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Evidence on Financial Globalization and Crisis: Capital Raisings

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Abstract

Financial globalization opened international capital markets to investors and firms all over the world. Foreign capital raisings by firms have increased substantially since the early 1990s in terms of equity as well as debt. I review the literature on the determinants and patterns of cross-border capital raisings and their effects on developments of domestic markets, highlighting the differences between mature and emerging economies. I focus on the effects the introduction of the euro had on European and global capital markets by bringing into existence a currency area comparable in size to that of the United States. Finally, I discuss the effects of financial crises on foreign capital raisings and review capital raisings during the 2007-09 global financial crisis.

Keywords: financial globalization, capital markets, contagion, home bias, lending booms, financial crises, sudden stops, euro area, emerging markets, balance-sheet effects

Table of Contents

I. Introduction

The first decade of the century witnessed a rare rise and fall in capital markets, both international and domestic, in developed and developing countries alike. To be sure, it is not the first time international capital markets have experienced such booms and busts – two remarkable episodes in the 20th century were lending boom decades preceding the Great Depression and the collapse of the Bretton Woods system in the mid-1970s. The recent episode started in the early 1990s and continued through 2007 with a few interruptions by financial crises that were mostly limited to developing countries. It was characterized by the low and declining cost of capital accompanied by rapid increase in equity and debt issues both in domestic and international markets, especially from 2001 to 2007. With debt growing at a faster pace than equity, this also implied an increase in leverage all over the world.

The low cost of capital and an increase in capital raisings were especially prominent, relatively speaking, for developing countries because of a rapid pace of financial liberalization in emerging markets of Latin America, East Asia, and Eastern Europe. The introduction of the euro in 1999, in addition, contributed to internalization of developed countries' capital markets. Between 1991 and 2005, 28 percent of developing countries' equity and 47 percent of their debt securities were issued abroad. For the same period, 8 percent of developed countries' equity and 35 percent of their debt securities were issued abroad (Gozzi et al., 2010). Figure 1 shows the dynamics of domestic and foreign debt and equity capital raisings by private firms in developed and developing countries. This capital raising boom ended when financial crisis broke out in August 2007 and worsened after the collapse of Lehman Brothers in September 2008.

Studying the patterns of capital raisings during the latest boom and bust can provide us with insights into the benefits and dangers of rapid expansion in cross-border equity and debt holdings. Crises always provide opportunities for lessons to be learned, and the 2007-09 financial crisis was no exception. Thus, in this paper I will review the data and the literature on the patterns and determinants of capital raisings by developing and developed countries on domestic and foreign markets and then will turn to a discussion of the effects of the financial crises. Unlike in many previous episodes, private capital raisings were much more important than sovereign borrowing during the latest boom and bust, at least prior to the sovereign debt problems induced by fiscal responses to the crisis. Therefore, in this paper I will focus on capital raisings by private firms.

In focusing on this demand-side part of the capital market, I will not spend much time on the supply side – investors' decisions to invest in or lend to firms in foreign countries. It is worth mentioning, however, that even as of 2007, when the level of financial globalization was at its highest in the recent past, we still observed a substantial degree of home bias in investment. Theory predicts that investors should diversify their country-specific risks by investing in foreign assets. Even taking into account the need for hedging ones' country-specific risks, differences in information, and the like, the evidence suggests that cross-border holdings of financial assets, while much higher than they were in the past, are still substantially lower than theory would predict. This suggests that there is still a potential for further increases in cross-border asset holdings and that both demand and supply factors may account for home bias in investment.

In this paper I will discuss the demand factors – the reasons firms may want to access foreign, as opposed to domestic, capital markets and which firms find it profitable to do so. I will also analyze the implications of these decisions for domestic capital markets and vulnerability to international financial contagion. Because the levels of financial development differ greatly between developed and developing countries, the set of issues they face in raising international capital is also different, and therefore the literature usually considers them separately (Lane and Milesi-Ferretti, 2008). Moreover, competition with foreign capital markets has different implications for strong, mature financial markets of developed countries than for young, fragile markets of emerging economies. Thus, I will discuss developed and developing countries separately.

The paper is organized as follows: Section II reviews capital raisings by developed countries, Section III focuses on emerging markets, and Section IV discusses the effects of crises on both developed and developing countries and on international capital markets in general. Section V concludes.

II. Developed world: patterns and effects of cross-border capital raisings

Financial markets in the developed world are well established. This has two main conflicting implications on the trade-off between domestic and foreign capital raisings. On the one hand, domestic infrastructure and the depth of capital markets are usually adequate to allow most firms to borrow and issue equity domestically, thus avoiding the additional costs associated with tapping foreign capital markets. On the other hand, mature financial markets are more integrated with each other and therefore additional costs of accessing foreign capital markets are not so large. Below I discuss in detail specific costs and benefits of issuing equity and debt securities abroad versus in domestic markets.

