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CHAPTER 14

Survey Evidence on Capital Structure: Non-U.S. Evidence

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INTRODUCTION

From large multinational companies to small entrepreneurial firms, financing decisions are important because they influence the value of the firm, enable or disable access to financing future growth, and co-determine the survival chances of the firm. Decision makers are aware of the importance of the choice between debt, equity, and intermediate instruments, as well as of the relevance of the leverage—the relative amount of debt—of their companies. This chapter provides a discussion of capital structure choice from the decision maker's perspective and documents survey evidence about financing choice for non-U.S. companies.

In his address to the American Finance Association, Myers (1984, p. 575) posed the following question: "How do firms choose their capital structures?" and answered this with: "We don't know." In this book many chapters discuss theoretical insights in optimal capital structure choices of companies or present models that aim to explain capital structure decisions in firms from the perspectives of managerial self-interest or even behavioral finance. So far, the theoretical literature has not converged on a single encompassing theoretical framework for optimal financing choice. Instead, the literature is characterized by a large number of more or less independent theories about financing decisions.

Empirical research serves to rigorously test the capital structure theories. The need for this testing is best evidenced by Myers (1984, p. 576): "Given time and imagination, economists can usually invent some model that assigns apparent economic rationality to any random event." Using such methodologies as cross-sectional or panel data regression models and event studies, many studies test relations between variables, which approximate (i.e., are "proxies" for) theoretical constructs. These tests provide many important stylized facts about capital structure decisions and often meaningful connections between these facts and theory are made. Although most empirical results pertain to U.S. data sets, several

studies provide international evidence. Following the study of Rajan and Zingales (1995) for G7 countries, Wald (1999) and De Jong, Kabir, and Nguyen (2008) are examples of studies in which large numbers of countries relate standard proxy variables to capital structure variables. Interestingly, these studies find very similar effects across countries as well as significant differences. This result hints at the co-existence of both fundamental capital structure determinants and institutional influences and makes further international comparative work highly relevant.

Survey research is typically motivated by the fact that indirect tests of the decision makers' intentions and considerations via proxy variables neither allow unambiguous tests of theory nor provide undisputable answers to Myers's (1984) initial question. Survey-based research can add to the body of knowledge about capital structure choice. In survey research, financial decision makers are directly approached with standard questions and provide their views on these questions. Although many fields of scientific research mainly rely on this empirical technique, in corporate finance relatively few studies are based on survey evidence. However, since the extensive survey by Graham and Harvey (2001) among U.S. chief financial officers (CFOs), there is a renewed interest in survey research. This chapter describes non-U.S. survey evidence, starting from the earliest work by Stonehill et al. (1975) until the most recent studies, building on the survey by Graham and Harvey.

In addition to the standard approach in corporate finance surveys, where the researcher asks for opinions about actual practices and the relevance of specific considerations, this chapter also provides a discussion of alternative research methods based on survey-based data. The aim is to provide an overview of the added value of empirical research based on survey data. The chapter is not intended to be exhaustive but discusses selective studies. The chapter excludes surveys that only collect information that is available via public sources for other firms: especially for small and medium-sized companies, researchers typically collect balance sheets and profit-and-loss statements via surveys (e.g., Cassar and Holmes 2003).

The structure of the chapter is as follows. The chapter first discusses the evidence from capital structure surveys. Next, it discusses studies using alternative approaches with survey data. Finally, the chapter presents ideas for future research and conclusions.

EVIDENCE FROM CAPITAL STRUCTURE SURVEYS

This section discusses the earliest capital structure surveys. It then presents the evidence for European countries because most non-U.S. studies focus on this region, and then reviews papers from other regions.

