FINANCIAL SECTOR FDI AND HOST COUNTRIES: New and Old Lessons

- The financial sectors of many developing countries are being reshaped dramatically by the rise in foreign direct investment, or FDI.
- The growth in financial sector FDI, in which banks in industrialized countries establish branches and facilities in emerging markets, has drawn attention to the consequences of foreign ownership of banking resources.
- An analysis of research on "real-side" FDI—
 investment into manufacturing and primary
 resource industries—suggests that lessons in
 these industries also apply to the financial
 sectors of host countries.
- Real-side and financial sector FDI can heighten the host country's integration into world business cycles through improved allocative efficiency, higher technology transfer rates, and greater wages. In banking and finance, financial sector FDI can potentially strengthen institutional development in the host country through improved regulation and supervision.

1. Introduction

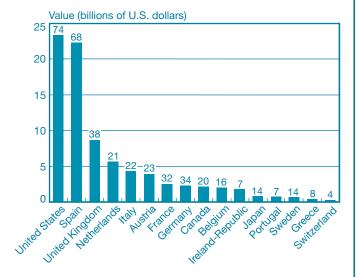
In the 1990s, foreign direct investment (FDI) became the largest single source of external finance for many developing countries. Most discussions on the causes and effects of FDI have focused on flows into manufacturing and real production sectors, where this type of investment has traditionally been concentrated. More recently, however, FDI into the financial sector has soared, and the sector is being reshaped dramatically.

Financial sector FDI, a relatively new phenomenon, typically takes the form of banks in industrialized countries establishing branches and facilities in developing countries. Following the dissolution of the Soviet Union, bank entry into Central and Eastern Europe in the early 1990s led to foreign ownership in local banking systems; today, such ownership often exceeds 80 percent of local banking assets. In addition, the liberalization of financial sectors in Latin America was likely spurred in part by foreign direct investment, especially in countries facing potential competitive losses to Asian economies. Within Latin America, the financial crises of the mid-to-late 1990s provided additional opportunities for foreign entry, as countries sought to recapitalize their banks and improve the efficiency of their financial systems.

¹Other sources of external finance include bank flows, revenues from bond sales, and foreign portfolio inflows. For more information, see International Monetary Fund (2006).

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CHART 1 Value and Number of Acquisitions of Banks in Developing Countries by Source Country, 1990-2003



Sources: Bank of England; Thompson Financial.

Note: The figures above the bars are the number of acquisitions.

Banks in the United States, Spain, the United Kingdom, and other countries with highly developed financial systems are the main sources of financial sector FDI (Chart 1). Parent banks based in industrialized countries have assumed substantial, if not majority, control of assets in host-country financial systems. This growing trend is illustrated in Chart 2, which shows the evolution of foreign control of emerging market financial assets between 1994 and 2004. Whereas foreign control was typically below 10 percent of assets in 1990, it more often surpassed 40 percent by the late 1990s. Acquisitions of local banks continued through the early 2000s, significantly expanding foreign bank presence into majority ownership in many countries. From 1999 to 2004, the largest change in structure occurred in Central Europe, where the foreign ownership share rose to 77 percent.²

As one might expect, these dramatic shifts in investment into foreign financial sectors have raised concerns about the consequences of ownership of banking resources. In this article, we emphasize that some of the consequences are already well established in studies of foreign investment, although that work does not focus specifically on the financial sector. In the broad literature on FDI, the authors draw their results primarily from "real-side" investment—that is, activity in manufacturing and primary resource industries. And although a new line of inquiry is concentrating on financial sector FDI,

it typically ignores the lessons documented in the research on real-side investment that also apply to the financial sector.

The stylized facts derived from the literature on the causes and consequences of real-side FDI are usually based on theoretical arguments supplemented by case studies. Within the economic research on this theme, the data studied are often from individual countries or from manufacturing industries within countries. Yet one limitation of real-side research is that conclusions seldom distinguish between FDI in the form of mergers and acquisitions and FDI in the form of greenfield (referred to as de novo in the financial services industry) investments. This limitation is relevant for understanding and interpreting the employment, growth, and efficiency consequences of FDI.

The emerging body of literature on financial sector FDI addresses some issues that have not received much attention in real-side studies. This research directly explores the cross-border flows of products and the consequences of ownership in the financial services industry. It generally focuses on the implications of foreign entry into local banking systems, either

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from the perspective of the investing firms and parents making risk management decisions or from the vantage point of the host markets that are sometimes skeptical of foreign entry.⁴

This article attempts to bridge some of the gap between research on real-side FDI and work on financial sector FDI by presenting a selective survey of the literature. We argue that real-side and financial sector FDI share many features. Accordingly, there are many lessons in the research that can benefit both fields of study. Moreover, because research on financial sector FDI is growing, attention could be focused on areas where real-side lessons are lacking or inapplicable, in which case real-side lessons need not be reinvented. In addition, we point to specific areas where financial sector FDI

²The history of and context for these developments are discussed in Bank for International Settlements (2006).

³The case studies employ distinct "definitions" of FDI, sometimes using a flow definition such as one covering the foreign investment that took place within a particular time period, or a stock definition meant to represent the total cumulative value of all foreign investment up to some point in time. Data availability often drives the type of analysis conducted.

⁴The insurance industry has also received significant foreign investment flows, but less research attention. For example, see Skipper (2001).



Source: Mihaljek (2006).

has broader consequences—some that are quite policy-relevant—and argue that these consequences need to be understood more fully.

Our review takes as its primary focus the host-country implications of FDI, especially for emerging markets. The implications span evidence on technology transfers, productivity spillovers, wage effects, macroeconomic growth, institutional development, and fiscal and tax concerns. One intention of the review is to emphasize the findings that have been presented independently in real-side FDI research and more recently in studies of financial sector FDI. While the language of these two distinct areas of analysis is subtly different (see box), we show that many conclusions drawn from them are strikingly similar. We also examine research in which no overlap exists between the two lines of inquiry and present conclusions from real-side FDI likely to apply to financial sector FDI. In addition, we comment on how both types of FDI may have different implications for host countries.

Our main conclusions are that real-side and financial sector FDI can induce limited technology transfers and productivity gains as well as have wage implications in the host country. Both types of investment can heighten the host country's integration into world business cycles. Moreover, in banking and finance, financial sector FDI has the potential to strengthen institutional development through improvements to regulation and supervision. Banks provide key financial intermediation services, and their activities have externalities for bank regulation and supervision that cannot be overlooked

(and certainly have come to the attention of host countries). These differences between real-side and financial sector FDI, more so than the similarities, warrant further attention from the research and policy communities. If the balance of evidence weighs in favor of making host-country financial systems healthier and improving intermediation—which seems to be true when robust and well-regulated foreign banks enter emerging markets—the governments of the host countries may wish to consider looking more closely at options for encouraging the benefits of financial sector FDI.