Financial globalization and internationalization of financial firms have blurred the line between domestic and international capital markets – investors from countries that are open to international capital flows can access securities traded in foreign countries. Hence, stocks and bonds issued by firms domestically may be purchased by foreign investors either directly or through financial intermediaries. For the purpose of this article I will define domestic equity issuance as issuance on domestic, as opposed to foreign, stock exchanges. Because bond trading takes place over the counter, I will define domestic bond issuance as bonds denominated in domestic currency, as opposed to bonds issued in foreign currency. For most countries this definition would also correspond to bonds placed on domestic, as opposed to international, markets. I will define bank lending as international, or cross-border, if the borrower and the branch administering a loan are located in different countries, regardless of the currency denomination of the loan.

a. Portfolio equity issuance

Why would firms in developed countries with mature capital markets seek to place equity on foreign exchanges? There are a number of reasons. Issuing equity abroad allows firms to tap a larger pool of investors and raise more capital through the equity market, as well as enjoy more active trading in shares and therefore more efficient pricing. Listing in the foreign capital markets is also likely to disseminate information about the firm to a larger group of investors – through their equity prices, required publications, and analysts' reports – making it easier for these firms to also raise debt in the foreign markets should they choose to do so. Furthermore, if a firm is interested in forming international business relations, for exporting or importing purposes for example, the information dissemination may also prove useful. Finally, foreign issuance may serve as a "seal of approval," signaling to investors that the firm is creditworthy and has high growth potential.

There are costs of issuing equity overseas as well. To begin with, there is a fixed cost of acquiring necessary institutional knowledge or seeking assistance from a financial company that would facilitate foreign equity issuance. In addition, regulations and disclosure requirements vary across countries, and therefore a firm that is issuing equity abroad, as well as on domestic markets, will have to comply with more than one regulatory standard. Therefore only firms that gain a lot from foreign equity issuance will choose to do so.

What firms tend to raise capital abroad? As one would expect, firms that raise capital abroad are those that need access to a larger pool of investors – they tend to be larger and more indebted, have higher capital expenditures, and have better growth potential. These firms also tend to issue in domestic markets even after they access international

capital markets. Interestingly, issuing equity abroad has the same impact on a firm's performance as issuing equity domestically (Gozzi et al., 2010).

The question remains, however, whether issuing equity on the foreign exchange does indeed encourage foreign investors to buy a higher stake in a firm. Given that most developed world capital markets are quite open, one would expect international investors interested in a particular firm to be able to buy shares at their domestic exchange. Nevertheless, there is robust evidence that, other things being equal, foreign firms cross-listed in the U.S. receive more than three times as much U.S. investment as firms that are not cross-listed in the U.S. This large difference can be explained by limited cross-border information flows and differences in disclosure standards across countries.

The most rapid growth of foreign equity issuance by firms from developed countries occurred in the beginning of the century: Between 2000 and 2005, portfolio equity issuance abroad by developed countries' firms increased from 6.8 to 8.6 percent of total issuance. As of 2008, about 15 percent of foreign equity issued by firms in developed countries was placed on the U.S. stock exchanges, while 9 percent was placed in London, 7 percent in Tokyo, and 44 percent in European exchanges. The large number for European exchanges is partly explained by equity issuance by firms from other European countries.

Given that most developed economies have mature financial markets and active stock trading, it is unlikely that they can be harmed by competition with global equity markets, especially given that firms continue to issue equity domestically after they tap foreign equity markets. On the contrary, globalization of equity markets improves information flows across countries and is likely to make both domestic and international markets more efficient. On the other hand, globalized capital markets are more interconnected and therefore are likely to increase countries' vulnerability to shocks originating in the foreign financial markets. For example, if a company is cross-listed on more than one stock exchange, a decline of its stock price on one stock exchange, which may be due to factors not directly related to the firms' performance, may trigger a decline in the price of its stock on the other exchange. The more companies are cross-listed, the more correlated the stock prices across stock returns will be.

b. Bond issuance

Many of the reasons described above that make it beneficial for firms to issue equity abroad also apply to foreign issuance of debt securities. In addition, there are considerations related to transaction costs and currency exposure of liabilities. Issuing debt in foreign currency in foreign markets not only gives issuing firms access to a wider pool of lenders and allows them to disseminate information about their creditworthiness, but also provides them with an opportunity to hedge their long-term foreign currency exposure. For example, a firm that receives a large share of its revenue from foreign sales invoiced in U.S. dollars will benefit from issuing a portion of its debt in U.S. dollars as well. This implies, of course, that an increase in international trade, as we observed in the period between 1990 and 2007, is likely to be one of the reasons for an increase in international bond issuance. By some estimates, between 1995 and 2005 bond issuance abroad by developed countries' firms increased from 27 to 46 percent of total bond issuance.