Early Studies

Early studies surveyed financial managers before the pecking order theory, static trade-off theory, and market timing theory were well-developed. Stonehill et al. (1975) is an early study that uses survey data to examine the determinants of capital structure. The authors report results based on a 1972–1973 survey of financial executives in 87 firms in France, Japan, the Netherlands, Norway, and the United States. Interestingly, their survey questions already relate to capital structure theories that

had not been formally developed in the literature at that point in time. For example, their questions include the statement “we try to maintain a debt ratio equal to the debt ratios of other firms,” which hints towards the potential importance of a target debt ratio. Also, another statement—“we take advantage of favorable financing opportunities to issue either debt or equity as they occur”—indicates the potential importance of market timing. Both statements receive some support in their study. Overall, the authors conclude that financial executives are more concerned with financial risk and the availability of capital than its cost. This evidence highlights the importance of financial flexibility that is confirmed in later surveys.

Stonehill et al. (1975) not only use survey data on the determinants of capital structure but also examine countries from three different continents. In fact, the country differences are an important motivation for the study. The authors argue that an important decision for financial executives of multinational firms is whether or not to allow foreign subsidiaries to use debt ratios typical in their host countries. Allowing these debt ratios may lead to a debt ratio on the consolidated balance sheet that is abnormal to the multinational’s home country. Stonehill et al. find various differences in managers’ perceptions among countries. Most notably, the tax advantages of debt are ranked very highly in the Netherlands but not in the four other countries.

Stonehill et al. (1975) do not directly ask questions on a financing hierarchy of firms. Fawthrop and Terry (1975), who survey senior financial executives of 54 large U.K. firms in 1974, focus on financing preferences. Their study builds on the work of Donaldson (1961). Donaldson’s description of firms’ financing preferences mirrors Myers’s (1984) pecking order theory: Firms’ managers prefer internal financing over debt financing and only use equity financing when the debt capacity is reached. Fawthrop and Terry report that this financing order appears to be the opinion of the large majority of financial executives. Regarding the debt capacity, the authors note that many executives mention a 40 percent limit of debt financing but none who could explain why 40 percent should be the ‘magic figure’.

European Evidence

As mentioned in the introduction, Graham and Harvey (2001) have renewed interest in survey evidence. Surveys allow for comparisons across countries. A problem in nonsurvey cross-country research is typically that differences in accounting and disclosure practices make comparing and interpreting financial data difficult across countries. Survey evidence can add to the understanding of cross-country differences simply by asking managers about their views in different institutional settings. Bancel and Mittoo (2004) and Brounen, de Jong, and Koedijk. (2004, 2006) survey CFOs in European countries. Bancel and Mittoo include more countries (Austria, Belgium, Greece, Denmark, Finland, Ireland, Italy, France, Germany, the Netherlands, Norway, Portugal, Spain, Switzerland, Sweden, and the United Kingdom) than Brounen, de Jong, and Koedijk (who study the United Kingdom, the Netherlands, France and Germany). Yet, Brounen, de Jong, and Koedijk have a substantially larger sample size (313 CFOs versus 87 CFOs in Bancel and Mittoo). These studies allow for a two-way analysis of how institutional environments affect managers’ views. First, a comparison can be made between the results in

Europe and results obtained by Graham and Harvey in the United States. Second, country differences within Europe can be exploited.

Similar to Graham and Harvey (2001), both studies find that financial flexibility and credit ratings are very important determinants of firms' financing policies. As in Stonehill et al. (1975), Brounen, de Jong, and Koedijk's (2004, 2006) results show that managers in the Netherlands value tax deductions more than managers in most other countries, but the difference is relatively small. Bancel and Mittoo (2004) find that the legal system has an effect on capital structure. Their evidence shows that concern for financial flexibility is higher in civil law systems, which could possibly be explained by the dearth of available external financing in these systems. Overall, however, the studies conclude the rankings of most factors in Europe are strikingly similar to those in the United States. Although there are differences across countries and legal systems, the same factors apparently drive most of the capital structure decisions in the United States and Europe.