2. Does FDI Lead to Technology Transfer and Productivity Spillovers?

Economists argue that multinationals, through FDI, can help to fill an "idea gap" between developed and developing, or host, countries and provide greater opportunities for growth in the host markets (Romer 1993). According to this view, producers in the developed country have access to productive knowledge that is not otherwise readily available to producers in the host country. However potent, such productive knowledge may be intangible, taking the form of technological expertise, marketing and managing skills, export contacts, coordinated relationships with suppliers and customers, and reputation (Markusen 1995). Technology transfers from FDI, economists contend, can stimulate growth in developing countries.

The "Language" of FDI

To understand why "real-side" and financial sector foreign direct investment (FDI) are so similar, first consider an FDI decision process. In each case, a foreign producer of goods or services makes a two-step decision. The producer begins by determining whether to serve a particular market and then determining whether the market should be served through exports or through the establishment of a local production facility requiring FDI.

While manufacturers/real-side producers use the language of exports or production by multinationals as a means to satisfy customer needs, financial services firms use a different language for a similar decision process. In the financial services industry (in particular, banking), the bank first decides whether to provide lending, deposit-taking, and other services to a market. It then determines whether to serve the market through cross-border activities (arm's-length transactions) or through foreign direct investment in the form of setting up branches or subsidiaries to engage in local lending. Banks produce services, not goods, so "export" transactions are sometimes not practical, especially when the information intensity of the transaction requires proximity to the client. Some banks specialize in screening and monitoring more opaque borrowers, making cross-border transactions—that is, exports—more costly than operating through a branch or subsidiary in the host country. Financial sector FDI thus entails either a de novo operation of introducing a new, licensed bank in the host country or the acquisition of an existing bank.

Although the language used to describe transactions is different for real-side and financial sector FDI, the decision process is similar. In both contexts, FDI is an activity that occurs as part of a multinational's broader strategic plan. Flows can respond both to microeconomic stimuli, such as tax incentives, and to macroeconomic stimuli, such as fluctuations in exchange rates and business cycles. The sometimes lumpy reallocation of capital across borders can occur when governments reduce their protection of inefficient or corrupt local industries. Opportunities to gain local market share and exploit sales or production networks also trigger entry. These features are common to manufacturing industries and extractive resource industries as well as to financial services providers.

This concept of technology transfer between countries has a long and rich research history.⁵ Nonetheless, studies of technology transfer reach mixed conclusions on the extent to which the transfers and productivity spillovers have occurred as a result of foreign direct investment in manufacturing and extractive resource industries. Some conclude that domestic firms in sectors with greater foreign ownership are more productive than firms in sectors with less foreign participation. Others dispute the spillover benefits of FDI into local markets. Part of the disagreement among researchers stems from methodological disputes, particularly the extent to which the studies properly control for the conditions in a country or sector that existed prior to the entry of the foreign investors. Sometimes foreign investment enters sectors where firms are ex ante more productive. Observations of ex post high levels of productivity in these sectors therefore offer no proof that foreign entry contributed to enhanced productivity via technology transfer or some other channel.

On balance, research on real-side FDI supports the finding of positive productivity and technology spillovers into host markets. However, the level of these benefits depends on

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preexisting conditions among the host-country producers. Small plants may have the largest productivity gains from foreign entry. Some local plants may lose workers and experience productivity declines. In some cases, the gains from foreign investment appear to be captured entirely by the joint ventures. 9

Technology transfers also flow into local industries that are not themselves direct recipients of foreign capital. Indeed, the view that a new plant will stimulate the local development of

^aSee Feldstein, Hines, and Hubbard (1995) for analyses of tax and FDI issues.

^bDixit and Kyle (1985) provide an elegant conceptual exposition.

⁵See Horstmann and Markusen (1989) for an early discussion and formalization of this concept.

⁶See, for example, Blomstrom (1989) on Mexico.

⁷See Germidis (1977) for an early discussion of spillovers in the Organization for Economic Co-operation and Development countries.

⁸Gorg and Greenaway (2004) provide a rich and more exhaustive review of the evidence on this point. They are more skeptical that the balance of evidence is positive, but also emphasize that methodological issues need to be addressed better

⁹Aitken and Harrison (1999) and Harrison and Aitken (1994) provide evidence for Venezuela and preliminary results for Indonesia.

services and attract related producers is occasionally offered as a justification for (possibly excessive) incentive packages offered to foreign investors. ¹⁰ Such positive "externalities" have been observed. For example, Javorcik (2004) shows that

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among Lithuanian firms, productivity spillovers from FDI took place through contact between the foreign affiliates and their local suppliers in upstream sectors, that is, through vertical linkages. This careful study finds no support for the claim of spillovers taking place within the same industry, sometimes referred to as horizontal linkages.

This same logic should apply to the financial services industries. Instead of using the language of productivity, recent research on financial sector FDI considers whether foreign bank entry alters the efficiency of foreign-owned and domestically owned banks. Financial sector FDI typically is found to enhance the efficiency of banks that remain in business in the host markets. Efficiency calculations are performed by using data on overhead costs (the ratio of bank overhead costs to bank total assets) and bank net interest margin (bank interest income minus interest expense divided by bank total assets). Foreign banks operating in developing countries appear to be more efficient than their domestic counterparts, whether those counterparts are privately or government-owned. Domestic banks are forced to become more efficient after foreign entry, especially in the business lines in which foreign banks choose to compete. Among the relevant studies is Claessens, Demirguc-Kunt, and Huizinga (2001), who use data from a sample of eighty countries to show that foreign entry reduces the profitability of domestic banks but enhances their efficiency. Country-specific studies that mainly use bank balance-sheet data reach similar conclusions, such as work on Latin America by Crystal, Dages, and Goldberg (2001), on the Philippines by Unite and Sullivan (2001), on Colombia by Barajas, Steiner, and Salazar (2000), and on Argentina by Clarke et al. (1999). Turner (2006) argues that the larger role of foreign-owned banks in Europe and Mexico in the past decade has made the banking industry more efficient and improved credit allocation.

These financial sector FDI studies do not identify whether the productivity enhancements that occur in banking are attributable to increased competition among banks or to technology transfers between foreign and domestic banks. This distinction is important for assessing whether financial sector FDI is helping to close a knowledge gap between countries. The distinction may also help reconcile two potentially contradictory themes in discussions on financial sector FDI. One such theme is that financial sector FDI induces efficiency gains by changing an industry's competitive structure: foreign entry reduces the monopolistic excesses of domestic banks. Bank exit or mergers and acquisitions change local competitive structures in ways largely unparalleled in other sectors that have received FDI. Another theme is that the significant amount of bank consolidation during the past decade has been fostered by technological change and foreign entry into emerging markets. Interestingly, Gelos and Roldos (2002) show that while such consolidation has been associated with efficiency improvements, it has not reduced competition in local financial markets. Foreign entry may be enhancing the productivity of other banks in the host market through the channel most often explored in real-side FDI research technology transfers—instead of exclusively through competitiveness changes. This issue is interesting from a policy perspective: If the main channel is technology transfers, productivity transfers and gains can continue as long as the parent banks innovate, even if a stable ownership structure exists in the host-country banking industry.