The global bond market is dominated by just a few currencies – the U.S. dollar, the euro, the pound, and the yen. There is substantial evidence that transaction costs of bond issuance decline with market size, providing borrowers from countries other than the U.S., U.K., euro area, and Japan with an additional incentive to issue in foreign currency – a reduction in transaction costs. This cost reduction needs to be weighed against potential mismatch in the currency composition of a firm's balance sheet – if a firm issues bonds in foreign currency but its assets and revenues are primarily denominated in domestic currency, this firm's balance sheet is exposed to exchange rate fluctuations. Given that the median maturity of international bond issues is around five years, such exchange rate

exposure is not possible to hedge through forward currency markets. This problem, however, is more acute for developing countries, as I will discuss below.

The patterns of international bond issuance are consistent with the above reasons for firms to access foreign bond markets – foreign bonds are issued predominantly in the currencies of major financial centers. Between 1990 and 2008, 65 percent of bonds issued by firms from developed countries other than the U.S. were denominated in U.S. dollars, 6 percent of bonds issued by firms from developed countries outside the U.K. were denominated in pounds, and 7 percent of bonds issued by firms from developed countries outside Japan were denominated in yen.

Much like with equity, firms that benefit from foreign bond issuance are larger, have better growth potential, and have larger capital expenditures. They also tend to continue issuing debt domestically even after they access foreign bond markets. In addition, there is evidence that issuers are sensitive to the changes in the interest rate differentials – for example, when the U.K. interest rate rises relative to that in the U.S., issuance of bonds denominated in pounds tends to decline (Gozzi et al., 2010).

Given that the transaction costs of issuing decline with the size of the market, it is natural to expect that markets for bonds denominated in major currencies will keep dominating global bond markets. While bond issuance in domestic currencies will continue to exist for most countries, it is unlikely to expand. The advent of the euro, as discussed below, created an important alternative to the U.S. dollar-denominated bond market, affecting the currency denomination of bonds issued by all countries, not only those in the euro area.

c. Bank loans

Bank loans are different from equity and debt issues in that the information about the borrower remains in the private domain of the lender and is not disseminated to other potential investors. Therefore many of the motives for foreign equity and debt issuance discussed above are not applicable to international bank lending. Most large-scale lending takes the form of syndicated bank loans, and many of the syndicates consist of a number of multinational banks or include banks from different countries, thus creating a substantial amount of international bank flows. The main reason firms access foreign bank capital is that the size of the required loan may be too large for an individual domestic bank, or even a syndicate of domestic banks to shoulder.

There are two main ways for private firms to access foreign bank capital – directly and through domestic banks that themselves borrow from foreign banks. As of the end of 2008, 49 percent of international bank loans to developed country borrowers were extended to banks, while 38 percent were extended directly to nonbank private firms (the remaining 13 percent of loans were extended to sovereign or quasi-sovereign borrowers). These numbers do not include internal lending within multinational banking corporations, when cross-border lending takes the form of within-institution transfers between branches of the same bank.

While the United States and U.S. dollar markets lead in terms of equity and portfolio debt issuance, continental Europe (predominantly France and Germany) and the U.K. are leaders in terms of cross-border bank lending. As of March 2010 European banks held 63 percent of cross-border loans to borrowers in developed countries, of which 11 percent were U.K. banks, while U.S. and Japanese banks held 8 and 7 percent, respectively.

International bank lending, especially bank-to-bank international lending, is important in terms of creating links for cross-border information flows and bank relationships. These relationships between banks, in turn, facilitate international securities issuance, especially in the case of debt securities – there is evidence that developed countries in which banks are more connected to global banking networks tend to hold larger positions in debt securities, both on the assets and on the liabilities side. At the same time, interconnectedness of banking systems across countries

allow for the spillovers of liquidity shocks and produce cross-border correlations in bank asset performance such as those observed during the global financial crisis of 2007-09, which highlights the importance of the costs of global banking.

d. Effects of the EMU

Prior to the financial crisis, probably the single most important event for the developed countries' international capital markets was the introduction of the euro in 1999. Sufficient time has passed since then, which allows us to evaluate the effects of this event. As intended, the introduction of the single currency substantially reduced transaction costs for capital flows between euro area countries. This was partly due to the introduction of TARGET – a new EU-wide payment system, partly due to the harmonization of the set of rules, but mostly due to the elimination of the currency risk and the need to hedge it as well as to common monetary policy (Kalemli-Ozcan et al., 2010). Some evidence suggests that differences in equity markets within the euro area were reduced by the introduction of the euro, while the correlation of stock prices across these markets increased (Syllignakis, 2006).