Bancel and Mittoo (2004) and Brounen, de Jong, and Koedijk (2006) use the same questions as Graham and Harvey (2001) in order to draw a comparison between results. Although these questions provide strong insight into firms' financing decisions, they do not explicitly ask about the pecking order theory. Beattie, Goodacre, and Thomson (2006) survey 198 managers in the United Kingdom and do ask directly about firms' financing hierarchy. They report that 60 percent of the respondents claim to follow a financing hierarchy, while 51 percent of the respondents seek to maintain a target debt level. Their results indicate that respondents do not view having a target debt level and having a financing hierarchy as mutually exclusive: 32 percent claim to follow both the pecking order theory and the static trade-off theory, and 22 percent follow neither. For 80 percent of the respondents that do have a target debt ratio, the target debt-assets ratio is 50 percent or lower, indicating an increase compared to Fawthrop and Terry's (1975) finding of 40 percent. Beattie et al. further report that "ensuring the long-term survivability of the company" is the main determinant of capital structure, which seems very similar to valuing financial flexibility or financial conservatism.

Evidence from Other Countries

The impact of institutional environments can be studied further by focusing on countries outside the United States and Europe. A relatively early study of Allen (1991) focuses on Australia. Allen uses semistructured interviews with financial executives of 48 Australian listed companies. He reports that 40 respondents indicate having a policy of maintaining spare debt capacity. As interviewees also note that this policy improves credit ratings, Allen's findings foreshadow Graham and Harvey's (2001) findings on the relevance of financial flexibility and credit ratings. Allen concludes that his findings in Australia are very supportive of Donaldson's (1961) description of firms' financing policy. As he held his interviews around the 1987 market crash, Allen (p. 119) not surprisingly also finds evidence that managers believe "in the existence of a capital market window which opens and shuts at times outside their control."

A survey by Cohen and Yagil (2007) covers 140 managers in the United States, the United Kingdom, Germany, Canada, and Japan. As could be expected, the responses of the managers in these countries also point toward the importance of

financial flexibility. Although credit ratings are also perceived as important, the average ranking of credit ratings in Cohen and Yagil is lower than in Graham and Harvey (2001), for example. In Japan, Cohen and Yagil find credit ratings to be more important than financial flexibility. As described in the next subsection, Allen (2000) also reports this reduced importance of financial flexibility. In a follow-up study, Cohen and Yagil (2010) examine sectorial differences in managers' views. They find various differences across sectors. For example, a typical manager in the banking and finance industry finds the corporate tax rate substantially more important than a typical manager in the technology sector.

So far, the chapter has focused on studies that mainly describe developed markets. Kester et al. (1998) survey executive officers in a range of Asia-Pacific countries in the period 1990 to 1996. These countries—Australia, Hong Kong, Indonesia, Malaysia, the Philippines, and Singapore—have varying levels of stock market development. The authors use the same questionnaire that is used by Pinegar and Wilbricht (1989) in the United States. Pinegar and Wilbricht survey 176 large U.S. firms and conclude that pecking order predictions are more descriptive of the respondents' answers than the static trade-off theory.

Kester et al. (1998) find that pecking order predictions are overall far more predictive of capital structure decisions than the static trade-off theory in Asia-Pacific countries. As in most surveys, however, the pecking order theory is presented as a financing hierarchy, and the survey questions do not require that information asymmetry drive the hierarchy. Ensuring long-term survivability and financial flexibility are the two most important factors in the Asia-Pacific countries according to Kester et al., whose results show a great resemblance to the results in the United States and Europe. In general, the strongest country differences in their sample can be observed between Australia and the Asian countries. These differences likely follow from the relatively well-developed market in Australia, as the other countries have more emerging markets. Kester et al. report that 43.1 percent of Australian managers believe that their securities are rightly priced more than 80 percent of the time. By contrast, Pinegar and Wilbricht (1989) report that 47.2 percent of U.S. managers believe that their prices are right more than 80 percent of the time. The percentages in the other countries are all below 20 percent. In Singapore, only 4.8 percent of the managers believe that the stock price is right more than 80 percent of the time.

Fan and So (2004) survey Hong Kong managers both in 1994 (before the 1997 Asian crisis) and in 1999 (after the crisis). Before the crisis, the authors find that more than three-quarters of managers prefer the pecking order theory over the static trade-off theory. After the crisis, less than half the managers prefer the pecking order theory. More than 77 percent of the managers indicate that the Asian financial crises have made equity look more favorable relative to debt as a source of capital. Fan and So's study shows that managers' views can change fairly rapidly. As such, a survey of managers' views on capital structure after the global financial crisis would be very interesting.