3. Implications of FDI for Host-Country Workers

The productivity and technology transfer arguments lead directly to the question of whether foreign entry benefits local workers in terms of wages. When the foreign firm has some

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intangible productive knowledge, technology transfer and other training after entry should expand the human capital of the employees of the foreign firm within the host country. This expansion of human capital should manifest itself in greater worker productivity and be rewarded by higher wages.

Studies of manufacturing industries link higher levels of foreign direct investment to higher wages. In Mexico and

 $^{^{10} \}rm Such$ themes are developed in the elegant theoretical analysis of Markusen and Venables (1999) and in Rodriguez-Clare (1996).

Venezuela, wage growth was experienced by workers in foreign-owned firms, but it did not spill over more broadly through the host-country labor markets. In the United States, the wage effects from foreign investment were smaller and spilled over more into local labor markets (Aitken, Harrison, and Lipsey 1996). In Indonesia, wages paid in domestically owned manufacturing plants taken over by foreign firms increased sharply relative to wages paid in those plants that remained in domestic hands (Lipsey and Sjoholm 2003). 11 On balance, these studies conclude that some workers in manufacturing industries benefit directly from FDI through higher wages. Whether because of the accumulated capital being firm-specific or because of efforts by foreign firms to limit outmobility of productive workers, analogous growth in wages and productivity is generally not observed outside the sector receiving FDI.

While the same issues are relevant for workers in financial services industries, the topic has not been studied extensively. Bank balance-sheet data indicate that foreign bank operating costs are lower and that domestic bank costs are pushed down by foreign entry (Crystal, Dages, and Goldberg 2001). In some

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cases, wage expenditures also decline. The analysis has not determined whether these cost reductions are due to decreases in the number of workers (often a result of acquisitions and consolidations of banks) without wage declines or to reductions in employment with higher wages paid to the remaining workers.

Research on real-side FDI has examined the employment effects of foreign direct investment. The overall implications for the host economy are the combination of FDI effects on employment by the specific firms receiving capital and on employment changes that FDI induces in the rest of the economy. Some implications are contingent on whether FDI takes the form of greenfield (de novo) investments or occurs via mergers and acquisitions of existing plants (or banking networks). Greenfield investments, where new plants or facilities are built, may generate increased host-country employment. This job growth might be strongest if the new plant does not compete directly with other local production facilities that serve thin host-country markets. Net employ-

ment gains could also be strong if agglomeration externalities exist, so that the infrastructural improvements associated with FDI spill over to other local firms and all local producers gain.¹²

The net employment effects of merger-and-acquisition FDI are less transparent. Mergers and acquisitions may trigger consolidation of an inherited bloated infrastructure, leading to job loss. Fewer individuals may be employed at higher wages

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in a plant or banking system that ultimately operates more efficiently. In the case of financial sector FDI, evidence reported by the Bank for International Settlements (2006) shows that this type of investment is often made through acquisitions of host-country banks. If financial sector FDI is followed by branch closures and reductions in wage bills after acquisition, it accords with this scenario. Yet such declines in employment by a bank do not necessarily imply reductions in total employment in host countries. The special role of banks in financial intermediation means that the employment consequences of financial sector FDI may be broader, and more positive, than the consequences of FDI to the real economy. This could arise if intermediation is improved and financial capital is allocated more effectively in the host country.

4. Do FDI Inflows Accelerate Macroeconomic Growth?

The relationship between FDI and macroeconomic growth, and the stability of this growth, is a central consideration as host countries evaluate the trade-offs associated with foreign entry. One way this topic has been discussed is in the context of longer term performance, stemming from the argument by

¹²Job creation by a single plant is generally not an appropriate welfare metric for employment calculations. The foreign plant employs workers and pays higher wages, drawing some workers from other local plants. In a situation where the foreign investor takes over a local plant, restructuring could lead to job loss, with only the remaining employees getting higher wages. The producer potentially generates larger income and tax revenues for local governments.

¹¹These results persisted even after the authors controlled for the initial characteristics of the plants taken over by foreign investors.

Romer (1993) that an idea gap has held back growth in emerging markets. If an idea gap has impeded growth, the argument continues, FDI can induce a catch-up process.

Indeed, the most robust evidence on FDI and aggregate growth is found in studies of developing countries. For example, analyses of inward investments to Greece, Taiwan, Indonesia, and Mexico show a significant positive contribution

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to these countries' growth. ¹³ Research using detailed industry-level data finds that growth spillovers across industries depend on the industries into which FDI flows. The spillovers and growth ramifications are expected to be strongest when foreign affiliates and local firms compete most directly with each other, as may be the case in previously protected industries. ¹⁴ Borensztein, DeGregorio, and Lee (1998) find positive threshold effects between FDI and growth, with human capital accumulation in the host country needing to be sufficiently large before countries can reap the beneficial growth effects of the foreign inflows.

Studies of financial sector FDI effects conclude that growth may expand both through the technology transfer channel and through improved intermediation of capital flows between savers and investment opportunities. ¹⁵ Cross-country growth regressions reach the broader finding that financial development improves economic growth. ¹⁶ Demirguc-Kunt

and Maksimovic (2002), however, find no evidence that country differences in economic growth can be explained by distinguishing countries by financial structure (that is, bankbased versus market-based structures).

Positive growth effects from financial sector FDI can occur because of more efficient credit allocation in host markets, with funds made more available for private sector use. Prior to financial sector liberalization and reform, some governments used the local banking system as a tool for providing directed credit to politically favored constituents or favored but lossincurring sectors of the economy. The banks implicitly play a role in patronage and "development finance" and subsidize levels of activities that might not be viable on market terms. Suggestive evidence of the costliness of such strategies is found in La Porta, Lopez-de-Silances, and Shleifer (2002). Using global data, the authors argue that a higher level of government ownership of banks is associated with lower growth of per capita income and productivity. Sapienza (2002), in a fascinating study of state-owned banks in Italy, shows that public bank lending has a pattern of rewarding political supporters.

While serving as a means of fiscal stimulus, this type of directed lending crowds out intermediation to worthy private borrowers—a point also made by Mishkin (2005), who expounds on the principal-agent problems associated with

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directed lending. If foreign banks operating in host markets are better regulated and subject to parent bank oversight, these banks may be able to resist local suasion more effectively. As such, they may discipline host-country fiscal or monetary "irresponsibility" better and be less amenable to forced purchases of government bonds or forced lending to favored political constituents. Such outcomes are auspicious for sustainable economic growth.

A related finding by Galindo and Schiantarelli (2003) is that financial liberalization tends to relax financing constraints on producers in developing countries and make them less adversely influenced by financial crises. Foreign banks sometimes enter as a component of larger scale financial liberalization or bank privatization efforts and sometimes as local governments seek to recapitalize their financial systems

 $^{^{13}\}mathrm{The}$ caveat to these results is that it is difficult to control adequately for reverse causality problems. More specifically, investors may put their resources into countries where growth is expected to be higher. See Lipsey (2000) for an informative overview of the literature.

¹⁴Markusen (1995) was an early advocate of the view that the competitive structure of an industry is a key driver behind FDI implications.

