

National and International Patterns in Company-Financing: a Review of Comparative Studies on Debt-Equity Dilemma

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(Received on May 10, 2004)

Introduction

Corporate financing choices are complex and determined by a combination of factors related to characteristics of the firm as well as to the institutional environment. The main purpose of this paper is to find what kinds of patterns exist concerning corporate financing decisions in the world's scale and to identify and measure the influence of institutional differences on capital structure choice across countries. I mainly focus on differences in debt versus equity, internal versus external and domestic versus foreign sources of company financing for various groups of countries and try to find patterns across boundaries. I will try to explain the patterns in company financing in terms of national differences in cost of capital, financial structures, macro-economic growth, legal system, taxation, corporate governance and characteristics of the suppliers of capital. I will also examine if there are differences in capital structure of the companies from developed and developing countries. Rather than examine countries separately, I will outline broad patterns across countries, and draw attention to exceptions.

The materials used in this study are derived from primary and secondary resources. However broad the topic is, the nature of the paper requires that the issues will be discussed in rather limited methodological concept. This paper includes wide selection of literature on the financing decisions. The scope of the critical review will be mainly limited to the related studies published in English. The literature in other languages, however important, will be generally disregarded here.

Should trends in capital structure differ across countries? If yes, on what basis? At one level theory suggests that differences should be immaterial if all countries are subject to the full rigors of competition and market forces. Theory, however, recognizes, that despite vigorous market forces, there may be specific factors that result in differences. The researchers come

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to different conclusions as far as the relation between capital structure and the level of country development is concerned. It is also not clear till what extent, and even whether at all, the division on so called bank-oriented and market-oriented economies really matters for companies financing decisions. The lack of consensus in two above research areas, the vast proportion of capital structure phenomenon and the abundance of accumulated data and existing literature, suggest that when searching for any patterns it is necessary, first, to investigate cross-country debt-equity, internal and external, domestic and international sources of financing. For this study it is even more important to establish stylized facts already in the group of advanced economies taking into account cost of capital and other capital structure determinants.

The structure of paper is as following: In section one I will investigate whether the trends in capital structure differ across countries in terms of debt-equity, internal and external, domestic and international financing decisions. In section two I will investigate cross-country determinants of capital structure choice. In specific I will examine the influence of cross-boundary cost of capital, tax regimes, bankruptcy codes, stock and bond market level of development, legal systems, macro-economic environment and other variables on financing decisions of firms in different group of countries. Section three sums up main findings regarding global trends in corporate financing choices and suggests the areas for further research.

1. Patterns in cross-country Internal and External, Domestic and International, Debt and Equity Company Financing

Early attempts to explore the cross sectional determinants of capital structure in different countries analyzed large firms from developed countries (U.S., Japan, France, Norway, Netherlands) and found that industry and firm size are not important determinants of leverage while profitability and firm growth generally are.²⁾ In time corporate financing choices were supposed to be determined by a combination of factors related to characteristics of the firm as

2) See: Remmers, L. Stonehill, A, Wright, R. and Beekhuise, T., 'Industry and size as debt ratio determinants in manufacturing internationally', *Financial Management* 3, 1974, Stonehil, A., Beekhuisen, T., Wright, R., Remmers, L, Toy, N. Pares, A., Shapiro, A., Egan, D and Bates, T., 'Financial goals and debt ratio determinants: a survey of practice in five countries', *Financial Management* 4, 1975 and Toy, N., Stonehill, A., Remmers, L., Wright, R. and Beekhuisen, T., 'A comparative international study of growth profitability, and risk as determinants of corporate debt ratios in the manufacturing sector', *Journal of Financial and Quantitative Analysis* 9, 1974.

well as to the institutional environment.³⁾ In two related studies it is reported that despite substantial institutional differences across countries, firm debt ratios in developed and developing countries seem to be affected by some similar factors.⁴⁾ First, debt ratios are typically lower for more profitable firms. Second, debt use is generally higher for firms with more tangible assets that can be used as collateral (although it is argued that collateral may be less important in countries with weak bankruptcy laws and repossession enforcement like East Asian countries).⁵⁾ Firm size is frequently positively related to leverage, while market-to-book ratios are negatively related to debt use. There are also some evidences of tax motivated leverage using Miller's gains/leverage formula. A major problem in such research is that differences in legal and institutional environment as well as in accounting practices make it difficult to compare and interpret financial data across countries.

Patterns in cross-country internal and external financing

Looking for the differences and similarities in both systems regardless of a decline of relationship banking, internal finance is the dominant source of finance for firms in the main industrial countries (see table 1).

Examining corporate capital structure in Germany, Japan, the U. K. and U. S. over the period 1970-1994 we find that internal funds were the main source of finance in all countries, with the U.K. financing the highest proportion 93% of its investment by retentions, and Japan financing the lowest 69%. There is no clear cross-country trend in this period neither for all countries nor even for the countries belonging to bank-oriented and market-oriented systems (in the U. K. and U. S. trends are opposite). Similar results can be found throughout existing

3) Examples of empirical studies examining the association between firm characteristics and capital structure within specific countries include: 1. (U.S) Titman, S., and Wessels, R., 'The Determinants of Capital Structure Choice,' *Journal of Finance*, 43, 1998, 2. (Japan) Campbell, J. and Hamao, Y., 'Changing Corporate Financing Structure and the Main Bank System in Japan,' in M. Aoki 'Japanese Main Bank System,' Oxford University Press, 1995, 3. (Australia) Gatward, P. and Sharpe, I., 'Capital Structure Dynamics with Interrelated Adjustment: Australian Evidence,' *Australian Journal of Management*, 21, 1996.

4) It is however noticed that 'the theoretical interpretation of empirical underpinnings of the observed correlations are still largely unresolved': Rajan, R. and Zingales, L., 'What do we know about capital structure? Some evidence from international data,' *Journal of Finance*, 1995 see also: Booth, L., Aivazian, V., Dermiurg-Kunt, A. Maksimovic, V., 'Capital structures in developing countries', *Journal of Finance*, 56, 2001.

5) Allayannis, G., Brown, G. W. and Klapper, L. F., 'Capital Structure and Financial Risk: Evidence from Foreign Debt Use in East Asia', University of Virginia, 2000.

Table 1 Developed Countries; Internal finance: The Most Common Type of Finance in years 1970–1994

	1970's	1980's ⁶⁾	1990–1994
Germany	71%	85%	72%
Japan	65%	72%	71%
UK	100%	98%	81%
US	84%	97%	100%

Source: Corbet, J and Jenkinson, T., 'How is investment financed,' The Manchester School, 1997.

literature.⁷⁾

Comparing the use of internal financing in companies in developed and developing countries we find that the former have much higher ratios (see table 2).

Table 2 Internal finance: the comparison of companies in developed and developing countries

	Internal	New Equity	Bank Loans	Bonds
Germany	79%	0%	12%	-1%
Japan	70%	4%	27%	4%
UK	93%	-5% ⁸⁾	15%	4%
US	96%	-8%	11%	15%
Korea	12%	40%	n.a.	n.a.
Pakistan	58%	12%	n.a.	n.a.
Thailand	17%	n.a.	n.a.	n.a.
Malaysia	42%	31%	n.a.	n.a.
Zimbabwe	58%	43%	n.a.	n.a.
Mexico	17%	76%	n.a.	n.a.
Turkey	18%	60%	n.a.	n.a.

Based on: Singh, A. and Hamid, J., 'Corporate Financial Structures in Developing Countries,' International Finance Corporation Technical Paper No 1, 1992 and Corbet, J and Jenkinson, T., 'How is investment financed,' The Manchester School, 1997.