In addition, the introduction of the euro combined a number of separate bond markets (a market defined as bonds denominated in a given currency) into one, far exceeding the size of the largest pre-European Monetary Union market, that is, a market for Deutsche mark-denominated bonds. This had two effects on international bond issuance: first, it further reduced transaction costs within the euro area for cross-border investments in corporate portfolio debt; second, it created a market for bonds denominated in a stable currency comparable in size to that of the market for bonds denominated in the U.S. dollar (Coeurdacier and Martin, 2009). This, in turn, increased the probability that the borrowers in the U.S., Europe, and the rest of the world would issue new bonds in euros as opposed to the U.S. dollar. Hale and Spiegel (2009) show that the probability that an average borrower would issue a bond denominated in euros was 35 percentage points higher, on average, in the decade following the introduction of the euro than the probability of issuing in one of the legacy currencies, on average, in the decade prior to the introduction of the euro. Importantly, this effect is not driven by European firms only – firms in the U.S., U.K, and the rest of the world were all more likely to denominate their foreign bonds in euros than they were to denominate them in one of the euro area currencies prior to the advent of the euro.

Overall, there is growing evidence that the euro area capital markets are quickly becoming a single market. Investors in Europe are increasingly exhibiting a euro-bias as opposed to home-bias, viewing all of the euro area assets, especially those issued in larger euro area countries as their own (Giofré, 2008; Ferreira and Ferreira, 2006). Investors outside the euro area increasingly see one euro area market as opposed to a collection of related but separate markets. This is also true in case of bank lending – cross-border bank lending between the countries within the euro area increased substantially after the introduction of the euro, more so than into and out of the euro area (Spiegel, 2009a and 2009b).

III. Emerging markets

Almost by definition, emerging markets are those with young and undeveloped financial markets and relatively scarce domestic capital. Therefore the main reason firms in emerging markets raise capital abroad is to access foreign capital provided by rich countries' investors. The main reason foreign investors are interested in holding assets of firms in emerging markets is the historically high return on these assets. Despite this high return, the volume of capital flows from rich countries to emerging markets is still well below what theory would predict, due, predominantly, to institutional constraints and the inherent political risks of investing in emerging markets.

Foreign capital raisings by emerging market firms are a relatively new phenomenon; for most of the period after World War II the majority of developing countries restricted their residents' access to foreign capital markets, both in terms of borrowing and in terms of investing. Financial liberalization among the emerging markets, including the liberalization of cross-border capital flows, was led by Latin America after the debt crisis of the 1980s and by emerging Asia starting in the mid-1990s. After the collapse of the Soviet Union in the early 1990s, Eastern European markets and the countries that were formerly part of the Soviet Union quickly joined the group of rapidly developing and reforming financial markets and also opened their borders to international capital flows.

The development of local financial systems and liberalization of international capital flows in the emerging markets was far from being smooth. Since the early 1990s, a number of financial crises rocked these economies – the Mexican crisis of 1994, the East Asian crisis of 1997-98, followed by the Russia-LTCM crisis of 1998 and Brazil's sovereign default in 1999. Argentina's default and collapse of the currency board in 2001, while dramatic for Argentina's economy, was more localized. In each of these cases, economies affected by the crises experienced major downturns, leading to a debate in the literature on the costs and benefits of liberalization of international capital flows, the debate that still continues in the aftermath of 2007-09 global financial crisis. While this debate on the usefulness and effectiveness of capital controls is beyond the scope of this paper, I will discuss below the evidence on the effect the said financial crises had on capital raisings by emerging market firms. It is too soon to tell whether the 2007-09 financial crisis will have the same effects, but past experience frequently proves to be informative.

a. Domestic equity market development and foreign equity issuance

For large firms in emerging markets foreign issuance of equity is more of a necessity than a choice, given that in many of them domestic stock markets are shallow and underdeveloped. Most prominent recent examples are initial public offerings of the partially privatized large Chinese banks. These banks did issue some equity on the domestic stock exchange in Shanghai, but given the sheer value of the IPOs, the largest in history, they had to list on Hong Kong stock exchange and in some cases in New York as well. Beyond this need for market depth, the same motivation as discussed in the case of developed countries applies to emerging market firms. Firms in developing countries largely issued equity in the U.S. markets, mainly through American Drawing Rights (ADRs). As of 2008, about 14 percent of foreign equity issued by firms in emerging markets were issued in the U.S., with the rest issued in the U.K., Europe, China, and through offshore financial centers.

There is debate in the literature about the effect foreign equity raisings may have on the development of domestic equity markets, and the evidence so far has been mixed. On the one hand, firms that cross-list on foreign stock exchanges or issue ADRs are likely to show an example of international disclosure standards and also provide a good base for domestic stock markets, since they are likely to issue domestically as well. Moreover, some literature conjectures that competition with foreign equity markets may induce policymakers to speed up the reform that would remove the barriers faced by domestic equity markets. On the other hand, the fact that large amounts of equity are raised on the foreign, rather than domestic, markets may hamper the development of domestic markets by never letting them get deep enough – in one equilibrium, large firms issue domestically and domestic markets develop, while in another equilibrium, all large firms choose to issue equity abroad and domestic markets never reach the trading volume that would allow them to attract large domestic issuers (Levine and Schmukler, 2006).

