Journal of International Economics 74 (2008) 94 – 119

Journal of INTERNATIONAL ECONOMICS

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The pecking order of cross-border investment ☆

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Received 7 February 2006; received in revised form 21 March 2007; accepted 29 May 2007

Abstract

Is there a pecking order of cross-border investment in that countries become financially integrated through some types of investment rather than others? Using a novel database of bilateral capital stocks for all types of investment – FDI, portfolio equity securities, debt securities as well as loans – for a broad set of 77 countries, we show that such a pecking order indeed exists. The paper focuses on two key determinants of this pecking order: information frictions and the quality of host country institutions. Overall, we find that in particular FDI, and to some extent also loans, are substantially more sensitive to information frictions than investment in portfolio equity and debt securities. We also show that the share as well as the size of FDI that a country receive are largely insensitive to institutional factors in host countries, while portfolio investment is by far the most sensitive to the quality of institutions. This provides new evidence in favor of some hypotheses but contradicts others put forward in the literature on trade in financial assets.

Keywords: Foreign investment; Pecking order; Capital flows; Information frictions; Institutions; Home bias; Gravity

JEL classification: F34; G11; F21

1. Introduction

The debate in the literature on trade in financial assets makes the important point that the type of foreign financing of cross-border investment may not pursue a random pattern, but follows a certain "pecking order" regarding the composition of capital flows. One key focus has been on the role of information frictions, with some important theoretical contributions arguing that portfolio investment should be more sensitive to information frictions than FDI or bank loans due to a lack of ownership control of the former (Razin et al., 1998). A second important strand of the literature has concentrated on the role of institutions in influencing the composition of cross-border investment (Albuquerque, 2003; Wei, 2000a), with the empirical work still being inconclusive on which types of capital are most affected by the institutional environment.

☆ We would like to thank Michael Fidora and Elias Papaioannou for their help in compiling the data, and participants at an ECB seminar, at the University of Navarra's conference on emerging markets, the LACEA 2006 Annual Meetings and the BIS-CGFS workshop on research on global financial stability, in particular our discussants Enrique Alberola and Paolo Angelini, as well as Laura Alfaro, Eduardo Fernández-Arias, Carmen Reinhart, the editor and two anonymous referees for comments. This paper presents the authors' personal opinions and does not necessarily reflect the views of the European Central Bank or the Inter-American Development Bank.
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0022-1996/$ - see front matter
doi:10.1016/j.jinteco.2007.05.010

The main contribution of the paper is to test empirically for the existence of such a pecking order and to identify its determinants in a bilateral country-pair setting. We concentrate on two determinants that have been central in the literature on trade in financial assets: the role of information frictions, and the role of institutions as drivers of cross-border investment. The paper builds on several seminal studies. In particular, Portes et al. (2001) show that information frictions for a number of countries indeed exert a larger effect on portfolio equity and corporate debt than on government bond flows with the United States. The present paper is complementary to this as well as other studies, but innovates in a number of ways. First, using a novel dataset on bilateral holdings, the present paper is the first that includes all types of capital, i.e. also FDI and other investment/loans, and thus allows for a systematic comparison of all types of investment in the capital account. This is an important difference because especially FDI and loans are the dominant types of investment received by many if not most emerging markets and developing countries.[1]

Second, the empirical analysis covers 77 countries and thus is much broader in scope by addressing the issue of cross-border investment also from an emerging market (EME) perspective. This allows us to investigate and indeed empirically confirm that the effect of information on cross-border investment exhibits a sizeable asymmetry across countries, exerting a larger influence on EMEs. Third, our empirical methodology is distinct from most of the literature by building on the trade literature on the border effect (Anderson and van Wincoop, 2003; Cheng and Wall, 2005) which stresses the importance of including source and host country fixed effects and shows that the exclusion of such fixed effects may generate a sizeable estimation bias.

Our empirical results show that information frictions have a substantial effect on the pecking order as we find that FDI and loans are the most sensitive and FPI equity and FPI debt securities the least sensitive types of investment to information frictions. For instance, the distance among country pairs has a 1.5 to 2 times larger impact on FDI stocks than on equity securities and debt securities. Similarly, we find loans to be as sensitive as FDI to information asymmetries, thus confirming and being in line with the literature on the capital structure of firms which has emphasized the special role of loans and its sensitivity to information (Myers, 1984; Bolton and Freixas, 2000). We use various proxies for information frictions – distance, the volume of bilateral telephone traffic, bilateral trade in newspapers and periodicals, and the stock of immigrants from the source country in the host – showing the robustness of this result to alternative specifications. While these empirical findings are new, we also confirm some of the existing findings, in particular that equity portfolio investment are not more sensitive to information frictions than debt securities (Portes et al., 2001). Using our different econometric approach also reveals that the effects of information frictions tend to be larger than some found in the literature, though a precise comparison is impossible due to different country samples across studies.

Regarding the second determinant – the impact of institutions on the composition of cross-border investment – we make two key points. First, while many papers in the literature have focused on the effects of institutions on one or two particular types of capital flows, our analysis is the first to test for differences across all major components of the capital account. Our results show that portfolio investment is much more sensitive than FDI or loans to a broad set of institutional indicators, such as the degree of information disclosure in local credit market regulations, as well as accounting standards in the host country. Portfolio investment also reacts much more strongly to the risk of expropriation and repudiation costs, confirming the hypothesis put forward by Albuquerque (2003) who argues that portfolio investment is easier to expropriate than other types of investment. Other hypotheses of the literature are, however, not confirmed by our analysis. For instance, portfolio investments in particular, but also loans, decrease substantially with the degree of corruption. By contrast, the stock of FDI is found to be less sensitive to corruption, which is consistent with some findings in the literature (see Daude and Stein, 2004) but contrary to others (e.g. Wei, 2000a). Overall, portfolio investment, and in particular equity securities, appear to be the most sensitive type of investment to institutional factors. Our results prove robust to various alternative proxies of institutions and country samples.

An additional point of the paper is that we also study the impact of financial market development on the pecking order of cross-border investment positions. We find that portfolio investment is substantially more sensitive to the degree of market openness and development than FDI or loans. For instance, capital account liberalization and financial development change the *composition* of financial liabilities of a country by raising the share of portfolio investment substantially. Moreover, we find that the *volume* of FDI and loans is relatively insensitive to market

[1] For example, in our sample the average share of FDI in total foreign investment is 46% for developing countries but only 22% for developed countries. Moreover, the share of combined FDI and loans accounts for even 76% of total foreign inward investment for EMEs. We discuss these issues in detail in Section 3 of the paper.