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- 6) The date differs, however, in other publications, for example: Singh, A. and Hamid, J., 'Corporate Financial Structures in Developing Countries,' International Finance Corporation Technical Paper No 1, 1992.
- 7) Corbett, J. and Jenkinson, T., 'The Financing of Industry, 1970–89: an International Comparison,' CEPR Discussion Paper, Centre for Economic Policy Research, London, 1994. Compare also the findings of Wright, K., 'Corporate Profitability and Finance,' Bank of England Quarterly ↗

National and International Patterns in Company-Financing:
a Review of Comparative Studies on Debt-Equity Dilemma

We find that developed countries rely more on internal finance (consistent with previous table — highest ratios for the U. S. and U. K.) while developing countries less with lowest ratios for Korea, Thailand and Mexico, respectively 12%, 17% and 17%. Developing countries rely mostly on new equity whose highest ratios are observed in Mexico, Turkey and Zimbabwe, respectively 76%, 60% and 43%.

As for the companies in U. S., U. K. and Canada, external financing is smaller than internal financing, with firms in the U. S. raising the least from external sources. But firms in Japan consistently raise more money externally than internally. Firms in Germany, France and Italy raise substantially less from external sources than either firms in the U. K. or Canada.⁹⁾

The highest internal financing ratios of 58% for the companies in Pakistan and Zimbabwe are considerably less than that for those companies observed in the developed countries, especially U. S. and U. K. Moreover, not only do corporations in developing countries rely to a greater extent on external finance than firms in developed countries, but externally issued equity plays a large role in the growth of these firms.

This pattern of corporate finance in developing countries are surprising because it is not what economic theory suggests. The standard pecking order theory suggests that firm prefer internal to external finance and that if they had to resort to external finance they would prefer to use debt and as a last resort equity finance. It is also high level of imperfections in stock markets in developing countries such as the inadequacy of the investor protection, legal frameworks, lack of transparency in transactions and the sharp price volatility that is inherent in them would also lead us to predict that firms in developing countries would rely much more on internal than external funds and resort far less to equity finance than firms in advanced countries.

↙ Bulletin, 34, 1988 and Mayer, C., 'Financial Systems, Corporate Finance and Economic Development' in R. G. Hubbard 'Asymmetric Information, Corporate Finance and Investment,' Chicago, University of Chicago Press, 1990.

8) The negative figures for new equity in the UK and the US reflect high level of mergers (for cash or debt); also firms have increasingly replaced equity with debt over this period so haven't issued much new equity. The table excludes some minor other sources of finance, predominantly 'capital transfers' for Germany and trade credit for Japan. There are also large 'statistical adjustments' for UK and US. see also: Nestor, S. and Thompson, J. K., 'Corporate Governance Patterns in OECD Economies: Is Convergence Under Way?' 2001 - oecd.org/daf/corporate-affairs/governance

9) Rajan, R. and Zingales, L., 'What do we know about capital structure? Some evidence from international data,' Journal of Finance, 1995.

There might be different explanations of this fact.¹⁰⁾ It might be that in developing countries the governments have played major proactive role in the development of the stock market. Moreover, in 1980s cost of equity capital fell significantly as a result of the rise in share prices due to internal and external liberalization. From the other hand, in the same period, cost of debt financing increased due to the financial liberalization. Also international interest rates increased.¹¹⁾

Patterns in cross-country debt-equity financing

Many researchers report that companies in Japan and Continental Europe are more highly levered than companies in the Anglo-American economies.¹²⁾ They classify the former countries as 'high leverage' and the latter as 'low leverage' suggesting that firms in France, Germany and Japan are more highly levered than firms in the U. S. and the U. K. The differences are explained in the extent and nature of financial intermediation, differences in institutional structures governing bankruptcy and debt renegotiation, differences in the market for corporate control and the way leverage is defined. In contrast, some authors report that there are no major differences in the extent to which firms are levered in Japan and the U. S.¹³⁾

Available literature fairly makes distinction between two groups of countries. Some authors argue that because there are too many differences between developing and developed countries comparing debt ratios across companies in those two groups of countries gives no clear conclusions.¹⁴⁾ Other researchers find substantial differences and draw conclusions

10) For this and other factors concerning the patterns of Corporate Financing in developing countries see for example: Mutenheri, E. and Green, C., 'Financial Reform and Financing Decisions of Listed Firms in Zimbabwe,' Loughborough University, 2000.

11) For more detailed explanations see: Nagaraj, R., 'Indian Capital Market growth: Trends, Explanations and Evidence,' Economic & Political Weekly, September 1996.

12) Rutherford, J., 'An international perspective on the capital structure puzzle' in J. Stern and D. Chew, 'New Developments in International Finance', Basil Blackwell, New York, 1988, Berglof, E., 'Capital structure as a mechanism of control: a comparison of financial systems' in Masahiko A., B. Gustafsson and O. E. Williamson, 'The Firm as a Nexus of Treaties', Sage Publications, London, 1990, Frankel, A. and Montgomery, J., 'Financial Structure: an international perspective', Brookings Papers on Economic Activity 1, 1991, Rajan, R. and Zingales, L., 'What do we know about capital structure? Some evidence from international data,' Journal of Finance, 1995 and Borio, C., 'Leverage and Financing of Non-Financial Companies: An International Perspective,' BIS Economic Papers 27, Basle: Bank of International Settlements, Switzerland, 1990.

13) Kester, C., 'Capital and ownership structure: a comparison of United States and Japanese manufacturing corporations', Financial Management 15, 1986.

14) see for example: Booth, L., Aivazian, V., Demurg-Kunt. And Maksimovic, V., 'Capital structures in developing countries,' Journal of Finance, 56, 2001.

National and International Patterns in Company-Financing:
a Review of Comparative Studies on Debt-Equity Dilemma

regarding financing behavior of companies in developed versus developing countries.¹⁵⁾ They believe that when the leverage of the companies in developed and developing countries is compared, the companies in both groups of countries financed, in general, just over half of their balance sheet with liabilities (see table 3). However, there exist large variation across individual countries and within countries over time.

Table 3 Total Liabilities/Total Assets by Country and Year

Companies in Developed Countries	Year						
	1994	1995	1996	1997	1998	1999	2000
Australia	51%	51%	51%	51%	52%	53%	55%
Austria	66%	69%	71%	66%	63%	64%	63%
Belgium	58%	56%	59%	62%	60%	56%	57%
Canada	52%	50%	47%	48%	49%	48%	48%
Denmark	54%	53%	51%	52%	52%	54%	59%
Finland	67%	63%	61%	60%	58%	59%	58%
France	62%	62%	61%	62%	61%	62%	62%
Germany	71%	70%	71%	70%	68%	65%	64%
Greece	56%	55%	56%	58%	57%	55%	57%
Ireland	60%	62%	64%	60%	65%	65%	68%
Italy	66%	65%	62%	64%	62%	64%	64%
Japan	62%	62%	58%	56%	57%	55%	55%
Netherlands	58%	62%	59%	59%	60%	64%	61%
Norway	59%	56%	56%	55%	56%	54%	58%
Singapore	45%	44%	49%	49%	52%	47%	46%
Spain	60%	58%	47%	50%	52%	56%	56%
Sweden	60%	55%	53%	55%	54%	54%	53%
Switzerland	60%	60%	58%	56%	57%	54%	54%
UK	52%	54%	53%	52%	53%	51%	49%
US	44%	43%	41%	41%	43%	47%	45%
GROUP MEDIAN	59%	56%	56%	56%	56%	55%	56%