ALTERNATIVE SURVEY APPROACHES

In standard empirical finance research, the use of proxy variables for unobservable theoretical constructs is an important issue. As described in the previous section,

survey results can bridge the gap between the practical considerations of decision makers such as CFOs and abstract finance theory.

All papers in the previous section directly ask executives for opinions. However, this approach suffers from a major weakness, which is best explained via an example. Graham and Harvey (2001) ask CFOs whether they are more likely to issue equity after an increase in the stock price by asking CFOs for their (dis)agreement with the following statement about motives for an equity issue: "If our stock price has recently risen, the price at which we can sell is 'high.'" In their tables a score of 1.83 on a 0–4 scale is presented in the sample of private firms. Where this question aims to measure a market timing motivation for equity issues, this is unlikely to be relevant for nonlisted firms. This example shows that CFOs have difficulty reflecting on theoretical mechanisms. Obviously, CFOs have superior knowledge about the characteristics of their firms. However, this does not imply that they are also the best judge of the rationales for relations between these characteristics. The remainder of this section discusses papers in which relatively simple questions are posed about firm characteristics and the researchers use empirical tools to measure the relations between these characteristics and answers to the other survey questions as a test of capital structure theory.

The seminal paper in this area is Ang and Jung (1993). For a sample of South Korean firms, Ang and Jung test Myers's (1984) pecking order theory. This theory predicts that information asymmetries between managers and outsiders drive incremental financing choices. A unique feature of survey data is that superior informed managers are the ones who complete the survey. Therefore, a survey instrument is capable of capturing the (perceived) information advantage of the insiders, whereas other data sources, such as annual reports, press releases, and analyst reports, relate to objective information provided to the information-disadvantaged party. Ang and Jung pose four questions, each capturing a different aspect of information asymmetry, such as "Will you not provide extra information at all in an attempt to alleviate the lender's underestimation of the future prospect of your company?" Based on the scores for these four questions, they distinguish high and low information asymmetry firms. All respondents are also asked to rank their preferences for types of funding, including bank loans, retained earnings, trade credit, straight bonds, and new stock. The results of a Mann-Whitney U-test show no significant difference in the financial preferences of the two groups of firms, which contradicts Myers's theory. A related paper with a similar structure is Ang, Fatemi, and Tourani-Rad (1997) for Indonesian firms. This also does not find asymmetric information to be an important determinant of capital structure preferences.

Allen (2000) uses a sample of 252 Australian, British, and Japanese companies to examine the extent to which firms maintain spare borrowing capacity. In Britain, 88 percent of the respondents admit to following a policy of maintaining spare borrowing capacity, like using lines of credit and bill facilities. In Australia this percentage is 56 percent, while only 32 percent of the Japanese respondents maintain spare borrowing capacity. The authors use cross-sectional differences to try to explain this low percentage in Japan. For example, one factor might be that Japanese firms are often a member of a business group, that is, a *keiretsu*. When firms are members of a group with a close relation to a main bank, they may be less concerned with high debt ratios and be less likely to have pre-arranged

borrowing capacity. Allen does not find conclusive evidence on group membership. Regression analyses show that spare borrowing capacity is linked to company size.

In later studies researchers use more elaborate models. De Jong and Van Dijk (2007) use confirmatory factor analysis with structural modeling, which is an empirical model commonly used in business studies. This approach is often referred to as LISREL, which is the software used for estimations. The approach requires four steps. First, a model is designed, based on theory, in which relations between relevant variables (called constructs) are hypothesized and for each variable a set of simple characteristics is defined (called indicators). For example, based on the disciplinary role of leverage, the construct free cash flow is hypothesized to have a positive effect on the construct leverage. The indicators needed to measure free cash flow are the absence of investment opportunities and the presence of internal funds. Second, a questionnaire is designed in which for each indicator at least one simple question or statement is posed, where respondents can typically answer on a 7-point Likert scale. For example, "My firm has ample opportunity to carry out new, profitable projects." Third, questions/indicators related to the same construct are in a confirmatory factor analysis combined into factors, which measure the construct. This allows for an assessment of the quality of the survey instrument and measures the construct as a weighted average of its indicators. Fourth, the relations between the constructs are measured in a structural regression model. The key advantage of this approach is that the empirical model estimates the relations between variables, as in the cross-sectional models with proxy variables, while the CFOs only have to respond to simple questions about the characteristics of their firms. The main disadvantage is that estimates have only statistical, and not economic meaning, when compared to standard cross-sectional models.

