital structure is usually determined in accordance with the financial hierarchy theory. During financial crisis, the effects of capital structure determinants deviate from expectations.

INTRODUCTION
Financing decisions are very important for companies. They can use owners or foreign capital to finance their needs. Excessive debt financing has brought some risks because of reasons of inability to pay liabilities, high cost of debts and bankruptcy possibilities. Equity financing also has some disadvantages such as opportunity cost of equity, lack of using financial leverage effect and tax shield advantages.

Making profit cost analysis the companies should find their own optimal capital structure. For this analysis, we need to know relationships between capital structure determinants and profitability. In order to show these, some theories have been put forward.

The tradeoff theory assumes a positive relationship between profitability and the optimal leverage ratio because more profitable firms has lower expected bankruptcy cost and higher tax advantage of debts (Jensen and Meckling 1976;
Crisis Effects on the Capital Structure Determinants

Myers 1977; Bradley et al., 1984:857). More precisely, they will choose external financing to internal financing (Hovakimian et al., 2001).

The pecking order theory (the financial hierarchy theory) which was developed by Myers and Majluf (1984) and Myers (1984) expects a negative relationship between these variables because more profitable firms have more internal funds to rely upon (Chen and Zhao, 2005: 6). Asymmetric information problem means that managers have better information about their companies than outside investors. Investors undervalue firms’ value because of asymmetric information problem (Frank and Goyal, 2007: 21-22). Due to this problem, more precisely managers will choice internal financing to external financing (Harris and Raviv, 1991; Rajan and Zingales, 1995).

These relationships will be affected or changed in the time of crisis. The big problem for companies in the period of crisis is to find capital requirements for their activities. Therefore, firms should consider crisis effects on their capital structure determinants.

LITERATURE

According to the income tax theory, firms prefer to use debt due to interest tax deductibility (Modigliani and Müller, 1963). On the other hand, Miller (1977) proposed that the advantage of borrowing is offset by the disadvantage of higher income tax at the investor level. The bankruptcy costs’ theory that is caused because of high risk of borrowing was put forward by Stiglitz (1972) and Titman (1984). The asymmetric information concept due to the fact that managers have more information than investors was developed by Myers and Majluf (1984). Jensen and Meckling (1976) and Myers (1977) examined that the effects of conflicts relationships on the capital structures that is named agency costs problem between managers, shareholders and lenders. The theory of signs that use high debts as indication of a healthy expression of company was added into literature by Ross (1977).

According to financial hierarchy theory (POT), Companies primarily use their retained earnings as internal resources when they are faced with profitable investment opportunities. Then, they will respectively use the less risky bonds, stocks that can be converted to shares and lastly to issue shares to meet their financing needs. In this approach, the existence of negative relationship is accepted between the value of the company, profitability and borrowing (Rajan and Zingales, 1995; Frank and Goyal, 2003).

On the contrary, according to tradeoff theory (TOT), there is a positive relation between profitability and the optimal debt ratio. High profit companies have lower bankruptcy costs and higher tax benefits in this theory. In order to increase their firm value, they can benefit from this positive relationship (Jensen, 1986).

Chen and Zhao (2005) studies have shown that low profitable companies tend to use more debts than profitable companies and more profitable companies would prefer to use internal resources than external sources. According to Ni and Yu’s (2008) study, the large enterprises in China comply with the financial hierarchy, while the SMEs of China did not act according to this theory. Psillaki and Daskalakis’s (2009) study on SMEs of Greece, France, Italy and Portugal for the period 1997-2002 have demonstrated that they act in accordance with the financial hierarchy theory.

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