- 15) Glen, J., 'Capital Structure, Rates of Return and Financing Corporate Growth: Comparing Developed and Emerging Markets, 1994-00,' University of Cambridge, 2003; the results of Glen are similar to Titman, S., Twite, G. and Fan, J. P. H., 'An International Comparison of Capital Structure and Debt Maturity Choices,' University of Texas, 2003, for discussion over the relationship between the levels of debt in the capital structure and firm performance see also: Rajan, R., and Zingales, L., 'What Do We Know about Capital Structure? Some Evidence from International Data,' *Journal of Finance*, 50, 1995, Demirguc-Kunt, A. and Maksimovic, V., 'Law, Finance and Firm Growth,' *Journal of Finance*, 53, 1998, Demirguc-Kunt, A. and Maksimovic, V., 'Institutions, Financial Markets and Firm Debt Maturity,' *Journal of Financial Economics* 54, 1999, Majumdar, S. K., 'Capital structure and performance,' *Public Choice*, 1998 and Giannetti, M., 'Do Better Institutions Mitigate Agency Problems? Evidence from Corporate Finance Choices,' *Journal of Financial and Quantitative Analysis*, 38, 2003.

Companies in Developing Countries							
Argentina	46%	44%	47%	46%	53%	44%	41%
Brazil	n.a.	42%	50%	52%	51%	57%	62%
Chile	39%	40%	41%	41%	42%	40%	43%
Colombia	33%	37%	38%	30%	43%	34%	34%
Czech Republic	35%	41%	40%	45%	47%	49%	45%
Hong Kong	52%	52%	51%	46%	44%	42%	40%
Hungary	42%	29%	23%	23%	30%	37%	35%
India	60%	57%	57%	56%	55%	50%	47%
Indonesia	54%	51%	57%	71%	76%	70%	89%
Israel	54%	54%	48%	56%	47%	47%	40%
Korea	72%	72%	71%	72%	66%	56%	52%
Malaysia	47%	51%	48%	49%	50%	48%	48%
Mexico	51%	52%	50%	52%	46%	49%	56%
Pakistan	61%	68%	56%	56%	59%	72%	63%
Peru	19%	28%	34%	47%	48%	48%	49%
Philippines	22%	19%	17%	39%	26%	22%	41%
Poland	14%	15%	16%	26%	43%	48%	44%
South Africa	57%	53%	47%	46%	45%	47%	51%
Taiwan	36%	34%	41%	44%	43%	44%	47%
Thailand	52%	56%	62%	72%	54%	61%	62%
Turkey	48%	61%	63%	54%	59%	68%	62%
Venezuela	53%	31%	30%	27%	33%	38%	34%
GROUP MEDIAN	48%	47%	48%	47%	47%	48%	47%
GLOBAL MEDIAN	50%	51%	50%	52%	52%	52%	52%

Based on Source: Glen, J., 'Capital Structure, Rates of Return and Financing Corporate Growth: Comparing Developed and Emerging Markets, 1994–00,' University of Cambridge, 2003.

Across the two major groupings of companies (in developed and developing countries), debt levels were much higher in companies in developed countries, which had a median ratio of total liabilities to total assets raging from 56% to 59%. In contrast, companies in developing countries had ratio fluctuating between 47 and 48% with no obvious trend across time.

Even within these two major groups there are considerable variations; some of the lowest levels of debt in the developed countries group are observed in the U. S., where the median company had ratio 41% in 1996–97. Those ratios increased over next few years, however, ending the sample period at 45%, still, well below the level of nearly all other developed markets. Some countries saw debt levels drop over the sample. For example, in Japan the ratio declined from 62% in 1994 to 55% in 2000, placing it below the developed country median. The ratio for German companies also declined, but ended the period with a median

value 64% (2000) earning it the distinction of having the highest median leverage ratio in the entire developed market sample for that terminal year. So even though Japan and Germany are considered to belong to the same bank-oriented system they vary considerably.

There was also great variation across companies in the developing countries; the companies in Indonesia have ended the sample period with by far the highest leverage ratio 89%. Following the 1997 crisis leverage ratios soared in Indonesia as companies profits turned to losses. The impact of the crisis was different in Korea — the leverage was diminished from 72% (1994) to 52% (2000). Thailand represents a third way, with lower levels of debt in the early years. The crisis resulted in higher leverage ratios, however, not as high levels as in Indonesia. Leverage ratios declined in Hong Kong following the crisis, but they increased slightly in Taiwan where the effects of the crisis were weaker. Both, in the group of the companies from developed and developing countries the use of current liabilities is similar — they finance a larger portion of total assets than do long-term liabilities.¹⁶⁾

Cross-boundary Domestic and International financing structures

Are domestic and international financial structures correlated? As regards the structure of domestic financial sources of the U. S., Japan and EU countries, the literature shows that, debt finance clearly dominates, accounting on average for 79% of the balance sheet total as compared to 21% for equity finance (see table 4). For international liabilities, debt finance accounts on average for 63% of the total, while equity (the sum of portfolio equity and FDI) contributes 37%. For international assets, debt finance exceeds equity finance only narrowly.¹⁷⁾

The correlation between the domestic and international ratios of debt over total liabilities is positive, but not very high. Both FDI and international portfolio equity ratios are negatively correlated with domestic debt. This would suggest that domestic and international debt are complementary.

Some researchers also reported diverse patterns across European countries when the evolution of external and internal leverage ratios over time are concerned. Debt-equity ratios are higher domestically than internationally. Yet, for external leverage, there is a relatively

16) Glen, J., 'Capital Structure, Rates of Return and Financing Corporate Growth: Comparing Developed and Emerging Markets, 1994–00,' University of Cambridge, 2003.

17) Buch, C. M., Heinrich, R. P. and Schertler, A., 'External and Internal Financial Structures in Europe: A Corporate Finance Perspective', Kiel Institute for World Economics, 2002.

Table 4 Summary Statistics: International and Domestic Financial Structures

Variable ¹⁸⁾	Mean	Standard Deviation	Minimum	Maximum
	<i>Domestic liabilities</i>			
Debt	78.53%	5.20%	66.17%	88.92%
Equity	21.47%	5.20%	11.08%	33.83%
Domestic Leverage	397.10%	136.14%	195.57%	802.37%
	<i>International liabilities</i>			
International Debt	62.56%	17.04%	21.99%	86.31%
FDI	24.39%	13.57%	6.01%	63.39%
Portfolio Investment Equity	13.05%	11.95%	0.21%	72.00%
International Leverage	231.53%	155.08%	28.20%	630.58%
	<i>International assets</i>			
International Debt	54.37%	16.37%	19.07%	83.76%
FDI	32.03%	13.91%	8.55%	60.36%
Portfolio Investment Equity	13.60%	8.15%	2.58%	40.75%
International Leverage	154.36%	110.39%	23.57%	515.86%

Source: Buch, C.M., Heinrich, R.P. and Schertler, A., 'External and Internal Financial Structures in Europe: A Corporate Finance Perspective', Kiel Institute for World Economics, 2002.

clear negative trend for most European countries, evidence is more heterogeneous for internal leverage. While there are some countries such as Germany, Italy, Portugal or Spain, where debt finance has tended to become more important over time, debt-equity ratios have remained virtually unchanged in others (Belgium, Denmark, France).¹⁹⁾

As for the comparison of the companies in developing and developed countries the former ones are facing greater information asymmetries when dealing with the international capital markets. Even in international capital markets, such as the UE, regulatory obstacles to the free movement of capital across borders persist. Examples include discriminatory tax practices,

18) Domestic Debt is short-term plus long-term debts. Domestic Equity is capital plus reserves. Both are expressed as percentage of the sum of short-term and long-term debt plus equity and reserves. Domestic Leverage is the percentage ratio of Domestic Debt over Domestic Equity. FDI, Portfolio Investment Equity and International Debt assets and liabilities, respectively, are all expressed in percent of the sum of FDI, Portfolio Investment Equity and International Debt assets and liabilities, respectively. International Debt is the sum of portfolio debt and the bank debt component of other investments. International Leverage is the percentage ratio of International Debt over the sum of FDI and Portfolio Investment Equity.