De Jong and Van Dijk (2007) conducted a survey among Dutch CFOs of exchange-listed companies and received 102 responses. Based on the survey information, they first conduct a confirmatory factor analysis followed by a set of regression models. In the main analysis, three explained variables are included: leverage, overinvestment, and underinvestment. The regressions show that leverage is mainly explained by the marginal tax rate, collateral value of assets, and risk. These findings corroborate tax and bankruptcy theories. Overinvestment, in which managers are likely to waste internal funds to grow the company despite the negative value of investments, is driven by free cash flow and reduced by several governance-related variables. Interestingly, leverage is not related to overinvestment, which is evidence against the disciplinary role of debt. The authors only find underinvestment or debt overhang to be related to short-term debt, not to leverage. This application of survey research shows the added value of surveys because the constructs such as agency problems and information differences can be measured and explicitly modeled.

A similar paper is Romano, Tanewski, and Smyrniotis (2000), providing a test of capital structure theories for a sample of Australian family firms. The authors, however, first use an exploratory factor analysis in order to find common dimension in the variables. Then the authors test a structural model using LISREL. Unfortunately, the relation between the exploratory factor analysis and the confirmatory factor analysis in LISREL, as well as the variables used to measure each of the constructs, remain unclear.

So far, the chapter has provided a discussion of survey papers solely based on questionnaire data. The survey outcomes cannot be validated using nonsurvey data as the surveys are anonymous. An important motivation for anonymity is that anonymous surveys are more likely to yield truthful answers and higher response rates. An exception is a study by De Jong and Verwijmeren (2010). This paper starts with a data set of publicly available information taken from a set of U.S., Canadian, and European firms from WorldScope, including firm and CFO names, addresses, and proxy variables used in capital structure studies. To these CFOs, the authors pose a simple question: Which description of capital structure policy fits your firm best? There are five potential responses: (1) we have a flexible target range for our debt ratio; (2) we have a somewhat tight target range for our debt ratio; (3) we have a strict target range for our debt ratio; (4) we finance new investments first from internal funds, then from new debt issues, and as a last resort from new equity issues; and (5) other. A marketing bureau administered the survey. Using a marketing bureau guaranteed anonymity to the respondents but allowed the researchers to receive a data set with the response to the question and the public data, without firm or CFO identifiers. Using this setup, the authors combine the strengths of public data (objectivity and availability) and private data (the use of otherwise unobservable information).

De Jong and Verwijmeren (2010) find that 130 of the 235 responding firms (55 percent) indicate having a target, whereas 83 firms (35 percent) follow the pecking order theory. This distinction is relevant because various papers have empirically tested the static trade-off model, the pecking order model, or both models. However, in these papers, which of the sample firms have a target debt ratio and which firms follow the pecking order without having a target is not known *a priori*. Because “pecking order firms” do not act according to the static trade-off theory, a better approach would be to exclude these firms in determining how basic static trade-off variables can explain a firm’s debt level. The same applies for pecking order models, where “static trade-off firms” influence the estimation. Thus, a fundamental problem in other empirical studies is the inability to determine whether firms have a target debt ratio from public data.

De Jong and Verwijmeren (2010) use their survey instrument to distinguish “static trade-off firms” from “pecking order firms.” In their paper, the authors show that empirical static trade-off models perform better for the appropriate subsample of firms, that is, when excluding pecking order firms. For firms with a target, the debt ratio is positively related to size and tangibility, which is in line with the predictions of the static trade-off model. For firms that indicate following the pecking order, size and tangibility have less influence on the debt ratio. Instead, the leverage of pecking order firms is influenced by the firm’s profitability and market-to-book ratio: Both of these variables decrease leverage.