¹⁵A related area of research looks beyond financial sector FDI and considers the growth implications of overall financial liberalization. The issue of financial FDI, as opposed to portfolio investments or other forms of capital inflows, is not explicitly addressed. In this literature, financial liberalization events are usually defined in terms of regulatory changes, such as the relaxation of capital controls or the lifting of interest rate ceilings. Despite the considerable research undertaken, the extent of the long-term growth benefits of capital account liberalizations is hotly debated, and a consensus view has not emerged. Researchers have found sharply contrasting results owing to differences in country coverage, sample periods, inclusion of crisis controls, and indicators of financial liberalization. For recent examples and surveys, see Edison et al. (2002) and Eichengreen and Leblang (2003).

¹⁶For example, see Levine, Loayza, and Beck (2000) and Rajan and Zingales (1998).

in the wake of crises. Outside of crisis periods, foreign banks might be expected to contribute to growth by providing capital to worthy but previously credit-constrained borrowers and by not crowding out credit provision to worthy borrowers that are outside the scope of their business model. During crises, foreign-owned banks may be destinations for local flight capital, preventing this capital from leaving the country and creating greater opportunities for these funds to continue to be intermediated locally.

Research on lending comparisons across banks differentiated by owner types supports the conclusion that financial sector FDI fosters economic growth. Credit provision by U.S. banks to Latin American countries grew faster during the 1990s and was less sensitive to local cycles than credit provision by domestically owned banks (Crystal, Dages, and Goldberg 2001). The composition of credit provision is also important for long-term growth, raising the concern that small businesses relying on bank credit might have constrained access with foreign bank entry. In Latin America, foreignowned banks have been providing credit to local constituents in patterns similar to those of healthy domestically owned banks (Dages, Goldberg, and Kinney 2000). Detailed evidence for Latin American countries shows that other than possible biases in borrower orientation often linked to bank size

Overall, these observations support the conclusion that financial sector FDI should foster more rapid growth within economies. The conclusion is also supported by arguments based on better information processing, technology, and risk management practices.

(large banks lend relatively less to small and medium-size enterprises), there has been no systematic bias in orientation specifically associated with foreignness (Clarke, Cull, and Peria 2001). In Eastern Europe (specifically Hungary), in aggregate foreign entry may even have been associated with expanded credits to small and medium-size enterprises when the domestic banks had to search more aggressively for a broader clientele for lending (Bonin and Abel 2000). Berger, Klapper, and Udell (2001) find that foreign banks in Argentina behaved significantly differently from local banks only when decision-making remained in foreign headquarters.

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5. FDI AND BUSINESS CYCLES

Foreign direct investment can also influence the pattern of business cycles in host countries, the transmission of cycles from foreign markets, and crisis contagion across markets. Analyses of business cycle comovements across countries look for explanations for changes in synchronization that have occurred across recent decades. Yet when developing countries

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are divided into two broad groups—more financially integrated and less financially integrated economies—both groups have low correlations with world macroeconomic aggregates, with these correlations not statistically higher in recent decades compared, for example, with the 1960s and the 1970s (Kose, Prasad, and Terrones 2003).¹⁷

The independent role of FDI, and specifically of multinational firms, in business cycle integration has not been explored as thoroughly. While Hanson and Slaughter (2004) posit a role for multinationals that relies on profit sharing between parent and affiliate firms, especially through wages, the strength of this channel has not been widely tested empirically or assessed relative to other channels. As a general point, the specific contribution of real-side FDI to business cycle linkages across countries, as opposed to financial integration more broadly defined, largely remains an open

¹⁷Prasad et al. (2003) provide an extensive review of this evidence, noting the broad group of papers that look at financial integration and growth. The role of FDI within financial integration is less well documented. Imbs (2004) finds that financial integration raises correlations among a sample of industrialized countries. Kose and Yi (2001) argue that the increased vertical integration of production in world trade poses a powerful channel for business cycle transmission. Such vertical production linkages are frequently supported by patterns of general FDI and suggest that FDI in manufacturing and extractive resource industries stimulates business cycle comovements.

 18 The arguments draw from Budd and Slaughter (2000) on international rent sharing.

question. Likewise, the relative importance of real-side FDI compared with financial sector FDI in changing the nature of local business cycles has not been determined.

In contrast, studies conclude that financial sector FDI clearly has consequences for local business cycles. This line of research typically uses bank-level data to relate lending activities to shock transmission within and across national borders. In principle, bank lending activity can either be procyclical or countercyclical with respect to local business cycles and other shocks. The availability of loanable funds via the deposit base contributes to procyclicality. However, if foreign bank entrants are less reliant on host-country funding sources and more reliant on foreign sources, the procyclicality of their supply of loanable funds may be reduced. Loan demand, too, can either be procyclical, as individuals or businesses borrow more to expand their holdings in prosperous times, or countercyclical, as individuals try to smooth consumption intertemporally.

Researchers generally find strong evidence of procyclicality in bank lending. In addition to the aforementioned points, other arguments for procyclicality rely on information asymmetries between borrowers and lenders, as within a

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financial accelerator view of credit cycles.¹⁹ Or, as Borio, Furfine, and Lowe (2001) contend, procyclicality may result from inappropriate responses by financial market participants to changes in risk over time. These inappropriate responses can be attributable to market participants underestimating risk in good times and overestimating it in bad times. Inappropriate credit cycles can also derive from market participants having incentives to react to risk, even if correctly measured, in ways that are socially suboptimal. Related arguments for procyclicality stem from bank provisioning practices and their links to rules on regulatory capital (Cavallo and Majnoni 2001).

The cyclical lending responses of banks could differ between foreign- and domestically owned institutions. Dages, Goldberg, and Kinney (2000) find that although foreign banks are procyclical lenders, they do not appear to magnify the

¹⁹The financial accelerator argument maintains that information asymmetries between lenders and borrowers contribute to the procyclicality of lending. When economic conditions are subject to an adverse shock, and collateral values decline, even those borrowers with profitable projects have difficulty obtaining funding.

boom-bust cycles in emerging markets. Analysis of individual bank data from Chile, Colombia, and Argentina supports broad similarities between the lending patterns of private, domestically owned domestic banks and longer established

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foreign banks. The similarities with newer, established foreign banks are less systematic. While foreign banks had higher average loan growth, they did not add significant volatility to local financial systems or act as relatively destabilizing lenders. ²⁰ In a study of the Malaysian experience, Detragiache and Gupta (2004) find that foreign banks with sufficient international diversification played a stabilizing role in host credit markets during the Asian crisis. By contrast, foreign banks that had a narrower focus on Asia behaved similarly to domestic banks. Arena, Reinhart, and Vazquez (2006) study bank behavior across twenty Asian and Latin American countries from 1989 through 2001 to compare foreign- and domestically owned bank activities. They find weak evidence that foreign bank entry into emerging markets contributes to credit market stability.