19) Buch, C. M., Heinrich, R. P. and Schertler, A., 'External and Internal Financial Structures in Europe: A Corporate Finance Perspective', Kiel Institute for World Economics, 2002.

national differences in consumer protection rules, high costs of cross-border payments, limited cross-border access to credit registers and differing national regulations of pension funds.²⁰⁾

However, there seems to be no clear distinction between the companies in market-oriented and bank-oriented countries, as the debt-equity ratio and internal versus external financing is concerned. The classification on bank-oriented and market-oriented is, therefore, just one and perhaps not really important, institutional difference across countries. The cost of capital, the tax code, bankruptcy law, the state of development of stock and bond markets and patterns of ownership may matter for company financing choices.

2. Cross-Country Determinants of Capital Structure Choice

Cost of Capital

There is a large empirical study on the cost of capital.²¹⁾ The cost of capital varies across countries. For example, the Japanese cost of capital is higher than the U. S. one, which is in opposition to the often-heard claim that Japan's cost of capital is much below the levels elsewhere in the world.²²⁾ Japanese firms take on more debt than the U. S. firms. In particular,

20) Heinemann, F. and Jopp, M., 'The Benefits of a Working European Retail Market for Financial Services', Report to the European Financial Services Roundtable, Berlin, 2002.

21) See for example: Block, S. B., 'A study of financial analyst: Practice and theory', *Financial Analyst Journal*, 1999, Bruner, R. F., Eades, K. M., Harris, R. S. and Higgins, R. C., 'Best practices in estimating the cost of capital', *Survey and synthesis, Financial Management* 27, 1998 and Shao, L. P. and Shao, A. T., 'Risk analysis and capital budgeting techniques of U. S. multinational enterprises', *Managerial Finance*, 22, 1996.

22) See: Prowse, 'Institutional Investment Patterns and Corporate Financial Behavior in the United States and Japan', *Journal of Financial Economics*, 27, 1990, Hodder, J. E. and Tschoegi, A. E., 'Some Aspects of Japanese Corporate Finance', *Journal of Finance and Quantitative Analysis*, 1985, Hoshi, T., Kashyap, A. and Scharfstein, D., 'Bank monitoring and investment' in R. Glenn Hubbard 'Asymmetric information, corporate finance, and investment', University of Chicago, 1990, for the literature on Japanese capital structure see: Odagiri, H., 'Growth through competition, competition through growth: strategic management and the economy in Japan', Oxford University Press, 1992, Kester, W.C., 'Japanese Corporate Governance and the Conservation of Value in Financial Distress', *The Continental Bank Journal of Applied Corporate Finance*, 1991, Campbell, J. and Hamao, Y., 'Changing patterns of corporate financing and the main bank system in Japan' in M. Aoki and H. Patrick 'The Japanese main bank system: its relevance for developing and transforming economics,' Oxford University Press, 1994. Xueping, W., Sercu, P. and Chen, C. J. P., 'Japan's Corporate Returns on Value and cost: A Comprehensive Look,' City University of Hong Kong, 1999, Kang, J. and Sults, R., 'How different of Japanese corporate finance? An investigation of the information content of new security issues,' *Review of Financial Studies* 9, 1996 and Choe, H., Masulis, R and Nanda, R., 'Common stock offerings across the ↗

the main-bank centered keiretsu firms lost their traditional advantage of the access to the lower cost of capital, compared to non-keiretsu firms in the 1990s. The discussion of the failure of the main-bank system in Japan (1990) is beyond the scope of this paper. Nevertheless, several possibilities can be thought of, or have already been suggested in related literature.²³⁾ One, is that before early 90s, banks as well as management were overly optimistic about the returns of investment. It is also argued that the monitoring effectiveness of the main banks deteriorated in the changing environment of financial deregulation and that the banks might have exploit their information monopolies on client firms increasing cost of capital. The reduction of bank borrowing by keiretsu firms suggests that banks have been unable, or possibly even unwilling, to continue playing their role of privileged lenders to firms within the group.

As for the differences between capital structure, it is found that the leverage of U. S. firms is negatively related to the variables for agency problems, whereas Japanese leverage ratios show no such relationship. The interpretation suggests that agency problems in Japan are mitigated to a great degree by active monitoring by financial institutions. In contrast, other researches report that the factors found to be correlated with leverage in the U. S. appear to be similarly correlated in Japan as well. Moreover, it is claimed that those are main bank relations that that affect indeed the capital structure of Japanese firms.²⁴⁾

Although, according to pecking order theory equity is rated as a high-cost source of funds, common stock suddenly became the second, in Japan, after internal, major source of funds. New equity issues in Japan should have decreased in times of economic contraction, suggesting that Japanese firms have had a hard time obtaining debt financing, which resulted in a rise of their cost of capital.²⁵⁾

In 1980s cost of equity capital fell significantly as a result of the rise in share prices due to

business cycle: theory and evidence,' *Journal of Empirical Finance* 1, 1993, Ikeo, K., and Hirota, S., 'Corporate Capital Structure and the Role of Banks in Japan', in the Proceedings of the Annual Meeting of the Society for the Economic Studies of Securities, 1992.

23) Fukuda, A. and Hirota, S., 'Main Bank Relationship and Capital Structure in Japan', *Journal of the Japanese and International Economies*, 10, 1996.

24) Ikeo, K., and Hirota, S., 'Corporate Capital Structure and the Role of Banks in Japan', in the Proceedings of the Annual Meeting of the Society for the Economic Studies of Securities, 1992 and Fukuda, A. and Hirota, S., 'Main Bank Relationship and Capital Structure in Japan', *Journal of the Japanese and International Economies*, 10, 1996.

25) compare: Kang, J. and Sults, R., 'How different of Japanese corporate finance? An investigation of the information content of new security issues,' *Review of Financial Studies* 9, 1996 and Choe, H., Masulis, R and Nanda, R., 'Common stock offerings across the business cycle: theory and evidence,' *Journal of Empirical Finance* 1, 1993.

internal and external liberalization. From the other hand, in the same period, cost of debt financing increased due to the financial liberalization. Also international interest rates increased.²⁶⁾

The major reported differences in cost of capital across boundaries are between small and big firms. The former ones are less sophisticated when it comes to evaluate risky projects. Small firms are less likely to use the NPV criterion or the CAPM and its variants. Moreover, some researchers reported that informal criteria such as financial flexibility and credit ratings are the most important factors. Other informal criteria such as EPS dilution and recent stock price appreciation are the most important factors influencing equity issuance. The degree of stock undervaluation is also important to equity issuance (most executives feel also that their stock is undervalued).

