Journal of Applied Economics and Business Research
JAEBR, 3 (4): 222-231 (2013)

Foreign Capital and Stock Market Development - Do the Macro- and Microeconomic Studies Agree

Nadia Doytch[1]

City University of New York Brooklyn College, USA

& Asian Institute of Management, Philippines

The theoretical argument for the effects of foreign capital on stock market depth is the fact that additional capital needs additional financial intermediation. Foreign investors would need to finance their investment with either external capital or by selling equity. However, the fact that foreign investors oftentimes list their companies global stock exchanges rather than domestic ones tends to be overlooked. This article surveys the evidence on the impact of foreign capital on domestic stock market development, comparing the findings of macroeconomic vs. microeconomic studies. We find little agreement between these studies and a great need for more comprehensive analysis and understanding of the channels of the impact.

JEL Classification: G1, G15, F21, F41

Keywords: *Stock market deepening, stock market capitalization, stock market development, foreign capital*

1. Introduction

Increased interest in financial system fragility has recently intensified investigations in financial deepening. The Global Financial Crisis has shifted researchers' focus to systemic risk and likelihood of crises. When rapid expansion of credit is added to the typical information asymmetries and agency problems, financial systems can become fragile and susceptible to shocks (Barajas et al., 2013) [2]. Thus, while financial markets depth reduces asset price volatility and improves overall stability when it is within certain bounds, it can increase instability in the presence of financial distortions and the same financial system functions that help the economy

[1] Correspondence to Nadia Doytch, PhD, E-mail: NDoytch@brooklyn.cuny.edu

[2] Barajas, et al. (2013) establish a constrained optimum level of financial development and introduce the concept of financial possibility frontier, which takes into account structural, institutional, and macroeconomic country characteristics. The authors derive credit booms and busts as overshooting beyond level predicted by the structural fundamentals.

grow can become reasons for potential economic crises[3]. As part of financial deepening, stock market deepening plays an important role in financial instability[4].

Similarly to globalization of trade and capital flows, securities activities worldwide have become a lot more global in the past several decades. This process has been especially beneficial for firms, originating from emerging market economies whose stock market activities can be now moved abroad and cross-listed on the main capital market exchanges, such as New York and London (Claessens et al., 2002). Advances in technology have only exacerbated this trend and stimulated capital market convergence. Stock market trading has become easily accessible from everywhere. As a result, world capital market centers have gained liquidity, while many local markets have experienced pressures. Listing on the global stock market exchanges has lowered costs and improved liquidly of traded shares for corporations. On the other hand fully-fledged local stock exchanges have become less necessary for many economies (Claessens et al., 2002).

The theoretical argument for the effects of foreign capital on stock market depth is that the additional capital would need additional banking system and stock markets financial intermediation. Foreign investors would need to finance their investment with either external capital or by selling equity. Therefore, the liquidity of stock markets will rise. However, foreign investors have the option to list their companies not only on the local stock exchange, but also on foreign stock exchanges, including the global stock markets in New York, Tokyo, etc. Although this opportunity potentially exists for domestic investors as well, foreigners may be more prone to utilizing it. Thus, stock market capitalization may increase on the domestic market, foreign markets or both. The willingness to list domestically (or cross-list with domestic exchanges) may depend on the sector of the international investor (Doytch, 2013).

This survey has the goal of critically examining critically the literature on determinants of stock market development and identifying the role, which foreign capital plays in it. Comparing the macroeconomic and microeconomic evidence, we find little agreement between studies and a great need for more comprehensive analysis and understanding of the channels of the impact.

2. Macroeconomic Determinants of Financial Development

Financial systems are viewed as crucial for economic growth because of their functions of allocating capital to its most productive uses, maintaining property rights and promoting effective legal environments (Mishkin, 2009). They are instrumental in making allocation decisions in environments with high information and transaction costs, since they provide fund pooling, risk diversification, and liquidity management, screening and monitoring (Garcia and Liu, 1999). They also help economies grow through performing a liquidity transformation from short-term savings to long-term investments.

Early literature on financial development tends to focus on the relationship between financial development and economic growth (Gurley and Shaw, 1955; 1960; 1967; McKinnon,

[3] Such financial distortion could be due to dissimilarities between domestic and external balance sheets and excessive leverage.