A related issue is whether financial sector FDI can reduce the magnitude of host-country cycles if foreign bank involvement reduces the actual *incidence* of crises. The boom-bust cycles in international capital flows are often derided as wreaking havoc on economies, with lending booms contributing to financial crises. Financial liberalization, by giving banks and other intermediaries more freedom of action and allowing them to take greater risks, is sometimes argued to increase the financial fragility of an emerging market. Studies by Demirguc-Kunt and Detragiache (1998, 2001), as well as work by Rojas-Suarez (2001), find that financial liberalization (defined as interest rate liberalization) has costs in terms of increased financial fragility, especially in developing countries where the institutions needed to support a well-functioning financial system are generally not well established.

The transmission of shocks across borders is another issue that bears on financial crises. Foreign banks may contribute to contagion through common-lender effects, as documented in Van Rijckeghem and Weder (2003). These banks could also be subject to foreign cyclical flows. However, any private bank

 $^{20}\mathrm{See}$ also Goldberg (2002), Dages, Goldberg, and Kinney (2000), and Horvath (2002).

with access to foreign loanable funds can be affected similarly: foreign cycles have been shown to affect the lending and deposit bases of domestically and foreign-owned private banks in emerging markets (Crystal, Dages, and Goldberg 2001). More evidence is needed on the question of whether foreign banks can, and do, receive additional capital from their head offices in times of stress. Accordingly, this topic warrants more rigorous study.

On the issue of crises, it is worth noting that foreign banks may contribute to domestic financial stability by operating within a country's borders, rather than from abroad. If flight to

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quality occurs in stress periods, it may be better for domestic depositors to keep their money within the domestic financial system, to be reintermediated locally, rather than leave the country through capital flight. Peria and Schmukler (1999) document that depositors recognize differences in the health and efficiency of banks and move their assets to better functioning ones or demand higher deposit rates. Locally generated claims from foreign-owned banks substitute in part for cross-border flows, with the latter occasionally being more volatile.²¹

6. FDI and Host-Country Institutional Development

In theory, real-side and financial sector foreign direct investment can play a causal role in host-country institutional development. The direct role of real-side FDI in host-country institutional reform has not been well documented. Financial sector FDI has been more closely linked to institutional reforms, but systematic analysis of this response is warranted. The recent availability of rich institutional databases, such as the World Bank database on Bank Regulation and Supervision, may facilitate such testing. ²²

Nevertheless, institutions in developing countries can respond positively to financial sector FDI. Crystal, Dages, and Goldberg (2001) show that foreign-owned banks appear to contribute to the overall soundness of local banking systems by screening and treating problem loans more aggressively. If foreign entry spurs additional regulatory improvements, the risk of financial crisis declines. Demirguc-Kunt, Levine, and Min (1998) relate foreign bank entry per se to the probability of a banking crisis. The foreign bank presence was found to have a negative and statistically significant coefficient, leading the authors to conclude that, after they controlled for other factors likely to produce banking crises, greater foreign bank participation had a stabilizing effect.

Mishkin (2005) argues that financial globalization should be an important supporting force behind institutional reform.

The entry into emerging markets of foreign banks that are healthier than domestic banks implicitly allows a country to import stronger prudential regulation and increase the soundness of the local banking sector.

He contends that domestic institutions, facing competition from abroad, will seek new customers to stay in business. For lending to be profitable, domestic banks will require information to screen and monitor their customers. Better accounting standards and disclosure requirements, as well as a more efficiently managed legal system, will be consistent with continued domestic bank profitability. Foreign-owned banks will also be a constituency supporting these positive reforms because, as outsiders, they would not have access to the same information as their domestic competitors.

Numerous studies assert that financial sector FDI spurs improvements in bank supervision, with regulatory spillovers. The entry into emerging markets of foreign banks that are healthier than domestic banks implicitly allows a country to import stronger prudential regulation and increase the soundness of the local banking sector. In Argentina, Chile, and

²¹More evidence is needed on the extent to which substitutability exists between cross-border flows and locally generated claims by foreign branches and subsidiaries. There are direct parallels between these questions in financial FDI and questions long raised in the area of real-side FDI. In manufacturing industries, there is no clear pattern of substitutability compared with complementarity in bilateral flows between Latin American countries and the United States. However, manufacturers in different countries may engage in distinct FDI strategies. Research shows that FDI from Japan enhanced Japanese exports to Southeast Asian countries, consistent with intermediate input trade, while FDI from the United States substituted for exports from the United States to Southeast Asia. FDI from these two sources did not systematically influence exports from the United States or Japan to Latin American countries (Goldberg and Klein 1998, 2001).

²²See Barth, Caprio, and Levine (2002).

Colombia, for example, foreign banks have contributed to enhanced domestic financial stability by engaging in more aggressive risk management techniques (Crystal, Dages, and Goldberg 2001). Calomiris and Powell (2001) argue that

Foreign bank entry also raises issues of competition policy within host-country banking systems.

Argentina's bank regulatory system in the late 1990s was one of the most successful among emerging market economies. Reliance on market discipline was viewed as playing an important role in prudential regulation by strengthening risk management among banks.

The transition to improved local supervision, however, might be bumpy. Major international banks may try to build market share by offering a variety of new financial products, including over-the-counter derivatives, structured notes, and equity swaps. These new derivative products can provide greater opportunities for hedging risks. Yet some new products may also be used to evade prudential regulations and take on excess risks, especially in countries with weak financial systems and underprepared supervisors (Garber 2000). One clear implication is that local supervisors in emerging markets may have to invest in upgrading their skills in order to evaluate more efficiently the use and effects of new products. Other challenges for supervisors arise in the context of relationships with parent banks, and may depend on whether the foreign entry is accomplished through branches or subsidiaries.²³

Foreign bank entry also raises issues of competition policy within host-country banking systems. While the actual experiences of host countries have been researched extensively (see Bank for International Settlements [2001] and the volume's overview by Hawkins and Mihaljek), on average consolidation has occurred without deterioration of the competitiveness of a country's financial services industry (Gelos and Roldos 2002).

Another challenge can arise if a country's financial services industry becomes highly concentrated, in which case banks may exert monopolistic pricing tendencies more extensively. If foreign banks are among the few surviving banks, local regulators may be tempted to conclude that these banks bear specific responsibility for adverse outcomes. Yet in many cases,

²³One recent study considers the stability of cross-border compared with FDI flows in banking in Central and Eastern Europe (Buch, Kleinert, and Zajc 2003). In preliminary work, the authors argue that FDI should have an additional stabilizing feature because it should allow banks in these countries to draw on the liquidity buffer of their headquarters abroad. Branches and subsidiaries are not distinguished in the conceptual presentation.

foreign bank entry is part of a larger scale restructuring and recapitalization of the emerging market financial system. More concentrated market power may have occurred regardless of whether owners were foreign or domestic. Even with monopolistic pricing, there may be other benefits through scale economies and improved services that are by-products of consolidation. These issues challenge regulators to engage in careful cost-benefit analyses and policy reactions.