The companies in the U. S. moderately follow the trade-off theory and target their debt ratio. The importance of equity undervaluation and financial flexibility are generally consistent with pecking-order view. Executives use the mainline techniques (NPV, CAPM) to value projects and to estimate the cost of equity and are much less likely to follow academic factors and theories when determining capital structure. They rely heavily on practical, informal rules and there is little evidence that executives are concerned about asset substitution, asymmetric information, transaction costs, free cash flows or personal taxes.²⁷⁾

It can, however, be noted that some variables like financial flexibility might be more important in practice than cost of financing as was concluded in Titman's study: 'Corporate treasurers do occasionally think about the kind of tradeoffs between tax savings and financial distress costs that we teach in our corporate finance classes. However, since this tradeoff does not change much over time, the balancing of the costs and benefits of debt financing that we emphasize so much in our textbooks is not their major concern. They spend much more thinking about changes in market conditions and the implications of these changes on how firms should be financed'.²⁸⁾

26) For more detailed explanations see: Nagaraj, R., 'Indian Capital Market growth: Trends, Explanations and Evidence,' *Economic & Political Weekly*, September 1996.

27) Graham J. R. and Campbell, R. H., 'The theory and practice of corporate finance: Evidence from the field', Duke University, Durham, 2000.

28) Titman, S., 'The Modigliani and Miller Theorem and Market Efficiency', NBER working paper no8641, 2001. It is interesting to notice that the trends in financing decisions are strongly influenced by non-economical and hardly measurable factors. An example of such factors are the events from September 11 2001 causing the higher valuation of financial flexibility of managers, especially in the U.S.

Impact of Taxation on Capital Structure

The literature reports two main impacts that taxes may have on the firm's capital structure. The first is related to the corporate tax deductibility of debt, whilst the second takes into account the influence the taxes may have on decisions of the firm's security holders, and hence their willingness to hold the firm's securities. Owners of debt and shares are, however, also subject to tax on their security income and this affects their after-tax returns.

It was already pointed out in early 1970s that the marginal tax rate applicable to securities depends both on the official tax rates and on the precise system under which tax is collected.²⁹⁾ Because it concerns tax treatment of interest and dividend payments, the choice of the tax system has, therefore, the indirect impact on the corporate financing decisions of the companies operating in particular country. It is argued that in an integrated world capital market all firms locate debt in the most tax-advantaged jurisdictions.

The types of the tax regimes operating nationally:

1) the conventional tax system in which dividends are taxed at the corporate and personal levels and interest payments are a tax-deductible corporate expense taxed at personal level only. This system exists in Brazil, Chile, China, Hong Kong, India, Indonesia, Israel, Japan, Korea, Malaysia, Netherlands, Pakistan, Peru, Philippines, Singapore, South Africa, Switzerland and the U.S.

2) dividend relief tax system, differs from the conventional tax system in respect to the taxing of dividend payments which are either, not taxed at the corporate level, but remain taxed at the personal level, or, are taxed at the corporate level, but taxed at a reduced rate at the personal level. To this group belong countries such as: Austria, Belgium, Denmark, Greece, Portugal, Sweden, Thailand and Turkey.

3) the dividend imputation tax system where firms can deduct interest payments at the corporate tax rate and domestic corporate taxes paid are distributed to taxable resident shareholders as a tax credit with dividend payments. Interest payments remain a tax deductible corporate expense, only taxed at the personal level. This group consist of Australia, Canada, Finland, France, Germany, Ireland, Italy, Mexico, New Zeland, Norway, Spain, Taiwan and the U. K.³⁰⁾

29) Glen, J., 'Capital Structure, Rates of Return and Financing Corporate Growth: Comparing Developed and Emerging Markets, 1994-00,' University of Cambridge, 2003.

30) Titman, S., Twite, G. and Fan, J. P. H., 'An International Comparison of Capital Structure and Debt Maturity Choices,' University of Texas, 2003.

The tax benefit of debt financing varies across tax systems and therefore there might be differences in financing decisions. Indeed, firms in countries with dividend imputation and dividend relief tax systems tend to have lower average ratios, suggesting that the tax system influences capital structure choices.

Bankruptcy Law

Bankruptcy law should be regarded as an integral aspect of a debt contract. The G-7 countries vary considerably in their bankruptcy procedures, especially the extent to which liquidation is emphasized over renegotiation of claims, and the extent to which management has control during the bankruptcy process.³¹⁾

U.S. code appears to have strong incentives to keep the firm as a going concern even when it is worth more in liquidation while the U. K. code (and to some extent German), by emphasizing the rights of creditors is likely to lead to too many premature liquidations. The other countries appear to fall in between the extremes of the U. S. and Germany or U. K. in the extent to which they support creditors rights. It is suggested that the countries where the debt contracts are most strictly enforced are also ones where firms have the least debt.³²⁾

Liquidity of the Stock Market and the financing decisions

Empirical evidence shows that differences in the capital structure of firms in industrial and developing countries can be attributed to the potential for a firm's owners or managers to engage in opportunistic behavior (captured by factors such as asset composition, liquidity constraints, industry classification and growth opportunities) as well as to the tax advantages of debt financing in many countries.³³⁾ However, these differences explain only a part of the cross-country variation in corporate debt-equity ratios. Some authors suggest that one possible determinant of corporate financing choices that theory has overlooked is the level of

31) Harris, M. and Raviv, A., 'The design of bankruptcy procedures', University of Chicago, 1992.

32) Franks, J. and Torous, W., 'A comparison of the U. K. and U. S. bankruptcy codes', *Continental Bank Journal of Applied Corporate Finance*, 1993.

33) See: Krishnan, V. S. and Moyer, R. C., 'Determinants of capital structure: An empirical analysis of firms in industrialized countries', *Managerial Finance* 22, 1996, Homaifar, G., Zietz, J. and Benkato, O., 'An empirical model of capital structure, some new evidence', *Journal of Business Finance and Accounting* 21, 1994, Booth, L., Aivazian, V., Dermiurg-Kunt, A. Maksimovic, V., 'Capital structures in developing countries', *Journal of Finance*, 56, (2001), Jensen, M. C. and Meckling, W. H., 'Specific and General Knowledge, and Organizational Structure' in L. Werin and H. Wijkander, 'Contract Economics', Massachusetts, Blackwell, 1992.

development of financial markets, especially equity markets.³⁴⁾ Economies without well — functioning stock market may suffer from three types of imperfections:

1. If there is no stock market, or the stock market is illiquid, opportunities for risk diversification are limited for investors and entrepreneurs;
2. In the absence of a well-functioning stock market, firms are unable to optimally structure their financing packages;
3. Lack of information; besides their role in supplying capital, stock markets play an important information role;

Moreover, the effect of stock market development on corporate financing decisions is ambiguous. Sudden access to a stock market could have a variety of possible effects on corporate debt-equity ratios that depends on the initial level of stock market development. When less-developed stock markets double, in terms of size and liquidity, corporate debt-equity ratios increase by 10 percent. When a stock market quadruples in size and liquidity, however, this ratios decline by 25 percent.³⁵⁾ This finding suggests that, as a relatively undeveloped stock market begins to develop in the given country, firms in that country initially increase their debt-equity ratios. Not only do they issue new equity but they also borrow more. So at early stages of market development, improvements in information quality, monitoring, and corporate control may be large enough to induce creditors to lend more. For those firms, debt and equity are complementary. However, as stock markets continue to develop, the ratio changes; firms begin to substitute equity for debt. As already suggested earlier, in addition to the differences, identified in the corporate finance literature, between firms, capital structures may be different across countries because of differences in economic development, supporting institutions, tax treatment of debt versus equity, and level of development of financial institutions. Differences in growth rates capture differences in growth opportunities available to firms in industrial and developing countries. Also differences in inflation rates can explain some of the cross-country variation in debt-equity ratios.³⁶⁾

Although the general trend has been toward liberalization, markets are much more heavily regulated in most developing countries. Countries also vary with respect to their tax treatment

34) Demigruc-Kunt A. and Maksimovic V., 'Stock Market Development and Corporate Finance Decisions', *Finance & Development*, June 1996.