[4] Stock market deepening is one part of financial deepening. Financial deepening can be defined as $[1/2(D_A+ D_L) + 1/2(F_A+ F_L)]/GDP$, where D_A and D_L are domestic assets and liabilities and $F_A+ F_L$ are foreign assets and liabilities (Source: IMF, 2013). Stock market capitalization is part of the overall measure of capital markets depth.

 ISSN 1927-033X

1973, and Shaw, 1973). Studies of the 1990s and early 2000s tend to analyze this relationship using relatively small country panels (King and Levine, 1993a, 1993b; Ndikumana, 2000; Rajan and Zingales, 1998; Demirguc-Kunt and Maksimovic, 1996; Levine et al., 2000; Beck et al., 2000b; Levine and Zervos, 1998; Levine, 1997). This line of research has a positive relation between financial development and economic growth. Moreover, when the type of financial structure has been considered, studies have established that both bank-based and stock market-based systems produce a positive impact on economic growth (Ndikumana, 2005 and Beck and Levine, 2004).

More recently, the financial development literature has been heavily influenced by analyses of the World Bank data set on *Financial Development and Structure* (Thorsten Beck, Aslı Demirgüç-Kunt, and Ross Levine, 1999), initially published in 1999. The *Financial Development and Structure* contains measures of the size of the banking sector and the liquidity of the stock markets. It covers a large country sample. Using the new measures of financial development, researchers have confirmed a high correlation and a causal relationship between them and GDP per capita growth (Beck, Demirgüç-Kunt, and Levine, 1999; Beck, Demirgüç-Kunt, and Levine 2009; Narayan et al., 2011).

A useful survey of the finance-growth nexus literature is available in Levine (2005). A discussion of the newly uncovered non-linearities in the stock market - economic growth relationship are discussed in Barajas et al. (2012), who find that effect of financial development on growth is the strongest in middle-income countries. The non-linearities are also linked to the level of private credit- the relationship becomes negative for levels beyond 110 percent of GDP (Arcand et al., 2012). In addition, excessive financial deepening is linked to elevated macroeconomic volatility Dabla-Norris and Srivisal (2013).

The past several decades have produced a shift of literature attention from the role of the banking sector to the role of stock markets. The shift has been motivated by the surge of world stock markets, including emerging countries' stock markets in the past decades. New theoretical and empirical work shows how stock market development might boost long-run economic growth and new studies on determinants of stock market development cast light on the reverse relationship (Demirguc-Kunt and Levine, 1996; Singh, 1997; and Levine and Zervos, 1998). Stock market development as a concept has many dimensions- size, liquidity, volatility, concentration, integration with world capital markets, regulation and supervision etc. Many of the recent studies have focused on stock market capitalization, value traded and turnover ratio (Narayan et.al, 2011). Researchers compare stock market capitalization in role and functions to monetization, i.e. the role private sector plays in financial intermediation.

A large share of the empirical literature on stock market development has emphasized institutional determinants. Legal systems, property rights and contract enforcement have all been proven important for capital markets in general. The seminal work by La Porta et al. (1997, 1998) shows the impact of contract enforcement in the form of protection of creditor' and shareholder' rights. Further studies show the importance of the regulatory environment in terms of judicial system, accounting standards, enforcement of the law in general, and lack of corruption (Lombardo and Pagano, 2002; Mayer and Sussman, 2001; Pistor, Raiser and Gelfer, 2000).

A number of macroeconomic determinants of stock market development has been studied. Among them are the level of income per capita, both the investment and the saving rates, the level of private credit, stock market liquidity, interest rates and level of inflation (Garcia and Liu, 1999; Huybens and Smith, 1999; Boyd, Levine and Smith, 2001; Do and Levchenko, 2004 and Huang and Temple, 2005). In addition, several studies focus on the effects of openness on stock market capitalization and value traded. Trade openness is found to have a positive effect on stock market development (Do and Levchenko, 2004; Huang and Temple, 2005) and remittances as well (Aggarwal et.al, 2011). And in resource-rich countries, stock market capitalization has been shown to be driven by the oil price (Billmeier and Massa, 2007).