b. Private bond issuance

Foreign capital markets are especially important for developing countries' bond issuance. Almost half of the debt issued by emerging markets is issued abroad. From the point of view of efficiency, it may be optimal, especially for

smaller countries, to encourage their firms to tap foreign bond markets instead of developing their own, because transaction costs on the small markets may be large and there may not be sufficient trading to maintain liquidity of the secondary bond market. This would result in a high cost of issuance, especially because it is hard for emerging markets to attract foreign capital to their local currency markets (Burger and Warnock, 2007). Since smaller countries also tend to be more engaged in international trade, issuing bonds in foreign currency may not lead to currency mismatch on firms' balance sheets. It may, in fact, provide a hedge from currency risk exposure for firms that are exporting and pricing their foreign sales in the currency of the market they sell in or in U.S. dollars, the main trade invoicing currency.

Domestic bond markets are especially underdeveloped in emerging Asia. In recognition of the importance of economies of scale, the Asian Bond Market Initiative by ASEAN+3 countries aims at developing a regional bond market, taking emphasis away from developing individual countries' bond markets. An additional difficulty for Asian emerging markets arises from the fact that they don't have a long history of foreign sovereign bond issuance that could facilitate private firms' access to global bond markets by providing benchmark pricing of sovereign bonds and sovereign credit ratings. Arguably, firms from emerging markets of Latin America and Eastern Europe benefited from the benchmark assessment of the country-specific risk of the bonds due to active secondary markets in their sovereign bonds. However, too much sovereign debt may make investors unwilling to increase their exposure to a given country's risk and thus may crowd out private debt that is subject to firm-specific risk in addition to the country risk.

From the firm's point of view, issuing a bond in a foreign market allows it to tap deeper markets, pay lower transaction costs and liquidity premia, disseminate information, and receive a credit rating. On the other hand, issuance of foreign currency-denominated bonds tends to lead to a currency mismatch on the balance sheet of the firms. As was most prominently shown by the collapse of the Argentinean currency in 2001, the balance sheet effects in this case can be very large – when the peso lost more than half of its value vis-à-vis the dollar, firms that were solvent otherwise became effectively bankrupt, since their dollar-denominated liabilities more than doubled while their peso-denominated assets remained unchanged. This balance sheet effect is further propagated by the affected firm's inability to continue borrowing because of the deterioration of its balance sheet and relative decline in the value of its collateral, which is also likely to be denominated in domestic currency.

Emerging market firms tend to denominate their bonds either in U.S. dollars or in the currency of the closest financial center. Between 1990 and 2008, 95 percent of foreign bonds issued by Latin American firms were denominated in U.S. dollars, 90 percent of foreign bonds issued by emerging markets in Eastern Europe were denominated in U.S. dollars and 9 percent in Deutsch mark or the euro, 92 percent of foreign bonds issued by emerging markets of East Asia were denominated in U.S. dollars, while 3 percent were denominated in yen. As developing countries' domestic capital markets develop, we should expect larger countries with stable currencies to develop their own currency bond markets that may become target bond markets for the firms in the region's smaller countries.

c. Bank loans

For large companies in emerging markets, borrowing from foreign banks or bank syndicates is more a necessity than a choice – domestic financial markets and banks are frequently not sufficiently large to provide them with loans of the required size. Since domestic banking systems are less developed in the emerging markets and their banks are less interconnected with the global banking system, it is more common for nonfinancial private firms to access foreign bank capital directly, rather than through the intermediation of their domestic banks. This is especially true for the borrowers from Eastern Europe and Latin America, where almost 70 percent of international bank loans go directly to nonbank private firms and only about 20 percent of international loans are extended to banks. For East

Asia, where the banking system is substantially stronger, 53 percent of the international bank loans are extended directly to nonbank private firms, while 37 percent are extended to banks.

European banks dominate lending to emerging market borrowers, as they do in the case of developed country borrowers. In addition to French, German, and U.K. banks, Spanish banks are actively engaged in lending to emerging market borrowers, mostly those in Latin America. Geographical proximity, however, plays an even more important role for international bank lending than it does for the issuance of debt securities. For borrowers from emerging East Asia, 54 percent of the loans are extended by European banks (including the U.K.), 14 percent by U.S. banks, and 12 percent by Japanese banks. For borrowers from Eastern Europe, European banks and the U.K. extend 92 percent of the loans, while American and Japanese banks extend only 3 and 2 percent, respectively. Latin American borrowers owe 64 percent of their cross-border bank loans to European banks (a majority of these loans come from Spanish banks), while they owe 16 percent of their loans to U.S. banks and 6 percent to Japanese banks.