35) Demigruc-Kunt A. and Maksimovic V., 'Capital Structures in Developing Countries: Evidence from Ten Countries', *World Bank Policy Research Working Paper No. 1320*, Washington 1994.

36) Because debt contracts are typically written in nominal dollars, the rate of inflation may affect the riskness, in real terms, of debt financing.

of interest income, dividends, and capital gains. The level of development of financial institutions, especially banks, is also important in provision of credit and corporate financing decisions.

By providing better information and decreasing monitoring costs for investors and financial intermediaries, stock markets lower the costs of both external debt and external equity. It is, however, the company that can take advantage of being listed on the stock market which make the size that matters. The development of a stock market initially affects the financial policies of only the largest firms. In countries where stock markets do not play a significant economic role, stock market development permits large firms to increase their leverage. However, for large firms in countries with more developed markets, further stock market development is associated with low debt-equity ratios.

A stock market is more efficient if the share of total value traded to GDP is high as it measures the ease of trading the ownership of country's firms. The biggest stock markets are in market-orientated countries (U. S. and U. K.) (see table 5)

Table 5 Developed countries: Overall size of the stock market (1998) (Market capitalization/GDP)

	Equity	Bonds
Germany	28%	23%
Japan	66%	5%
UK	142%	2%
US	154%	23%

Source: financial market trends, February 1998, after Dow, J. 'Corporate Finance',

Bond Markets

The three principal means employed in the company financing are issued stocks, bonds, and bank lending. Over the years, much attention has been focused on the optimal ratio of debt to equity, however, in the same time the optimal or best balance between bond financing and long-term bank financing has scarcely been addressed.

The only country with a well-functioning corporate bond market is the U. S. As a percentage of GDP, bond market financing in other countries is a small fraction of the U. S. number. In Italy, for example, company financing from bonds represented only 2% compared to about 50% in the U. S. In contrast, bank lending as a percentage of GDP in 1995 was

three times the U. S. number in Japan and twice as large in Malaysia and Thailand. Incidentally, countries where banks play a large role need higher savings rates to reach the same level of benefits since returns on bank deposits are typically smaller than on bonds and on equities.³⁷⁾

Corporate bond markets around the world were undergoing rapid change in 1990s, a phenomenon that was most visible in Europe and to some extent in Japan. The principal force behind this change is the need of companies striving for funds to bypass banks and go directly to the capital market. The primary entities responsible for the increased demand for bonds are pension funds and insurance companies, which tend to have a longer-term focus. These market participants undergo rapid growth, especially in Europe, in part due to the process of economic integration and the privatization of state enterprises.³⁸⁾ Since these institutional investors employ little leverage, while banks are highly levered, this development should have a beneficial effect on systematic risk.³⁹⁾ In Japan, two factors are primarily responsible for the shift to corporate bond financing: low returns retail investors receive on bank deposits and the unwillingness of the banks to lend money because of huge bad loans.

Heavy average reliance on bond or bank financing can have tremendous effects, especially on systematic risk, since the banking system is heavily leveraged and subject to regulatory imperfections. It is argued that a significant corporate bond market is in a much stronger position than the banking system to give free reign to the important disciplinary role exercised by market forces.⁴⁰⁾

Higher debt levels can be found in countries with both a liquid bond market and large life insurance industry, suggesting that the role of life insurance companies in the supply of funds

37) Pomerleano, M., 'The East Asia Crisis and Corporate Finances — The Untold Micro Story,' World Bank Working Paper, 1998. and Sapsford, J., 'Japanese Growth Model Hits a Wall in Asia,' The Wall Street Journal, October 1997.

38) See: Iskandar, S. and Luce, E., 'Big Issue for Europe,' Financial Times, February 1998 and Merchant, K., 'The Changing Culture of Risk-Taking,' Financial Times, October 1998.

39) Systematic risk — The risk common to all assets; risk that cannot be diversified away, (market risk); Giddy, I. H., 'Global Financial Markets', D. C. Heath and Company, 1994.

40) The absence of a corporate bond market of sufficient size and independence from government interference has two principal effects. First, the effects of misdirected government credit-allocation preferences will tend to be magnified. Second, the absence of a sizable corporate bond market will aggravate the imperfections present in any financial regulatory system. In the end, the associated inferior risk assessment by the over-sized banking system and that system's other weaknesses will tend to overwhelm, leading to productive over-capacity and non-performing loans and finally economic crisis; see: Hakansson, N. H., 'The Role of Corporate Bond Market in an Economy — and in Avoiding Crises', UC, Berkeley, 1999.

is in part determined by the liquidity of the bond market. In particular in developed economies a larger life insurance sector increases the supply of corporate bonds, whereas, in developing economies a larger life insurance sector increases the supply of equity.⁴¹⁾

Unlike the equity market, the level of corporate bonds issued is more closely related to economic development. Emerging markets had much smaller bond markets (both domestic and international) than more wealthy economies. Foreign financing is something much more important in emerging markets.

Tangibility

Tangible assets are easy to collateralize and thus they reduce the agency cost of debt. Firms with close relationships with creditors need to provide less collateral and it is because the relationship, and more informed monitoring by creditors, substitutes for physical collateral. The standard deviation increase in tangibility increases book leverage by about 20% of its standard deviation in all countries except Japan where it increases leverage by 45%. On market basis, firms with lot of fixed assets are not highly levered.⁴²⁾

Asset Structure

The companies from developing countries hold much higher levels of fixed assets than their developed market counterparts. This difference is highlighted by the remarkably low levels of fixed assets in two leading developed markets — the U. S. and Germany — both of which had ratios below both the global and developed markets⁴³⁾

Maturity Structure

Debt maturity structure is unrelated to the level of economic development. Weak legal system integrity as well as not having a common law system is strongly associated with the use of short-term debt. Consistent with prior evidence, debt maturity is negatively associated with the size of bank sector. However, it is not clear what is the association between debt maturity

41) Titman, S., Twite, G. and Fan, J. P. H., 'An International Comparison of Capital Structure and Debt Maturity Choices,' University of Texas, 2003.

42) Berger, A. and Udell, G., 'Lines of credit, collateral, and relationship lending in small firm finance', Board of Governors of the Federal Reserve System, 1994 and Rajan, R. and Zingales, L., 'What do we know about capital structure? Some evidence from international data,' Journal of Finance, 1995.

43) Glen, J., 'Capital Structure, Rates of Return and Financing Corporate Growth: Comparing Developed and Emerging Markets, 1994–00,' University of Cambridge, 2003.

and stock market capitalization.⁴⁴⁾ Finally, it is positively related to the development of financial institutions measured by life insurance penetration.

Foreign Currency debt

Foreign currency debt users are consistently larger and have higher committed capital expenditures in many countries, both developed and developing, and in aggregate. They have also more tangible assets in nearly all countries, significantly lower market-to-book ratios and higher levels of foreign EBIT and cash reserves.

Firms that are able to access foreign debt markets will on average have higher total leverage.⁴⁵⁾

As for the currency risk, there is a strong drive for companies to hedge currency risk associated with long-term debt by rolling over short-term derivative positions.