And finally, a new stream of literature has tested the hypothesis of Stock Market Convergence (Narayan et al., 2011; Brada et al.; 2005, Eun and Lee, 2010; Su et al., 2010; Fung, 2009; and Mylonidis and Kollias, 2010). Narayan et al., (2011) test specifically for stock market absolute and conditional convergence within various country groups and total data set for 120 countries. The authors find conditional convergence of stock market capitalization and value of traded stocks within the high income group, the low-income group, OECD panel, and the Sub-Saharan African group, where the speed of convergence is between 20% and 30%. Our paper confirms this result.

3. Foreign Capital and Stock Market Development - the Macroeconomic Evidence

One of the few studies that focus specifically on the effects of foreign capital on stock market development that we were able to find, is Claessens, Klingebiel, and Schmukler (2001). Their paper has been motivated by the migration of stock market activity to international financial centers, which occurs with globalization. First, the study finds that a relatively small number of fundamental factors that affects both domestic stock market capitalization and participation in international markets. Second, the study shows that FDI is positively correlated with stock market capitalization and value traded both at home and abroad. Claessens, Klingebiel, and Schmukler (2001) also predict that with improvement of countries' fundamentals and technology the trend towards integrate with the international financial markets, as well as migration of trading towards the international market centers will increase and domestic stock market activity will become too little to support many local markets.

Several more recent studies, supporting the result of a positive impact of FDI on stock market deepening are Soumaré and Tchana (2011), who find a causal relationship between foreign direct investment (FDI) and financial market development using panel data from emerging markets, Adam and Tweneboah, 2009), who find long-run relationship between FDI and stock market development in Ghana, using impulse responses and Variance Decomposition from Vector Error Correction Model, and Baltagi et.al. (2009), who explore the question of determinants stock market deepening by the use of country panels, comparing the impacts of trade and financial globalization of banking systems and stock markets and find a positive effect of both on stock market capitalization.

4. Foreign Capital and Stock Market Development- the Microeconomic Evidence

From a microeconomic perspective the decision of where to list or cross-list a company is largely guided by shareholder protection considerations (La Porta et al., 2002, 2006; Doidge et al., 2004; Claessens and Schmukler, 2007; Smirnova, 2008). Since there is a link between firm legal origins, return distribution, and growth rate of market capitalization de-listing and cross-listing

 ISSN 1927-033X

behavior of foreign firms is also of interest for the legal literature (Buchanan and English, 2007). The most often cited legal reasons are that by cross-listing shares in the U.S. is that foreign firms affiliate with a robust legal system that offers investor protection and improves reputation as well as their visibility and prestige (Coffee, 2002, 1999; Abdallah and Goergen, 2008; Fernandez and Ferreira, 2008; Lee and Valero, 2010). However, firms also cross-list to achieve greater liquidity, better capital access, increased transparency, as well as to broaden their shareholder base (Foerster and Karolyi, 1999; Miller, 1999; Doidge et al., 2009b, 2004; Gozzi et al., 2008; Lel and Miller, 2008).

There is also a cultural dimension to the decision where to list a company, which resonates with the institutional economics literature. Culture could be a reason for de-listing of foreign firms, since social norms and cultural values impact economic decisions (North, 1990; Williamson, 2000; Daugherty and Georgieva, 2011). Companies have a tendency to list in countries that are culturally similar the theirs (Pagano et al., 2002; Licht, 2003) and cross-listing activities end up being clustered in geographical groupings (Sarkissian and Schill, 2003). The geographical and cultural factors often dominate the financial considerations for cross-listing behavior (Portes and Rey, 2000; Rauch, 2001).

5. Conclusion

The current survey examines the literature on determinants of stock market development and analyses the role foreign capital plays in it. Comparing the macroeconomic and microeconomic evidence, the survey finds little agreement between the studies. Whereas from macroeconomic perspective we expect to find a positive impact of foreign capital on domestic stock market capitalization, at the microeconomic level the willingness to list, delist or cross-list certain foreign company on domestic stock exchanges is a complex decision that requires further analysis and more thorough understanding.

References

Abdallah, W. and M. Goergen (2008) Does Corporate Control Determine the Cross-listing Location?, *Journal of Corporate Finance*, 14, 183–199.