Relationships that emerging market banks establish with global or foreign banks by borrowing from them and by participating in international bank lending syndicates are important for the growth of cross-border flows of other assets and liabilities. While for the developed countries bank relationships seem to only affect debt flows, there is evidence that emerging market countries in which banks are more closely linked to the global banking network tend to have larger positions in terms of equity as well as debt securities, on both the assets and the liabilities side. This is not surprising – because emerging markets have less variety of financial intermediaries, banks are more likely to play an active role in intermediating equity flows and transmitting relevant information in emerging markets than in the developed world.

d. Effects of financial crises

Developing countries' access to global capital markets did not improve monotonically since the early 1990s. It was interrupted on many occasions by emerging market financial crises that were mostly regional. These financial crises consisted of various combinations of widespread crises of domestic banking systems, currency collapses, and defaults on sovereign debt. In each of the cases domestic capital markets were severely impaired by the crises themselves and because of the recessions that followed and, crucially, balance sheet effects that rendered many banks and nonfinancial firms technically insolvent overnight. Thus, while demand for external financing of any kind tends to fall during recessions because of economic uncertainty, decline in the demand for foreign capital in the aftermath of emerging market crises was limited by the fact that domestic capital was scarce.

The estimated size of a decline in foreign credit to emerging market private firms is about 25 percent in the first year following large currency depreciations (Hale and Arteta, 2009). This decline is especially large in the first five months, is less pronounced in the second year, and disappears entirely by the third year (see top panel of Figure 2). Only about a quarter of the initial decline in credit could be attributed to the "credit crunch," while the rest of the decline is due to contracting demand – in the first six months after the currency collapse, demand for foreign funds is estimated to fall by around 35 percent. After six months, however, most of the credit decline could be attributed to supply effects, which could be partly explained by the balance sheet effects, described above, that instantly reduce creditworthiness and the value of collateral of the firms that had currency mismatch on their balance sheets.

There is also evidence that the effects are exacerbated in cases when financial crises are accompanied by sovereign defaults (Arteta and Hale, 2008). Controlling for the effects of currency collapses and a country's overall macroeconomic well-being, one finds that credit tends to decline by over 20 percent during the debt renegotiations and for more than two years after the restructuring agreement is reached (see bottom panel of Figure 2). The size of contraction in foreign credit to the private sector depends on the type of debt restructuring: it is smaller after agreements with commercial creditors as opposed to agreements with official creditors, and no contraction occurs

after voluntary debt swaps and debt buybacks; furthermore, agreements that include new lending lead to a lower decline in foreign credit to private firms than agreements that do not include new lending. This pattern is consistent with the effects different types of sovereign debt restructuring may have on investors' perceptions of the implications for the country-specific risk that spills over to their assessment of the risk of corporate debt of the affected country's firms. Recent analysis by Ağca and Celasun (2010) also shows that country credit risk associated with high sovereign foreign debt is likely to have a negative impact on private firms' ability to raise capital on foreign debt markets.

Some of the emerging market crises were also accompanied by widespread crises of domestic banking systems, although in many cases the causality between balance-of-payments problems and banking crises are hard to establish (Kaminsky and Reinhart, 1999). In some cases banks were rescued, while in others they were allowed to fail or be taken over by foreign or larger domestic banks. Importantly, relationships between banks were broken in these cases, which further contributed to the decline in domestically available funds for firms through loss of valuable private information about the borrowers. Evidence suggests that it takes about a year after a systemic banking crisis for bank relationships to be restored and that the breakdown in bank relationships has a sizeable effect on domestic bank lending in the year that follows.

IV. Capital raisings during the 2007-09 global financial crisis

While more integrated financial markets experienced the impact of the crisis more quickly and more dramatically, it is hard to argue that globalization per se was the cause of the 2007-09 financial crisis (Eichengreen, 2010) and that the economic impacts of the crisis were related to countries' exposure to foreign assets and liabilities (Rose and Spiegel, 2010).

The global financial crisis of 2007-09 was initially felt by banks and the interbank market but spread quickly to other capital markets through a global freeze of credit and the substantial decline in stock prices worldwide. Domestic and foreign capital raisings, beyond working capital financing, basically came to a standstill. Evidence suggests that relationships between banks, which commonly suffer whenever there is a recession in the U.S. or a banking crisis in a country in consideration, were destroyed even further.

It is too soon to tell what the long-term consequences of the crisis will be for domestic and foreign capital raisings by developed and developing country firms. One can tell, however, that even countries with very strong capital controls, such as China, which avoided a direct impact from the problems on the U.S. subprime markets, did not escape completely. Their economies were deeply affected by the global recession through reduced demand for their exports and global collapse of international trade. As fundamentals worsened, so did financial positions of the firms and therefore the value of their collateral, limiting their borrowing ability.

Among the countries that were open to international capital flows, those with better creditor protection and with banks that are better connected to the global banking network experienced a smaller decline in the values of their stock market indexes and therefore did not suffer as much of a setback in terms of firms' ability to raise capital domestically (Hale and Razin, 2009; Caballero et al., 2009). Further development of global capital markets, as well as the future of domestic and foreign capital raisings by private firms, will crucially depend on two factors – the pace of economic recovery and the specifics of financial regulation that is currently being revised worldwide.