7. FISCAL AND TAX QUESTIONS RAISED BY FDI

Public finance decisions concerning multinationals²⁴ and host-country governments have received considerable analytical attention, particularly in terms of real-side FDI. One pertinent and very important issue is incentives offered to foreign investors to attract them to a country or a locality within a country. Such efforts have been extensive. As reported by the United Nations Conference on Trade and Development (2001, pp. 6-7), nearly 95 percent of the almost 1,200 changes in national FDI legislation from 1991 through 2000 were favorable to foreign investors, sometimes taking the form of special incentives such as lower income taxes, income tax holidays, and import duty exemptions for foreign enterprises as well as subsidies for infrastructure.

Researchers and policymakers correctly ask whether, quantitatively, the benefits of real-side FDI justify the costs. When governments compete actively against each other for FDI, profits from the investments are shifted from the host country to multinational enterprises (Oman 2000).²⁵ While debate over this point is ongoing, Blomstrom and Kokko (2003) provide a compelling argument that the types of long-term benefits generated by FDI may not justify the short-term costs. These benefits include the positive spillovers between firms and across sectors that researchers continue to identify. To compete effectively, governments may make long-term financial commitments that are excessive when compared with the employment and political gains received in the short term.

Strong promotion efforts show that the government is actively doing something to strengthen employment, productivity, growth, or some other policy objective Another reason is that some of the perceived benefits (in particular, the jobs created by FDI) are easily observable while some of the costs (particularly related to tax breaks and fiscal incentives) are distributed over long periods of time and hard to measure (Blomstrom and Kokko 2003).

²⁴See Feldstein, Hines, Jr., and Hubbard (1995).

 $^{^{25}}$ Similar arguments apply to states within countries that compete against each other to attract new production facilities.

The same questions, to date applied almost exclusively to real-side FDI, are also pertinent to the financial sector. We have suggested a number of important dimensions along which financial sector FDI is expected to have implications distinct from other forms of FDI. These include reduced incidence of crisis, moderated business cycle magnitudes, and institutional development. Given the welfare consequences of business cycles and crises, the calculus of the costs and benefits of actively promoting and subsidizing such foreign entry is a topic worthy of further study. Analysis of the extent to which host markets encourage or tax foreign entrants, given their

To compete effectively, governments may make long-term financial commitments that are excessive when compared with the employment and political gains received in the short term.

implications for local markets, could be explored for entrants during unstable as well as normal periods. If such analysis weighs strongly in favor of encouraging financial sector FDI from healthy parent banks, the arguments could satisfy some of the critics concerned about "fire-sale" terms on local market assets. The quantities that have been implicitly or explicitly put on the table for attracting financial sector FDI should be systematically studied for the lessons they can offer.

8. Conclusion

Our selective survey of the literature on foreign direct investment supports our argument that multinationals and FDI in emerging markets generally have important effects on the host countries, with some effects being particularly notable in financial services industries. These effects take the form of changes in allocative efficiency, technology transfer and diffusion, wage spillovers, institution building, altered macroeconomic cycles, and overall economic stability.

We find that FDI is typically associated with improved allocative efficiency. This improvement can occur when foreign investors enter industries with high entry barriers and then reduce local monopolistic distortions. The presence of foreign producers may also increase technical efficiency: heightened competitive pressure or some demonstration effect may spur local firms to use existing resources more effectively.

FDI is also shown to be associated with higher rates of technology transfer and diffusion as well as with greater wages. While there is evidence of technological improvements from FDI and a presumption that such investment will consequently stimulate economic growth, the strength of these effects is disputed. FDI into host countries also induces higher wages, although these wage effects are sometimes limited to the foreign-owned production facilities and do not spill over more broadly.

Institutional change is another potential implication of FDI. At least in the context of financial services, the outcome is expected to be in the direction of improved regulation and supervision, with such improvements potentially sought by the remaining domestically owned banks as well as by the foreignowned banks. These improvements occasionally occur with a lag, as supervisors in the host countries at first may not be prepared to evaluate the new products and processes introduced by foreign entrants.

FDI can also affect crisis and noncrisis macroeconomic conditions. Foreign banks are procyclical lenders in emerging markets. Domestic, privately owned banks also are procyclical lenders, so the presence of foreign banks does not negatively affect the boom-bust cycle in lending and international capital flows. Foreign entrants may introduce a more diversified supply of funds, in principle making loan supply less procyclical but also more sensitive to foreign fluctuations. Foreign bank entry into emerging markets reduces the incidence of crises, but enhances the potential for greater contagion through common-lender effects. The contagion problem is reduced when foreign banks have a stronger subsidiary presence, as opposed to supporting local markets through cross-border flows.

The employment and growth effects of financial sector FDI are more subtle than other effects, ²⁶ depending in part on whether the investment is greenfield or merger and acquisition. In the latter case, the effects also depend on whether the acquired institution was financially sound or in need of restructuring, regardless of the nationality of the new owners. However, if financial intermediation improves, financial sector FDI should support greater employment and growth prospects.

The institutional effects of financial sector FDI are potentially clearer and quite positive. Financial sector FDI from well-regulated and well-supervised source countries can support emerging market institutional development and governance, improve a host country's mix of financial services and risk management tools, and potentially reduce the incidence of sharp crises associated with financial

²⁶If FDI evidence in manufacturing is a guide, Kokko (1994) shows that the incidence of spillovers is associated with a host country's ability to absorb them

underdevelopment in emerging markets. Yet this type of investment can initially pose formidable challenges to local supervisors, who may need to develop expertise in the practices and products introduced into their economies.

Finally, whether governments should actively pursue FDI through subsidies and other incentive programs is a subject of strong debate. There is some skepticism in the literature on real-side FDI about whether the benefits of investment to the host country justify the sometimes large incentives offered to attract foreign investors. The special features of financial sector FDI add other dimensions to this debate, and accordingly warrant further exploration.

These findings will hopefully contribute to discussions about whether developing countries should open their financial sectors to foreign entrants. The evidence suggests that many emerging markets have responded with strong affirmative statements in the past decade. It also suggests that the benefits of financial sector FDI can be substantial enough for a country to encourage and support entry from well-regulated and healthy banks. Careful discussion and further rigorous analysis will no doubt continue to inform these important issues.