Adam, A.N. and G. Tweneboah (2009) Foreign Direct Investment and Stock Market Development: Ghana's Evidence, *International Research Journal of Finance and Economics*, 26, 178–185.

Aggarwal, R., A. Demirgüç-Kunt and M. S. M. Pería (2011) Do Remittances Promote Financial Development?, *Journal of Development Economics*, 96 (2), 255–264

Arcand, J.L., E. Berkes and U. Panizza (2012) Too Much Finance, Unpublished draft (available at Ugo Panizza's website at http://sites.google.com/site/upanizza/), July, 2013.

Baltagi B. H., P.O. Demetriades and S. H. Law (2009) Financial Development and Openness: Evidence from Panel Data, *Journal of Development Economics*, 89, 285–296.

Barajas, A., R. Chami and S.R. Yousefi (2012) The Finance and Growth Nexus Re-examined: Do All Countries Benefit Equally? IMF Working Paper 13/130.

Barajas, A., Beck, T., Dabla-Norris, E., and Yousefi, S. R. (2013) Too Cold, Too Hot, or Just Right? Assessing Financial Sector Development across the Globe, IMF Working Paper 13/81.

Beck, T., A. Demirgüç-Kunt and R. Levine (1999) World Bank Data Set on *Financial Development and Structure*

Brada, J.C., A.M. Kutan and S. Zhou (2005) Real and Monetary Convergence between the European Union's Core and Recent Member Countries: A Rolling Cointegration Approach *Journal of Banking and Finance*, 29, 249–270.

Beck, T., A. Demirgüç-Kunt and R. Levine (1999) A New Data Base on Financial Development and Structure, World Bank Financial Sector Discussion Paper No. 2.

Beck, T., A. Demirgüç-Kunt and R. Levine (2009) Financial Institutions and Markets across Countries and Over Time - Data and Analysis *World Bank Policy Research Working Paper Series*

Beck T. and R. Levine (2004) Stock Markets, Banks, and Growth: Panel Evidence, *Journal of Banking & Finance*, 28, 423–442.

Bessler, D.A. and J. Yang (2003) The Structure of Interdependence in International Stocks Markets, *Journal of International Money and Finance*, 22, 261–287.

Billmeier A. and I. Massa (2007) What Drives Stock Market Development in the Middle East and Central Asia—Institutions, Remittances, or Natural Resources?, IMF Working Paper No. 07/157.

Boyd, J. H., R. Levine and B. D. Smith (2001) The Impact of Inflation on Financial Sector Performance, *Journal of Monetary Economics*, 47(2), 221-248.

Buchanan, B. and P. C. English II (2007) Law, Finance, and Emerging Market Returns, *Emerging Markets Review*, 8(3), 181-193.

Claessens, S., D. Klingebiel and S.L. Schmukler (2001) FDI and Stock Market Development: Complements or Substitutes? Mimeo, World Bank.

Claessens, S., S. Djankov, J. Fan and L. Lang (2002) Disentangling the Incentive and Entrenchment Effects of Large Shareholdings, *Journal of Finance*, 57, 2741–2771.

Claessens, S. and S. Schmukler (2007) International Financial Integration through Equity Markets: Which Firms from which Countries Go Global?, *Journal of International Money and Finance*, 26, 788–813.

Coffee, J. (2002) Racing towards the Top? The Impact of Cross-listings on Stock Market Competition on International Corporate Governance, *Columbia Law Review*, 102, 1757–1831.

Dabla-Norris, E. and N. Srivisal (2013) Revisiting the Link Between Finance and Macroeconomic Volatility, IMF Working Paper 13/29.

Daugherty M. and D. Georgieva (2011) Foreign Cultures, Sarbanes–Oxley Act and Cross-Delisting, *Journal of Multinational Financial Management*, 21, 208–223.

 ISSN 1927-033X

Demirguc-Kunt, A. and R. Levine (1996) Stock Market Development and Financial Intermediaries; Stylized Facts, *The World Bank Economic Review*, 10 (2), 291–321.

Demirguc-Kunt, A. and Maksimovic, V. (1996) Stock Market Development and Financing Choices of Firms, *World Bank Economic Review*, 10 (2), 341-69.

Do Q. and A. Levchenko (2004) Trade and Development, World Bank Working Papers Series No. 3347.