Size

At the aggregate level, large firms across countries are generally more highly levered; however, in the past fifteen years we observe a clear reduction in bank debt and a sharp increase in financial assets. Small firms on the other hand are less highly levered but have shifted toward greater long-term debt. In general, small firms remain roughly constant through time with a clear dominance of self-finance. In contrast, large firms have increased reliance on external sources of finance.⁴⁶⁾

Industrial classification

Identifying capital structure differences among industries does not necessarily explain them, since there is not a one-for-one relationship between firm's industrial group and the

44) On this issue the researchers are divided; compare: Demircuc-Kunt, A. and Maksimovic, V., 'Institutions, Financial Markets and Firm Debt Maturity,' *Journal of Financial Economics* 54, 1999 and Titman, S., Twite, G. and Fan, J. P. H., 'An International Comparison of Capital Structure and Debt Maturity Choices,' University of Texas, 2003.

45) Theoretically (Market Depth Hypothesis) if local currency debt markets are not sufficiently large or deep enough to satisfy the demands of borrowers, firms with access to foreign currency lending will seek out such funds; see: Allayannis, G., Brown, G. W. and Klapper, L. F., 'Capital Structure and Financial Risk: Evidence from Foreign Debt Use in East Asia', University of Virginia, 2000.

46) Tychon, P., 'The Structure of Corporate Finance in Belgium: An Emperical Investigation,' Universite Catholique de Louvai, Belgian National Fund for Scientific Research, 1997.

National and International Patterns in Company-Financing:
a Review of Comparative Studies on Debt-Equity Dilemma

degree of specialization of product.⁴⁷⁾

Financing Growth

In years 1995–2000 liabilities accounted for 49% of total financing for the companies in developed and developing countries (see table 6). The use of liabilities to finance growth is much lower in the developing countries, with that lower level offset by higher levels of both internal and external equity.⁴⁸⁾ A significant difference between the financial structure of

Table 6 Financing Sources in Selected Countries: 1995–2000 (% of Change in Total Assets)

Developed Countries	Liabilities	External Equity	Internal Equity	Developing Countries	Liabilities	External Equity	Internal Equity
Australia	58%	32%	11%	Argentina	46%	16%	38%
Austria	52%	3%	45%	Brazil	74%	11%	15%
Belgium	56%	6%	38%	Chile	44%	33%	23%
Canada	56%	32%	12%	Colombia	73%	16%	11%
Denmark	72%	6%	23%	Czech	33%	21%	46%
Finland	53%	26%	22%	Hong Kong	44%	20%	35%
France	61%	7%	31%	Hungary	28%	1%	71%
Germany	62%	5%	33%	India	53%	5%	43%
Greece	52%	34%	14%	Indonesia	110%	12%	-23%
Ireland	76%	5%	18%	Israel	54%	6%	40%
Italy	68%	5%	27%	Korea	27%	48%	25%
Japan	62%	6%	32%	Malaysia	40%	18%	42%
Netherlands	65%	9%	26%	Mexico	61%	30%	10%
Norway	50%	23%	27%	Philippines	34%	17%	49%
Singapore	66%	15%	19%	South Africa	49%	10%	41%
Spain	68%	-9%	40%	Taiwan	59%	40%	1%
Sweden	57%	4%	39%	Thailand	74%	11%	15%
Switzerland	54%	7%	39%	Turkey	61%	18%	21%
UK	52%	21%	27%	Venezuela	27%	54%	19%
US	47%	21%	32%				
Group Average	53%	17%	30%	Group Average	35%	39%	27%
Global Average	49%	22%	29%				

Based on Source: Glen, J., 'Capital Structure, Rates of Return and Financing Corporate Growth: Comparing Developed and Emerging Markets, 1994–00,' University of Cambridge, 2003.

47) This is strongly argued in Prasad, S., Green, C. J. and Murinde, V., 'Company Financing, Capital Structure, and Ownership: A Survey, and Implications for Developing Economies', Loughborough University, 2001.

48) Compare findings of Domowitz, I., Glen, J., and Madhavan, A., 'Liquidity, Volatility and Equity Trading Costs across Countries and over Time,' *International Finance*, 4, 2001.

firms in developing countries and those in developed countries is, therefore, that the former ones much more heavily rely on external equity as a source of finance because financial systems in developing countries are predominantly bank-oriented.⁴⁹⁾ The companies from some developing countries such as Korea, Hungary, Czech and Philippines use extremely low level of liabilities.

As for the companies from developed countries there was much lower variation across countries in the use of liabilities, with the U. S. companies having the lowest level of liabilities (47%). In contrast, Ireland displayed the highest level in the group (76%), followed by Denmark (72%), Italy and Spain (68%).⁵⁰⁾ The largest user of external equity was Korea (developing country; 48%). In contrast, the U. S. companies (world's largest equity market) financed its growth only in 21% from external equity — level below average to the companies from developing countries.

Institutions

The researchers agree that both country and industry factors are important determinants of capital structure.⁵¹⁾ In specific, they suggest that the legal system, the tax system, the information environment and the suppliers of funds all influence the capital structure choice.

When domestic and foreign bank lending is included, domestic banks provide the largest amount of external finance, usually in excess of 80 percent. In contrast, foreign bank finance is relatively small part of the total financing, usually less than 4 percent.

The role of institutional framework is complicated involving many issues that are not readily apparent and may severely influence the corporate capital decisions. For example, the government may introduce a private pension system which has a large demand for privately issued securities. The constraints on their portfolios, however, induce the pension funds to buy more debt than equity, which influences relative prices of debt and equity and overall issuance activity.

49) Samuel, C., 'The stock market as a source of finance: A comparison of U. S. and Indian firms,' The World Bank, Policy Research Working Paper 1592, 1996.

50) Glen, J., 'Capital Structure, Rates of Return and Financing Corporate Growth: Comparing Developed and Emerging Markets, 1994–00,' University of Cambridge, 2003.

51) For example: Booth, L., Aivazian, V., Dermiurg-Kunt, A. Maksimovic, V., 'Capital structures in developing countries', *Journal of Finance*, 56, 2001, Jensen, M. C. and Meckling, W. H., 'Theory of the firm: Managerial behaviour, agency costs and ownership structure', *Journal of Financial Economics*, 1976.

Auditors

Capital structure is also influenced by the information environment. The information role of Big-five auditors is generally important in developing countries and is generally less in developed which may be reflected by the fact that latter have more substitute information and governance mechanisms. The presence of equity analysts is significantly negatively related to leverage in high-income economies, but positively in developed.⁵²⁾

Investor preferences

Insurance companies, pension funds and mutual funds have comparative advantage in holding longer-term securities that is why firms in countries with more institutional investors tend to use significantly less short-term debt, and are less levered. In contrast, banks, having monitoring capabilities, may have a comparative advantage holding short-term debt. Hence, in countries where the banking sector has access to more funds, firms tend to be relatively short-term financed, suggesting that capital structure is also influenced by the suppliers of capital.

The legal framework

One of the principal remedies to agency problems is legal protection, which consists of both the content of laws and the quality of their enforcement. They are important determinants of the ownership structure and the ability of the firms to raise external finance through either debt or equity. The countries can be divided into two broad categories based on their legal origin: common law and civil law countries where the later is further divided into three categories, French, German and Scandinavian legal systems and it is argued that legal systems based on common law offer outside investors better protection than those based on civil law.⁵³⁾ The quality of legal enforcement, as another characteristic of legal system, is determined by the integrity (strength and impartiality) measured by using the index of country corruption.⁵⁴⁾ The corruption level is high for Asian and Latin American countries (high leverage and short term

52) Compare: Fan, J., and Wong, T. J., 'Do External Auditors Perform A Corporate Governance Role in Emerging Markets? Evidence from East Asia,' Working Paper, Hong Kong University of Science & Technology, 2002. and Chang, J. J., Khana, T. and Palepu, K. G., 'Analyst Activity Around the World,' Working Paper, Harvard Business School and the Wharton School, 2000.