Conclusion

Financial globalization brought many benefits to developing and developed countries alike through allowing firms' access to global capital markets and thereby lowering the cost of capital. As is always the case, however, benefits do come with costs. Financial globalization and cross-border capital raisings created channels for financial contagion that were not present otherwise. Nevertheless, a dominant view among economists remains that liberalization of cross-border capital flows is important in the long run even though it increases the vulnerability of countries to foreign financial shocks as we observed in 2007-09.

While financial globalization may lead to severe competition for some of the emerging domestic capital markets and may in fact impair their development, it allows firms to reach a large pool of investors and leads to more efficient allocation of capital on a global scale. As the Asian crisis of 1997-98 and the global crisis of 2007-08 highlighted, excessive leverage may lead to costly collapses. Preventing foreign capital raisings, however, is not a solution – with more globalized capital markets, financial regulation will hopefully become more harmonized across countries and will help prevent excessive leverage in the future.

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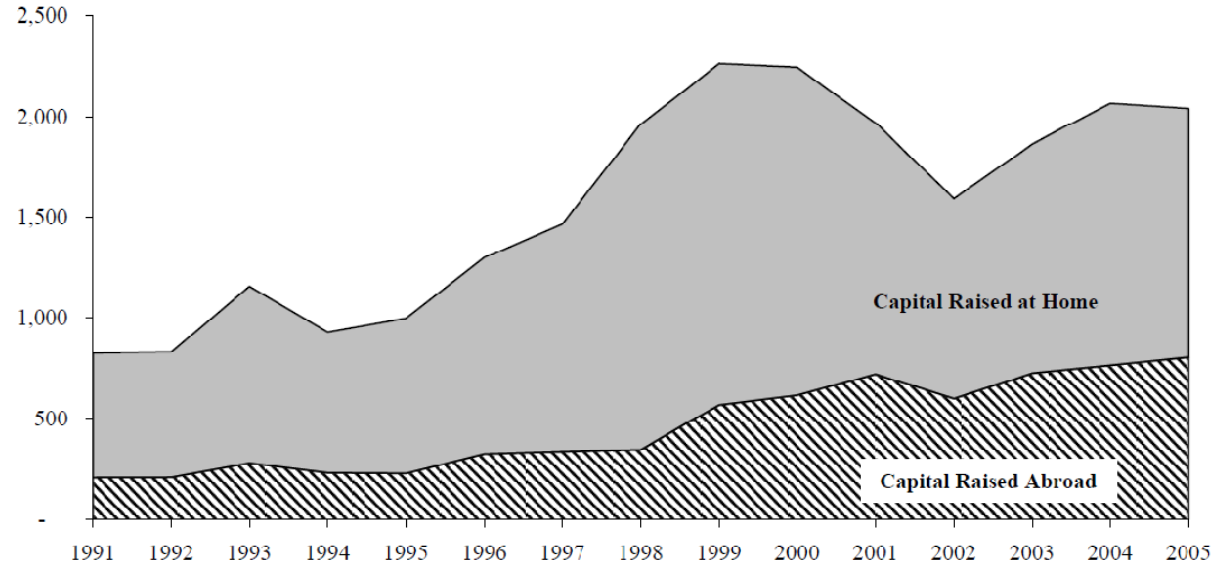
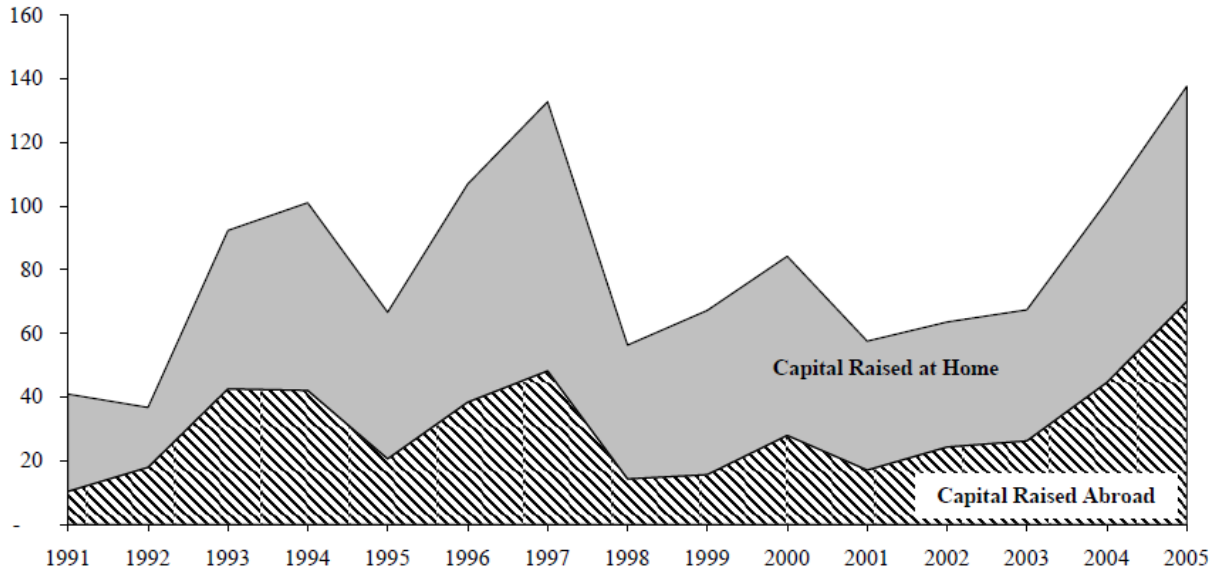
Figure 1. Amount raised by firms through debt and equity markets

