

I. Introduction

Capital structure puzzle has been widely discussed since Modigliani and Miller (1958). From then on, several hypotheses are proposed. One of the most popular hypotheses is static trade-off theory. According to static trade-off theory, firms are supposed to have target leverage, which is determined by the trade off between the costs and the benefits of using debts. In a perfect market, firms ought to operate at their optimal leverage all the time. However, the real world is a world with transaction costs and many imperfections; it makes firms deviate from the optimal leverage. Recent researches find that even firms do not maintain at their long-run equilibrium, they do partially adjust toward it. Miguel and Pindado (2001) conclude that Spanish firms bear transaction costs when they decide to adjust their debt level. Gaud et al. (2005) analyze 104 Swiss firms and find they adjust toward a target debt ratio. Flannery and Rangan (2006) find that American firms do have target capital structure and a typical American firm closes about one-third of the gap between its actual and its target debt ratios each year.

Although the partial adjustment toward target leverage ratio model seems to explain the capital structure in most developed countries well. The adjustment speeds vary. Shyam-Sunder and Myers (1999) observe that the adjustment speed is 41.0% in the United States. Miguel and Pindado (2001) find that Spanish firms move back to their optimal leverage at 21.0% annually. Gaud et al. (2005) find that Swiss firms adjust much slower, at 27.0% annually. What causes the adjustment speeds differ from countries? This is the main question we try to answer in this research.

We use a sample of non-financial firms in thirty-two countries for the period 1995 to 2004 in Compustat Global Vantage database. Additionally, we use three estimation methods—Fama and MacBeth (1973) estimate, fixed-effect year-dummy panel, and Flannery and Rangan (2006)'s base specification—to evaluate the partial adjustment model. Our results show that no matter which estimation method is used, the adjustment speed varies from country to country.

Besides for static trade-off theory, two additional theories of capital structures are also popular—pecking order and market timing theories. Unlike static trade-off theory, both of them reject the timely convergence toward a target leverage ratio. Researches by Shyam-Sunder and Myers (1998), Miguel and Pindado (2001), Baker and Wurgler (2002), Frank and Goyal (2003), Flannery and Rangan (2006), and many others, have tested static trade-off against pecking order or market timing models of capital structure. Their results are

ambiguous, but it is clear that pecking order or market timing seems to play some roles in explaining capital structure.

We add the pecking order and market timing factors in our model to capture their effects. There are two kind of leverage measures used. First leverage measure is used widely, which is defined as both short-term and long-term debts divide by total assets. Rajan and Zingales (1995) propose that the previous leverage measure fails to incorporate the fact that there are some assets that are offset by specific non-debt liabilities. For instance, an increase in the gross amount of trade credit is reflected in a reduction of the first measure of leverage. Given that the level of accounts payable and accounts receivable may jointly be influenced by industry considerations, it seems appropriate to use a measure of leverage unaffected by the gross level of trade credit. Hence, we define second leverage measure as long-term debts divide by net assets, where net assets are total assets less accounts payable and other liabilities.

When the first leverage measure is used, we observe that including pecking order and market timing factors only slightly change the adjustment speed, and they are only significant in few countries. But when we use the second leverage measure, including pecking order factor obviously slow down the adjustment speed all over the world. It means that firms with more serious information asymmetry problem move back to their optimal leverage at a slower speed. Our results also indicate that the definition of leverage measure matters.

No matter we include the pecking order and market timing factors in our model or not, we observe the divergence of adjustment speeds among countries. And we also find that pecking order factor will significantly lower the adjustment speed when we apply second leverage measure. We study the determinants of adjustment speeds around the world by focusing on differences in laws and regulations across countries. Eleven country-level factors introduced by La Porta et al. (1998, 1999, 2000) and Demirguc-Kunt and Maksimovic (1999) are used—market condition, legal tradition, financial system, law enforcement, capital market development, banking development, shareholder right, creditor right, ownership concentration, corporate tax rate and accounting standards.

From all country-level factors we chose, market condition and accounting standards play significant role in explaining the difference of adjustment speeds among countries. Firms in emerging countries or in countries with more completed accounting standards tend to have quicker adjustment speed. Additionally, market condition, law enforcement, corporate tax rate and accounting standards help to explain the magnitude of decrease on adjustment speed

after including pecking order factor in our model (using second leverage measure). We also observe the legal tradition and accounting standards are significantly negative correlated with the coefficient on the pecking order factor. Hence, we conclude that firms in developed countries or in countries with stronger law enforcement, or more completed accounting standards tend to have less reduction on adjustment speed when considering pecking order factor (using second leverage measure), because they are countries with less information asymmetries.

In summary, the goal of this research is threefold: (1) do firms target a long run capital structure and partially adjust to it in our selected countries? (2) do the pecking order or market timing factors add any information to our partially adjustment models? (3) do country-level factors help to explain the differences of the adjustment speeds among countries?

This research is organized as follow. Chapter II is literature review. Chapter III lists the source of our sample, the definitions of firm-level and country-level variables, and the hypotheses. Our empirical results are shown in Chapter IV. And chapter V is conclusion.