REFERENCES

- Aitken, B., and A. Harrison. 1999. "Do Domestic Firms Benefit from Direct Foreign Investment? Evidence from Venezuela." American Economic Review 89, no. 3 (June): 605-18.
- Aitken, B., A. Harrison, and R. E. Lipsey. 1996. "Wages and Foreign Ownership: A Comparative Study of Mexico, Venezuela, and the United States." JOURNAL OF INTERNATIONAL ECONOMICS 40, no. 3-4 (May): 345-71.
- Arena, M., C. Reinhart, and F. Vazquez. 2006. "The Lending Channel in Emerging Economies: Are Foreign Banks Different?"NBER Working Paper no. 12340, June.
- Bank for International Settlements. 2001. The Banking Industry in the Emerging Market Economies: Competition, Consolidation, and Systemic Stability. BIS Papers, no. 4, August.
- ———. 2006. THE BANKING SYSTEM IN EMERGING ECONOMIES: How MUCH PROGRESS HAS BEEN MADE? BIS Papers, no. 28, August.
- Barajas, A., R. Steiner, and N. Salazar. 2000. "The Impact of Liberalization and Foreign Investment in Colombia's Financial Sector." JOURNAL OF DEVELOPMENT ECONOMICS 63, no. 1 (October): 157-96.
- Barth, J., G. Caprio, and R. Levine. 2002. "Bank Regulation and Supervision: What Works Best?" NBER Working Paper no. 9323, November.
- Berger, A. N., L. F. Klapper, and G. F. Udell. 2001. "The Ability of Banks to Lend to Informationally Opaque Small Businesses." Journal OF Banking and Finance 25, no. 12 (December): 2127-67.
- *Blomstrom, M.* 1989. Foreign Investment and Spillovers. London: Routledge.
- *Blomstrom, M., and A. Kokko.* 2003. "The Economics of Foreign Direct Investment Incentives." NBER Working Paper no. 9489, February.
- Bonin, J., and I. Abel. 2000. "Retail Banking in Hungary: A Foreign Affair?" William Davidson Institute Working Paper no. 356, December.
- Borensztein, E., J. de Gregorio, and J. W. Lee. 1998. "How Does Foreign Direct Investment Affect Economic Growth?" Journal of International Economics 45, no. 1 (June): 115-35.

- Borio, C., C. Furfine, and P. Lowe. 2001. "Procyclicality of the Financial System and Financial Stability: Issues and Policy Options." BIS Working Paper no. 1, part 1, March.
- Buch, C., J. Kleinert, and P. Zajc. 2003. "Financial Integration and Stability in Transition Economies: Does the Mode of Entry Matter?" Unpublished paper, Kiel Institute for World Economics, January.
- Budd, J., and M. Slaughter. 2000. "Are Profits Shared across Borders? Evidence on International Rent Sharing." NBER Working Paper no. 8014, November.
- Calomiris, C., and A. Powell. 2001. "Can Emerging Market Bank Regulators Establish Credible Discipline? The Case of Argentina, 1992-1999." In F. Mishkin, ed., Prudential Supervision: What Works and What Doesn't, 147-91. Chicago: NBER and University of Chicago Press.
- Cavallo, M., and G. Majnoni. 2001. "Do Banks Provision for Bad Loans in Good Times?" World Bank Policy Research Working Paper no. 2619, June.
- Claessens, S., A. Demirguc-Kunt, and H. Huizinga. 2001. "How Does Foreign Entry Affect Domestic Banking Markets?" Journal of Banking and Finance 25, no. 5 (May): 891-911.
- Clarke, G., R. Cull, L. D'Amato, and A. Molinari. 2000. "On the Kindness of Strangers? The Impact of Foreign Entry on Domestic Banks in Argentina." In S. Claessens and M. Jansen, eds.,

 The Internationalization of Financial Services: Issues and Lessons for Developing Countries, 331-54. Doredrecht, the Netherlands: Kluwer Academic.
- Clarke, G., R. Cull, and M. S. M. Peria. 2001. "Does Foreign Bank Penetration Reduce Access to Credit in Developing Countries? Evidence from Asking Borrowers." World Bank Policy Research Working Paper no. 2716, November.
- Crystal, J., B. G. Dages, and L. Goldberg. 2001. "Does Foreign Ownership Contribute to Sounder Banks? The Latin American Experience." In R. Litan, P. Masson, and M. Pomerleano, eds., Open Doors: Foreign Participation in Financial Systems in Developing Countries, 217-66. Washington, D.C.: Brookings Institution Press.

Financial Sector FDI

References (Continued)

- Dages, B. G., L. Goldberg, and D. Kinney. 2000. "Foreign and Domestic Bank Participation in Emerging Markets: Lessons from Mexico and Argentina." Federal Reserve Bank of New York Economic Policy Review 6, no. 3 (September): 17-36.
- Demirguc-Kunt, A., and E. Detragiache. 1998. "The Determinants of Banking Crises: Evidence from Industrial and Developing Countries." IMF STAFF PAPERS 45, no. 1: 81-109.
- ———. 2001. "Financial Liberalization and Financial Fragility." In G. Caprio, P. Honohan, and J. Stiglitz, eds., FINANCIAL LIBERALIZATION: How FAR, How FAST? 96-122. New York: Cambridge University Press.
- Demirguc-Kunt, A., R. Levine, and H.-G. Min. 1998. "Opening to Foreign Banks: Issues of Stability, Efficiency, and Growth." In S. Lee, ed., The Implications of Globalization of World Financial Markets. Seoul: Bank of Korea.
- Demirguc-Kunt, A., and V. Maksimovic. 2002. "Funding Growth in Bank-Based and Market-Based Financial Systems: Evidence from Firm-Level Data." JOURNAL OF FINANCIAL ECONOMICS 65, no. 3 (September): 337-63.
- Detragaiche, E., and P. Gupta. 2004. "Foreign Banks in Emerging Market Crises: Evidence from Malaysia." IMF Working Paper no. 04/129, July.
- Dixit, A., and A. S. Kyle. 1985. "The Use of Protection and Subsidies for Entry Promotion and Deterrence." American Economic Review 75, no. 1 (March): 139-52.
- Edison, H., M. Klein, L. Ricci, and T. Slok. 2002. "Capital Account Liberalization and Economic Performance: Survey and Synthesis." IMF Working Paper no. 02/120, May.
- Eichengreen, B., and D. Leblang. 2003. "Capital Account Liberalization and Growth: Was Mr. Mahathir Right?" NBER Working Paper no. 9427, December.
- Feldstein, M., J. R. Hines, and R. G. Hubbard, eds. 1995. The Effects of Taxation on Multinational Corporations. Chicago: NBER and University of Chicago Press.
- Galindo, A., and F. Schiantarelli. 2003. "Credit Constraints on Firms in Latin America: An Overview of the Micro Evidence."Boston College Working Papers in Economics, no. 537.

- Garber, P. 2000. "What You See versus What You Get: Derivatives in International Capital Flows." In C. Adams, R. E. Litan, and M. Pomerleano, eds., Managing Financial and Corporate Distress: Lessons from Asia, 361-83. Washington, D.C.: Brookings Institution Press.
- Gelos, G., and J. Roldos. 2002. "Consolidation and Market Structure in Emerging Market Banking Systems." IMF Working Paper no. 02/186, November.
- Germidis, D. 1977. Transfers of Technology by Multinational Corporations. Paris: Organisation for Economic Co-operation and Development.
- Goldberg, L. 2002. "When Is Foreign Bank Lending to Emerging Markets Volatile?" In S. Edwards and J. Frankel, eds., PREVENTING CURRENCY CRISES IN EMERGING MARKETS, 171-91. Chicago: NBER and University of Chicago Press.
- Goldberg, L., and M. Klein. 1998. "Foreign Direct Investment, Trade, and Real Exchange Rate Linkages in Developing Countries." In
 R. Glick, ed., Managing Capital Flows and Exchange Rates:
 Perspectives from the Pacific Basin, 73-100. Cambridge:
 Cambridge University Press.
- ———. 2001. "International Trade and Factor Mobility: An Empirical Investigation." In G. Calvo, R. Dornbusch, and M. Obstfeld, eds., Money, Capital Mobility, and Trade: Essays in Honor of Robert A. Mundell, 273-302. Cambridge, Mass.: MIT Press.
- Gorg, H., and D. Greenaway. 2004. "Much Ado about Nothing? Do Domestic Firms Really Benefit from Foreign Direct Investment?" WORLD BANK RESEARCH OBSERVER 19, no. 2 (fall): 171-97.
- Hanson, G., and M. Slaughter. 2004. "The Role of Multinational Corporations in International Business Cycle Transmission: Skew Lines or Arbitrage Opportunities?" In H. Siebert, ed., Macroeconomic Policies in the World Economy, 133-55. Heidelberg and New York: Springer.
- Harrison, A., and B. Aitken. 1994. "Do Domestic Firms Benefit from Foreign Direct Investment? Evidence from Panel Data." World Bank Policy Research Working Paper no. 1248, February.