Doidge, C., A. Karolyi and R. Stulz (2004) Why are Foreign Firms Listed in the U.S. Worth More?, *Journal of Financial Economics*, 71, 205–238.

Doidge, C., A. Karolyi, K. Lins, D. Miller and R. Stulz (2009) Private Benefits of Control, Ownership and the Cross-listing Decision, *The Journal of Finance*, 64 (1), 425–466.

Doytch, N. (2013) Does FDI Improve Financial Deepening of Host Country Stock Markets? Evidence from Sectoral FDI, unpublished manuscript.

Eun, C. S. and J. Lee (2010) Mean–variance Convergence around the World, *Journal of Banking & Finance*, 34(4), 856-870.

Fernandez, N. and M. Ferreira (2008) Does International Cross-listing Improve the Information Environment, *Journal of Financial Economics*, 88, 216–244.

Foerster, L. and G. Karolyi (1999) The Effects of Market Segmentation and Investor Recognition on Asset Prices: Evidence from Foreign Stocks Listing in the U.S., *Journal of Finance*, 54, 981–1013.

Fung, M. K. (2009) Financial Development and Economic Growth: Convergence or Divergence?, *Journal of International Money and Finance*, 28(1), 56-67.

Garcia, V.F. and L. Liu (1999) Macroeconomic Determinants of Stock Market Development, *Journal of Applied Economics*, 2(1), 29–59.

Gozzi, J., R. Levine and S. Schmukler (2008) Internationalization and the Evolution of Corporate Governance, *Journal of Financial Economics*, 88, 607–632.

Goyal R., C. Marsh, N. Raman, S. Wang and S. Ahmed (2011) Financial Deepening and Interational Monetary Stability, IMF Staff Discussion Note 11/16.

Gurley, J. and E. Shaw (1955) Financial Aspects of Economic Development" *American Economic Review*, 515-38.

Gurley, J. and E. Shaw (1960) *Money in a Theory of Finance*, Washington, DC: Brookings Institutions.

Gurley, J., and E. Shaw (1967) Financial Structure and Economic Development," *Economic Development and Cultural Change*, 34 (2), 333-46.

Huang, Y. and J. Temple (2005) Does External Trade Promote Financial Development?, University of Bristol, Department of Economics, Discussion Paper No. 05/575.

Elisabeth H. and B.D. Smith (1999) Inflation, Financial Markets and Long-Run Real Activity, *Journal of Monetary Economics*, 43 (2), 283–315.

King, R.G. and R. Levine (1993) Finance, Entrepreneurship and Growth, *Journal of Monetary Economics*, 32 (3), 513–542.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, R. Vishny (2002) Investor Protection and Corporate Valuation, *Journal of Finance*, 57, 1147–1170.

La Porta, R., F. Lopez-de-Silanes and A. Shleifer (2006) What Works in Securities Laws? *Journal of Finance*, 61, 1–32.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1997) Legal Determinants of External Finance, *Journal of Finance*, 52 (3), 1131-1150.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny (1998) Law and Finance, *Journal of Political Economy*, 106, 1113–1155.

Lee, H. and M. Valero (2010) Cross-listing Effect on Information Environment of Foreign Firms: ADR Type and Country Characteristics, *Journal of Multinational Financial Management*, 178–196.

Lel, U. and D. Miller (2008) International Cross-listing, Firm Performance, and Top Management Turnover: A Test of the Bonding Hypothesis, *The Journal of Finance*, 63 (4), 1897–1937.

Levine, R (1997) Financial Development and Economic Growth: Views and Agenda, *Journal of Economic Literature*, 35 (2), 688-726.

Levine, R. (2005) Finance and Growth: Theory and Evidence, Handbook of Economic Growth, 1(A), 865–934.

Levine, R., N. Loayza and T. Beck (2000) Financial Intermediation and Growth: Causality and Causes, *Journal of Monetary Economics*, 46 (1), 31–77.

Levine, R. and S. Zervos (1998) Stock Markets, Banks, and Economic Growth, *American Economic Review*, 88(2), 537-558.

Levy, H. and M. Sarnat (1970) International Diversification of Investment Portfolios, *The American Economic Review*, 60(4), 668-675.