Developed countries



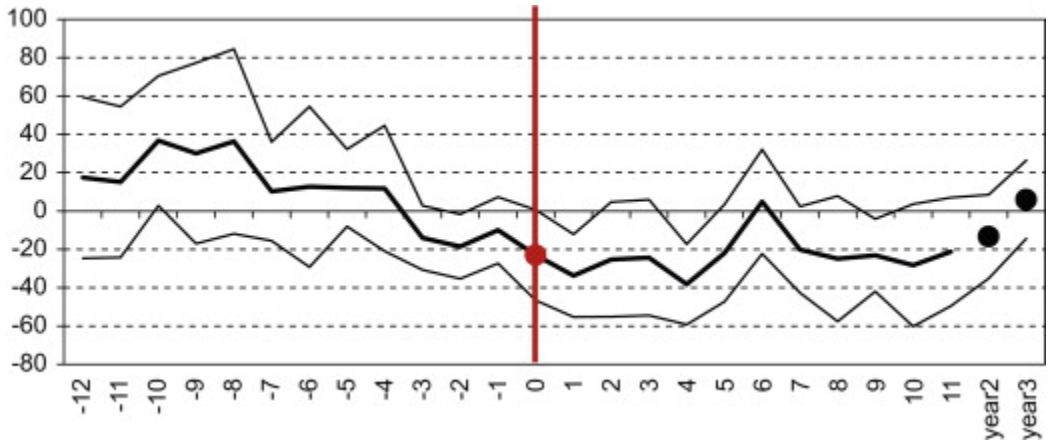
Developing countries



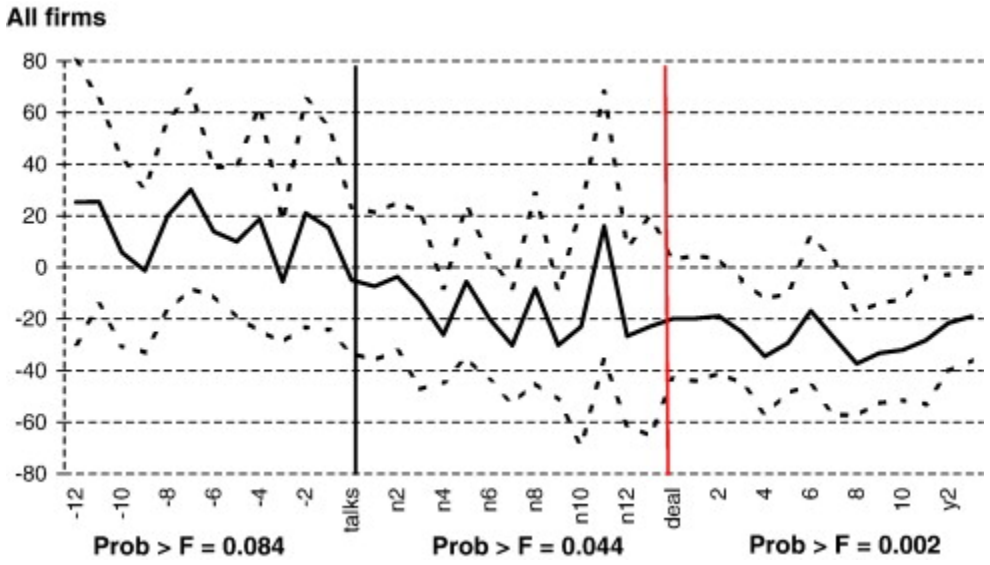
Note: Billion U.S. dollars at 2005 prices.
Source: Gozzi et al. (2010)

Figure 2. Effects of financial crises on emerging market firms' foreign borrowing

Effect of large currency depreciation



Effect of sovereign debt restructuring



Note: horizontal axis shows months before and after depreciation or debt restructuring; vertical axis shows percent deviation from average foreign borrowing by private firms, conditional on macroeconomic development. F-tests in the bottom panel show joint probability that the deviation is zero.

Source: Hale and Arteta (2009) for the top panel; Arteta and Hale (2008) for the bottom panel.