References (Continued)

- Hawkins, J., and D. Mihaljek. 2001. "The Banking Industry in the Emerging Market Economies: Competition, Consolidation, and Systemic Stability: An Overview." In The Banking Industry in the Emerging Market Economies: Competition, Consolidation, and Systemic Stability, 1-44. BIS Papers, no. 4, August.
- Horstmann, I., and J. Markusen. 1989. "Firm-Specific Assets and the Gains from Direct Foreign Investment." ECONOMICA 56, no. 221 (February): 41-8.
- Horvath, E. 2002. "Lending Booms, Credit Risk, and the Dynamic Provisioning System." In E. Horvath, K. Mero, and B. Zsamboki, eds., Studies on the Procyclical Behaviour of Banks.

 National Bank of Hungary Occasional Paper no 10.
- *Imbs*, *J.* 2004. "Trade, Finance, Specialization, and Synchronization." Review of Economics and Statistics 86, no. 3 (August): 723-34.
- International Monetary Fund. 2006. GLOBAL FINANCIAL STABILITY REPORT. September.
- Javorcik, S. B. 2004. "Does Foreign Direct Investment Increase the Productivity of Domestic Firms? In Search of Spillovers through Backward Linkages." AMERICAN ECONOMIC REVIEW 94, no. 3 (June): 605-27.
- Kokko, A. 1994. "Technology, Market Characteristics, and Spillovers." JOURNAL OF DEVELOPMENT ECONOMICS 43, no. 2 (April): 279-93.
- Kose, M. A., E. S. Prasad, and M. E. Terrones. 2003. "Volatility and Comovement in a Globalized World Economy: An Empirical Exploration." IMF Working Paper no. 03/246, December.
- Kose, M. A., and K.-M. Yi. 2001. "International Trade and Business Cycles: Is Vertical Specialization the Missing Link?" American Economic Review 91, no. 2 (May): 371-5.
- La Porta, R., F. Lopez-de-Silances, and A. Shleifer. 2002. "Government Ownership of Banks." JOURNAL OF FINANCE 57, no. 1 (February): 265-301.
- Levine, R., N. Loayza, and T. Beck. 2000. "Financial Intermediation and Growth: Causality and Causes." Journal of Monetary Economics 46, no. 1 (August): 31-77.

- Lipsey, R. E. 2000. "Inward FDI and Economic Growth in Developing Countries." United Nations Conference on Trade and Development Transnational Corporations 9, no. 1 (April): 67-96. Geneva: The United Nations.
- Lipsey, R. E., and F. Sjoholm. 2003. "Foreign Firms and Indonesian Manufacturing Wages: An Analysis with Panel Data."NBER Working Paper no. 9417, December.
- *Markusen, J. R.* 1995. "The Boundaries of Multinational Enterprises and the Theory of International Trade." JOURNAL OF ECONOMIC PERSPECTIVES 9, no. 2 (spring): 169-89.
- Markusen, J. R., and A. J. Venables. 1999. "Foreign Direct Investment as a Catalyst for Industrial Development." European Economic Review 43, no. 2 (February): 335-56.
- Mihaljek, D. 2006. "Privatisation, Consolidation, and the Increased Role of Foreign Banks." In The Banking System in Emerging Economies: How Much Progress Has Been Made? 41-66. BIS Papers, no. 28, August. Available at http://www.bis.org/publ/bppdf/bispap28c.pdf>.
- Mishkin, F. 2005. "Is Financial Globalization Beneficial?" NBER Working Paper no. 11891, December.
- Oman, C. 2000. Policy Competition for Foreign Direct Investment: A Study of Competition among Governments to Attract FDI. Paris: Organisation for Economic Co-operation and Development.
- Peria, M. S. M., and S. Schmukler. 1999. "Do Depositors Punish Banks for 'Bad' Behavior? Market Discipline in Argentina, Chile, and Mexico." World Bank Policy Research Working Paper no. 2058, February.
- Prasad, E., K. Rogoff, S.-J. Wei, and M. A. Kose. 2003. "Effects of Financial Globalization on Developing Countries: Some Empirical Evidence." IMF Occasional Paper no. 220, September.
- Rajan, R. G., and L. Zingales. 1998. "Financial Dependence and Growth." AMERICAN ECONOMIC REVIEW 88, no. 3 (June): 559-86.
- Rodriguez-Clare, A. 1996. "Multinational Linkages and Economic Development." AMERICAN ECONOMIC REVIEW 86, no. 4 (September): 852-73.

Financial Sector FDI

References (Continued)

- Rojas-Suarez, L. 2001. "Rating Banks in Emerging Markets: What Credit Rating Agencies Should Learn from Financial Indicators." Institute for International Economics Working Paper no. 01-6, May.
- Romer, P. 1993. "Idea Gaps and Object Gaps in Economic Development." JOURNAL OF MONETARY ECONOMICS 32, no. 3 (December): 543-73.
- Sapienza, P. 2002. "Lending Incentives of State-Owned Banks." Unpublished paper, Northwestern University.
- Skipper, H., Jr. 2001. "Liberalization of Insurance Markets: Issues and Concerns." In R. Litan, P. Masson, and M. Pomerleano, eds., Open Doors: Foreign Participation in Financial Systems in Developing Countries, 105-56. Washington, D.C.: Brookings Institution Press.

- Turner, P. 2006. "The Banking System in Emerging Economies: How Much Progress Has Been Made?" In The Banking System in Emerging Economies: How Much Progress Has Been Made? 1-10. BIS Papers, no. 28, August. Available at http://www.bis.org/publ/bppdf/bispap28a.pdf>.
- Unite, A., and M. Sullivan. 2001. "The Impact of Liberalization of Foreign Bank Entry on the Philippine Domestic Banking Market."Philippine Institute for Development Studies, PASCN Discussion Paper no. 2001-08, December.
- United Nations Conference on Trade and Development. 2001. WORLD INVESTMENT REPORT 2001. PROMOTING LINKAGES. Geneva: The United Nations.
- Van Rijckeghem, C., and B. Weder. 2003. "Spillovers through Banking Centers: A Panel Data Analysis of Bank Flows." Journal of International Money and Finance 22, no. 4 (August): 483-509.

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