Licht, A. (2003) Cross-listing and Corporate Governance: Bonding or Avoiding? *Chicago Journal of International Law*, 4.

Lombardo, D. and M. Pagano (2002) Law and Equity Markets: A Simple Model, *Corporate governance regimes: Convergence and diversity*, 343-362.

Mayer, C. and O. Sussman (2001) The Assessment: Finance, Law, and Growth, *Oxford Review of Economic Policy*, 17(4), 457-466.

 ISSN 1927-033X

McKinnon, R.I. (1973) *Money and Capital in Economic Development*, Washington, DC: The Brooking Institution.

Miller, D. (1999) The Market Reaction to International Cross-listing: Evidence from Depositary Receipt, *Journal of Financial Economics*, 51, 103–123.

Mishkin, F. (2009) Globalization and Financial Development, *Journal of Development Economics*, 89, 164–169.

Mylonidis, N. and C. Kollias (2010) Dynamic European Stock Market Convergence: Evidence from Rolling Cointegration Analysis in the First Euro-decade, *Journal of Banking and Finance*, 34(9), 2056-2064.

Narayan P. K., S. Mishra and S. Narayan (2011) Do Market Capitalization and Stocks Traded Converge? New global evidence, *Journal of Banking and Finance*, 35, 2771–2781.

Ndikumana, L. (2000) Financial Determinants of Domestic Investment in Sub-Saharan Africa: Evidence from Panel Data, *World Development*, 28 (2), 381-400.

Ndikumana L. (2005) Financial Development, Financial Structure, and Domestic Investment: International Evidence, *Journal of International Money and Finance*, 24, 651-673.

North, D. C. (1990) *Institutions, Institutional Change, and Economic Performance.* New York: Cambridge University Press.

Pagano, M., T. Jappelli and M. Bianco (2002) Courts and Banks: Effects of Judicial Enforcement on Credit Markets, *Journal of Money, Credit and Banking*, 37(2), 223-244.

Pistor, K., M. Raiser and S. Gelfer (2000) Law and Finance in Transition Economies, *Economics of Transition*, 8(2), 325–368.

Portes, R., K. Pistor, M. Raiser and S. Gelfer (2000) Law and Finance in Transition Economies, *Economics of Transition*, 8(2), 325-368.

Portes, R. and H. Rey (2000) The Determinants of Cross-border Flows: The Geography of Information, University of California, Berkeley, Center for International Development & Economic Research (CIDER), Working Paper C00-111, 2000.

Rajan, R.G., and L. Zingales (1998) Financial Dependence and Growth, *American Economic Review*, 88(3), 559-586.

Rauch, J. (2001) Business and Social Networks in International Trade, *Journal of Economic Literature*, 39, 1177–1203.

Roodman, D. (2006) How to Do Xtabond2: An Introduction to “Difference” and “System” GMM in STATA, Center for Global Development. Working Paper No.103.

Ruud, P.A. (2000) Classical Econometrics. Oxford University Press, New York.

Sarkissian, S. and M. Schill (2003) The Cost of Capital Effects of Overseas Listings: Market Sequencing and Selection, Unpublished working paper. McGill University, Canada.

Shaw, E.S. (1973) Financial Deepening in Economic Development, New York: Oxford University Press.

Singh, A. (1997) Stock Markets, Financial Liberalization and Economic Development, *Economic Journal*, 107, 771-782.

Smirnova, E. (2008) Depositary Receipts and Firm Value: Evidence from Central Europe and Russia, *Emerging Markets Review*, 9, 266–279.

Soumaré, I. and F. Tchana (2011) Causality between FDI and Financial Market Development: Evidence from Emerging Markets, MPRA Paper No. 31328.

Su, Y.C., H.C. Huang and M.W. Hsu (2010) Convergence to Market Efficiency of Top Gainers, *Journal of Banking and Finance*, 34, 2230–2237.

Von Furstenberg, G.M. and B.N. Jeon (1989) International Stock Price Movements: Links and Messages, *Brookings Papers on Economic Activity*, 1, 125–179.

Williamson, O. (2000) The New Institutional Economics: Taking Stock, Looking Ahead, *Journal of Economic Literature*, 38 (3), 595–613.

 ISSN 1927-033X