FUTURE RESEARCH

Based on the recent revival of survey-based research in the corporate finance literature (e.g., Graham and Harvey 2001; Brounen, de Jong, and Koedijk 2004, 2006), using questionnaires is a valuable addition to the toolbox of empirical researchers. For the future, three important issues seem relevant to survey research.

First, because most surveys in corporate finance use relatively complex questions, knowing how respondents interpret the questions is unclear. A good example is the notion of financial flexibility used in several studies. The approach of using relatively complex questions dates from the 1970s. In most other areas of business research, particularly strategy and marketing, and in other academic disciplines where survey research is widespread, especially psychology and sociology, researchers no longer use this approach. Therefore, survey researchers in finance may find taking into consideration developments in survey research in other fields to be of value.

The second issue is that using standardized survey instruments allows a comparison between surveys. By using the same survey in the same population over time, survey researchers may find changes in the respondent's opinions. Similarly, using literal translations of a survey in international research may facilitate comparisons between different regions. In other disciplines, particularly in psychology, the use of standard surveys is a widely-accepted practice, where subsequent studies serve to validate the survey instrument. As such, data obtained via a survey can be very valuable to other researchers. An example is the data of the Graham and Harvey (2001) study, which is available on the Internet (see Graham and Harvey 2003) and has been re-used in Brounen, de Jong, and Koedijk (2004, 2006) to compare the results for U.S. respondents with their European survey. Therefore, to facilitate future research, editors of academic journals may want to ask authors of survey studies to publish their data.

Finally, survey evidence could be combined with public data such as in De Jong and Verwijmeren (2010). Distributing the survey by a third party, such as a marketing bureau, guarantees the anonymity of respondents while allowing the researchers to receive a data set with the responses to the survey questions together with public data on the firm. Further studies can strongly benefit from this approach as it combines the strengths of public and private data.

SUMMARY AND CONCLUSIONS

The capital structure literature is characterized by a broad set of theories. The majority of the empirical research is based on publicly available data about firms' financing structures and decisions. In financing decisions, the financial executives of firms are responsible for the actual financing arrangements. Thus, an obvious approach for empirical research is to use survey research, allowing a direct assessment of theoretical predictions and constructs. This chapter describes survey studies about CFOs' opinions from countries other than the United States. Overall, these studies conclude that the findings for U.S. firms are also very relevant for non-U.S. firms. For example, findings on the importance of financial flexibility and credit ratings are widespread among surveys all over the world. Nonetheless, important differences exist between the United States and other countries. Survey evidence also indicates relevant differences across non-U.S. countries and legal systems.

Alternative survey-based research methods provide avenues for future survey research. Survey data have the potential of complementing other research methods. In fact, survey evidence can provide strong rationales for conducting nonsurvey research on particular topics. For example, survey evidence on the importance of

financial flexibility has motivated many nonsurvey studies to focus on modeling and empirically testing the importance of financial flexibility, such as DeAngelo and DeAngelo (2007) and Gamba and Triantis (2008). In short, surveys are a very valuable addition to the toolbox of researchers.

DISCUSSION QUESTIONS

1. What are the strengths and weaknesses of survey research when compared to other empirical research methods in the corporate finance literature?
2. Titman (1984) argues that the liquidation of a firm may impose costs on both customers and employees. As a result, they demand risk premiums on products and wages when leverage increases. These costs are transferred to the shareholders. However, if the shareholders commit to liquidate only when the gains exceed all costs, including those of customers and employees, this would increase the cost of capital. Titman shows that managers can use their firm's capital structure to control these risk premiums. He argues that firms with higher liquidation costs to customers and employees will have less debt. Design a survey question or a set of questions to test Titman's theory.
3. Fan and So (2004) use surveys as a tool to measure changes in managers' beliefs about capital structure. Describe the study of Fan and So (2004) and discuss why managers may have changed their opinions from 1994 to 1999.

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