53) La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R., 1997, 'Legal Legal Determinants of External Finance,' *Journal of Finance*, 52, 1997.

54) Index prepared by Transparency International reflecting the extent to which corruption is perceived to exist among public officials and politicians.

debt) and low for North American and Scandinavian countries (low leverage and long term debt).

It is interesting to notice that in the empirical studies asset tangibility is argued to be not significantly related to the total debt ratio. This suggests that collateral may be less important in countries with weak bankruptcy laws and repossession enforcement like the East Asian countries.⁵⁵⁾

There appears to be agreement among European and U.S. managers on major determinants of capital structure. Although the rankings of these factors are different. There are, however, significant differences across different legal system on many dimensions. More importantly, no consistent pattern emerges as would be suggested under the legal system framework.⁵⁶⁾ This evidence suggests that the capital structure choice may be a result of complex interaction of many institutional structures including disclosure rules, accounting systems or banking systems that are not fully captured by the legal system distinction.

3. Conclusion

Firm's financial leverage is to large extent similar across developed countries and the differences that exist are not easily explained by institutional differences. The factors identified by cross-sectional studies for individual countries to be related to debt-equity determinants seem similar on global scale. Neither German nor Japanese companies are highly levered. Germany, in particular, comes across as surprisingly low leveraged country. But firms in the U. K. also have low leverage, while corporate leverage in other G-7 countries seems to be quite similar. Germany is also the only country where larger firms have lower leverage.

Regarding the cross-country patterns in external versus internal sources of financing, for the U. S., U. K. and Canada, external financing is smaller than internal financing, with firms in the U. S. raising the least from external sources. But firms in Japan consistently raise more financing externally than internally. Firms in Germany, France and Italy raise substantially less from external sources than either firms in the U. K. or Canada. There is, therefore no clear distinction between the companies in market-oriented countries and the others, as the

55) Allayannis, G., Brown, G. W. and Klapper, L. F., "Capital Structure and Financial Risk: Evidence from Foreign Debt Use in East Asia", University of Virginia, 2000.

56) Bancel, F. and Mitoo, U. R., "The Determinants of Capital Structure Choice: A Survey of European Firms", University of Manitoba, 2002.

debt-equity ratio and internal versus external financing is concerned.

Regarding the structure of domestic financial sources of the U. S., Japan and EU countries, the literature shows that, debt finance clearly dominates compared to equity finance. For international liabilities, debt finance is also more often used, however, it does not dominate over equity as in case of domestic financing sources. For international assets, debt finance exceeds equity finance only narrowly. The researchers also report diverse patterns across European countries when the evolution of external and internal leverage ratios over time are concerned. Debt-equity ratios are higher domestically than internationally. Yet, for external leverage, there is a relatively clear negative trend for most European countries. Evidence is more heterogenous for internal leverage. While there are some countries where debt finance has tended to become more important over time, debt-equity ratios have remained virtually unchanged in others.

The cost of capital varies across countries. The fundamental reported differences in cost of capital across boundaries are between small and big firms. The companies in the U. S. moderately follow the trade-off theory and target their debt ratio. The importance of equity undervaluation and financial flexibility are generally consistent with pecking-order view. Executives use the mainline techniques (NPV, CAPM) to value projects and to estimate the cost of equity and are much less likely to follow academic factors and theories when determining capital structure. They rely heavily on practical, informal rules and there is little evidence that executives are concerned about asset substitution, asymmetric information, transaction costs, free cash flows or personal taxes.

As for corporate governance there is clear negative relationship between executive share holdings and the firm's debt-equity ratio. The owners of family companies are not willing to dilute the shareholding by issuing equity resulting in higher leverage. Consequently, the inflow of (foreign) capital, if significantly reduces concentration of family ownership, results in the decrease of the leverage. Some specific characteristics of certain corporate structures (cheabols, keiretsu) have definitely influence on their cost of capital, however, their environment is too complex for me to propose here any clear conclusions.

From our analysis it is also rather clear that country factors are more important than the industry factors such as average tax rates, operating risk, asset tangibility and profitability, suggesting that institutions, which differ across countries, play an important role in finance decisions. Cross-country differences in capital structure can be, therefore, partly explained by observed following institutional differences. Countries that have lower levels of taxing divi-

dends (dividend imputation tax system) have lower leverage. Inflation is not highly correlated with the leverage ratio and also does seem to be negatively correlated with maturity structure. However, inflation is associated with greater external borrowing and reduced internal borrowing. Political risk is associated with greater overall leverage in the form of expanded external borrowing. The development of the banking sector, the equity and the bond market (especially liquid stock market) also influence corporate financing decisions across countries. Finally, the companies from the countries with low level of integrity of the legal system (corruption) tend to have higher leverage and debt maturity ratios.

Moreover, related studies on cross-country company financing report few patterns as far as the countries are compared being divided into: developed, developing countries and bank-oriented, market-oriented countries. With regard to the ratio analysis it is observed that the capital structures of firms within traditional market-based and bank-based financial systems converged. Regardless of the level of development, firms in most countries generally place a heavy reliance on retained earnings as a source of finance.

Researchers come often to different conclusions suggesting that the root of the differences in corporate capital structure may lie in the different underlying circumstances faced by individual firms. I will try, however, sum up patterns and some of the determinants of capital structure choices. As for comparing those decisions in companies in developing versus developed countries three main empirical results of the study of the comparison emerge. First, regarding firm leverage, companies in developing countries have lower levels of leverage than do developed markets firms; in both groups the use of current liabilities is similar — they finance a larger portion of total assets than do long-term liabilities. Second, regarding asset structure, the emerging markets firms employ a higher level of fixed assets. Third, regarding internal versus external financing, there are two opinions that divide empirical studies; one suggests that the use of internal finance is similar for both groups of countries; second that comparing with firms in OECD countries, firms in developing countries utilize a greater proportion of external funding than internal funding and a greater proportion of equity finance than debt finance.

Moreover, equity and debt are similarly important as the major source of firm finance in developing countries, although one is more important in some countries than in other. It is also visible that those are companies in developed countries that use higher levels of liabilities and that firms in bank-based financial systems have higher leverage than do firms in market-based ones.

National and International Patterns in Company-Financing:
a Review of Comparative Studies on Debt-Equity Dilemma

Finally, in each individual country the managers' capital structure policy is influenced by financial, institutional, multidimensional system, which is moreover, in some countries very unique. Additionally, the quantity of the variables of this system seems to be too high and often the interdependence of those variables seems to be too complex to be precisely understood in full context or often too complex to be applied in empirical studies as show different results of similar studies conducted in the same time throughout corporate finance literature. It is therefore difficult to extract more precise similarities. The patterns may be observed in the limited environment, but it is too early to apply them in wider context. It is also essential, in order to understand company financing in developing economies, to examine how far the data are influenced by economic policy changes in different countries. Moreover, further study are needed concerning legal origin, GDP per capita, international country risk, foreign bank presence, disclosure rules, accounting systems and existing regulatory regimes, that are not fully captured by the literature relating to company financing decisions.

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National and International Patterns in Company-Financing:
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